

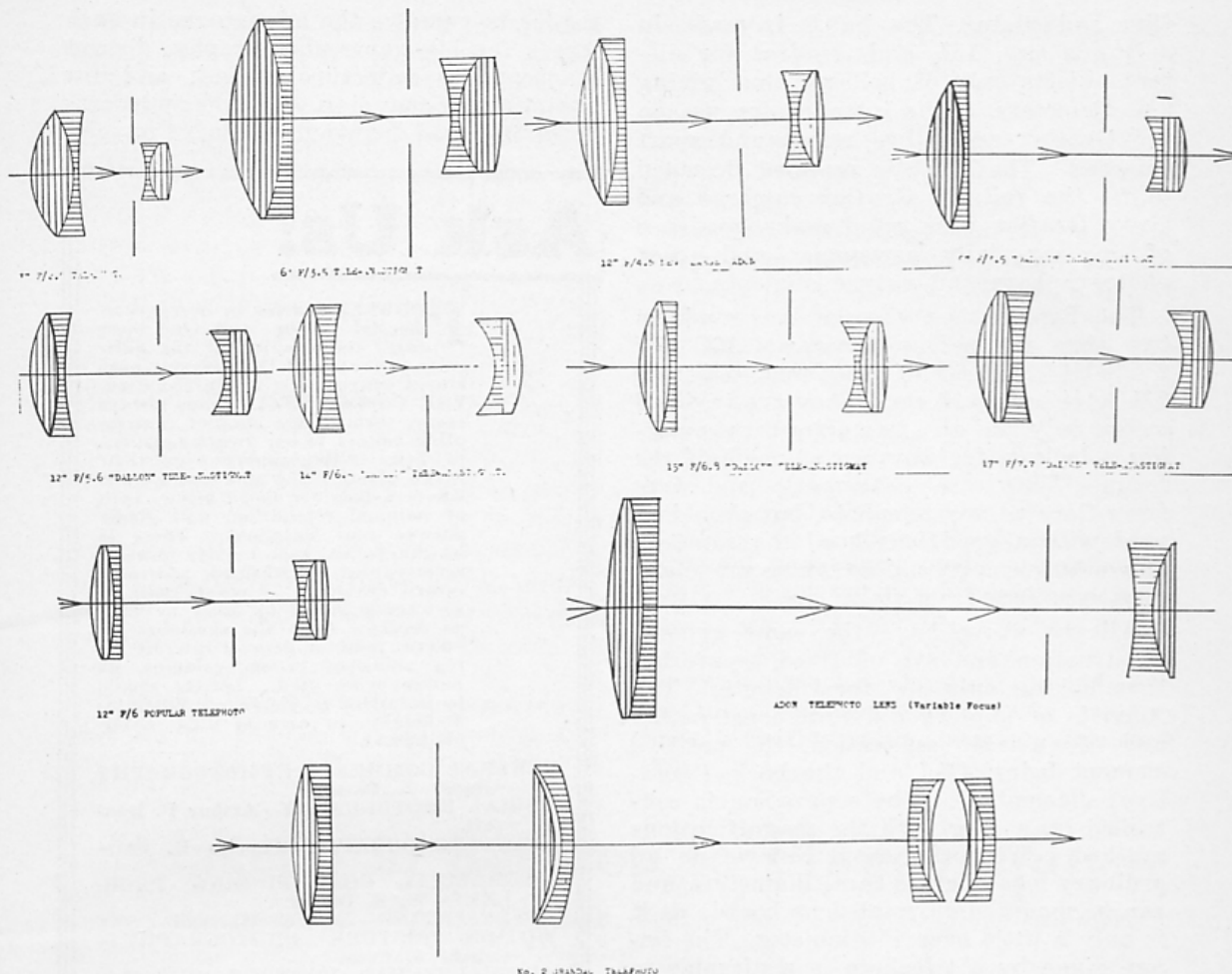
Lenses *—their whys— and wherefores!*

Conducted by Charles H. Shipman

TO illustrate the telephoto lenses the line made by J. H. Dallmeyer has been chosen because they make the most complete series and were one of the first firms to make telephoto lenses.

Among the later telephotos of this firm are those of high speed and short focus for use on the 16mm. cine cameras

such as the Cine-Kodak, Filmo, Victor and others. These are fixed separation, 2", 3", 4" and 6", of speeds F/2.9 to F/3.5 and F/4.5. They consist of a positive and a negative element, each of a positive and negative glass cemented together. They are mounted in focusing mounts ready to fit the particular camera for which the



DIAGRAMS OF LENSES ACCOMPANYING MR. SHIPMAN'S ARTICLE.

individual lens is intended. They cover the small field of the 16mm. very sharply. In use the camera should be placed on a tripod or other solid support to avoid any vibration. Since the standard lens for such cameras is 1", these telephotos may be said to give 2, 3, 4 or 6 diameters. They are necessary for movies of athletics, parades, fires, floods, wild life, and any distant subjects requiring a large image. They should be used for close up portraits so as to avoid the distortion of the one inch lens used for large heads.

The New Large Adon is a fixed separation lens of F/4.5 speed and focal lengths 6", 9", 12", 14", 17". The back focus (back cell to ground glass) is 3", 4½", 6¼", 7¼", 8¾" respectively. Thus for distant objects the bellows is only one-half the focal length, but for close ups the increase in bellows needed is the same as for any other lens of same focus. Thus for a full size image the 17" lens would require 25¾". For portraiture they give better drawing than short focus lenses

used close enough to give the same size images. Since the exit node is well in front of the lens they give a larger image than a regular lens of same focus at the same distance, or if placed back to give same size image they give slightly better depth. They are for use on Graflex and other reflex cameras, view cameras and large hand cameras, with large lens boards and fair length bellows, for all purposes as listed under the section above. They may be had to fit the Graflex cameras to be interchangeable with the regular lens.

The Dallon is made in several speeds, F/3.5, F/5.6, F/6.5, F/6.8 and F/7.7. They are also fixed separation lenses and are made in the following focal lengths, F/3.5 is 3" to 14", F/5.6 is 6" to 24", F/6.5 is 6" to 24", F/6.8 is 15", and F/7.7 is 12" to 40". As with all telephotos the plate covered is small for focal length, the F/3.5 covering from the 16mm. movie to 9x12 cm. or 3¼"x4¼". The F/7.7 covers 4x5" to 6½"x8½". The F/6.5 is made for use on hand cameras, both roll

film and plate. The F/6.8 is made in only one size, 15", and requires for distant objects only 6" bellows, thus giving 2½ diameters. It is intended for use on the Graflex and other reflex and sport cameras. The F/5.6 is supplied threaded to fit the suitable Graflex cameras and every Graflex user could make good use of one especially newspaper and sport photographers and nature students.

The Popular is a cheaper lens made in two sizes for reflex cameras. 10" for 2½"x3½" or 6½"x9 cm. and 12" for 3¼"x4¼" or 9x12 cm. They are in fixed mount only and give two diameters requiring a bellows for distance of one-half the focus. They are achromatic and free from flare as any telephoto, but should be used with a good lens hood the same as any other lens should be to secure clean negatives free from flare.

All the above have the same general construction and are of fixed separation thus having only one focal length. The Adon is of slightly different construction and of variable separation, the positive element being 4½" and the back (negative) element 2". The separation is controlled by a ring with the magnifications marked. With the same bellows as an ordinary lens it gives three diameters, and can be mounted on small lens boards as it is only a little over 1" diameter. The image given by a telephoto is preferable to that obtained by enlarging up to about six diameters. The variable feature makes it possible to obtain several sizes of image from one point. This is very useful in architectural, landscape, natural history and other photography needing large images but not requiring the high speed of the fixed separation lenses.

The Grandac is a fast variable telephoto consisting of a Patent Portrait adjusted for use with the negative element. The Portrait lens may be used alone. The flange is 3¼" thus requiring a large lens board. The Portrait lens is 10" and the negative is 4". No. 1 Grandac will cover a 3¼"x4¼" plate at about 6" bellows extension giving 25" focus at F/10. Thus the image would be of nearly five diameters as compared with the 5¼" lens usually fitted to 3¼"x4¼" cameras. At 8" bellows it gives 30" focus at F/12 and at 12" bellows gives 40" focus at F/16.

The No. 2 Grandac has a 5" negative lens and at 9" bellows covers 4¼"x6½" with 28" focus at F/11. With 12" bellows it produces 34" focus at F/14 and with a bellows of 20" gives 50" focus at F/20. These details are given to enable the

reader to perceive the advantages in such lenses for big game photography, distant landscape, architectural detail, and for photographic mapping, and other purposes requiring good drawing with large images.

Ask Us!

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Prices on Contract Work. *Would you care to discuss in an early issue fair prices for some of the types of work mentioned in the article entitled "Getting More Bread-and-Butter Jobs" by Mr. Williams, in the August COMMERCIAL, prices which would be fair to all concerned?—J.M., Kansas City, Mo.*

Answer by Mr. McMullan: The prices charged on this type of work should be the same as on any other. There is no reason for a quantity negative discount, as you make only one or two negatives at