

CHAPTER XI.

EPOCH OF YOUNG AND FRESNEL.

Sect. 1.—Introduction.

THE man whose name must occupy the most distinguished place in the history of Physical Optics, in consequence of what he did in reviving and establishing the undulatory theory of light, is Dr. Thomas Young. He was born in 1773, at Milverton in Somersetshire, of Quaker parents; and after distinguishing himself during youth by the variety and accuracy of his attainments, he settled in London as a physician in 1801; but continued to give much of his attention to general science. His optical theory, for a long time, made few proselytes; and several years afterwards, Auguste Fresnel, an eminent French mathematician, an engineer officer, took up similar views, proved their truth, and traced their consequences, by a series of labors almost independent of those of Dr. Young. It was not till the theory was thus re-echoed from another land, that it was able to take any strong hold on the attention of the countrymen of its earlier promulgator.

The theory of undulations, like that of universal gravitation, may be divided into several successive steps of generalization. In both cases, all these steps were made by the same persons; but there is this difference;—all the parts of the law of universal gravitation were worked out in one burst of inspiration by its author, and published at one time;—in the doctrine of light, on the other hand, the different steps of the advance were made and published at separate times, with intervals between. We see the theory in a narrower form, and in detached portions, before the widest generalizations and principles of unity are reached; we see the authors struggling with the difficulties before we see them successful. They appear to us as men like ourselves, liable to perplexity and failure, instead of coming before us, as Newton does in the history of Physical Astronomy, as the irresistible and almost supernatural hero of a philosophical romance.