1841.]

I have been unable to procure certain information regarding the price at which the inferior kinds of impure Soda are sold in England, but when the expensive and laborious process as above described, is considered, it seems almost impossible that any product can be made at so cheap a rate, as that procured by the simple manipulation required for the mineral salt.

I have endeavoured by sending to England samples through a commercial gentleman to make this report more complete, by being able to state the value of the article on certain grounds, but have been unsuccessful, the point appearing to depend in great measure on the import duty which will be charged in England By the present regulations, natural alkali imported from places within the limits of the Honorable Company's charter pays a duty of 2 shillings per cent. but to ascertain the point it appears to be necessary to ship a few tons, and then try by experiment at what rate of duty the article will be admitted.

I am aware that some years ago attempts had been made to introduce Indian Soda into the English market, but which failed in consequence of the opposition of the English manufacturers, but I submit, that the soils now pointed out, yielding by single crystallization a pure Soda, were not before known, and in consequence, in the former experiments to which I refer, it became necessary to fuse the salt for the purpose of purifying it, which expensive process of course prevented a successful competition with the manufacturers of England.

# Report on the Kaolin Earth of Mysore. - BY CAPT. J. CAMPBELL,

## Assistant Surveyor General.

A great portion of the level surface of the table land of Mysore, is formed of a red ferruginous arenaceous earth, resembling much some of the softer varieties of the upper red sandstones of England.

This formation, which may be called for convenience 'Red Marle,' is superposed upon a continuous bed of hornblendic granite, and is connected with it by a graduation, both in structure and composition, through an interposed layer of white kaolin earth which is found between the two.

The kaolin is in some places several feet in thickness, and is generally of a pure white colour, and soft greasy feel, and is sometimes mixed with a fine quartoze sand in small quantity.

This kaolin is mentioned by Dr. Heyne, who mistook it for pipeclay.

The extent of this bed of kaolin I have not had an opportunity of ascertaining, but I know that it is found from Bangalore as far north as Nundydroog.

That this kaolin is fitted for the manufacture of the finer kinds of pottery and porcelain I have been able to ascertain by direct experiment, in consequeuce of the laborious process, and, to an individual, expensive apparatus required to grind it down to an impalpable powder, by stones of hornstone under water: but from its mineralogical characters I believe there can be little doubt of its being of finer quality than many kinds in England.

My attention was called to the mineral in consequence of being engaged in researches on the fusibility of the rocks and minerals of the Salem district, generally called igneous, in which it was necessary to expose them to a very high degree of heat, in a wind furnace sufficiently powerful to fuse cast steel, and for which I could procure no crucibles at a sufficiently cheap rate, and I have found this kaolin, when mixed with an equal quantity of finely pounded quartz, to fully answer the purpose of affording crucibles and covers, upon which the most intense heat has hardly any effect, the outside being only slightly glazed by the alkali of the fuel, and the crucible being very slightly softened. They are also much superior to those called Hessian, in not cracking, unless by very extreme changes of temperature.

In Calcutta, there are probably many manufactories carried on in the fusion of metals, &c. where this earth would be of great value, and it might even be useful in the manufacture of fire bricks, for lining furnaces, &c., if the carriage by land for 200 miles would not render them too expensive.

At Madras, at the mint for making musles and crucibles, at the Gun Carriage manufactory, and in several other manufacturing depots, this kaolin might be useful; and a manufacture of the articles might be either established at Bangalore, or the earth itself might be transported.

Coarse Chinaware is an article of import from China, and plates of this ware are purchased in considerable quantities by some of the Natives at 4 annas each, while it is reasonable to suppose that these articles might be manufactured in Mysore at a cheap rate, without the necessity of any very expensive machinery being required.



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