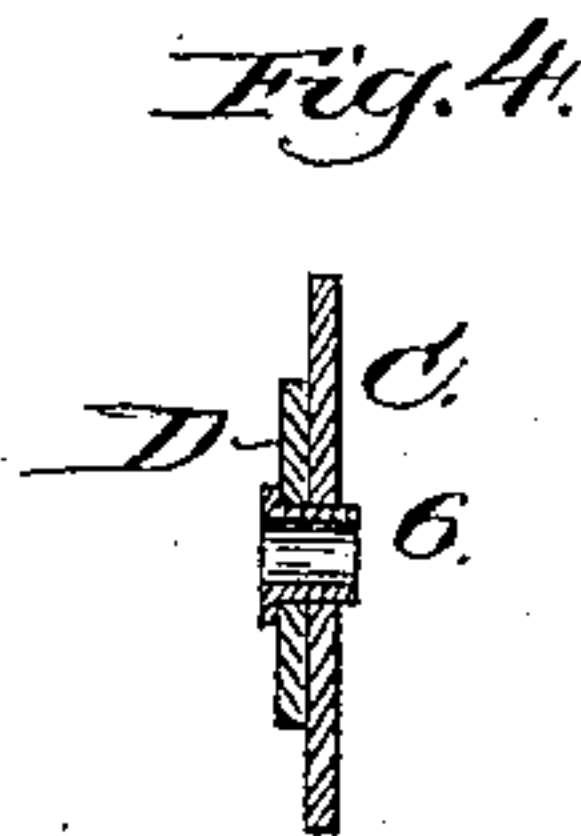
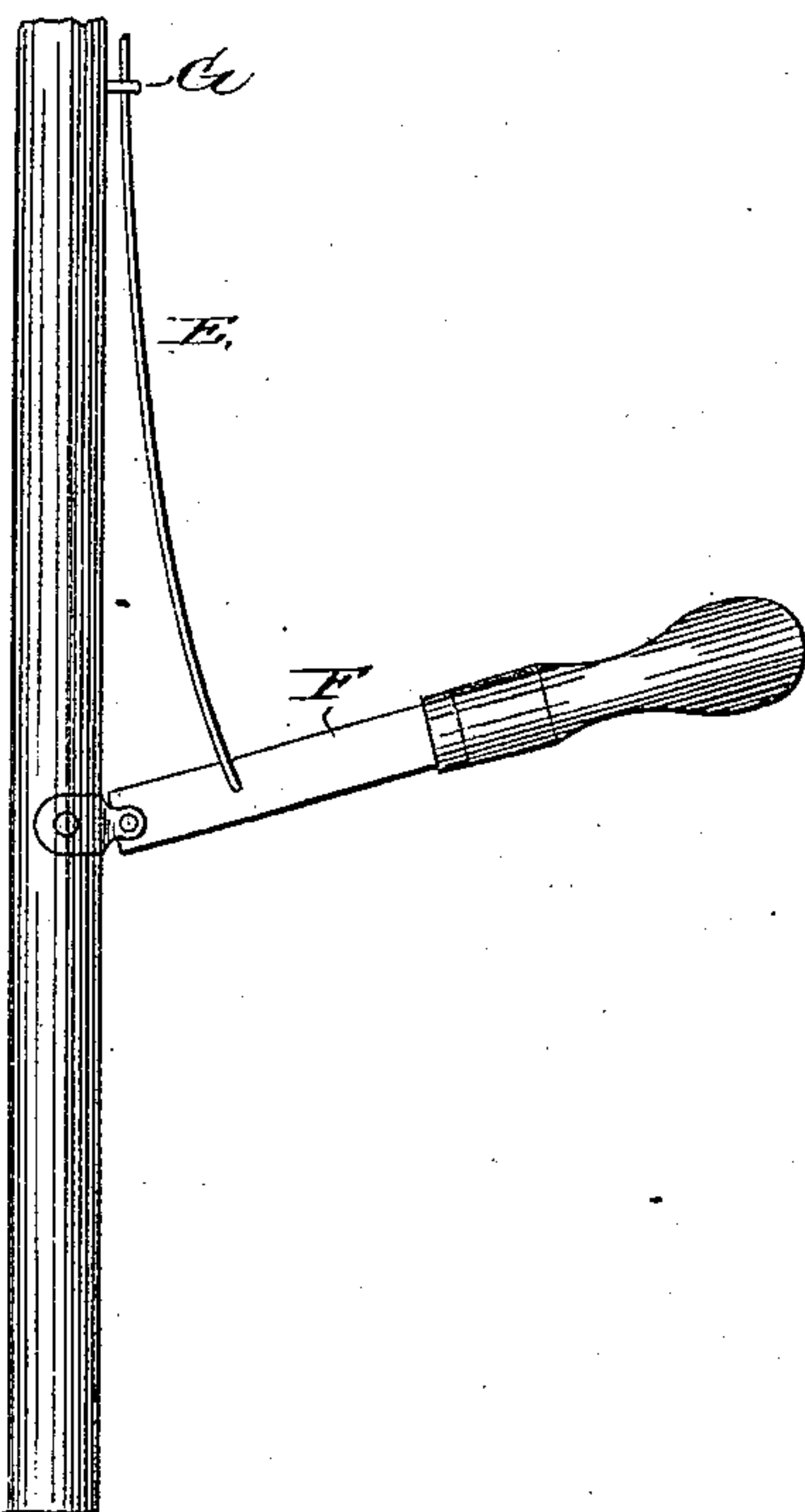
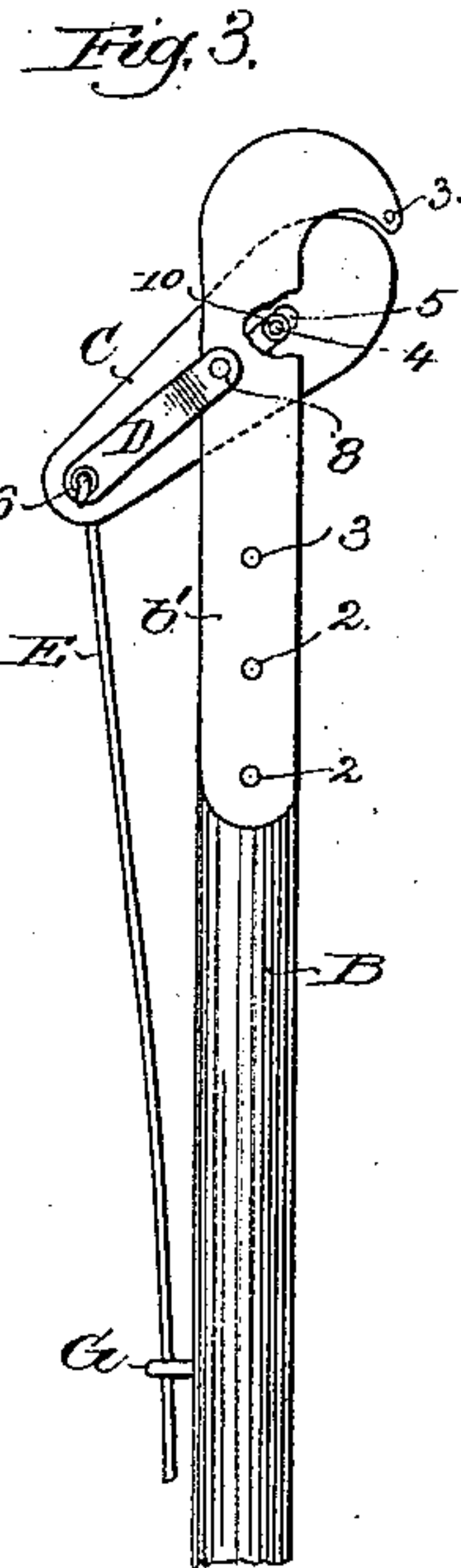
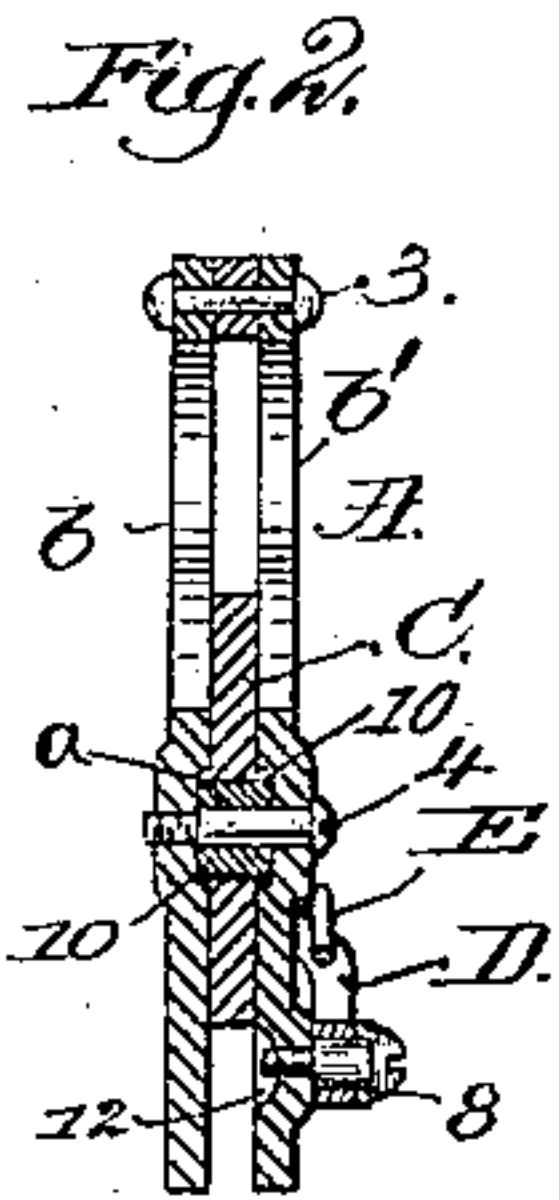
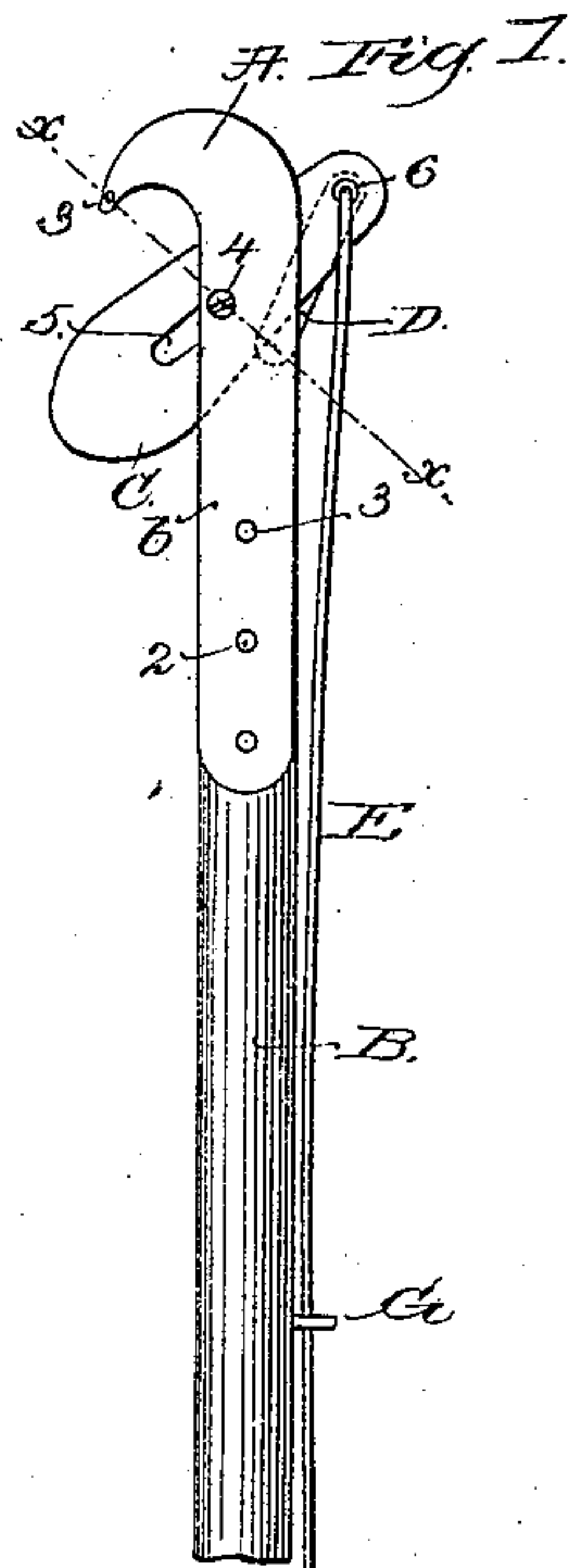


(No Model.)

G. F. WATERS.
PRUNING IMPLEMENT.

No. 291,966:

Patented Jan. 15, 1884.



Witnesses:
John F. C. Prindle
B. J. Noyes

Inventor:
George F. Waters.
by Crosby & Gregory attys.

UNITED STATES PATENT OFFICE.

GEORGE F. WATERS, OF BOSTON, MASSACHUSETTS.

PRUNING IMPLEMENT.

SPECIFICATION forming part of Letters Patent No. 291,966, dated January 15, 1884.

Application filed August 6, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. WATERS, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Pruning-Instruments, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the production of a pruning-instrument which shall present a widely-opened mouth for the reception of a limb, twig, stalk, or article to be cut, the cutting-blade having a long or extended draw-cut.

Pruning-instruments heretofore made—as, for instance, such as shown in United States Patent No. 58,326, heretofore granted to me, and on which my present invention is an improvement—have had a double hook with a blade pivoted below it to turn about a stationary fulcrum; but my present invention differs therefrom in that the blade is slotted where it rests upon the usual fulcrum-pin, and has connected with it and the shank of the hook a link, which, as the blade is turned about the fulcrum-pin, enables the end of the blade to be moved well away from the hook to increase the space for the entrance of a limb or twig, and as the blade is closed on the said limb the former is given a long sweeping cut, the blade being not only vibrated, but also moved at the same time longitudinally, so that the edge of the blade gets a very different and more effective cut than when the blade has only a movement about its pivot, as in the said patent. Now, a pruning-implement in which the cutting-blade has both these movements is not, broadly, original with me; and my invention consists in the details of construction, as hereinafter particularly set forth and claimed, whereby the strength, durability, and operation are enhanced.

Figure 1 of the drawings represents, in side elevation, a pruning-instrument embodying my invention, the blade being moved away from the hook; Fig. 2, a section of Fig. 1 on the dotted line *x*; Fig. 3, an opposite side view with the blade closed, a part of the shank of the hook being broken out to show the fulcrum-pin and roller for the blade; and Fig. 4, a sec-

tion taken through the connection between the link and rear end of the blade.

The hook A, composed of metal, is suitably attached to a pole, B, as herein shown, by rivets or bolts at 2. Preferably the hook will be formed of two plates, *b b'*, of steel, of the shape shown, cut from sheet metal, and riveted together at 3. A screw, 4, passed through or held in the hook part, serves as the fulcrum for the cutting-blade C, which is sharpened along its upper side, about its curved end, and along its under side, and slotted at 5, so as to both turn and slide longitudinally on the said screw as a fulcrum, said screw preferably having upon it an anti-friction-roll, *a*, (shown best in Fig. 2,) the ends of which enter recesses at the inner sides of the metal plates *b b'*, composing the hooks and shank, so that the blade, as it is vibrated, is not worn by the end of the roll and a space is not left into which the blade may crowd to move the plates apart. The rear end of the blade C is provided with a hole, which receives a hollow journal, 6, connected with the link D near its end. The journal 6 is extended through the blade C and forms a tubular journal and pivot by which to connect the said link and cutting-blade. The opposite end of the link is pivoted to the hook part by a screw, 8. The upper end of the wire E, passed through the tubular journal, will not be worn and strained as would be the case if the wire were simply passed through a hole made in the link and a hole in the blade, or if the said wire alone acted as the holding means between the link and blade. The wire extended through suitable guides, G, has its lower end attached to a hand-lever, F, by which and the wire the cutting-blade is turned from the position Fig. 1 to the position Fig. 3. By referring to Fig. 1 it will be seen that the blade is fully open, that the right-hand end of the slot 5 rests against the screw 4, and that the space between the blade and hook is considerable, and that the blade is extended outward beyond the hook. As the blade is moved from its position Fig. 1 to the position Fig. 3, it being supposed that a limb or twig has been inserted between them, the blade is gradually elevated, and also drawn or moved back longitudinally on the fulcrum 4 by the action of

the link, thus gradually increasing the power of the blade and making a draw-cut. The edge of the blade works in the space between the two side pieces of the hook, so that the blade is not dulled by coming against metal, and the limb or twig is held squarely for the action of the blade against it. The blade may be removed and turned over to use its lower sharpened edge when its upper edge becomes dull. The link D is attached to the shank of the instrument by a shouldered screw, 8, the inner end of which is stopped in a recess, 12, Fig. 2, made in the plate *b'*, so that the blade in its movement cannot strike the inner end of the said screw.

By removing the screws 4 and 8, the blade may be readily reversed or turned, its under side up, thus presenting the reserved cutting-surface in cutting position.

I claim—

1. The combination, substantially as shown and described, of the hook-plates *b b'*, riveted together with an intervening space, the cutting-blade C, having the longitudinal slot 5 and

arranged in said space, the screw 4 and its roller *a*, forming an anti-friction fulcrum for said blade, the recesses 10 in the plates to receive the roller, the link D, connecting said blade and one of the plates, the anti-friction device 6, and the operating-rod E and handle F, all constructed and arranged to operate as set forth.

2. The pruning-instrument, the two plates *b b'*, shaped as described and recessed at their inner sides, as at 10, and the fulcrum-screw 4, combined with an anti-friction roller thereon, having its ends located in the recesses 10 of the said side plates, and with the slotted blade mounted to turn thereon, as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEO. F. WATERS.

Witnesses:

G. W. GREGORY,
BERNICE J. NOYES.