

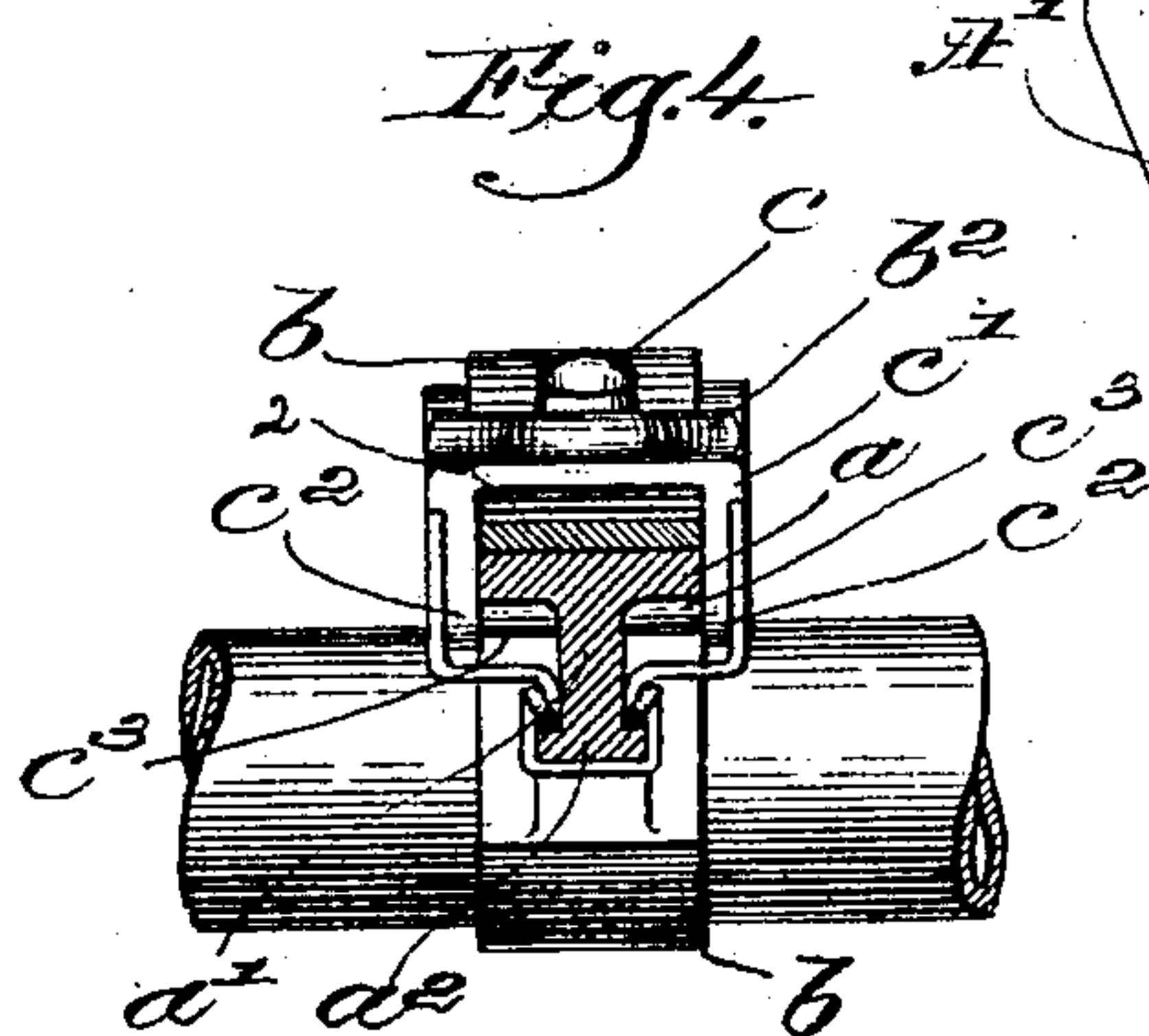
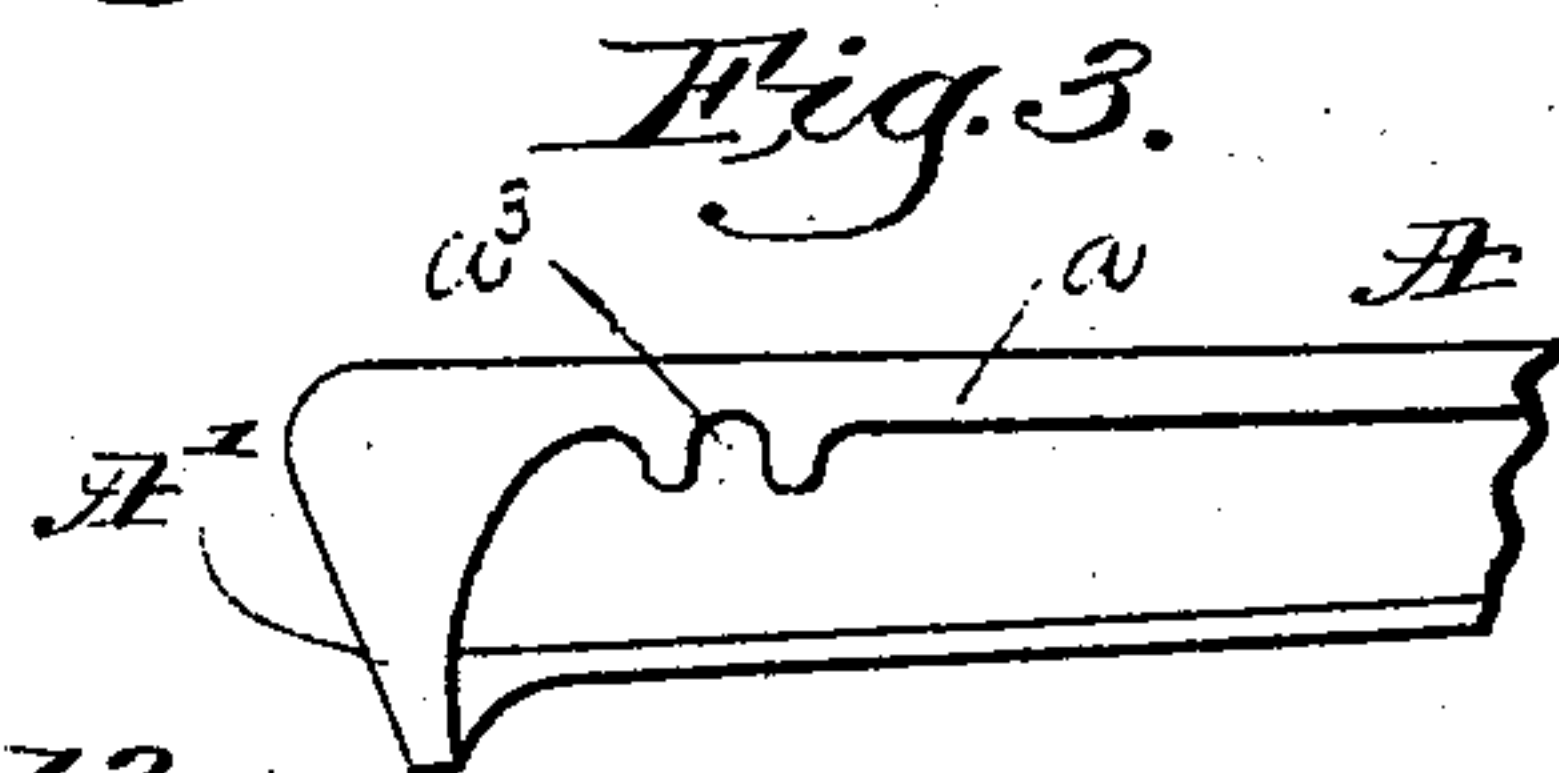
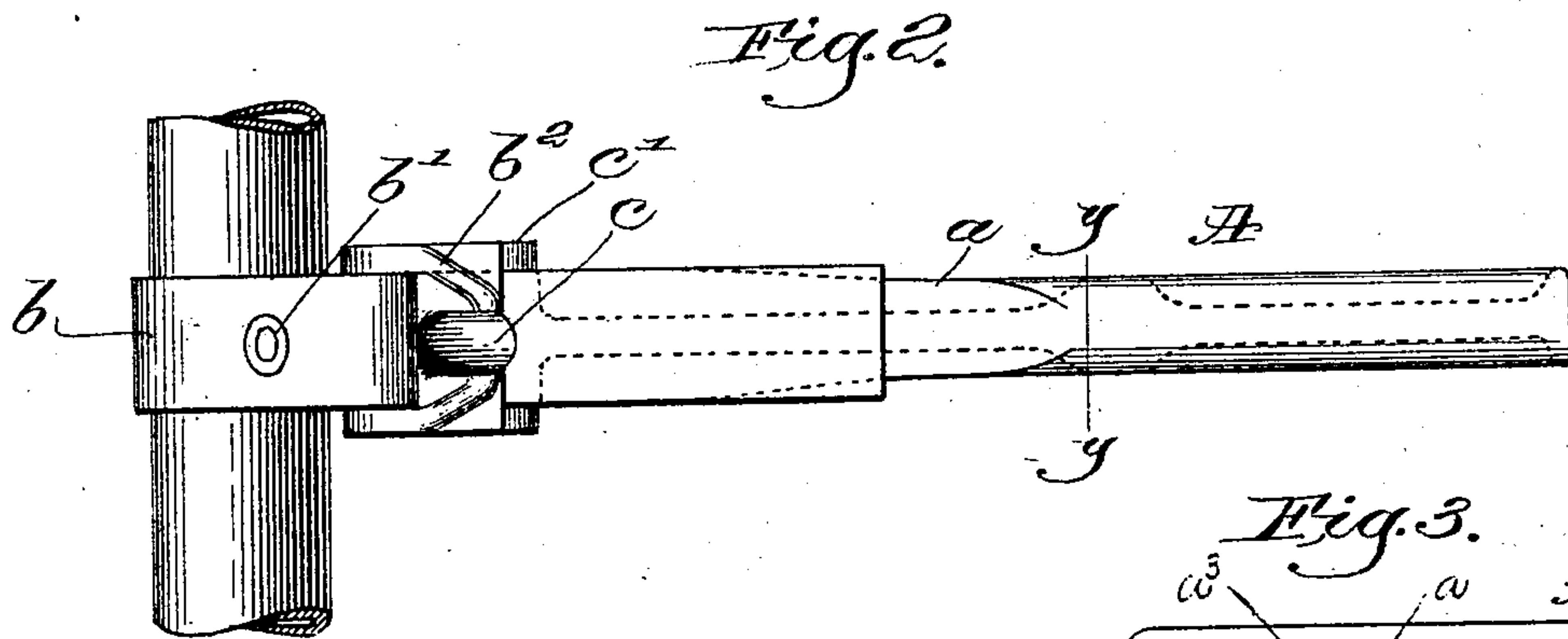
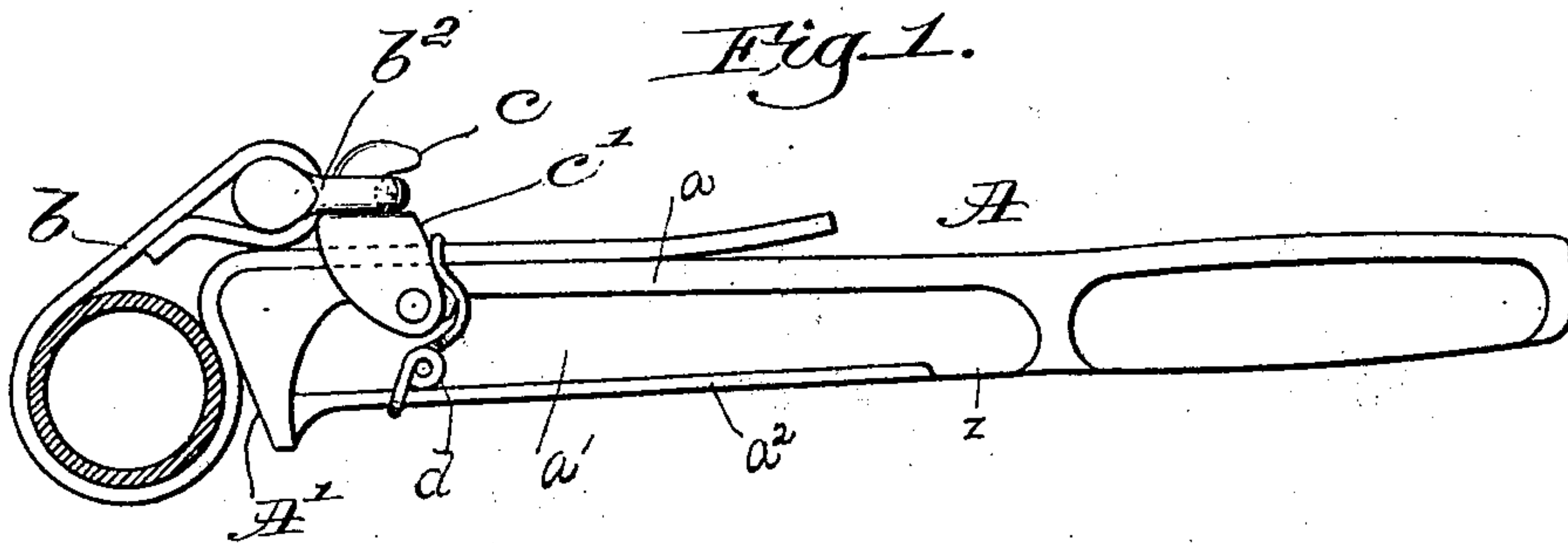
No. 689,325.

Patented Dec. 17, 1901.

F. E. SANDS.
PIPE WRENCH.

(Application filed Oct. 7, 1901.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

FRED E. SANDS, OF CAMBRIDGE, MASSACHUSETTS, ASSIGNOR TO TRIMONT MANUFACTURING COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 689,325, dated December 17, 1901.

Application filed October 7, 1901. Serial No. 77,802. (No model.)

To all whom it may concern:

Be it known that I, FRED E. SANDS, a citizen of the United States, and a resident of Cambridge, county of Middlesex, State of Massachusetts, have invented an Improvement in Pipe-Wrenches, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

10 This invention has for its object the production of a novel wrench for handling pipe having a finished surface, such as brass and plated pipes.

The wrench has a strap which embraces the 15 pipe, and the present invention relates more especially to means employed to hold the strap and permit it to be adjusted to the diameter of the pipe to be turned.

Figure 1 is a side elevation of the wrench 20 with a short piece of pipe; Fig. 2, a plan view. Fig. 3 shows the head end of the wrench with the clamp removed; and Fig. 4 is a section in the line *y y*, Fig. 2.

The handle *A* has at one end a head *A'*, 25 preferably beveled backwardly, as shown. The body of the handle for lightness and great strength is of the shape shown in cross-section—*i. e.*, it presents a part *a* and a web *a'*, preferably ribbed at its edge, as at *a²*, for 30 part of the length of the handle. The handle is shown as provided at the under side of the part *a* with suitable notches *a³*, Fig. 3. The strap *b*, of any usual or suitable material, is secured by a rivet *b'* or otherwise to 35 the cross-bar of a metallic loop *b²*, which engages a hook *c* of a rocking clamp *c'*, having depending ears *c²*, shown as provided with studs *c³*, which enter the notches *a³*, the clamp being slipped into its working position, Fig. 40 1, over the upper side of the handle in the line *y y*, where the handle is of less width than at its acting end *a*. To maintain the edge 2 of the clamp normally in contact with the strap *b*, I have applied to the handle 45 a suitable spring *d*, shown as made from spring-wire. The spring may be retained in place by embracing the rib *a²*, the spring being slipped onto the under side of the web, where the rib is reduced in width at, say, 50 about the point *z*.

To turn the pipe *e*, the user of the wrench will press down upon the outer end of the handle, thus tightening the strap about the pipe and turning the latter to enter a suitable threaded opening. Lifting the handle 55 slackens the hold of the strap on the pipe, permitting the strap to slip backwardly over the pipe to thereby enable the strap to get a new hold.

Having described my invention, what I 60 claim, and desire to secure by Letters Patent, is—

1. In a pipe-wrench, a handle provided with notches, a clamp pivotally mounted thereon, the pivot of the clamp loosely engaging said 65 notches, and a strap connected at one end with said clamp, the free end of the strap lying between said clamp and the handle whereby strain on the strap causes the clamp to firmly engage the strap and confine the free end 70 thereof to the handle.

2. In a pipe-wrench, a handle having a head and a portion *a* notched at its under side, and a clamp embracing said portion *a* and having studs to enter said notches, said 75 clamp having a hook, and a strap to engage said hook, strain on the strap turning the clamp to engage and hold the strap interposed between it and said portion *a*.

3. A pipe-wrench comprising a handle pro- 80 vided with notches, a clamp pivoted near one end of the handle and provided with a projecting hook, the pivot of said clamp loosely engaging said notches, and a flexible band arranged between the said clamp and the han- 85 dle and provided with a loop for engaging with the said hook.

4. A pipe-wrench comprising a handle provided with a beveled head portion and pre- 90 senting a broad portion *a* and a web *a'*, the handle having notches near its head portion, a clamp straddling the said broad portion and provided with studs pivotally engaging with said notches, and a flexible band arranged 95 between the said clamp and said broad portion and provided with means for connecting it to the said clamp.

5. In a pipe-wrench, a handle having a head, a clamp pivoted on said handle, a strap connected with said clamp and having a part 100

thereof interposed between said clamp and handle, a spring acting normally to turn said clamp that the edge thereof nearest said head may act against said strap, strain on the strap
5 causing the clamp to bear harder and harder on said strap.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

FRED E. SANDS.

Witnesses:

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