

for up to that time nothing was, or indeed could be known of the appearance of the deep structures of the living eye, either in health or disease. With the help of this instrument however, all the parts of the eye involved in vision can be brought under the eye of the surgeon. We can now determine the existence and variety of cataract even in its earliest stage. It demonstrates floating bodies in the vitreous humour as well as turbidity of that body. The ophthalmoscope discloses apoplexy of the retina in which mercurials would be contra-indicated; it also shows us cases where lymph is effused upon some of the deep structures of the eye in which the influence of alteratives may prove advantageous. It reveals the characteristic appearances of glaucoma which indicates a resort to *iridectomy*, an operation which has been very successful in relieving blindness from this cause. In short we may say with Hasner "what the telescope is to astronomy, the ophthalmoscope is to ophthalmology."

These are a few of the many uses of the ophthalmoscope, and if we wish to keep pace with the advances of ophthalmic science, it is absolutely necessary for us to thoroughly understand the use of this instrument.

In the short space of one lecture however, I can not hope to do more than give some hints that may prove of service to you in your future investigations of this subject. Those who wish to pursue it further should refer to the elaborate works of Rainy, Hulke, and Zander, and to the coloured plates of Liebreich.*

THE CAUSE OF THE BLACKNESS OF THE PUPIL.

It is well known that under ordinary circumstances the pupil of the eye appears to be perfectly black, and that all parts behind it are perfectly invisible: this was formerly thought to depend on the complete absorption of all the rays of light that fall upon the fundus or posterior internal surface of the eye, so that none of them passed out again from its interior.

That this is not the case can very easily be demonstrated by a simple experiment suggested by Coccinus:—"Having previously dilated the pupil of a cat's eye by a solution of atropine or belladonna, drop some

* Theory of the Ophthalmoscope. By G. Rainy, M.D., Glasgow. The use of the Ophthalmoscope. By J. W. Hulke F.R.C.S., London. The Ophthalmoscope. By A. Zander, translated by R. B. Carter, F.R.C.S., London. Atlas der Ophthalmoscopie, Dr. R. Liebreich, Berlin.

The above works can be procured through Dawson Brothers, Montreal, or through Chewett & Co., Toronto.