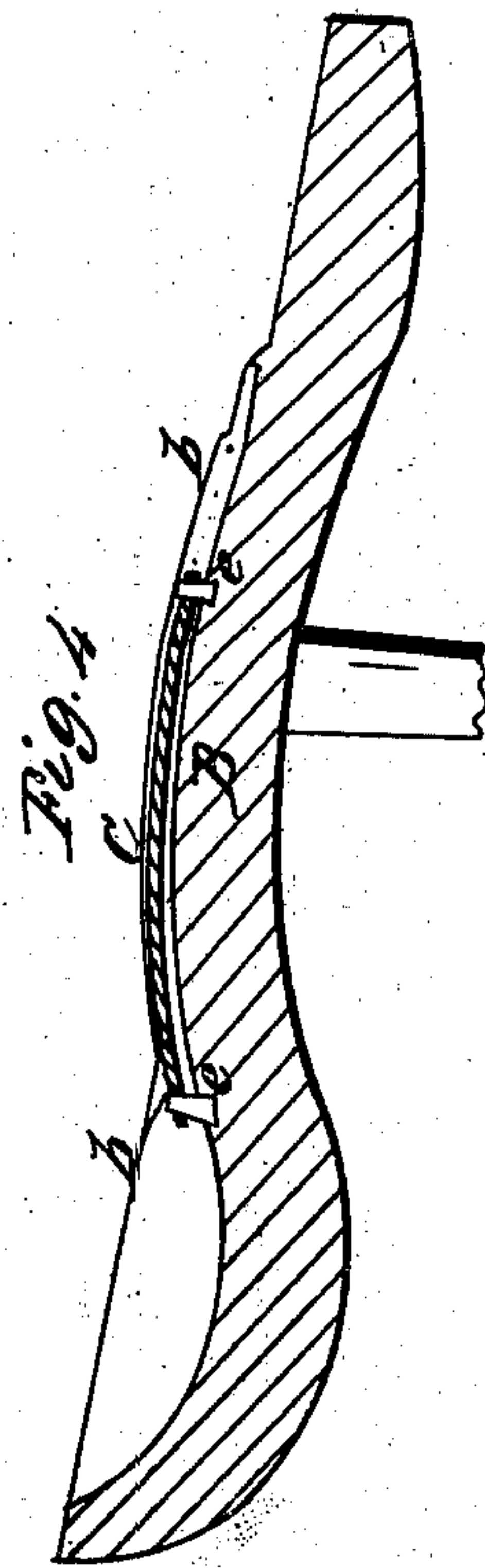
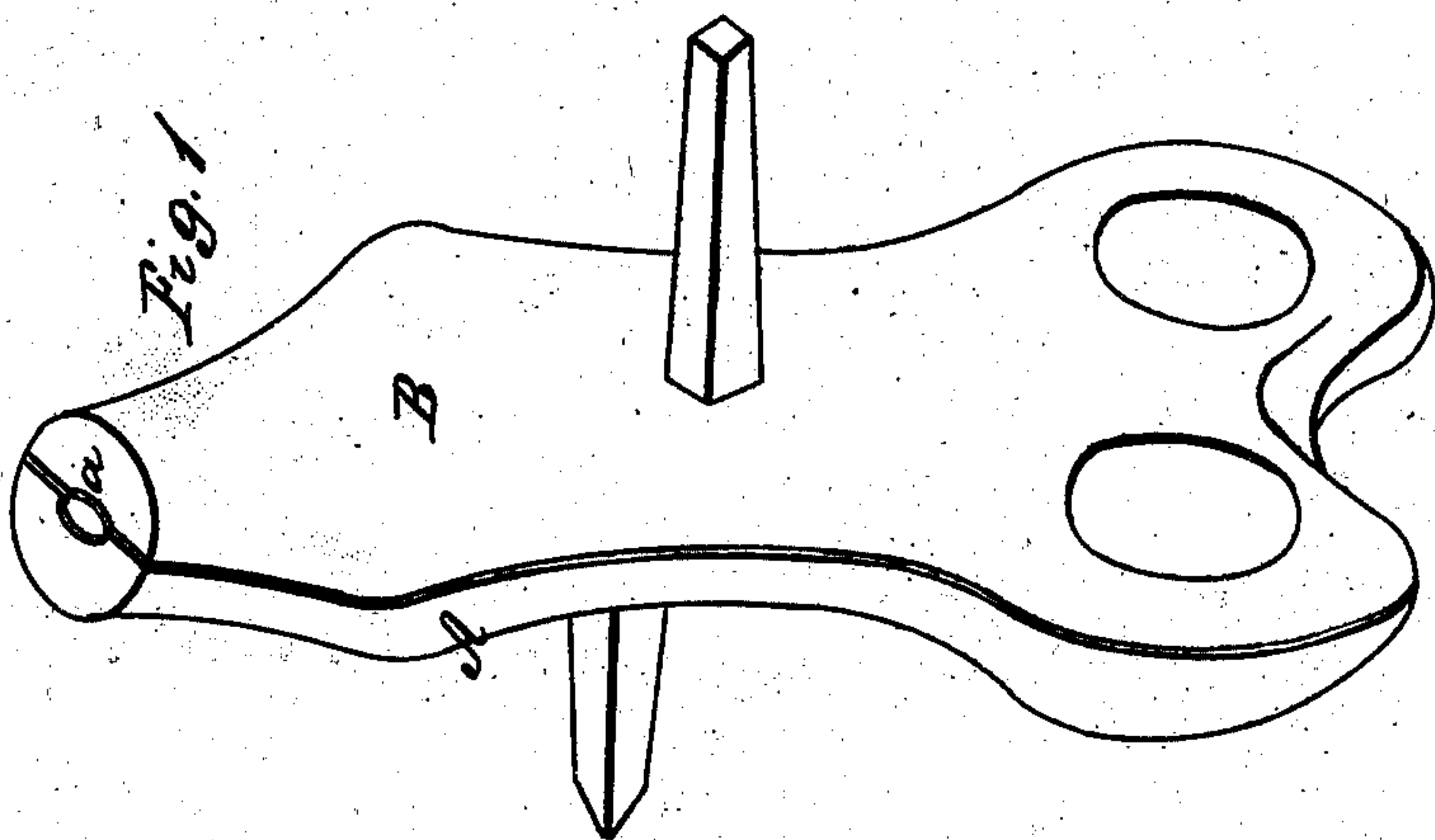
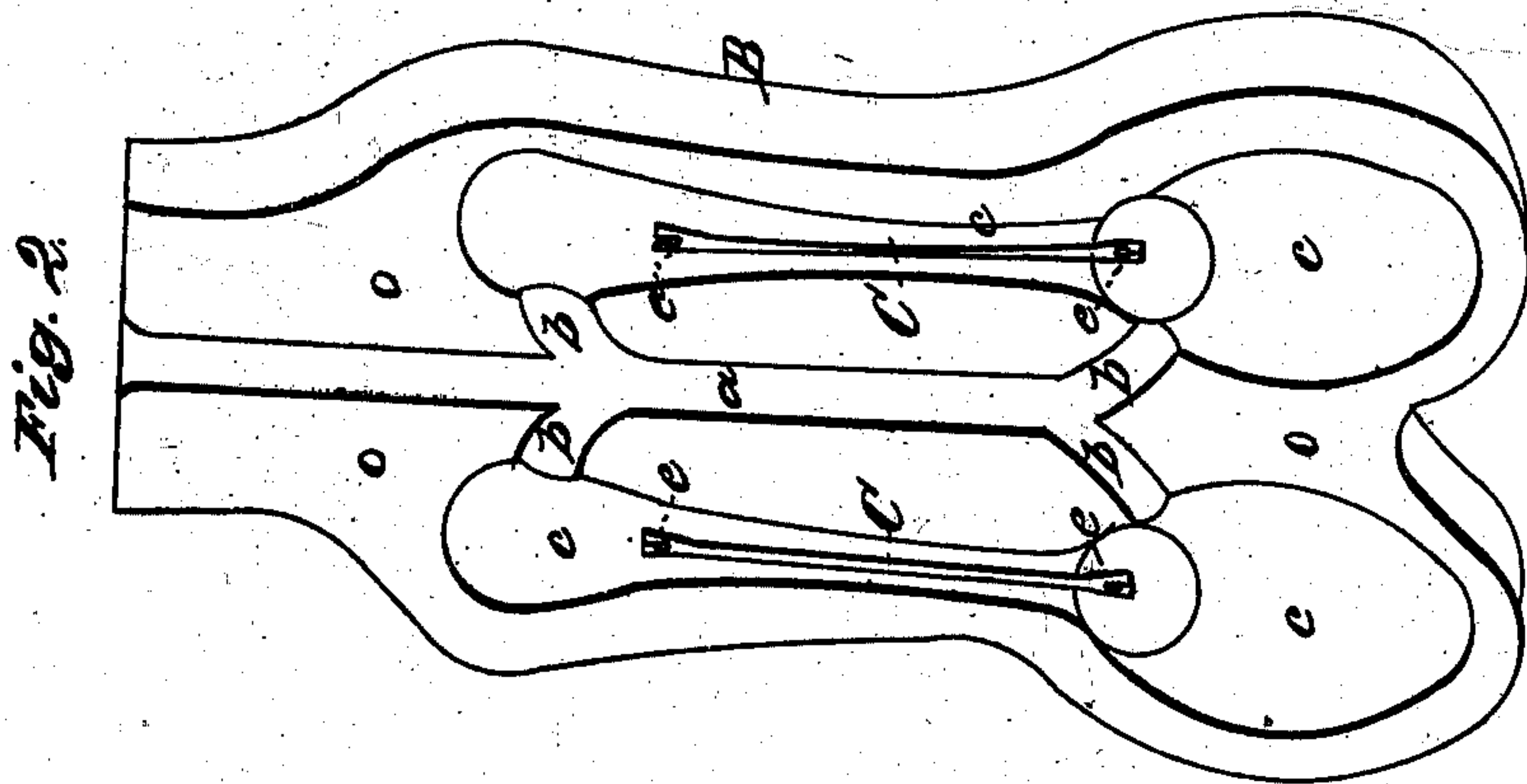
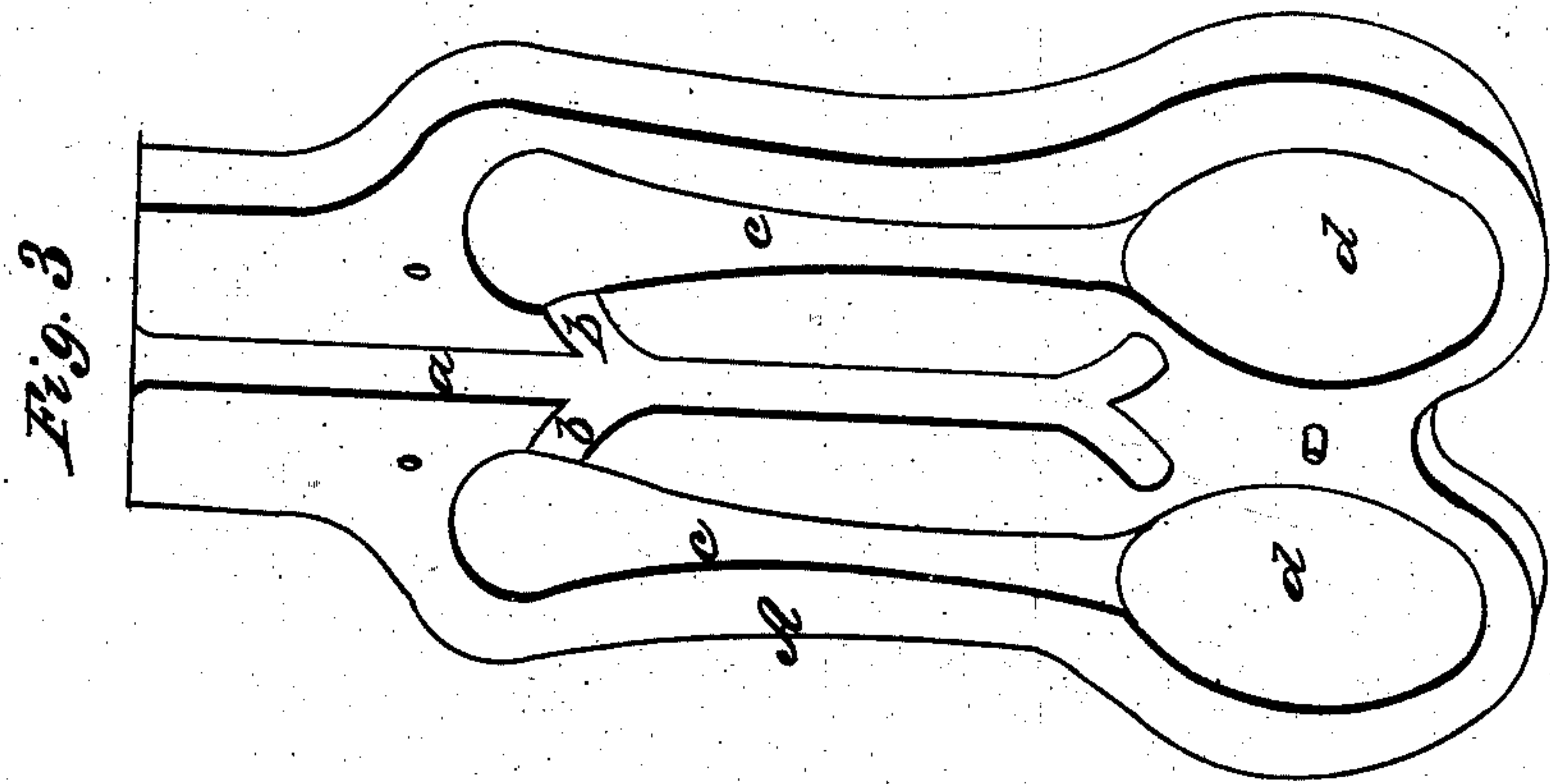


*L. Boardman,
Making Spoons.*

N^o 8102.

Patented May 20, 1851.



UNITED STATES PATENT OFFICE.

L. BOARDMAN, OF EAST HADDAM, CONNECTICUT.

IMPROVEMENT IN THE MANUFACTURE OF WIRE-STRENGTHENED SPOONS, &c.

Specification forming part of Letters Patent No. 8,102, dated May 20, 1851.

To all whom it may concern:

Be it known that I, LUTHER BOARDMAN, of East Haddam, in the county of Middlesex and State of Connecticut, have invented certain new and useful improvements in the manufacture of spoons or their handles made of block-tin or any other fusible metal or metals, which improvements are equally applicable to the construction of other handles having wires within them; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of the shell and core parts of a mold united. Fig. 2 is a parallel perspective view of the shell of the mold-supporting wires within it. Fig. 3 is a similar view of the core part of the mold, and Fig. 4 is a longitudinal section of the shell portion of the mold, Fig. 2, taken through one of the forms and showing the manner of carrying the wires.

The nature of my invention refers to the construction of the handle of the spoon or other handle having a wire inclosed within it; and it consists in supporting the wire within the form composing the shape of the handle on points or projections inserted in or secured to one half of the mold, so that the metal will be cast or run round the wire and small apertures left in the handle by the points carrying the wire, which may afterward be filled up by separate insertion of proper material, or by dilation of the metal forming the handle, produced by pressure through stamps or otherwise.

To enable others skilled in the art to make and use my invention, I will proceed more fully to describe it.

A represents what is usually termed the "shell portion" of the mold used in casting spoons, and B the core part of the same. The construction of these parts is similar to those in use under protection of a patent granted me, or need not necessarily differ (materially) from molds in ordinary use.

The parts or blocks A B forming the mold are shown in drawings constructed with two forms for casting spoons in pairs; but one form only, or three or more, may be used in a single mold, if preferred.

a a of either block composes the main gate or channel, through which the fused metal is run, having branches *b b b b b* from it to the space left by either block in their interior when united corresponding to the shape of the spoon to be made, and which is composed by the several indented portions, *c c c c c*, and projecting parts *d d* of the forms in both blocks A B.

Having thus sufficiently described a mold used in making spoons, I will now explain my improvements applicable to the construction of their handles when wire (for giving additional strength and economizing stock) inclosed within the handle is desired to be used.

In order that the wire intended to be inclosed may be kept free from contact with the surfaces of the forms, so that the fused metal will run round it, an extension of the wire hitherto has been held necessary, passing either through the end, face, or side of the handle, and secured on the outside of the form, so that the casting, when taken from the mold, has one end of the wire projecting from it, which is afterward cut off, but the end of the wire where cut off being visible the handle is not only thereby disfigured, but, by immersion in water or through damp, is apt to corrode. I therefore propose not to extend the wire as usual through the form, but having it of the desired length and shape, to inclose and employ it in the formation of the handle as follows:

C C are the wires in the two forms of the lower block, B. They may be shaped in conformity with the curve or figure of the handle, and may be of a dovetail form at their ends, in which are slits or apertures; and *e e e e* are points or projections secured to the block, which may be made of wedge shape and used for entering the slits in the ends of the wires *C C*, so that the points *e e e e* carry or support the wire free from contact with the surfaces of the forms, and round which the metal will run, inclosing the wire within the handle, and leaving only small cavities or spaces in the back of the handle where the points *e e e e* are secured to the block, which may be filled in by the usual marks or stamps pressed on the back of the handle, which, by the dilation produced through the pressure employed, will

cause the cavities to be filled in by the metal composing the handle; and the inclosed wire rendered invisible and exempt from corrosion; also, much time will be economized in adopting this improved process of inserting the wires over the ordinary modes employed, which, in the exactness required to adjust the wires centrally in the forms, occupies considerable time to arrange, and by employment of suitable machinery to lay the wires on the points *e e e e* the time consumed will be further economized, which not only facilitates the manufacture, but also (where metal liable to oxidize when heated is used in forming the handles) the time saved by my improved pro-

cess will likewise lessen the waste or economize stock.

I do not claim employing a wire within the handle, as such has already been done; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

The manner, substantially as herein shown and specified, of inclosing a wire of the required exact length within the handle by supporting it on points secured to the mold, and projecting midway or partly into the form.

LUTHER BOARDMAN.

Witnesses:

S. H. WALES,
O. D. MUNN.