pies in the arc. inward, the test stremity of the observation is has been tested all that is general eremainder of any the arc in recording the

is completed, de of the chin same manner." is apparatus I effort to hold so many director made it. It was also same individual the attempt of sosition at the he nystagmustuber of these

to the carrier n exceedingly e globe in any d. It may be er xii at fifty yed for others considerably it paper have aced between, he degrees of se strips are, of the periprimary posiorate fixation lower line, as

far away from the center as possible. This accomplished he is requested to give the figure placed above the word just recognized and to try and read, farther out, additional letters on the figure line. Each word beyond represents about one degree on the scale and the number of words so read added to the previous figure gives the limit, in degrees, of the field in that direction. As each quadrant of the circle is passed over, a slip of paper is removed, revealing the next paper whose lettering, being different, suggests nothing to the person under examination. I have found that instead of making the vertical letters face up and down one can accomplish the purpose of distinct vision by printing them with type of a bolder face, thus providing for those rare cases in which it is desired to test the muscles of an eye that can not read Jaeger xii, or thereabouts.

My investigations of the field of fixation have developed nothing new except that the normal field, in persons whose view is not cut off by the nose, lids or orbital margins, seems to have wider limits than those set down by Landolt, particularly in the

downward direction.

The causes that determine an unusual shape or abnormal position of the whole field, as pictured on the perimetric chart are, commonly, actual paresis of one or more of the external muscles of the eye. Apart from an abnormal configuration of the face, we also recognize those influences that underlie the various forms of heterophoria, i. e., general fatigue, weariness of one or more of the extrinsic muscles, age, defective innervation and, possibly, congenital defects in the muscular fibers. But in cases of heterophoria occurring during the fixation of objects directly in front of the eye, the state of the refraction exerts a very wide influence on the size, shape and situation of the whole field. Its boundaries are enlarged in moderate degrees of hyperopia, but are diminished in the higher grades, owing, as Landolt thinks, to the developed muscles acting on a not too large globe in the former instance