

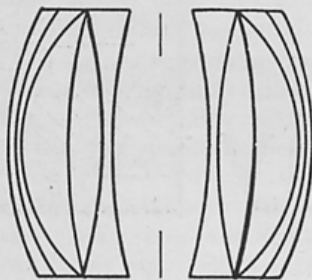
Lenses —their whys— and wherefores!

Conducted by Charles H. Shipman

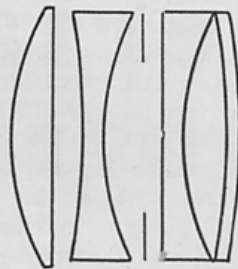
THE Gundlach Mfg. Company, 739 Clinton Avenue, Rochester, New York are one of the old American lens makers, their first lenses having been marketed about forty years since. One of their oldest is the general purpose convertible lens, the Turner-Reich, Series 2, F/6.8. This is a very well and favorably known lens and is to be found in the equipment of most commercial workers, as well as being used by many amateurs. This is a two element anastigmat either symmetrical or convertible. Each element is made of five glasses, two positive and three negative, all cemented together. This makes the elements rather thick but reduces the glass to air surfaces to four, thus reducing the number of flare images. Each of the elements is well corrected and has a nearly flat field having a speed of F/12.5, giving good definition over a fairly large angle for a single lens. The convertible combinations consist of two elements, one being of about one-half longer focus than the other, thus giving three focal lengths, as 7½", 12" and 18" for the 5x7. The circle of illumination of the

complete lens is large, allowing the lens to be used as a moderate wide angle at the smaller stops. The elements of the symmetrical combination can be used alone, but, as they are of about the same focal length, it allows only two foci instead of three. The Turner-Reich convertible is used on nearly all of the Cirkut cameras, being the standard equipment for this outfit. It is a good all around lens for commercial, architectural, copying and in fact, any purpose not requiring high speed. This lens is also put up in sets. Thus the 14", 18", 24" and 28" elements will give also 8", 9½", 10½", 11½" and 13" in the various combinations. Such a set is very useful for the commercial worker.

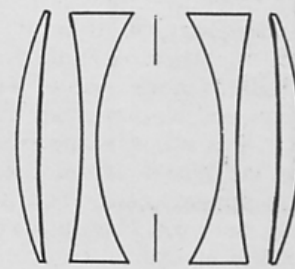
The Turner-Reich Series 5, F/9 is a slower and cheaper lens, made only in the longer focal lengths, 14" to 30". It is of the same construction, but, being of less speed, is less costly to construct. As commercial workers, using long focal length lenses, very seldom can use an opening larger than F/9, this lens reduces the cost of first class equipment for that class of



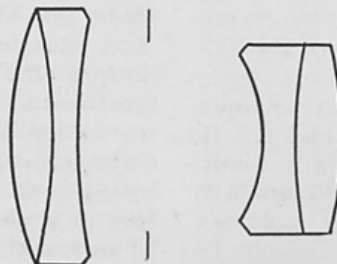
Turner Reich Ser II F6.8



Radar F4.5



Gundloch Anastigmat F6.3



Radar Telephoto F5.6

work.

One of the newer Gundlach lenses is the Radar F/4.5. This is of the Tessar type, having a separated pair of glasses in the front element and a cemented rear of three glasses. The glasses are fairly thin and the combination is of good definition and flat field, and free from flare under ordinary conditions as there are only six glass to air surfaces. This type of lens is suitable for portraits, groups, sports and all work needing a fast lens of flat field. The Radar is of 3½" to 18" focus for plates 2¼x3¼ to 11x14.

The Gundlach anastigmat is of the Celor type, each element consisting of two separated glasses, one positive and one negative with a positive shaped air lens between. It is a moderate priced anastigmat of F/6.3 speed and made in focal lengths 5¼" to 16" for plates 3¼x4¼ to 11x14. These lenses are good commercial lenses giving good definition with a large light circle, so that a size larger plate may be used at smaller stops. They do well for portraiture not needing the speed of the F/4.5.

The Gundlach Mfg. Company produce a single achromatic lens of soft focus. This is of the standard meniscus form of F/6 speed and is suitable for pictorial work with Graflex and other cameras. Focal lens are 5¼" to 18" for plates 3¼x4¼ to 8x10. This lens is suitable for portraiture giving a pleasing softness and, of

course, is not expensive.

The Hyperion, F/4 is a double R.R. lens of soft focus, flat field, and of good modeling due to the large opening. The softness is due to under-corrected spherical aberration not to chromatic aberration. Therefore the definition will be as seen on the ground glass. The elements are of different foci and one is F/6.3, the other F/11. Either may be used alone. At F/6.3 the combination becomes sharp focus. Flat curves make for freedom from flare, insuring brilliant negatives. Focal lengths, 7" to 18" for plates 4x5 to 11x14. This is a good pictorial lens and, in the large sizes, a fine studio portrait lens for those photographers whose patrons do not demand needle sharp definition.

Gundlach also makes Petzval type portrait lenses F/4 and F/5 in the usual focal lengths; anastigmat and R.R. wide angles, and convertible R.R. lens F/5.6 and F/8 and 40 to 50 mm cinema lenses.

The Pancratic Telephoto is a complete lens with a 6" positive F/12 and a 3" negative giving magnification 3 to 8 times. While not an anastigmat nor of high speed it gives good results for so inexpensive a combination. The Radar F/5.6 Telephoto is a fixed focus combination 9" to 18", 4½" to 9" back focus, thus giving two diameters. It is suitable for athletics, portraiture, distant views and other work requiring long focus on short bellows cameras.

