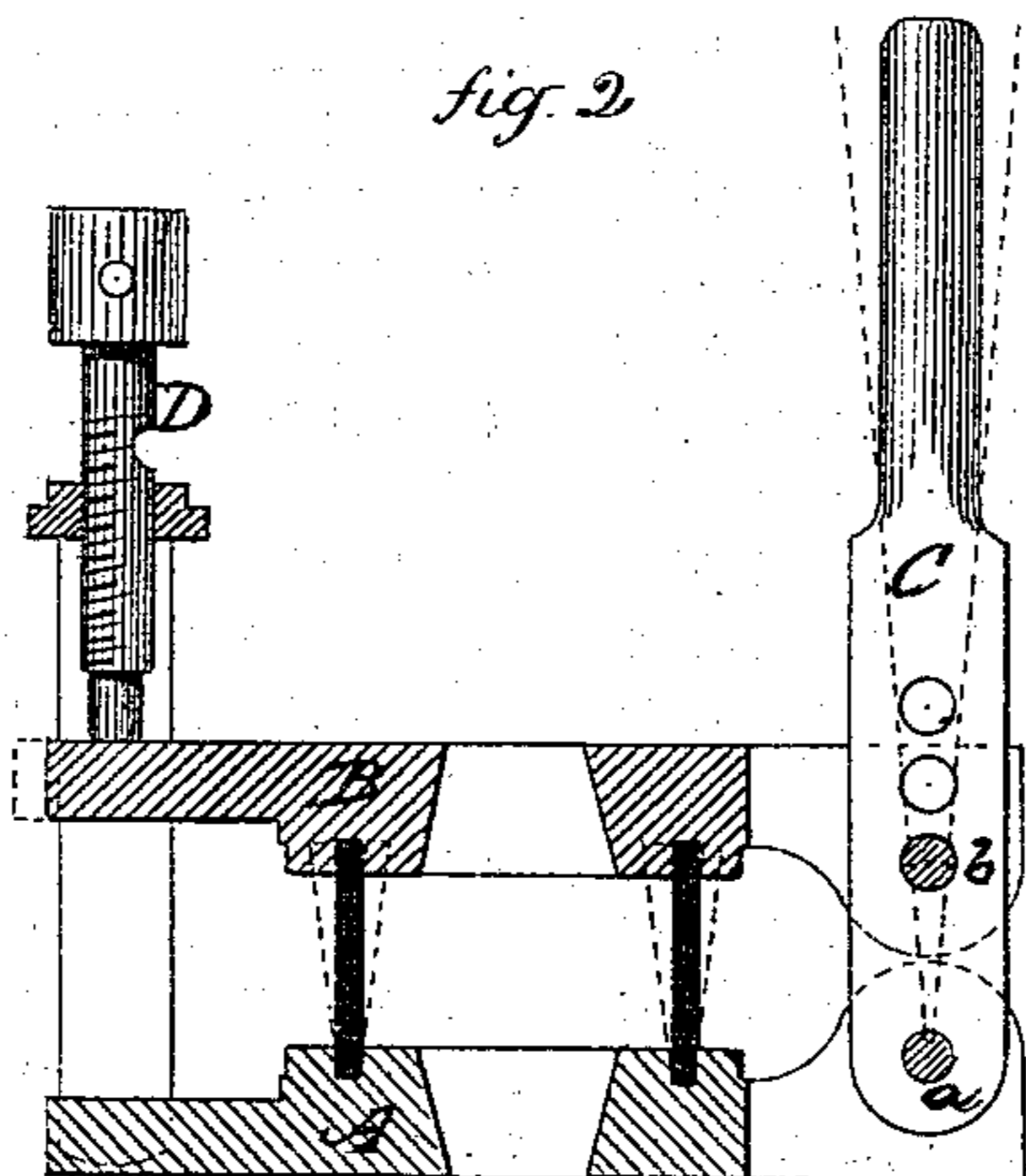
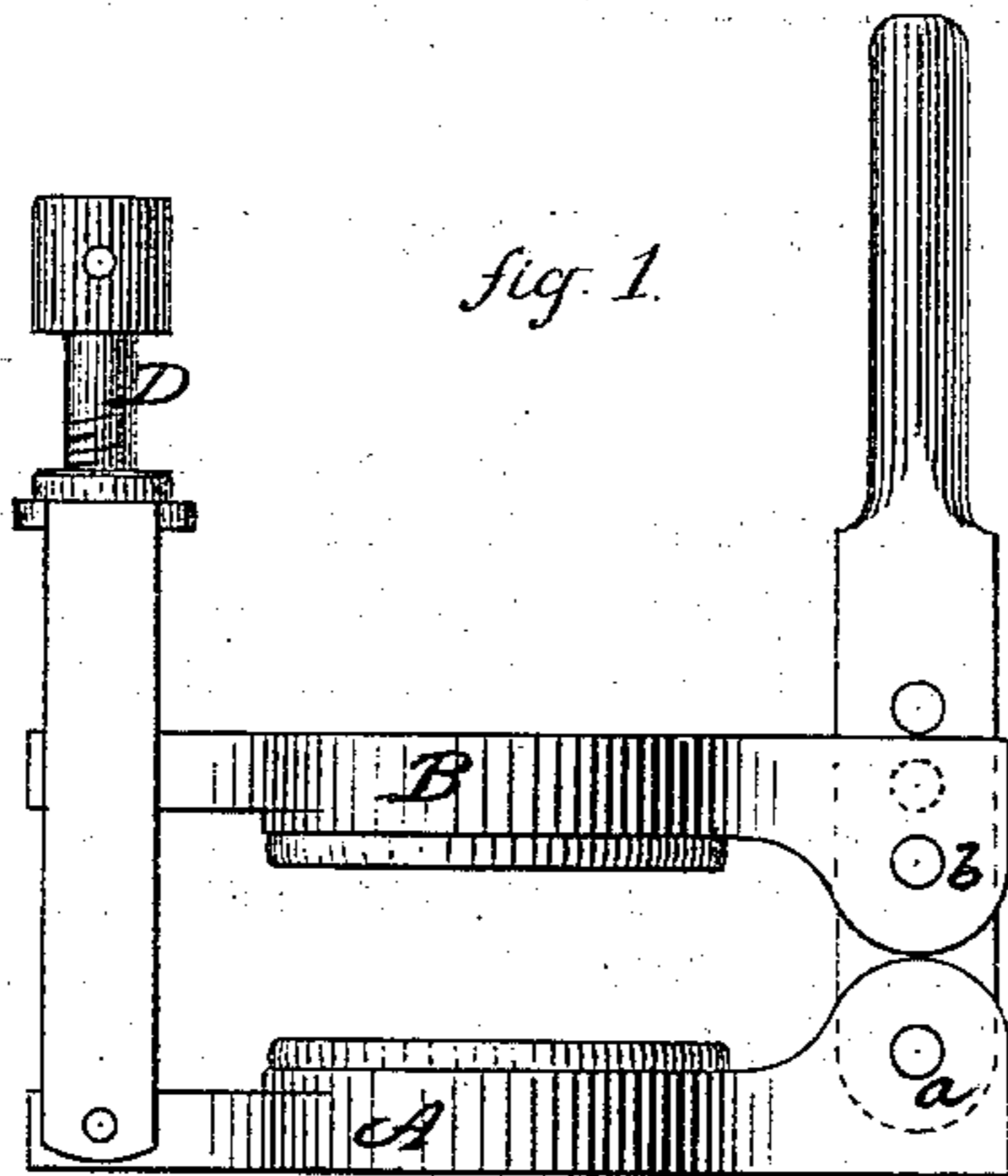


T. F. HAMMER.

Apparatus for Straightening Cylinders.

No. 125,892.

Patented April 23, 1872.



Witnesses

J. H. Shumway
A. J. Tibbitts

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By his Atty

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UNITED STATES PATENT OFFICE.

THORVALD F. HAMMER, OF BRANFORD, CONNECTICUT.

IMPROVEMENT IN APPARATUS FOR STRAIGHTENING CYLINDERS.

Specification forming part of Letters Patent No. 125,892, dated April 23, 1872.

To all whom it may concern:

Be it known that I, THORVALD F. HAMMER, of Branford, in the county of New Haven and State of Connecticut, have invented a new Improvement in Apparatus for Straightening Cylinders; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents in—

Figure 1 a side view, and in Fig. 2 a longitudinal central section.

This invention relates to an improvement in straightening or "trueing" metal cylinders, designed more particularly for malleable-iron work, but applicable for other purposes. In annealing cast cylinders of tubular form they are liable to spring or twist out of shape; hence many such articles are lost. The object of this invention is to save these castings; and it consists in the construction of two plates, one of which is adjustable as to its distance from the other, and the two connected by a lever, so that the movement of the said lever will throw one plate in one direction or draw the other plate in the other direction; and the surface of each plate is constructed to receive and hold one end of the article to be straightened. Power being applied to the lever, moves the plates to bend or force the metal into the required position.

A is the lower plate, and B the upper, here represented as both alike. C is a lever, pivoted to the lower plate at *a*, and to the upper plate at *b*, so that throwing the lever forward or back the plate B will be accordingly moved. The plate B is made adjustable as to its distance from the plate A by a succession of

holes through the lever, into either of which the pivot *b* may be set. D is a set-screw, arranged to bear upon the opposite end of the plate B, but so as to allow the free movement of the plate B longitudinally.

The upper surface of the lower plate and the lower surface of the upper plate are each fitted to receive the article to be operated upon, here represented as a short tube or cylinder denoted in solid black. Supposing this cylinder to have been sprung to the left (as denoted in broken lines) in the process of annealing, it is set upon the under plate, and the upper plate placed thereon, which would carry the plate B to the left, as denoted in broken lines; then the operator takes hold of the lever C and draws the plate over until it brings the cylinder into a vertical position, as denoted in Fig. 2, the metal yielding and retaining that position; or if the cylinder be sprung to the right, as denoted in broken lines, the operation would be the reverse.

From this description the operation of straightening or "trueing" up various articles will be apparent, it only being necessary that the plates be constructed to receive the article to be operated upon.

It will be understood that this invention is designed with special reference to the manufacture of many articles of the same kind.

I claim as my invention—

The two plates A B, constructed to receive the article to be operated upon, and combined with the lever C and set-screw D, or equivalent, in the manner and for the purpose substantially as set forth.

T. F. HAMMER.

Witnesses:

A. J. TIBBITS,
J. H. SHUMWAY.