

the strongest mass when exposed to a very high temperature. It was one of many experiments upon the fusibility of combinations of the different earths, all of which are recorded in his second report upon iron manufacture in Maryland, printed by order of the Senate.

Clays containing silica and alumina alone, are practically infusible in the hottest furnace, but with the addition of other earths or alkalies, or metallic oxides in certain proportions, they become fusible. The manufacture of fire bricks in Baltimore was first commenced by the late Colonel Berry, and the quality proved so good as to put an end to the importation of the English Stourbridge brick which was formerly imported here at a high cost.

In addition to the well known Berry's fire brick, this article is extensively made at Mount Savage, Alleghany county, from the fire-clay of the coal region, which being precisely similar to the Stourbridge clay, the bricks are of the same kind. It is a matter of interest to know that north and east of Pennsylvania and New Jersey, and south of Maryland, there is *no good fire clay*, so that an increased demand may be expected with the increasing manufacturing industry of the country. Eastern Pennsylvania is without the material for the extensive manufacture of fire-bricks, and it is singularly deficient even in their coal regions. The Maryland bricks are extensively used in Pennsylvania as well as in other States.

For several years, fire-bricks of excellent quality were made on a large scale at a factory near the village of Northeast, in Cecil county. Operations were, however, suspended two or three years since, because of the lessened demand for the bricks, owing to the depressed condition of iron manufacture and other branches of industry, in which they are so largely used.

#### POTTERY, INCLUDING QUEENSWARE.

The lower or older clays, as before stated, vary considerably in the different beds. Some of them are white, others more or less colored with carbon vary from light grey to lead color and even slate color. Again we find them of different shades of red.

The last is only suitable for common pottery, draining tile, and bricks, because of the deepened color they assume when baked in the kiln.

Some of the grey and lead colored clays are sufficiently free from iron to burn white, so that they can be used for the finer kinds of pottery and queensware, and the same may be said of the white clays.

Again we find them with an exceedingly fine texture, and varying from that to what, under the microscope, appears to be mainly composed of grains of sand so minute as to be invisible to the naked eye.