

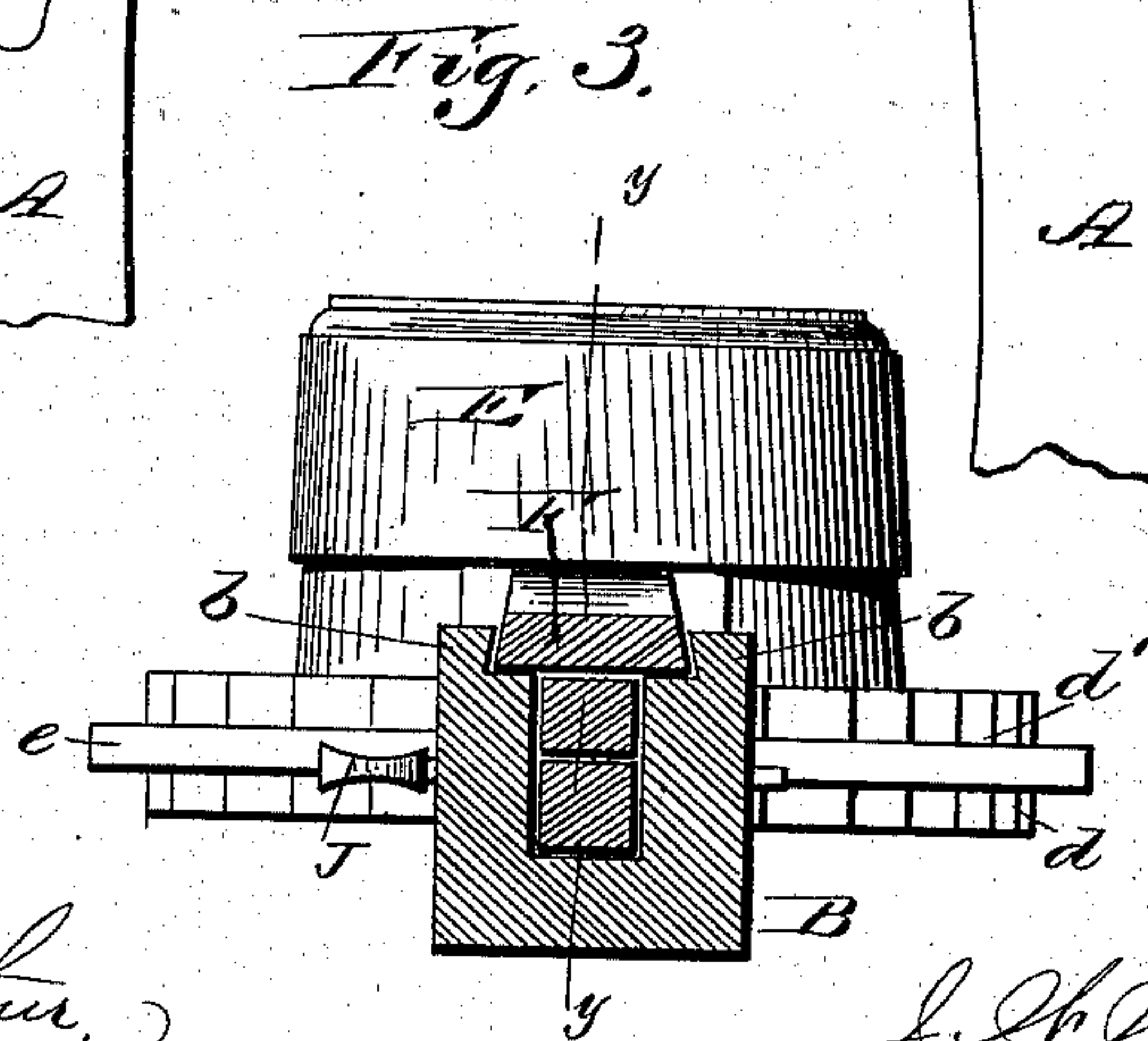
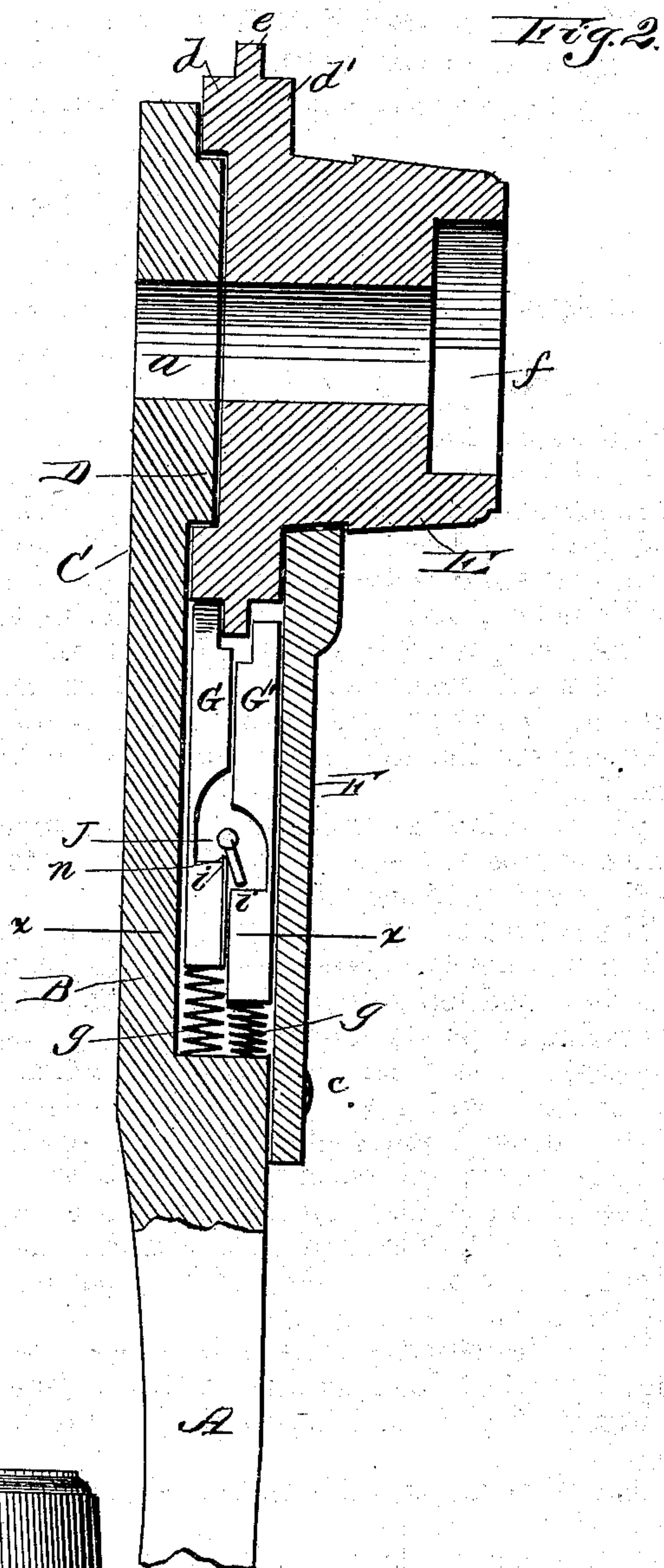
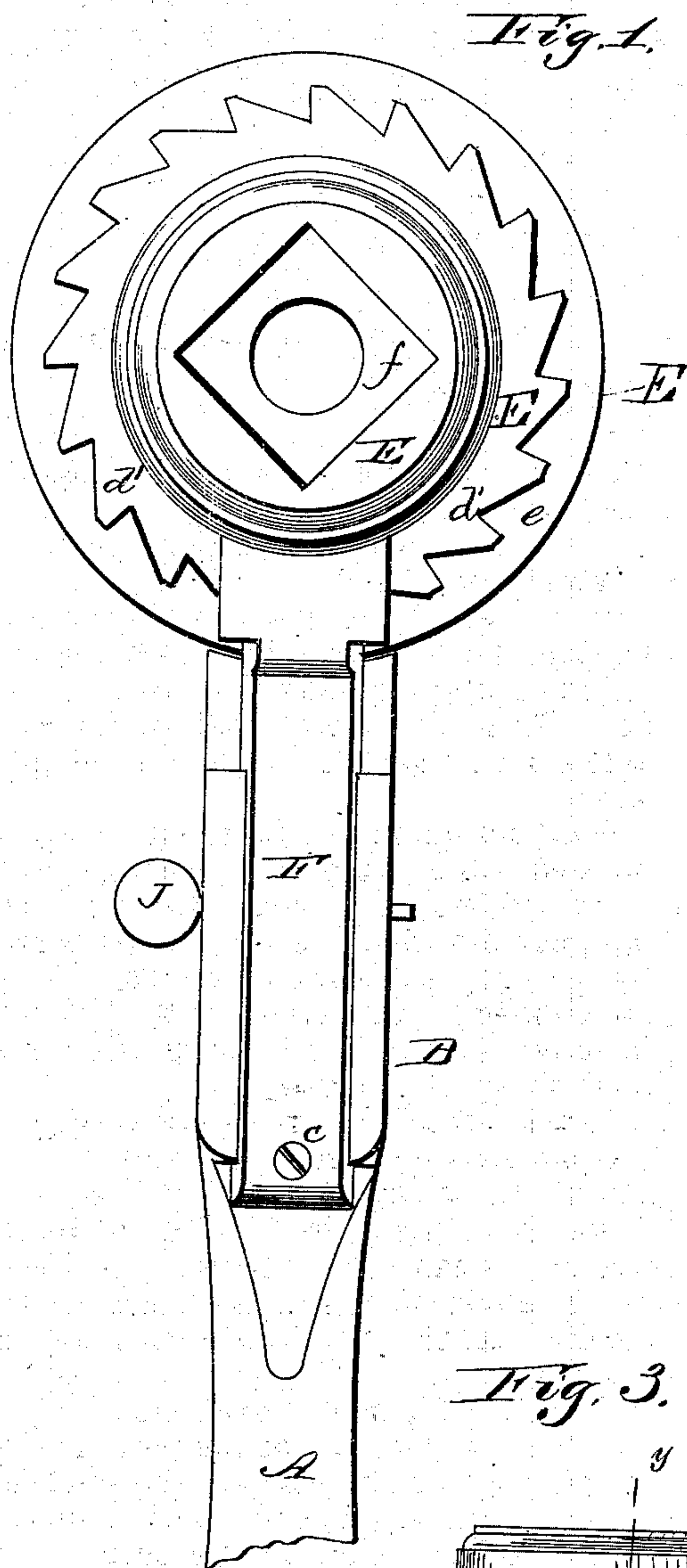
(No Model.)

J. W. WOMELSDORFF.

RATCHET WRENCH.

No. 252,300.

Patented Jan. 10, 1882.



Witnesses:
H. C. In. Carthar.
W. R. Reynolds.

Inventor:
J. W. Womelsdorff.
per W. H. Alexander
Attorney.

UNITED STATES PATENT OFFICE.

JAMES W. WOMELSDORFF, OF GUYANDOTTE, WEST VIRGINIA, ASSIGNOR
TO HIMSELF AND A. M. SIMMS, OF SAME PLACE, AND ROBERT T. ONEY,
OF HUNTINGTON, WEST VIRGINIA.

RATCHET-WRENCH.

SPECIFICATION forming part of Letters Patent No. 252,300, dated January 10, 1882.

Application filed November 19, 1881. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. WOMELSDORFF, of Guyandotte, in the county of Cabell and State of West Virginia, have invented certain new and useful Improvements in Ratchet-Wrenches; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention has reference to nut-wrenches which can be adjusted for turning a nut either to the right or to the left.

The nature of my invention consists in certain novel means whereby a socketed hub having right and left ratchet-teeth can be locked by means of pawls acted on by springs and inclosed in the stock of the lever handle, in combination with a key and such a construction of the said pawls as will allow either pawl to be retracted and freed from its ratchet.

The invention also consists in a novel construction of the stock of the lever-handle to admit the use of the said hub and pawls, as will be hereinafter explained.

In the drawings, Figure 1 is a plan view; Fig. 2, vertical longitudinal section on line *y y*, Fig. 3; Fig. 3, vertical section on line *x x*, Fig. 2.

The following is a description of my invention:

A designates a lever-handle of any desired length, and B is the channeled stock of this handle. C is an extension beyond the stock, and D is a circular bearing formed on the extension C, through which is a central hole, *a*. On one face of the channeled stock B are formed under-beveled flanges *b b*. All of these parts I am able to construct entire.

E designates the wrench-hub, which is applied so that it can turn on the circular bearing D, and is held in place thereon by a retaining-plate, F, which is confined to the stock B by means of the flanges *b b* and a screw, *c*. It will be seen that this plate F also serves to cover the channel in the stock. The wrench-hub is constructed with right and left ratchet-teeth *d d'* on opposite sides of a division, *e*.

The hub has a hole centrally through it, and also a prismatic recess, *f'*, in one end to receive a nut which is to be screwed on or unscrewed from a bolt.

If desired, the recessed end of the hub may be made separate from the hub, and rigidly but removably secured to it in any suitable manner. This will allow the use of interchangeable portions having nut-recesses of different sizes.

G G' designate two pawls or bolts, having beveled noses adapted to engage with the right and left ratchet-teeth *d d'* of the wrench-hub, against which teeth the pawls are held by springs *g g* at their rear ends. The pawls are applied in the channel of the stock B, and inclosed therein by means of the retaining-plate F, above referred to.

It will be seen by reference to Fig. 2 that the pawls are notched, so as to leave shoulders at *i i*. These notches allow the use of a key, J, for retracting either one of the pawls and freeing the same from its ratchet-teeth. The key-holes are made through the cheeks of the stock B, and the key acts against the shoulders *i* of the pawls.

What I claim as my invention is—

1. The combination of the perforated circular bearing D on one side of the enlarged end of the handle A, the perforated right-and-left ratchet-hub E, fitted on said bearing, the division *e* thereof, the nut-socket in one end of the hub, the removable retaining-plate F, and the spring-actuated pawls inclosed in the handle, substantially as described.

2. The combination of the right-and-left ratchet-hub E, the bearing D, and retaining-plate for the hub, the spring-actuated pawls G G', for the right and left teeth of the said hub, the shoulders *i i* on these pawls, the key, and the channeled stock, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JAMES W. WOMELSDORFF.

Witnesses:

RO. TUYFORD ONEY,
A. H. SANDERS.