distance, where copper could hardly be expected to find its way except at rare intervals, at least two examples, and we know not how many others of which they make no record, in which copper was wrought into forms in which it has recently been found, and of which you have specimens in the archives of your Society.[10]

But in addition to this, the Algonquin chief, in 1610, fresh from the region where the copper was found, testified to the mode of its manufacture. They gathered it, he informed Champlain, in lumps or small pieces; melted it; spread it into sheets and polished it off under the stone hammer. This is a general statement, and shows that the two processes of melting and malleation were familiar to the Indian in the manufacture of copper. But some of your implements were plainly cast in moulds.[11] The Algonquin chief does not testify as to this mode of manufacture. He

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[10] The Historical Society of Wisconsin *Collections* report in 1878, "forty copper beads, one-half inch in length, apparently made from *thin rolled copper.*" In the description of facsimiles of copper implements, *Colls.*, Vol. vii., p. 101, "Fig. 7 shows a handle rolled out of the *same plate* of copper with its blade." The knives and arrow-heads, whose sockets were made by turning up the edges, were apparently cut from copper sheets or plates. *Vide* Lapham's *Antiquities of Wisconsin*, p. 76. Also, Foster's *Pre-Historic Races of the United States*, p. 254, et passim.

[11] The history of the prehistoric copper implements, anterior to their recent discovery, is unrecorded, and only inferentially known. All evidence as to the mode of their manufacture is derived from their superficial appearance. That they *appear* to have been cast in moulds, is the testimony of most writers on this subject, so far as we know, who have examined them. The weight of *evidence*, therefore, as to the mode of their manufacture, goes to show that they were cast in moulds.

If the theory that they were cast in moulds be denied, it will be reasonable to demand that some other method of manufacture be suggested that shall not be encumbered with obstacles and difficulties to be overcome even more insuperable than those supposed to be connected with the process of casting them in moulds. To present an implement of a similar appearance not cast, but "swedged" by means of an iron matrix, would hardly be admissible as disproving the theory, unless it could be shown that the Indians used the iron matrix for the same purpose. Nor would a matrix cut in a granite boulder by the stone-cutter's chisel of steel be admissible, unless it could be proved that the Indian had the same kind of tools which he could use for the same purpose. When implements similar to those alleged to be prehistoric castings shall be otherwise made by means which the Indian had at his command, it will go far to prove that these implements having the appearance of castings, may have been fabricated without the use of moulds.

A series of experiments might well be instituted to illustrate the Indian method of constructing copper implements. The conditions should coincide strictly with such as were possible to the Indians. Copper melts at about 2000°, more or less. Wood produces a heat of 3000°, more or less. With such a blast as the Indian could easily avail himself of, it would be possible to test the practicability of melting copper by a heat produced by wood, and likewise by casting it in such moulds as he could construct from sand, loam and clay.

Nothing is more remarkable in the history of man, than the ingenuity and practical skill which, in his rudest state, he summons to his aid whenever his necessities demand them.