sides of the fissure; and if electrical currents were the agents of transferring the metallic substances to their peculiar repositories, the conditions of the rocks as to conduction of heat and electricity become of paramount influence. The specific affinities which the contents of one vein display to the different rocks which bound it (as in the lead mining districts of the north of England), when rightly viewed, offer a most convincing proof that the substance of veins was introduced among these rocks *after* they had acquired such conditions of hardness, position, &c. as to exert unequal powers in determining the arrangement of the substances presented to their influence.

3. Strings and branches of metallic and sparry substances, like those which occur in veins, but inclosed on all sides in rock, are of sufficiently frequent occurrence to demonstrate that not all mineral repositories have been *open fissures*, filled by depositions from above, as Werner taught, or by injection from below, as Hutton contended, or by mere sublimation, as other writers besides M. Necker have advanced on good though limited evidence. We have shewn, while treating of the "forms of igneous rocks," that such "contemporaneous veins," as Jameson properly calls them, have arisen from the same play of affinities as the spherical arrangements of the orbicular greenstone of Corsica; they are "segregations" of parts of a fluid compound, depending on circumstances which affect its transition to a solid state. Such results may be admitted to have happened with metallic veins, whenever the evidence is equally clear. They are admitted by some writers for some of the veins in Cornwall.

But yet, a general contemplation of insulated metallic and sparry masses, which fill cracks and other cavities in rock, will not allow us to adopt this as a general explanation. These cracks and cavities have existed *as such* in the limestones of the north of England, before the introduction of their crystallised contents. For some of these cavities are the inner hollows of bivalve