VI. CLAY.

We have many varieties of clay in Maryland, some of which are used, whilst others now neglected are adapted to important branches of industry not yet instituted amongst us. I shall consider each variety of clay separately.

1. *Kaolin or Porcelain Clay.*

This clay differs from all others in being produced by the decomposition of masses of felspar more or less pure, which have existed in or formed a part of masses of granite.

It is from this that the finest kinds of porcelain or china ware are made. It occurs with the granites of Cecil, Harford, Balto., Howard and Montgomery counties, and if the proper manufacturing establishments existed amongst us, inexhaustible supplies of Kaolin can be obtained.

At one point in Harford county, about three miles n. n. e. from Abingdon, I discovered twenty years ago a body of Kaolin of a most superior kind. It is a perfect white and being free from metallic oxides it would furnish porcelain of a pure white color. It is also entirely free from mica, quartz and all other impurities.

2. *Potters' Clay.*

The most extensive deposits of Potters' clays in Maryland are those described in chap. III, as forming the lower members of the cretaceous series in the table at the beginning of that chapter, and in the key to the map.

These clays may be classed with reference to their industrial uses.

1. Pure white fine clay.
2. Those varying in color from dark to light red and sometimes yellow.
3. Lead colored and blue clays, varying from dark to light blue lead color and gray.

The first kind usually cotain but little iron or manganese, and is used in the manufacture of the celebrated Berry's Baltimore fire bricks.

Fire bricks have also been extensively made from these clays in Cecil county, but I believe that the manufacture has been discontinued, because of the prostrated state of iron manufacture, in which they were largely used.

Another application of these clays is in the manufacture of wall paper to which it is *better adapted*, than the more costly whiting from England, formerly used for that purpose.

The same kind of clays exactly, exist in New Jersey, and furnish the material for the manufacture of crockery or delft ware to a very large amount. They produce from it a variety of yellow and mottled crockery ware which have become a considerable amount of trade; and I am glad to find that some of our own enterprising citizens have entered largely and I doubt not profitably into that branch of industry. So far as I have observed they have not yet found it to their interest to select the clays which burn white so as to imitate the English white crockery.

Such clays exist in this formation, and they will, after a time, come into use and enable us to supply all our wants in this respect.

The lead colored clays in the vicinity of Baltimore have always been celebrated for enabling us to produce two articles of extensive use.

The first consists of building bricks, of which those made near Baltimore are universally considered the finest in the United States for uniformity of color and smoothness.

The second article made of the light colored clays, free from iron or nearly so, is what is termed the *Baltimore stone-ware*, so extensively used throughout the State. It is very strong, and as the glazing is effected without the use of lead or other deleterious matter, and may be used for any purpose for which such ware may be wanted.

The red pottery owes its color to the large quantities of iron in the clay used in its manufacture. The inside of the vessels, and often the exterior also, is glazed with the aid of oxide of lead, and sometimes, oxide of manganese.