

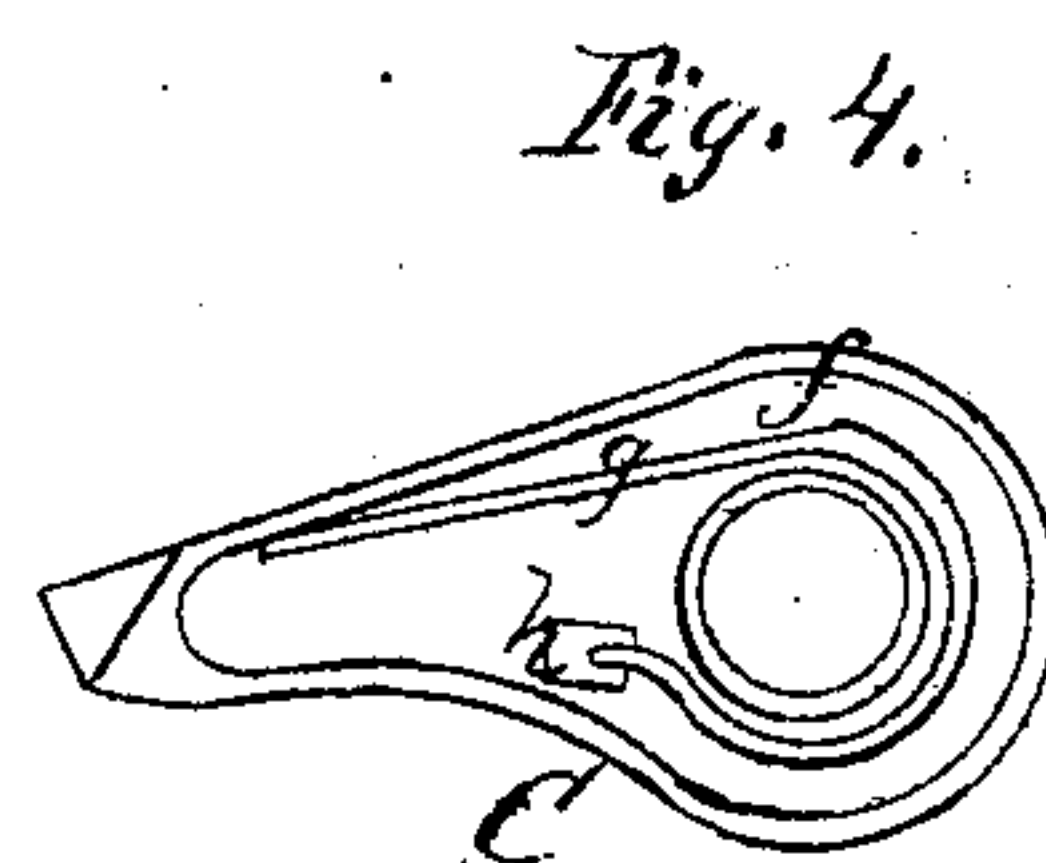
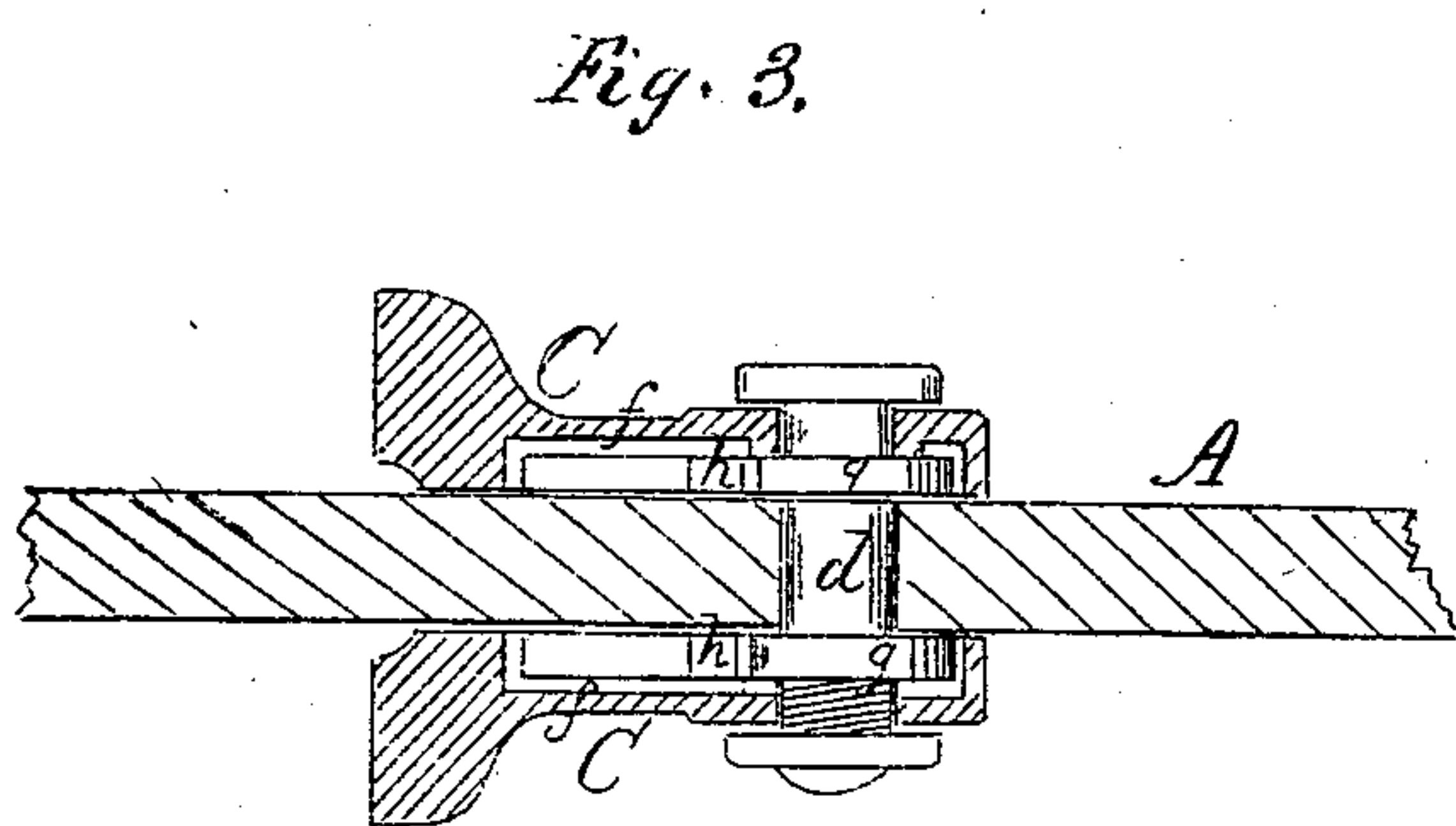
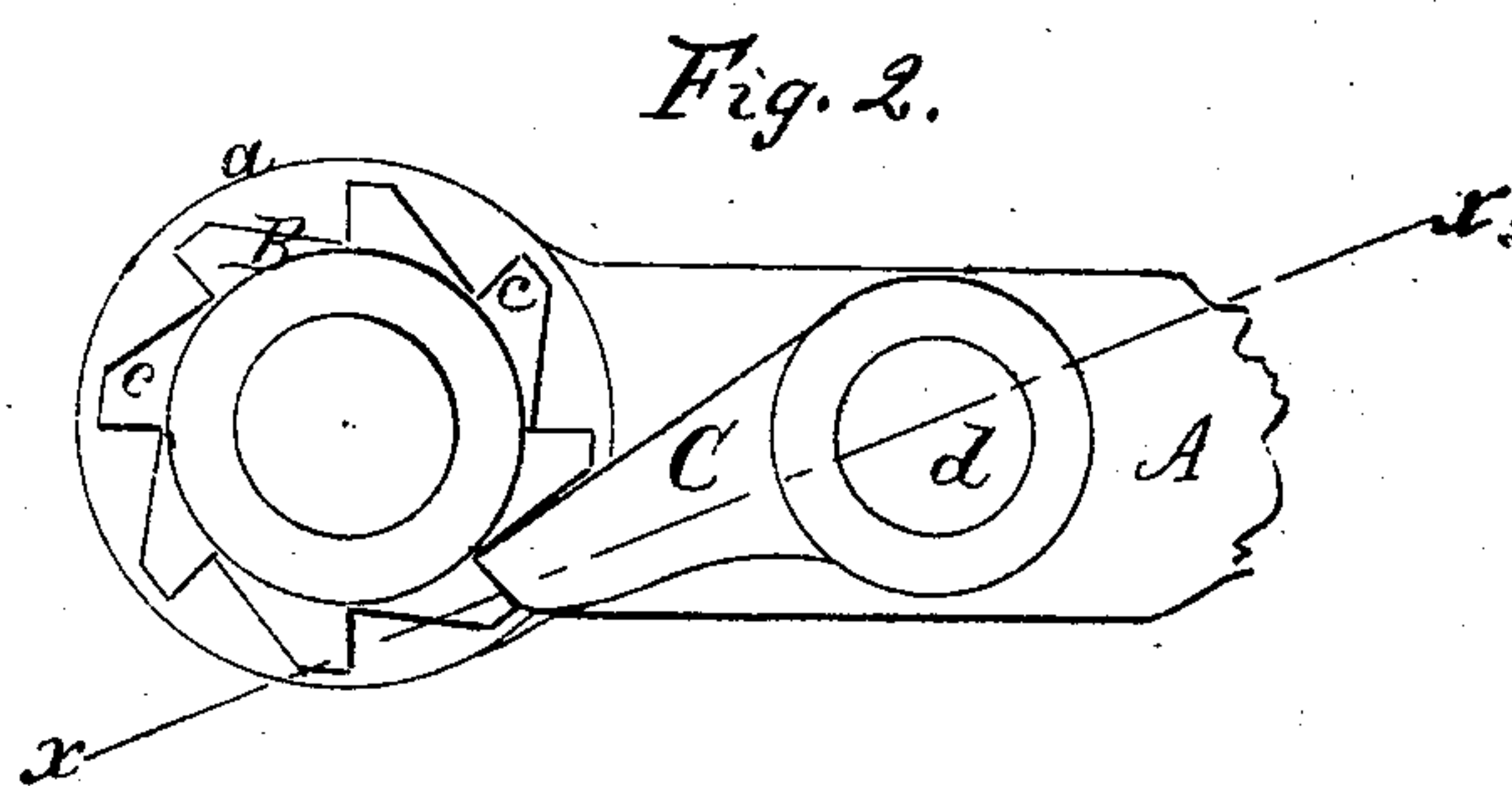
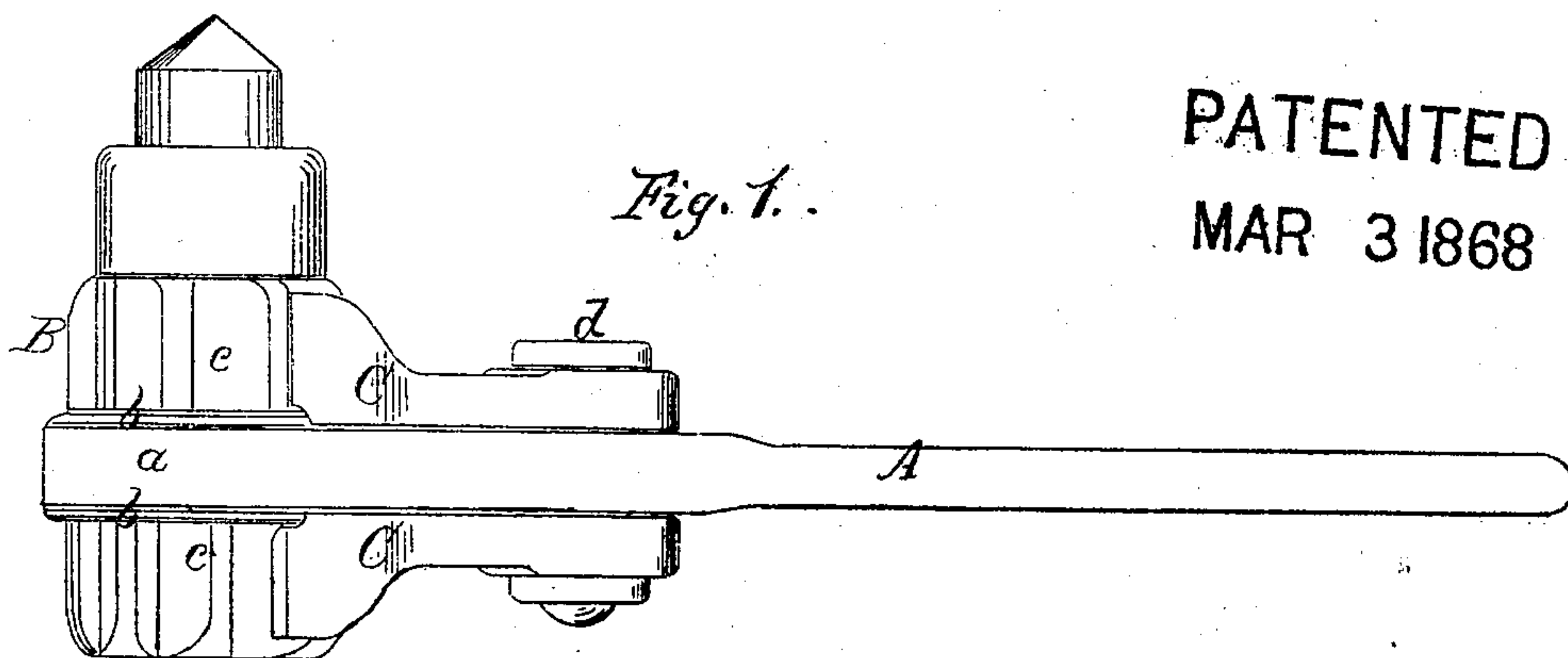
T.A. WESTON'S

75092

Ratchet Brace or Lever. *D*

PATENTED

MAR 3 1868



Witnesses.
J. C. Drake
Geo. W. Miff.

T. A. Weston,
By J. Fraser & Co.,
Attys.

United States Patent Office.

T. A. WESTON, OF BUFFALO, NEW YORK.

Letters Patent No. 75,092, dated March 3, 1868.

IMPROVEMENT IN RATCHET-BRACE OR LEVER.

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, T. A. WESTON, of Buffalo, in the county of Erie, and State of New York, have invented a certain new and useful Improvement in Ratchet-Braces or Levers; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is an elevation of my improved device.

Figure 2, a plan of the operating end.

Figure 3, a vertical angular section in plane *x x*.

Figure 4, a view showing the spring-arrangement of the pawls.

Like letters of reference indicate corresponding parts in all the figures.

I embody in this improvement my differential principle of teeth and pawls, viz, the employment of an unequal relative number of said parts, whereby I am enabled to attain, by the use of comparatively large teeth, the same nicety of adjustment or engagement as is attained by the use of a great number of small teeth, while the great wear and slight hold of the latter are avoided.

I do not claim this principle in the present application, but only the special arrangement of a double-ratcheted head with the end of the lever, forming a strap resting centrally between the two sets of teeth, with spring-pawls on opposite sides playing alternately therein; also, the arrangement of the spring-pawls.

In the drawings, A indicates the lever or handle, B the ratchet-head, and C C the pawls. The end of the lever or handle is formed into a strap or eye, *a*, which centrally encircles the ratchet-head, having a washer, *b*, on each side, as shown. The ratchet-head is provided with two sets of teeth, *c c*, on opposite sides of the strap. With these, respectively, engage the two pawls, C C, held by the single bolt or pivot *d*, on opposite sides of the handle. These pawls engage alternately with the teeth, that is, when one is engaged (as at the top, in fig. 1,) the other is disengaged, (as at the bottom,) so that double the number of engagements are secured that would be if but a single pawl were employed. The pawls are formed hollow on their inner sides, as shown at *f*, and receive springs *g g*, attached at one end to studs *h h* of the handle, while the other end passes around the pivot, and extends to the opposite end of the pawls, thereby holding them up to engagement with the teeth. This construction is clearly shown in figs. 3 and 4.

By thus constructing the ratchet-head with double sets of teeth, and engaging therewith the double pawls C C, I place the whole in a neat and compact form, and insure great simplicity and cheapness. Besides this, the double bearing of the pawls on opposite sides of the centre has a tendency to brace the action, and produce a more regular and uniform movement than would otherwise be attained. By this construction, also, there is less liability of disarrangement, and, if such does occur, the parts are very easily separated and replaced. The connection of the pawls to the one pivot, *d*, and the arrangement of the springs *g* therewith, insure great simplicity in construction.

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

The special construction and arrangement of the double ratchet-head B, with the end of the lever, forming a strap, *a*, resting centrally between the sets of ratchet-teeth and the spring-pawls C C, on opposite sides, playing alternately in said teeth, the whole operating in the manner and for the purpose specified.

I also claim the special construction and arrangement of the pawls connecting with the one pivot *d*, and formed hollow, and receiving the springs *g g*, the whole operating in the manner and for the purpose set forth.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

T. A. WESTON.

Witnesses:

JAY HYATT,

THOMAS C. HOLMES.