the observer must wear his correcting glasses, and in addition, there must be placed in the clip behind the mirror, a concave lens of sufficient strength to render slightly divergent the convergent rays that emanate from the myopic eye of the patient. When, however, the patient and the observer are both myopic, the examination can be more satisfactorily conducted by the indirect method. When the eye is examined by the direct method, objects at the fundus appear to be considerably enlarged. This arises from the fact that an eye has all the properties of a convex lens, having a focus of about one inch. It is well known that when an object is held just within the focus of a convex lens, the object is apparently enlarged and appears to be placed at a greater distance from the lens than the position it really occupies. So, in looking into the eye by the direct method, the whole of the posterior concave has the appearance of an eye several inches in diameter. Thus in Fig 5, rays emanating from P in the eye E, after being rendered divergent by the lens L, fall upon the eye A, as if they diverged from a point *p*, behind the eye E. By examining the eye from different directions the whole of the fundus can be surveyed, which will appear to occupy the position *m n* behind M N.* The direct method is the only mode of examining the eye for detachment of the retina, opacities of the vitreous humour, crystalline lens, &c., &c. In this latter examination, the eye under examination is viewed at a distance of 10 or 12 inches, and the patient is directed to turn the eye in different directions according to the part that is being inspected.

DEMONSTRATING OPHTHALMOSCOPE.

The theory of the author's demonstrating ophthalmoscope will be seen from the accompanying figure. F is the flame of a lamp; L^1 a double convex lens for rendering parallel the diverging rays of light from F; L^2 a second double convex lens of 2 inch focus for converg-

* Beginners are recommended to endeavour to familiarize themselves with the ophthalmoscope by practicing upon an artificial eye constructed of an ordinary pill box as described in a former part of this lecture; the ocular lens of a microscopo or telescope, or one of the objective lenses of Liebreich's ophthalmoscope can be cemented behind the aperture of the lid; a rude imitation of the optic nerve entrance and the branching of the retinal vessels can be made with pen and ink upon the bottom of the box; the normal, hypermetropic, and myopic eye can be imitated by fixing the bottom of the box at different distances behind the lens as already described. The eye of the cat is more easily examined by the ophthalmoscope than the human eye, as the *tapetum* reflects the light much better than the choroid of the human eye. The rich colouring of the tassetum makes the fundus of the cat's eye, a very interesting object for examination with the ophthalmoscope.