

No. 610,881.

Patented Sept. 13, 1898.

S. A. D. CLARK.  
WIRE STRETCHER AND CUTTER.

(Application filed May 12, 1896.)

(No Model.)

Fig. 1.

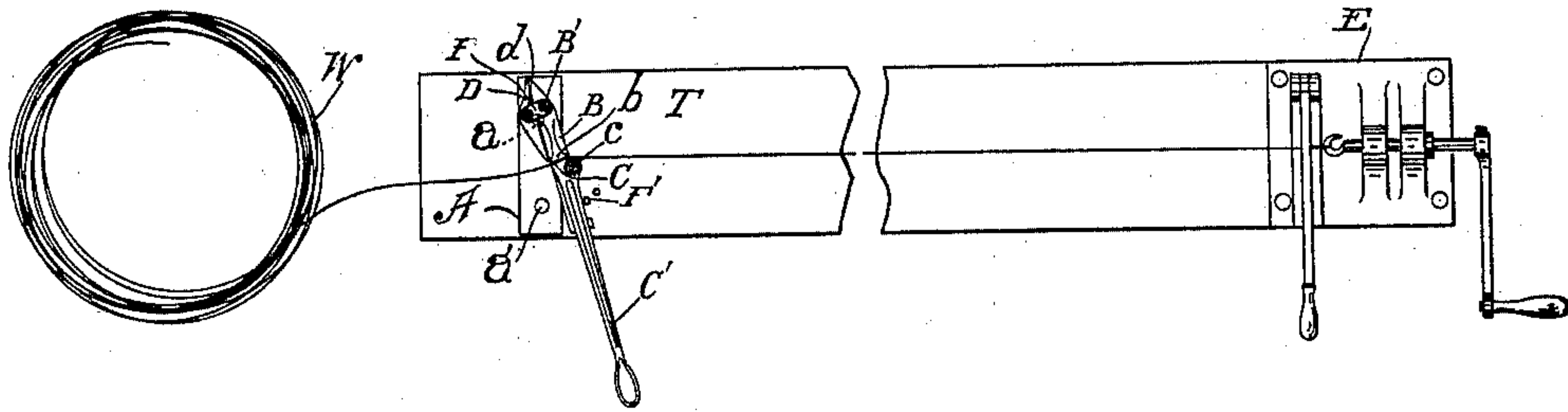


Fig. 2.

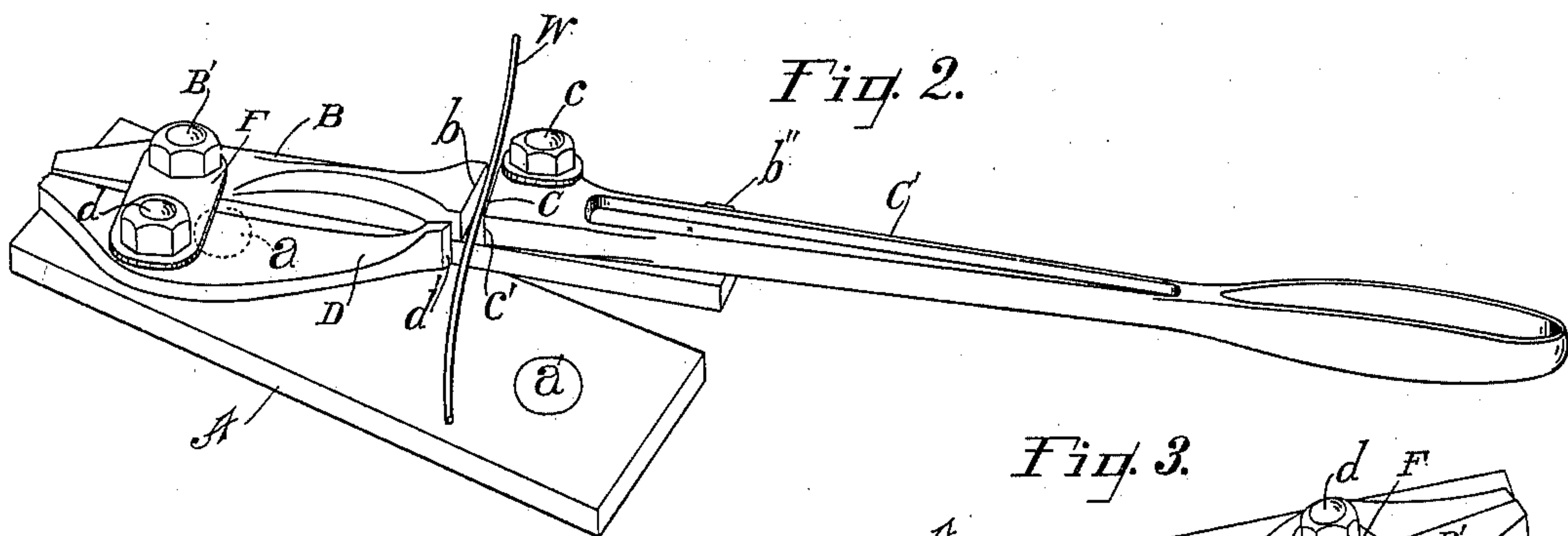


Fig. 3.

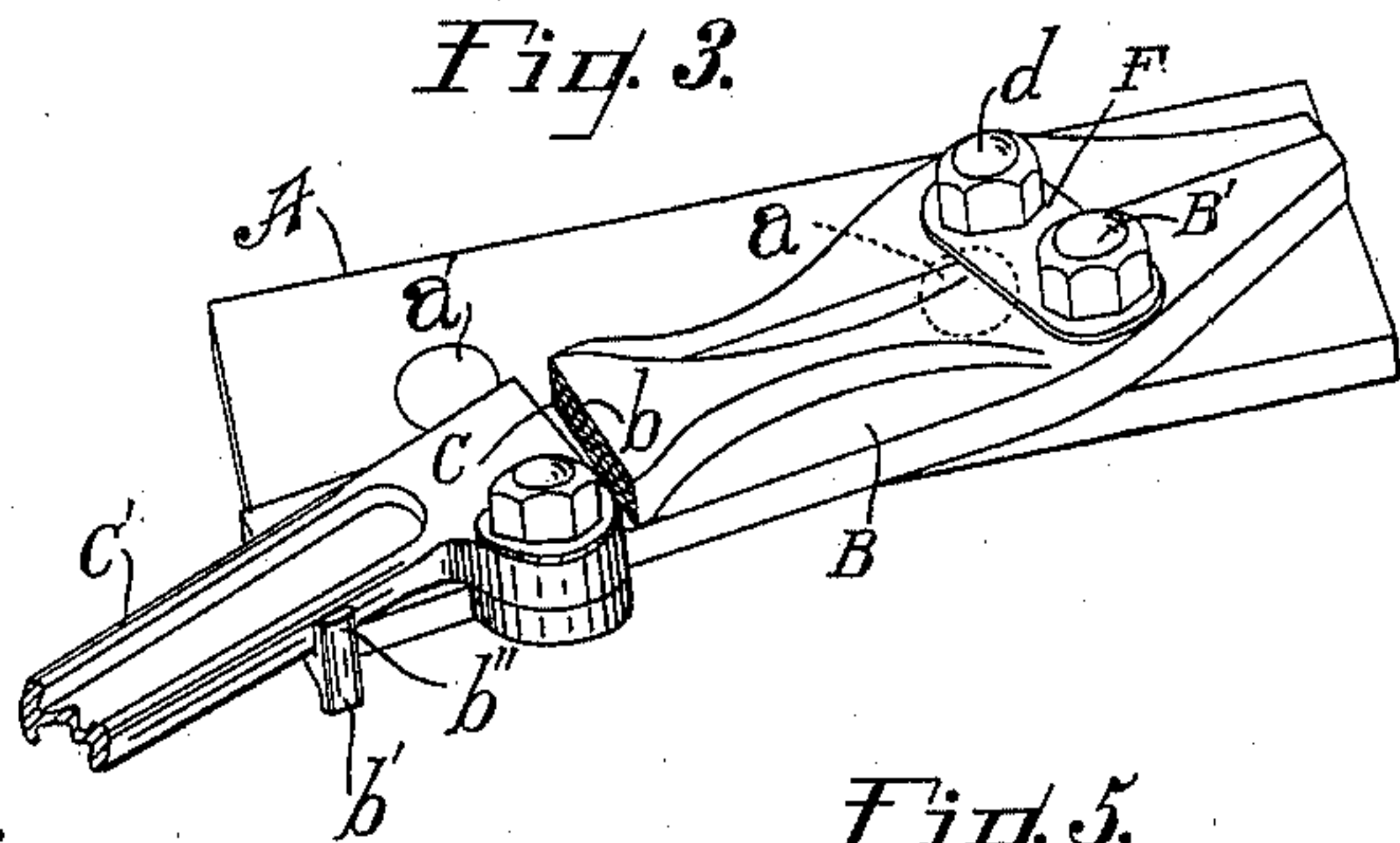


Fig. 4.

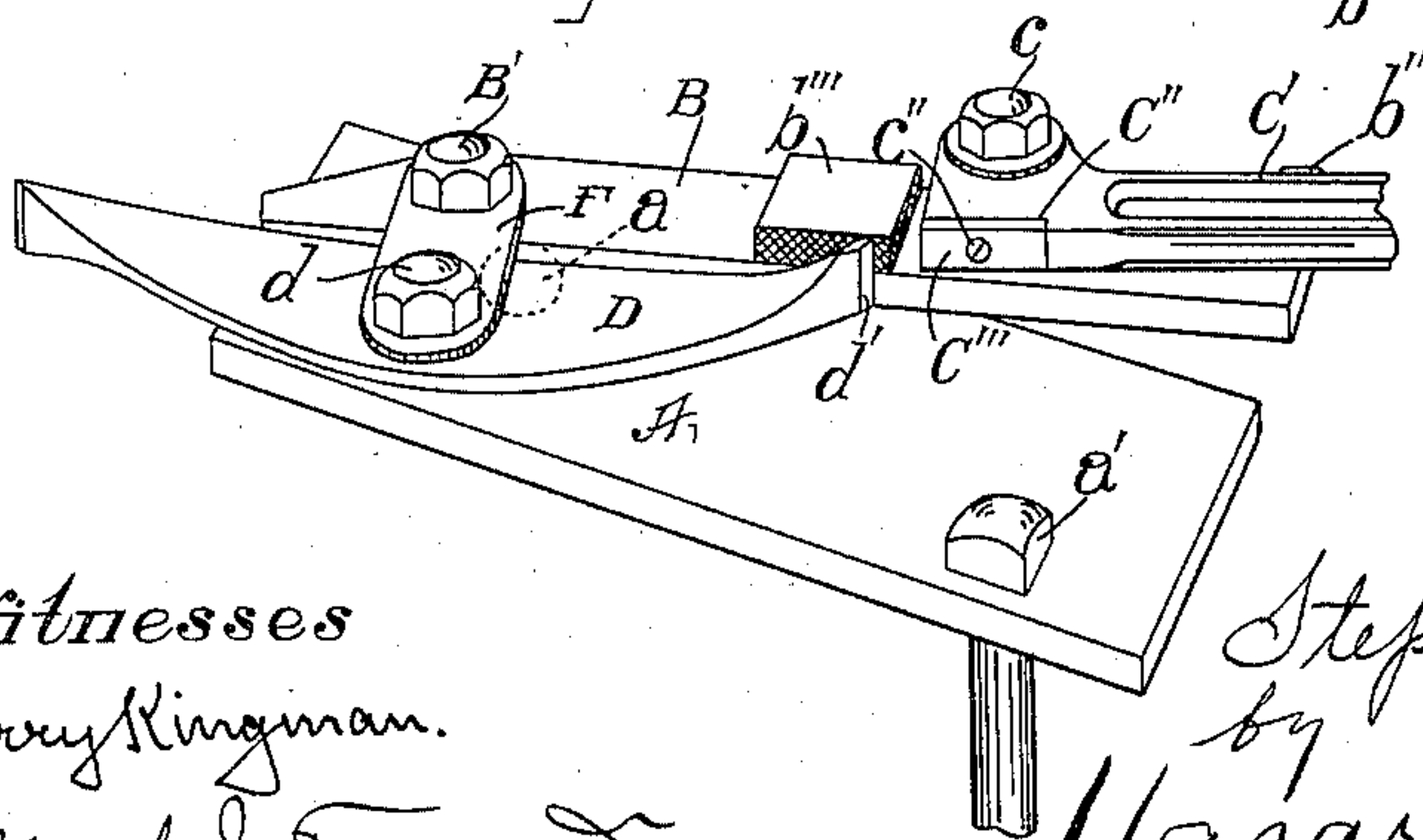
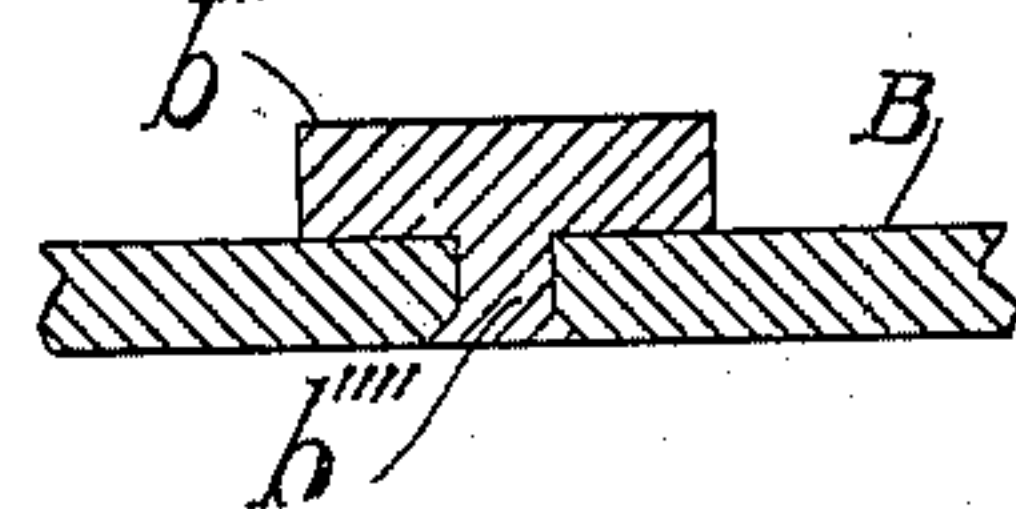


Fig. 5.



Witnesses

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# UNITED STATES PATENT OFFICE.

STEPHEN A. D. CLARK, OF PASADENA, CALIFORNIA.

## WIRE STRETCHER AND CUTTER.

SPECIFICATION forming part of Letters Patent No. 610,881, dated September 13, 1898.

Application filed May 12, 1896. Serial No. 591,236. (No model.)

*To all whom it may concern:*

Be it known that I, STEPHEN A. D. CLARK, a citizen of the United States, residing at Pasadena, in the county of Los Angeles and State of California, have invented a new and useful Wire Stretcher and Cutter, of which the following is a specification.

My invention relates to those devices used for stretching and cutting to an exact predetermined length wires used in machines for baling hay, &c.

The object of my invention is to provide a simple, cheap, and efficient device of this character—one which will be easy to operate, will stretch the wire just sufficient to straighten it properly, and will automatically cut it off at exactly any predetermined length desired.

My invention comprises the various features of construction and combinations of parts hereinafter set forth and claimed.

The accompanying drawings illustrate my invention.

Figure 1 shows one of my improved stretching and cutting appliances in working position on a bench provided with the ordinary appliances for twisting the loop at the end of a baling-wire and also showing a coil of wire ready for use. Fig. 2 is a perspective front elevation of my improved wire stretching and cutting device. Fig. 3 is a perspective fragmental rear elevation of the same. Fig. 4 is a fragmental perspective view of another form of device embodying my invention, and Fig. 5 is a fragmental sectional view illustrating my improved reversible jaw or anvil.

In the drawings, A represents a suitable base-plate, (preferably metallic,) which is provided with means, such as the bolts *a a'*, whereby it may be attached to a table T. To this base-plate is pivoted by a pivot B' a main jaw member B, which is provided upon its upper face with a fixed jaw *b*. The rear face of this member is provided with two projecting lugs *b' b''*, arranged to form stops, one of which, *b'*, engages with the base to limit the forward or stretching movement of the movable member B, and the other of which, *b''*, is arranged to be engaged by a lever C', which operates the movable jaw C of the wire-gripping jaws to limit the movement of the lever with relation to the member B.

The jaw C is pivoted to the jaw member B by a pivot *c* and when swung upon such pivot is adapted to move toward and from the fixed jaw of the jaw member and to grip the wire thereagainst.

As shown in the drawings, the jaw C and the lever C' are formed integral or rigidly attached to each other; but it is to be understood that to make them separate from each other would not avoid my claims, which broadly cover a movable member carrying jaws and a lever arranged to operate the jaws, or one of them, and to also actuate the movable member, whereby one lever serves a triple purpose—*i. e.*, that of gripping the wire while it is being stretched, of stretching the wire, and cutting it while it is gripped.

The chisel or wire-cutter D is pivoted by a pivot *d* to the base A at one side and in front of the pivotal point of the jaw member B and is provided with a vertical cutting edge *d'*, which is adapted and arranged to shear past the outer faces of the jaws, when the jaw member B is swung upon its pivot by means of the lever C'.

It is essential that devices of this class be cheap, and is also essential that they be durable. The operation of gripping the wire and of holding it while it is being sheared off by the chisel causes the jaws to wear, and when the front edge *c'* of the jaw C becomes rounded off the wire bends when the cutter is brought against it to shear it off and a clean cut cannot be made. I provide improved means (shown in Fig. 4) whereby when the face of the jaw C becomes worn it can be easily renewed and made as good as ever. I accomplish this by providing the lever C' on its front face with a jaw-receiving socket C'' and provide a rectangular jaw-block C''', of tempered steel, to fit within such socket, where it is secured by a screw *c''*, passing through a centrally-arranged perforation in the jaw-block, so that the block can be turned side for side and also end for end, thus to provide four new cutting-faces by simply reversing the block. Thus it becomes unnecessary to make the lever C' of steel, since iron will serve fully as well when the steel jaw-block is provided.

In Figs. 4 and 5 I have shown the fixed jaw formed of an anvil-block *b'''*, having a stem



$b'''$  passed through a hole in the member B and secured by riveting. This block has its four sides roughened in the manner of an ordinary vise-jaw, and when one side becomes worn by means of a wrench the anvil may be turned to present a new face toward the jaw C. This anvil may be formed of an ordinary machine-bolt.

In Fig. 4 I have shown the bolt  $a'$  provided with a projecting head which is adapted to serve as a stop for the lever  $C'$  in addition to securing the base to the bench or table. In this view I have also shown the cutter or chisel D double and provided at each end with a cutting edge. The body of the chisel is thin and the chisel edge projects above the top of the body. So in order to make it reversible I make the two chisel edges project from opposite sides of the body and arrange the rear end of the chisel to project beyond the rear end of the base and to thus have a clear sweep. Should one edge of the chisel become accidentally broken or dulled, by simply changing ends a new cutting edge is provided. A link washer F is arranged connecting the pivot-bolts  $B'$  and  $d$  to sustain such bolts against strain and to also insure that the nuts do not work loose by the friction of the jaw member and the cutter thereagainst.

In practice the loop-twisting device E is secured to the bench T in the ordinary manner and at proper distance therefrom to give the length of baling-wire which is required. My improved stretching and cutting device is secured to the table by means of the bolts  $a a'$  or other suitable means. A suitable stop  $F'$  is arranged to limit the rearward movement of the main jaw member. Everything being in readiness and the wire-twister having been operated to twist the loop on the end of the wire W in the ordinary manner, the wire is pulled taut by hand and is placed between the jaws of the stretching device, as shown in Fig. 1. Then the operator grasps the lever  $C'$  and pulls such lever forward, thus closing the movable jaw C against the fixed jaw  $b$  and tightly gripping the wire between the two jaws. Further movement of the lever  $C'$  partially stretches the wire W and brings the jaw member against the cutter or chisel, and by reason of the pivotal points of the jaw member and the cutter being different further movement of the lever causes the cutter to shear past the two jaws and cut off the wire. After the wire is cut the lever  $C'$  is swung on forward, stretching the wire until the stop  $b'$  engages with the base member, after which the lever is pushed back, thus throwing the jaws open and allowing the completed baling-wire to be removed. By this arrangement the wires are always cut exactly the same length and are stretched uniformly the same distance, which is regulated to be just sufficient to take all kinks and curls out of the wire and to straighten it and place it in proper condition for using.

The cutter or chisel D is pivoted intermediate of its ends, and its rear portion engages with the rear end of the jaw member B, which projects beyond its pivotal point, and the two are so arranged with relation to each other that when the lever  $C'$  is swung to open the jaws the chisel is engaged by the member B and automatically carried back into proper position to engage the wire and shear it off close to the forward edge of the two jaws when the jaw member is carried forward by the lever  $C'$ . A spring might be arranged to perform the same office; but it would not be so positive in action, so simple and cheap, or so satisfactory in use as the arrangement which I have described.

Now, having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A wire stretcher and cutter comprising a base; a movable jaw-carrying member pivoted to the base and provided with the jaw fixed thereto; the movable jaw carried by the jaw member; the lever, pivoted to the jaw member and arranged to operate the movable jaw and to actuate the jaw member; and the cutter pivoted to the base and adapted to be actuated by the movement of the movable jaw member to cut the wire after it has been gripped by the jaws.

2. The wire stretcher and cutter set forth comprising a base; a jaw member pivoted to the base and provided with a fixed jaw; a movable jaw pivoted to the jaw member provided with the lever and adapted to grip the wire against the fixed jaw; and a cutter pivoted to the base at one side of the pivotal point of the jaw member and arranged to shear past the two jaws when, by means of the lever, the jaw member is swung forward upon its pivot.

3. The wire stretcher and cutter set forth comprising a base; a jaw member pivoted to the base and provided with the jaw projecting from the upper face thereof; a movable jaw pivoted to the jaw member and provided with the lever; and a cutter, pivoted to the base at one side of the pivotal point of the jaw member and arranged to shear past the two jaws when, by means of the lever, the jaw member is swung forward upon its pivot.

4. The wire stretcher and cutter set forth comprising a base; a jaw member pivoted to the base and provided with stops, one arranged to engage the base and the other arranged to be engaged by a movable jaw-lever; a movable jaw pivoted to the jaw member and provided with the projecting lever; and a cutter pivoted intermediate of its ends to the base and arranged to engage the jaw member when such member is swung to the rear, to be thereby swung into position ready to shear past the junction of the two jaws when the jaw member is swung forward.

5. In a wire stretching and cutting device, the combination set forth of a base; a jaw member pivoted to the base and provided



with a jaw-stem socket; a reversible jaw  
comprising a rectangular body provided with  
a stem fitted in the stem-socket in the jaw  
member to adapt the jaw to be turned when  
5 worn to bring a new gripping-face into use;  
a jaw-lever pivoted to the jaw member and  
provided in its front face with a rectangular  
jaw-seat; a jaw formed of a rectangular piece  
of tempered steel provided with a central per-  
10 foration and seated in the jaw-seat; and a  
screw passing through the jaw and into the  
jaw-lever to hold the jaw in place.

6. A wire stretcher and cutter comprising a  
base; jaws secured to the base and adapted  
to grip the wire and to be actuated to stretch 15  
the wire while it is gripped; a cutter arranged  
to shear past the jaws to cut the wire when  
the jaws are actuated to stretch the wire;  
and means for actuating the jaws and oper-  
ating the cutter.

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Witnesses:

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