ment that was cast in a mould, or where the metal was ever melted. The great bodkin, mentioned by Mr. Foster, from the collection of Mr. Perkins, now I think in your Society collection, I examined at Philadelphia in 1876. The tortuous ridges which were regarded as due to creases in the moulds, are merely the result of irregular oxidation.

A gentleman from Syracuse, whose name I have not in mind, said to me that he had immersed an ancient cold wrought copper implement in weak acids, and the corroded portions were very like those on the bodkin. Cold wrought copper cannot be mistaken for ingot or melted copper. In pounding the native nuggets into shape, they become laminated, and the hardness is irregular. I should expect the oxidation to be irregular also.

It is very strange that the mound builders did not melt copper; but I have seen no evidence that they did. There is a popular belief that they knew how to temper it and make it harder than ingot copper. No people of any age are known to have hardened copper in that way. All the hard copper is an alloy with tin. The Lake Superior copper, in its matrix, is as hard as the ancient implements, and both are harder than the copper of commerce.

COLUMBUS, O., June 4, 1879.

By P. R. Hoy, M. D.

I propose, briefly to consider the manner in which the ancient inhabitants of this country fabricated those curious copper implements, which the plow and spade turn up all over Wisconsin and the adjacent States. A few of the specimens, upon a superficial inspection, seem to be cast. Did these rude people possess the skill and intelligence requisite to cast articles of pure copper? Before a cast be made, it is necessary to have an exact copy moulded either in sand, plaster, clay, metal, or other suitable substances. The formation of sand moulds is by no means so simple a matter as it seems at first thought. It requires long practical experience to overcome the disadvantages attendant upon the materials used. The moulds must be sufficiently strong to withstand