

By Fred S. Perkins

In January, 1873, I expressed to Dr. John W. Foster, of Chicago, my belief that many of these ancient copper implements were cast in moulds, and when I showed some specimens, he became convinced, and re-wrote the portion of his manuscript that related to the manner in which these objects had been made.¹

In February, 1876, I showed similar specimens to Sir Wm. R. Wilde,² in Dublin, Ireland. He examined them attentively, and said they had certainly been cast, "probably in clay moulds."

M. Gabriel de Mortillet, and other French archæologists, were of the same opinion. I intended to show them to members of the Anthropological Society, in London, but it so happened that I could not stop there on my way home.

Since my return to Wisconsin, I have obtained many ancient copper objects, which show to my mind very good evidences of casting, and also some that do not bear any such evidence; but, on the contrary, by their laminar structure, show quite clearly that they were made in a different way, probably by hammering.

BURLINGTON, WIS., June 2, 1879.

By Col. Charles Whittlesey

In reply to your inquiry of the 31st ult., I can only say, in brief, that I have never seen a veritable ancient copper imple-

¹ In *Pre-Historic Races*, by J. W. Foster, LL. D., p. 259, the learned author remarks: "Mr. Perkins, to whose archæological collections, I have had occasion so often to refer, * * * had arrived at the same conclusion as myself, that, by reason of certain markings, it was evident that the mound builders possessed the art of smelting copper, and he has furnished me with the foregoing illustrations, in which the traces of the mould are clearly defined. It is impossible to infer, after a careful examination of these specimens, that the ridges could have been left in the process of hammering, or that they have resulted from unequal oxidation."—L. C. D.

² Sir Wm. R. Wilde, a learned antiquary, vice-president of the Royal Irish Academy, and author of a descriptive catalogue of the antiquities of that institution, embracing articles of stone, earthen, copper and bronze. In describing the copper celts found in Ireland, Mr. Wilde does not, in his work, express any opinion as to their mode of manufacture, but adds: "Upon the steppes of Tartary, and in some of the wildest parts of Russia, the remains of very ancient copper furnaces, of small size, and of the most rude construction, have been discovered."

The fact that bronze implements are found in Ireland, as they were by Cortes and his followers in Mexico, is evidence that the natives knew how to form the amalgam of copper and tin, and this would very naturally lead to the use of moulds.—L. C. D.