

tained the presence of a foreign metal in the rich iron ores of Deer creek, in Harford county. This ore which contains from eighteen to twenty per cent. of the metal Titanium, and is here called Titaniferous iron ore, was found, in consequence of this admixture, to be exceeding refractory. It cannot, in fact, be smelted by itself; but requires to be mixed with some poorer ores before it can be made to yield its metal. Experiments directed by science have shown, that by mixing it in the proportion of two parts to three, of an ore yielding thirty-three per cent. of metal, it may be very readily worked. Similar considerations apply to those varieties of ore which, for the sake of distinction, might be called Calciferous iron ores; and which for a long time were thought to require the addition of limestone, as a flux; these, likewise, experience has proved, not, however, until after considerable expenditure of time and money, to be perfectly manageable without it.

To be able to specify those different kinds of ore in the manner now indicated, it is evident that it will be frequently necessary to subject them to a careful chemical analysis. The advantages, which those who have to use them will derive from such a specification, it is presumed, must be apparent. Nor do these considerations apply with less weight to the varieties of ores of iron which are not used for the production of the metal. Among them, the Chromiferous iron ores, which furnish a substance employed in a different branch of our manufacturing industry, require a separate mention. These more usually called Chrome ores, are known to be extensively employed for the production of several articles used as pigments and dyes. The value of the pro-