

the exterior and interior of the globe differed from each other to such an extent that, while the outer parts were cool and solid, the vastly more enormous inner intensely hot part was more or less completely liquid. Hence the term "crust" was applied to the external rind in the usual sense of that word. This crust was variously computed to be ten, fifteen, twenty, or more miles in thickness. In the accompanying diagram (Fig. 4), for example, the thick line forming the circle represents a relative thickness of 100 miles. There are so many proofs of enormous and wide-

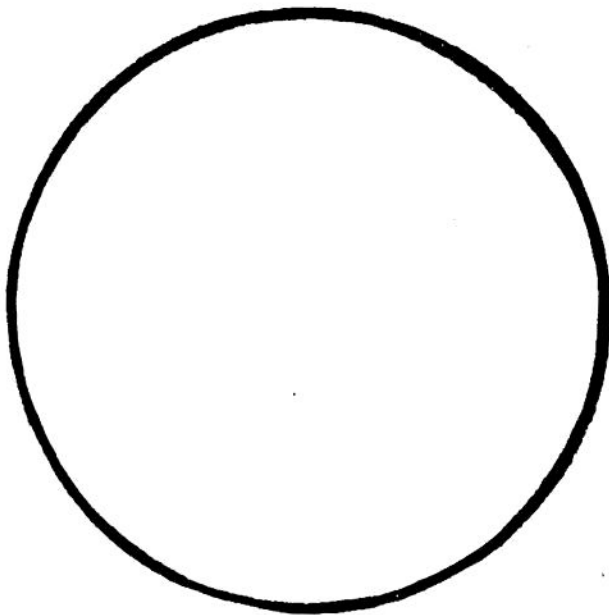


Fig. 4.—Supposed Crust of the Earth,  
100 Miles thick

spread corrugation of the materials of the earth's outer layers, and such abundant traces of former volcanic action, that geologists have naturally regarded the doctrine of a thin crust over a liquid interior as necessary for the explanation of a large class of terrestrial phenomena. For reasons

which will be afterward given, however, this doctrine has been opposed by eminent physicists, and is now abandoned by most geologists. Nevertheless the term "crust" continues to be used, apart from all theory regarding the nucleus, as a convenient word to denote those cool, upper or outer layers of the earth's mass in the structure and history of which, as the only portions of the planet accessible to human observation, lie the chief materials of geological investigation. The chemical and mineral constitution of the crust is fully discussed in later pages (p. 112 *et seq.*).