

T. BOOTH.
PIPE-WRENCH.

No. 178,902.

Patented June 20, 1876.

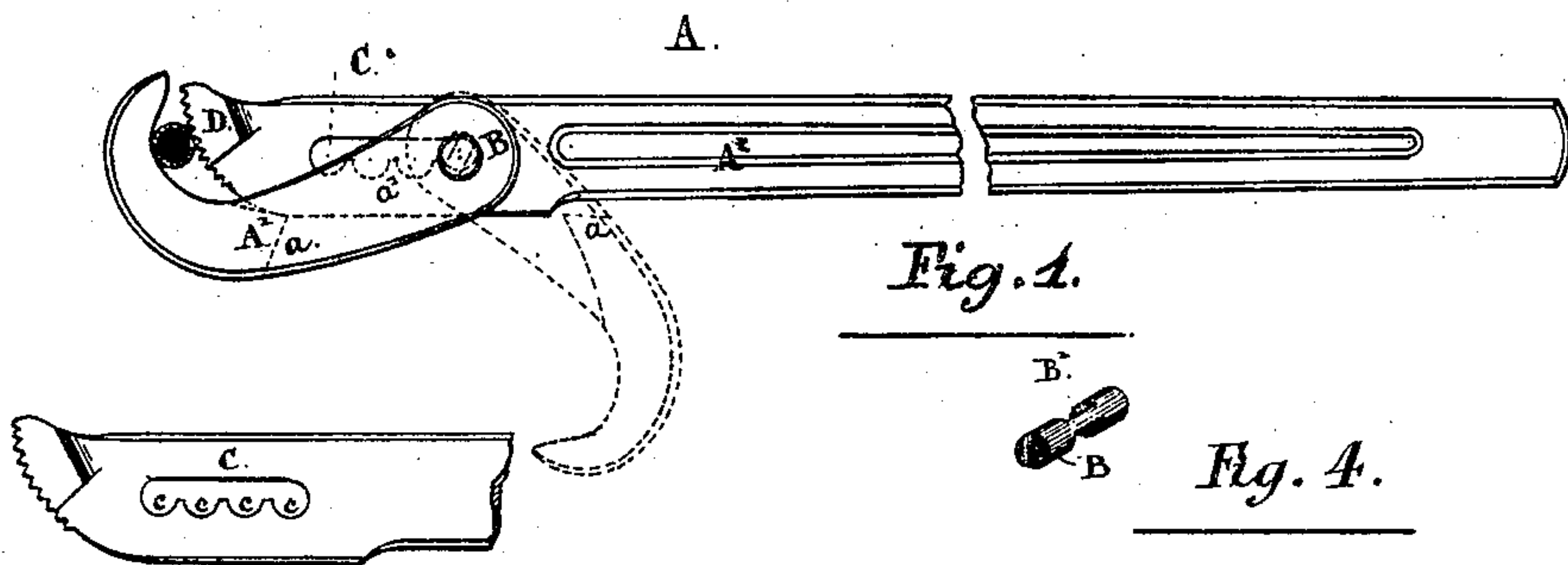
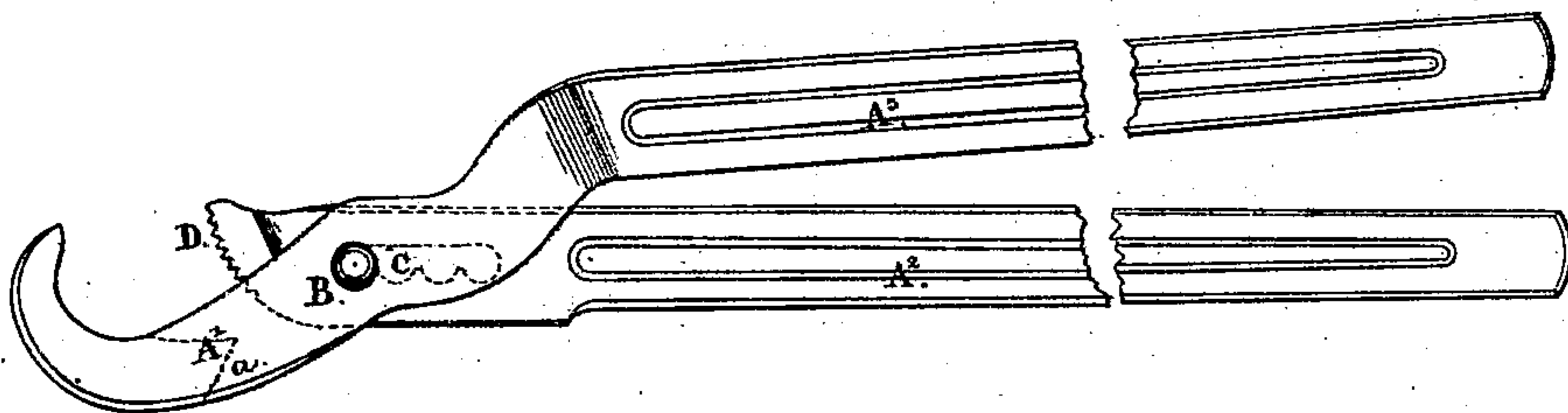
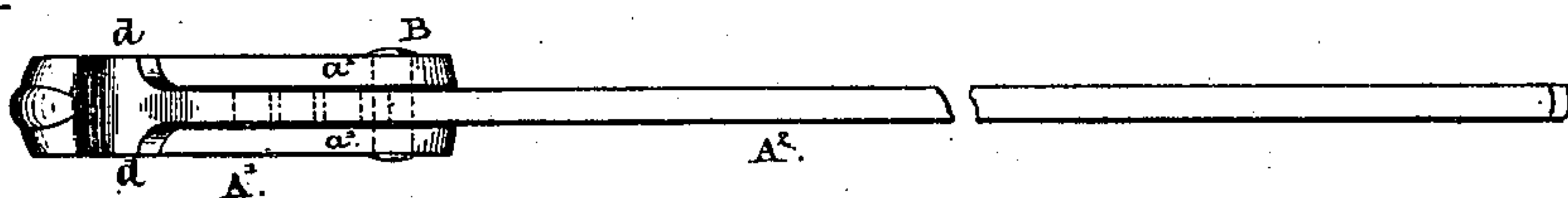


Fig. 5.



WITNESSES.

Harry Hanson.

William Sanford.

INVENTOR

Thomas Booth

per Richard Hird

Att'y

UNITED STATES PATENT OFFICE.

THOMAS BOOTH, OF TORONTO, CANADA.

IMPROVEMENT IN PIPE-WRENCHES.

Specification forming part of Letters Patent No. **178,902**, dated June 20, 1876; application filed February 25, 1876.

To all whom it may concern:

Be it known that I, THOMAS BOOTH, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented an Improved Pipe-Wrench, of which the following is a specification:

My invention has relation more particularly to that class of pipe-wrenches in which a curved jaw, hinged to one end of a lever, acts in combination with the serrated face of the end of the said lever; and my invention consists in the novel manner in which the block is attached and pivoted on the end of the hand-lever by means of a pin, having two flattened opposite faces, working in a slot provided with circular notches cut out of one side at intervals in its length; the object being to enable the block to be moved nearer to or farther from the serrated face of the end of the lever, increasing or decreasing the capacity of the wrench accordingly.

In the accompanying drawings, Figures 1 and 3 are side views, and Fig. 2 is a plan of a wrench constructed according to my invention. Figs. 4 and 5 are details.

A is the wrench, in which A^2 is the hand-lever, and A^1 the pivoted jaw, attached to the lever by the pin B. This pin passes through holes cut in the forked end of the jaw A^1 , and through a slot, c, of suitable length and width, cut through the center of the lever at a suitable distance from the working end of the same. The central portion B' of the pin B, to an extent equal in width to the thickness of the lever, is flattened on opposite sides to fit snugly into the slot C, and the said slot C, at intervals, on one side only, is enlarged by half-round notches c c c c, into which notches the rounded faces of the pin fit, allowing the jaw to be thrown into working position.

When it is desired to move the block nearer to or farther from the end of the lever it is thrown back, as shown by dotted lines. This operation causes the flattened faces of the pin to fall in line with the parallel faces of the slot, and the jaw and pin may then be

moved as desired. The block is locked in position at any of the notches by simply turning it forward into its proper working position.

To render the matter of adjustment easy, the face a of the block, between the forked ends $a' a'$, is finished parallel with the flattened faces of the pin, and, when thrown back, strikes the lower edge of the lever in a parallel line, so that the operator can quickly effect an adjustment by throwing the jaw back the full extent, and moving it horizontally, as desired.

The direction of strain when the block is in working position, it will be observed, lies through the deepest part of the center of the pin.

The working end D of the lever is increased in strength by the cheek-jaws d d on each side of the lever.

In Fig. 3 a handle continuation of the block is shown for wrenches for small work, the construction otherwise being the same as in Figs. 1 and 2.

I do not wish it to be understood that I confine myself to the use of the joint for wrenches alone, as I use it with advantage in the construction of cant-hooks, carpenter's clamps, and other mechanics' tools.

I make no claim to the lever or jaw, or to a hinged jaw in combination with a lever, as I am aware they are in common use; but

I claim as my invention—

1. The pivot-pin B, provided with the flattened faces B^2 , in combination with the lever A^2 , provided with the slot C and notches c, arranged and operating substantially as described.

2. The jaw A^1 , provided with the face a, between the forked ends $a' a'$, finished parallel with the faces B' of the pin B, substantially as described.

THOS. BOOTH.

Witnesses:

GEO. A. AIRD,
HARRY WARREN.