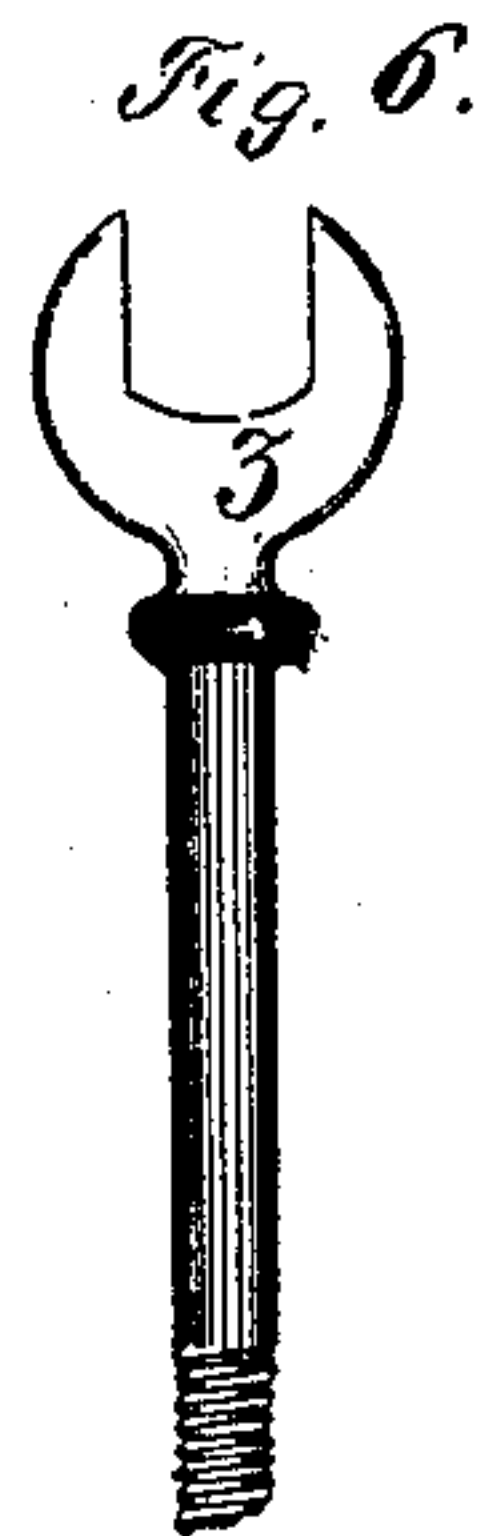
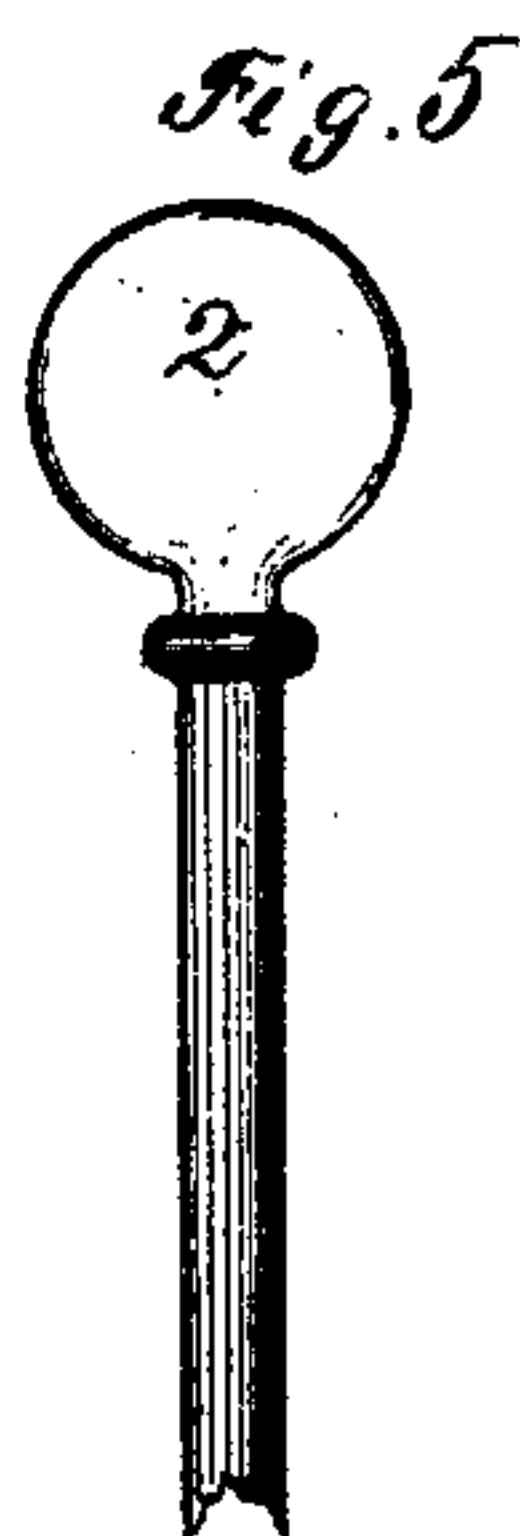
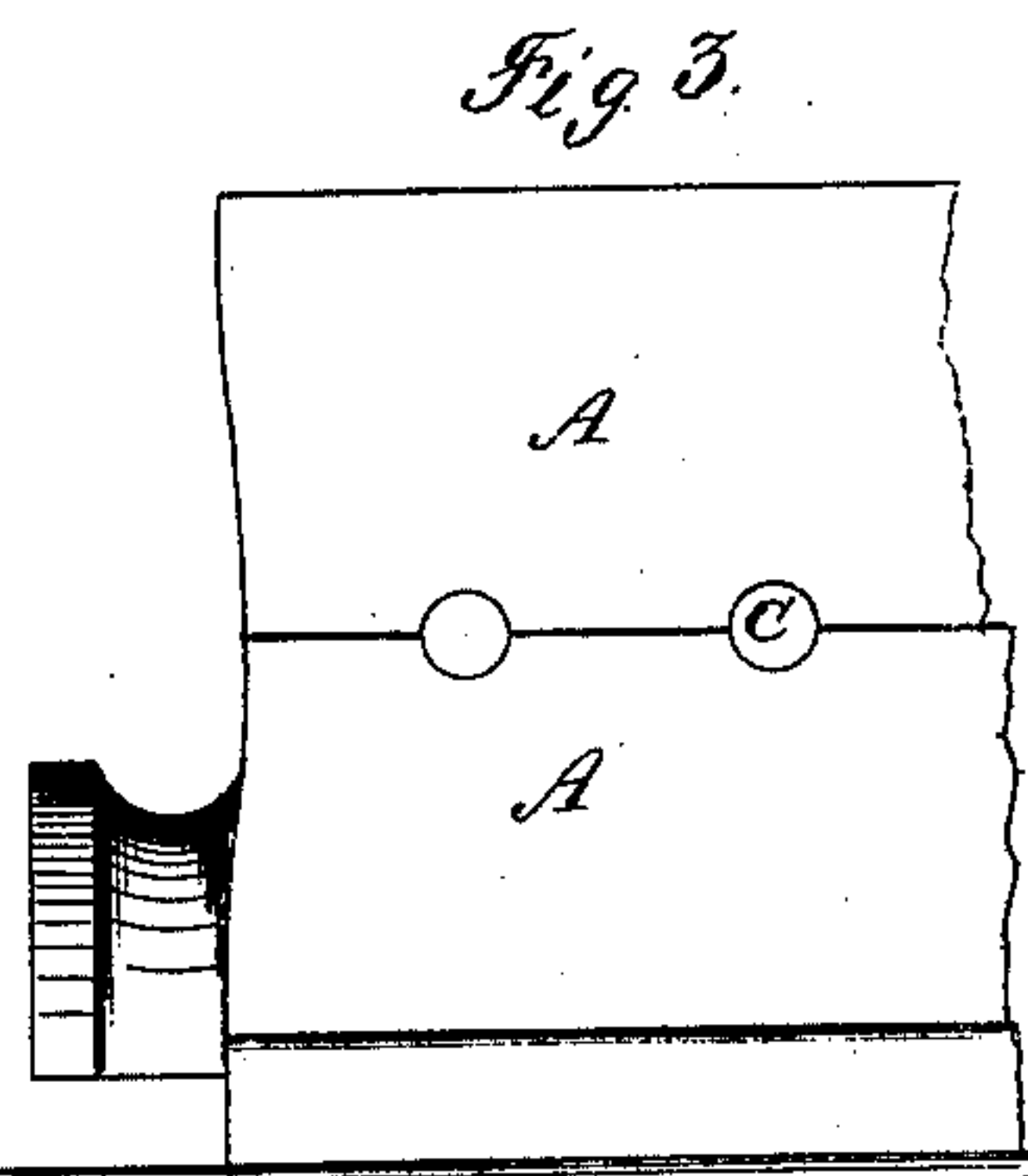
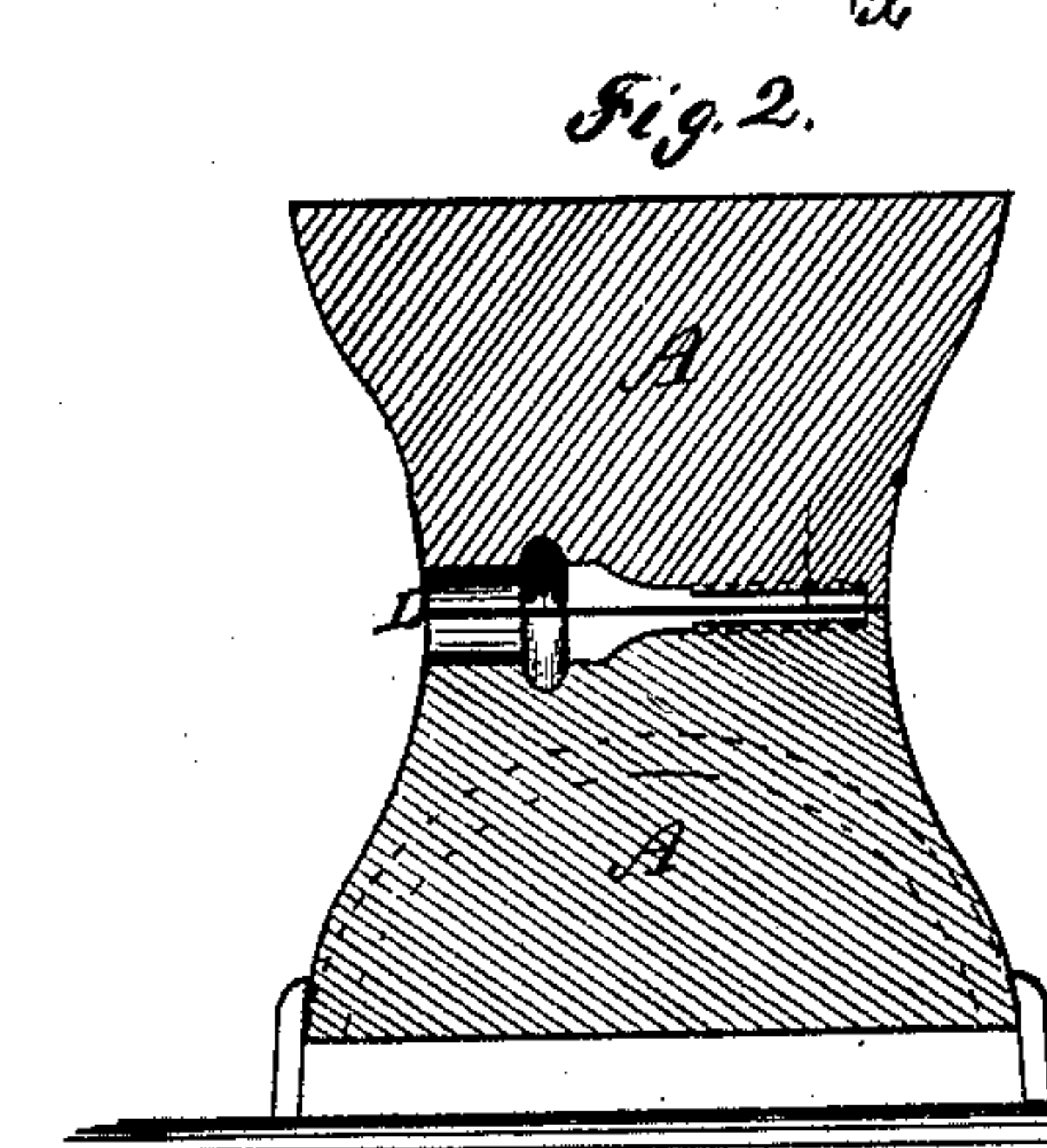
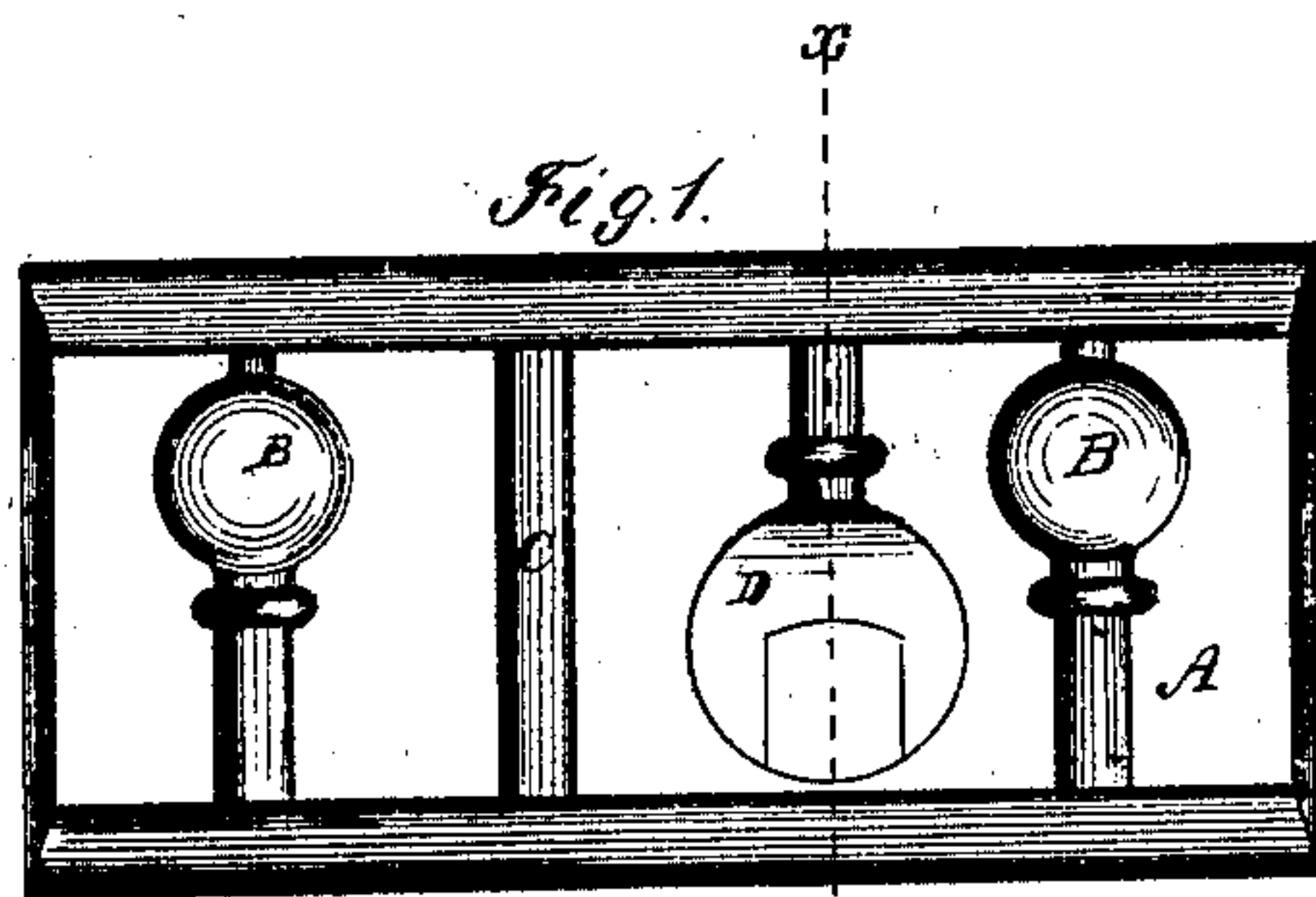


T. Meikle,
Die for Swaging Wrenches.
No. 108,502, *Patented Oct. 18. 1870.*



Witnesses:
A. Ruppert.
Ch. Clauson

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United States Patent Office.

THOMAS MEIKLE, OF LOUISVILLE, KENTUCKY.

Letters Patent No. 108,502, dated October 18, 1870.

IMPROVEMENT IN DIES FOR SWAGING WRENCHES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, THOMAS MEIKLE, of Louisville, in the county of Jefferson and State of Kentucky, have invented certain Improvements in Dies for Swaging Wrenches; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing making part of this specification, in which—

Figure 1 is a plan view of the lower die, showing the different forms to which the iron is reduced on being converted into a wrench.

Figure 2 is a transverse vertical section of both dies, showing the recess in which the finishing operation is performed upon the wrench.

Figure 3 is a section of a longitudinal elevation, showing the cavities in which the handle of the wrench is swaged, and a projection upon one end of one of the dies, which may be used for attaching it to the anvil, or to the helve of the hammer.

Figure 4 is a representation of the appearance of the blank after the first swaging operation has been performed.

Figure 5 is a representation of the blank after the swaging has been completed.

Figure 6 is a representation of the wrench after it has been completed by cutting a screw-thread upon its rounded end, and punching out a portion of its flattened end, to adapt it to receive the nut to be turned.

This invention relates to dies for swaging wrenches which are designed to be used in connection with plows, and which are denominated clevis-wrenches.

It is very desirable that, in this type of wrenches, the parts should be of uniform size, as, when they are made in quantities, their rounded portions are required to pass through and properly fit a hole of a given diameter in the clevis, while their flattened and slotted ends are required to fit the several nuts upon a plow.

The object of this invention is to provide dies which shall rapidly swage, from bars of iron, wrenches which shall meet the above-recited requirements.

With a view to the accomplishment of the above-named results, this invention consists in the construction and arrangement of dies, as will be more fully explained hereinafter.

A A in the drawings refer to dies which are made of cast-iron, and have the cavities in their faces

formed when they are cast, but which are far better when made of cast-steel, or of wrought iron, and faced with steel, in which case the cavities should be milled or drilled out. One or both of these dies may be made with a projection upon its or their ends, as shown in fig. 3, by which to secure it to an anvil or anvil-block, or to the helve of a trip-hammer. They should be of sufficient length to allow room in their faces for the number of cavities shown in the drawings, and of sufficient width to properly swage the different parts of the wrench.

B B refer to the cavities in the face of the dies, one-half of which is in the upper one, and the other half in the lower one, in which the blank or bar of iron is first placed to be swaged. This bar should be somewhat larger than the shank of the wrench after it is finished, or nearly as large as the largest diameter of the cavity in the dies. The bar of iron or blank from which the wrench is to be swaged, after being heated, is to be placed upon the lower die, and in or over the cavity B. By a few strokes of the upper die, during which the operator must turn the rod, to prevent the formation of fins, a blank, as shown in fig. 4, will be formed.

C refers to a cavity, which is used to finish the swaging of the handle or shank of the wrench; and

D refers to the cavity in which the globe or ball upon the end of the blank 1 is swaged into the form shown at 2 in fig. 5; or, if preferred, slight projections may be raised in the surfaces of such cavities, as shown in fig. 2, which will swage the wrench into the form shown in fig. 1, thus indicating the portion which is to be cut or punched out, in order to give the wrench the appearance indicated at 3 in fig. 6.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent, is—

The within-described dies, having in their faces cavities for swaging clevis-wrenches, substantially as shown and described.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS MEIKLE.

Witnesses:

J. E. BADGER,
JAMES BELL.