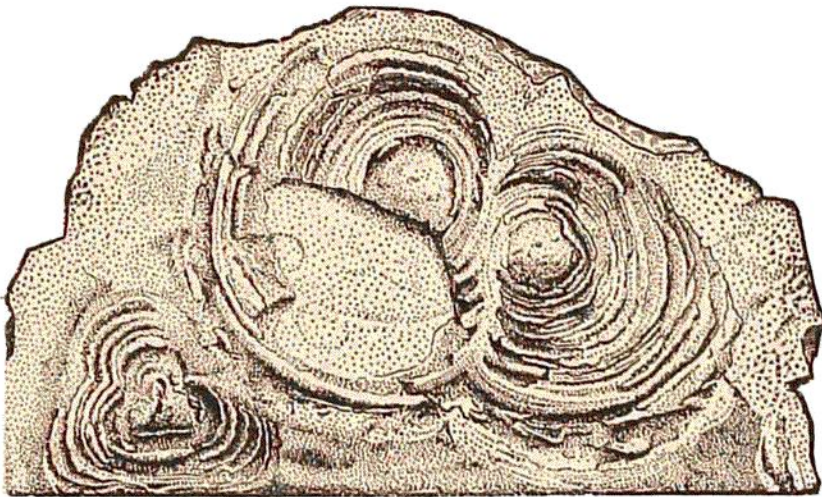


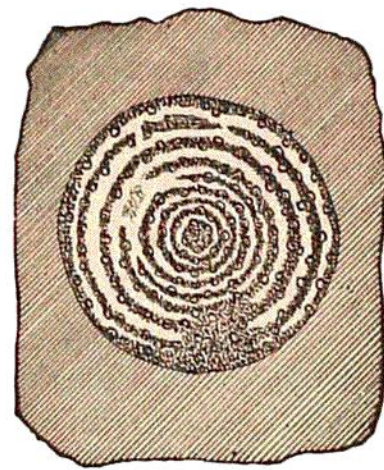
The process decomposes the walls of the fissures or cavities to make the filling materials, the walls showing it by their decayed condition. The lateral source may be within an inch or a few inches of the place of deposition; and still it well illustrates much of vein-making. Bitumen or mineral oil may also be taken in from carbonaceous shales, and deposited in the amygdaloidal cavities and fissures; and to its presence J. Lawrence Smith attributed the reduction of the magnetite in igneous rocks to grains of native iron, and even the production of the great masses of native iron brought to the surface by basaltic ejections in Greenland.

The term *vesicle*, as applied to a vapor-blown cavity in an igneous rock, has been put into Greek form in the word *lithophysa* (stone-bubble) by Richthofen (1860), and applied especially to peculiar chambered cavities common in obsidian, its variety, lithoidyte, and in rhyolyte. They occur in great perfection, as flattened spheroids, in the region of the Obsidian Cliff, Yellowstone Park (Fig. 279, page 306). The following figures are from

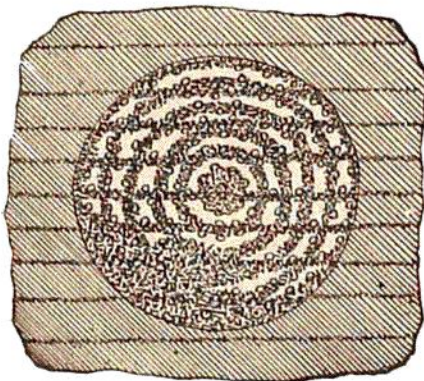
310.



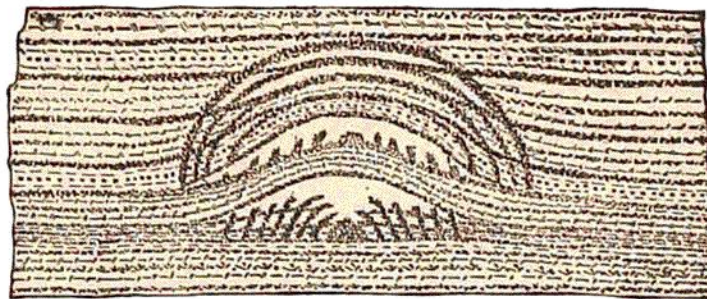
311.



312.



313.



Lithophysæ of the Obsidian Cliff. Iddings.

a memoir by J. P. Iddings (1888). Three of the lithophysæ are shown, of natural size, in Fig. 310, and three others in section in Figs. 311, 312, 313. The rock containing the lithophysæ commonly consists of alternating solid