quarry-water (*eau de carrière*). This is not chemically combined with their mineral constituents, but is merely retained in their pores. Most of it evaporates when the stone is taken out of the parent rock, and freely exposed to the atmosphere. The absorbent powers of rocks vary greatly, and chiefly in proportion to their degree of porosity. Gypsum absorbs from about 0·50 to 1·50 per cent of water by weight; granite, about 0·37 per cent; quartz from a vein in granite, 0·08; chalk, about 20·0; plastic clay, from 19·5 to 24·5. These amounts may be increased by exhausting the air from the specimens and then immersing them in water.[21] No mineral substance is strictly impervious to the passage of water. The well-known artificial coloring of agates proves that even mineral substances, apparently the most homogeneous and impervious, can be traversed by liquids. In the series of experiments above referred to (p. 452), Daubrée has illustrated the power possessed by water of penetrating rocks, in virtue of their porosity and capillarity, even against a considerable counter-pressure of vapor; and, without denying the presence of original water, he concludes that the interstitial water of igneous rocks may all have been derived by descent from the surface. The masterly researches of Poiseuille have shown that the rate of flow of liquids through capillaries is augmented by heat. He proved that water at a temperature of 45° C. in such situations moves nearly three times faster than at a temperature of 0° C.[22] At the high temperatures under

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[21] See an interesting paper by Delesse, Bull. Soc. Geol. France, 2me ser. xix. (1861–62), p. 65.

[22] Comptes Rendus (1840), xi. p. 1048. Pfaff ("Allgemeine Geologie," p. 141) concludes from calculations as to the relations between pressure and tension that water may descend to any depth in fissures and remain in a fluid state even at high temperatures.