

XXI. DOWN IN A MINE.

MODES OF OCCURRENCE OF THE METALS.

WHO has not heard of the Comstock Lode? Who has not read something about the hundreds of millions of gold and silver extracted from its deep depositories? What names in the annals of mining enterprise are more familiar than those of Gould and Curry, William M. Stewart, Adolf Sutro, James G. Fair, J. W. Mackey, John P. Jones, William Sharon? What is the Comstock Lode? It is a body of gold-and-silver-bearing mineral matter lying in the Virginia range, a spur of the Sierra Nevada, about 25 or 30 miles east of the Sierra crest. The range trends a little east of north, and the lode appears to be the filling of an imperfect fissure four or five miles long—the principal part of which is about 10,000 feet. The fissure extends into the mountain with an eastward dip varying from 33° to 45° . At the north end it divides into three or more diverging and somewhat irregular branches, and at the south end it terminates in two branches. The fissure has, at its broadest part, along the middle, a width of about 600 feet, which becomes 1,400 feet when measured along the sloping surface; and it narrows toward each end. The lode also narrows downward, and at about 1,800 feet vertically, has a thickness of about 120 feet. The part above this seems to be formed from two fissures and the wedge-shaped mass of "country rock" included between them. This wedge of country rock was cut off from the east side, where the rock is diabase—that is, composed of grains of augite and a plagioclase feldspar. On the west side, the country rock is diorite—that is composed of hornblende and a plagioclase feldspar. In miners' language a fragment of country rock included in a lode is a "horse." The fissure along each side of this enormous "horse" is filled chiefly with quartz. The east wall in this case, is the "hanging wall," and the west, is the "foot-wall." The hanging wall is much decomposed, and the decomposition extends through the diabase for five thousand feet.