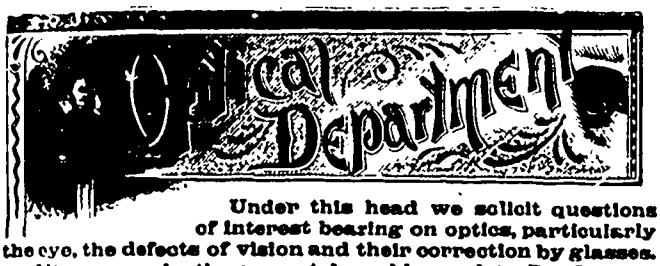

Under this head we solicit questions of interest bearing on optics, particularly the eye, the defects of vision and their correction by glasses. All communications must be addressed to Dr. John E. Owen, 23 East Adams Avenue, Detroit, Mich., U.S., and must not be received later than the 15th of each month in order to insure publication in the following issue of "The Trader."

A. C., Ont.: "A lady fifty years of age required a pair of plus 3 D.S. for reading and near work. She came back in about a week complaining that they made her eyes ache. She brought her old ones with her which she had used for about four years, they were twenty six inches. I gave her instead of plus 3 D.S. a pair of plus 2½ D.S., supposing that on account of her using the weak glasses so long that she could not stand the plus 3 D.S. Would this be the trouble? I have had several cases like this."

Your views in this case are no doubt correct. A change from her ordinary glasses to the plus 3 D.S. was more than she could stand. In all cases of Presbyopia we endeavor to ascertain what glasses have been worn and usually find that about one-half or three-fourths D.S. stronger is all that can be worn with comfort, although in some cases the test calls for one or two D stronger. The reason why such cases occur is most probably due to disturbing the harmony that has evidently existed between Accommodation and Convergence.

R.T.L., Ont.: "Why should not more than one-half the prism correction be given and that divided between both eyes? What is the reason for not giving the full amount?"

Suppose you have a case of latent Convergent Strabismis in which the total amount of latent Convergence is ten degrees. When the full correction is placed before the eyes it will be impossible for the eyes to turn to the right or to the left without meeting with double vision. In many instances Diplopia will be produced by the slightest turn of the eyes to either side. Such lenses would not be satisfactory to any patient, and consequently it is necessary to give a partial correction It has been found by experience that a half correction gives the best satisfaction in the majority of cases and it is necessary that this half correction, which in this case would be five degrees, be divided equally between the two eyes In this case we would place a two and one-half or three degree prism before each eye base out, to be worn for distant vision, as the patient will find it easier to remove the prisms for reading. In many cases a pair of one degree prisms cannot be borne by the patient because of the peculiar effect produced by the lenses.

N.O., Que.: "Would the Ophthalmoscope be of any use, and if so in what way?"

We are of the opinion that an Ophthalmoscope would not prove to be an actual necessity in your practice. In order to use the instrument to any advantage, you would have to have a room that could be made dark and in which an artificial light could be placed. The instrument is merely another method of examining the eyes aside from that of the trial lenses and test card. But on account of the tedious method of examination we do not consider it of much practical use to an optician. It may be used for correcting or estimating errors of refraction, but even after its use the trial lenses must be resorted to for final adjustment. The only absolute use for which the Opthalmoscope may be applied is in examining the inside of the eye for diseases. An expert may use it for this purpose whilst the pupil remains its normal size, but even then in some cases it is impossible to see anything in the eye. Hence, in order to make a satisfactory examination of the eye for any purpose, the pupil should be dilated, and if it is not dilated the time spent in experimenting with the instrument avails little or nothing.

M.B., Ont.: "What is your opinion of the Maddox double prism test?"

In our experience we have found the Maddox double prism test to be entirely unreliable, especially when used close to the eyes. Probably the reason for our adverse opinion or rather that our experience with it has been so unsatisfactory may be ascribed to the fact that the three lights as seen through the double prism test are all alike, and therefore, as there is a constant desire on the part of nature, to reduce the number of images, an unconscious effort is made to obtain that result. The very fact that the patient knows there is but one light there, but sees three lights all looking alike, he will unconsciously endeavor to bring them all together, thus cause a spasm of one or more muscles from the vertical direction when the vertical muscles are being examined. We have found this unconscious spasmotic condition to exist in a normal eye, as was proven by various other tests, thus proving conclusively that a similiarity of images seen through the prisms rendered the tests unreliable. The little instrument known as the rod test we have found in our practice to be all that can be desired for a simple instrument and have such confidence in it that we would be willing to select it as the best of all methods in examining the rotary muscles of the eye. The reason why this rod test is so satisfactory and reliable is because the image as seen by one eye is so entirely different from the other that there is no effort on the part of nature to bring the images together. Consequently the bar of light as seen through the test will remain where it should with the normal eye or will move aside when the abnormal condition is present, in spite of the efforts one can make to bring the images together. Probably the reason for this is because the patient's attention is directed to the real light or the bar of light as seen through the test, it being found impossible to direct attention to both at the same time. As a result the attention is directed to one eye, whilst the muscles of the other will relax and permit the eye to move wherever it may be inclined.

REPAIR OF FIELD GLASSES AND TELESCOPES.

Among the multitude of repairs constantly brought in to the provincial watchmaker, probably the most puzzling and difficult to deal with are general optical repairs and alterations. Still many of them can be done successfully by the use of a little thought and intelligence. Every holiday when people are leaving town they generally overhaul their field glasses, telescopes, tourists, aneroids, compasses and hand cameras, and if