

sion, are capable of being held in suspension in water, and of being transported to great distances. These substances, differing much in composition, are embraced under the general term Clay, which may be defined as a white, gray, brown, red, or bluish substance, which when dry is soft and friable, adheres to the tongue, and shaken in water makes it mechanically turbid; when moist is plastic, when mixed with much water becomes mud. It is evident that a wide range is possible for varieties of this substance. The following are the more important.

**Kaolin** (Porcelain-clay, China-clay) has been already noticed (p. 140).

**Pipe-clay**—white, nearly pure, and free from iron.

**Fire-clay**—largely found in connection with coal-seams, contains little iron, and is nearly free from lime and alkalis. Some of the most typical fire-clays are those long used as Stourbridge, Worcestershire, for the manufacture of pottery. The best glass-house pot-clay, that is, the most refractory, and therefore used for the construction of pots which have to stand the intense heat of a glass-house, has the following composition: silica, 73·82; alumina, 15·88; protoxide of iron, 2·95; lime, trace; magnesia, trace; alkalis, ·90; sulphuric acid, trace; chlorine, trace; water, 6·45; specific gravity, 2·51.

**Cannister**—a very siliceous close-grained variety, found in the Lower Coal measures of the North of England, and now largely ground down as a material for the hearths of iron furnaces.

**Brick-clay**—properly rather an industrial than a geological term, since it is applied to any clay, loam, or earth, from which bricks or coarse pottery are made. It is an impure clay, containing a good deal of iron, with other ingredients. An analysis gave the following composition of a brick-clay: silica, 49·44; alumina, 34·26; sesquioxide of iron, 7·74; lime, 1·48; magnesia, 5·14; water, 1·94.

**Fuller's Earth** (Terre à foulon, Walkerde)—a greenish or brownish, earthy, soft, somewhat unctuous substance, with a shining streak, which does not become plastic with water, but crumbles down into mud. It is a hydrous aluminous silicate with some magnesia, iron-oxide and soda. The yellow fuller's earth of Reigate contains silica 44, alumina 11, oxide of iron 10, magnesia 2, lime 5, soda 5.<sup>119</sup> In England

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<sup>119</sup> Ure's Dict. Arts, etc. ii. p. 142.