

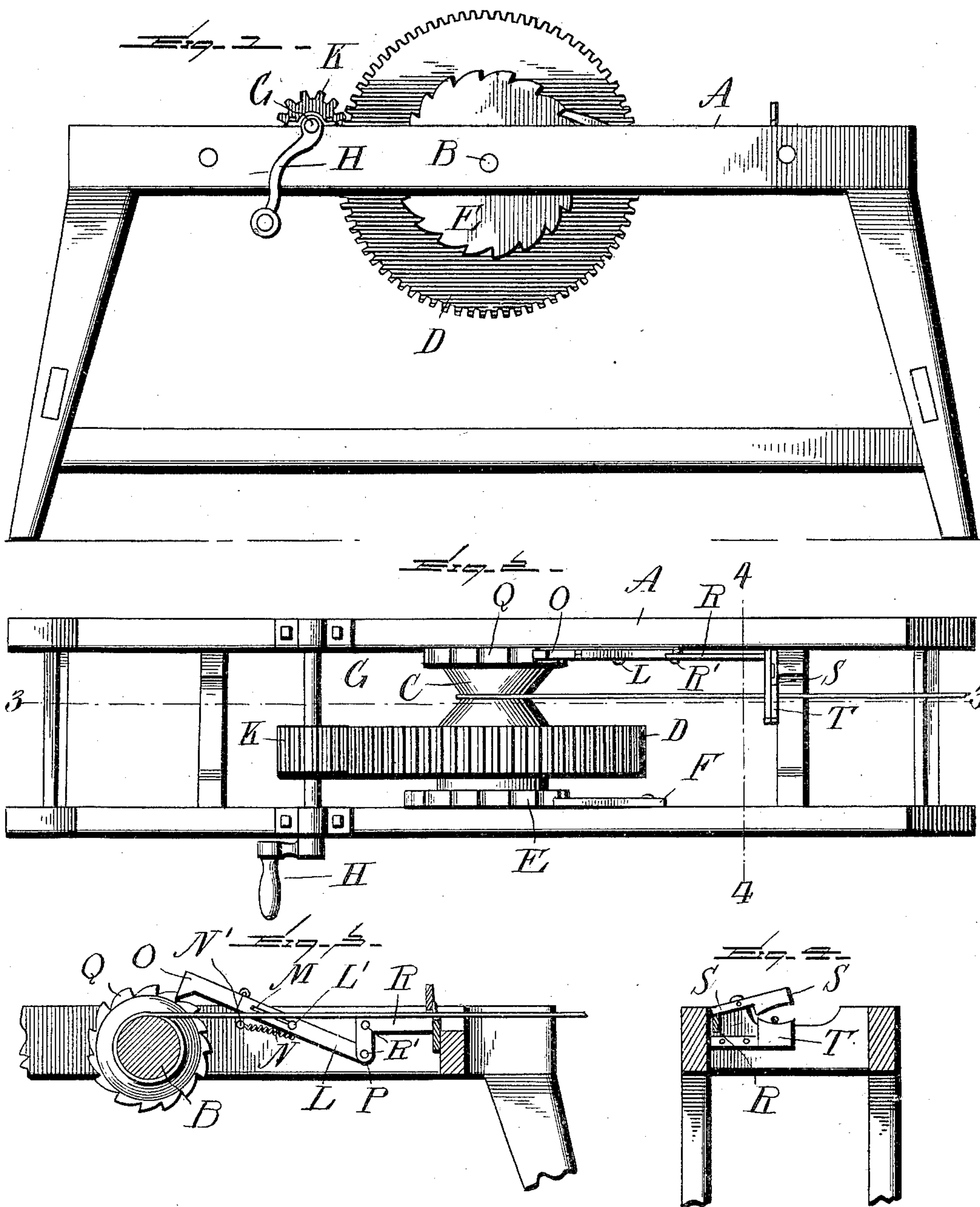
No. 696,395.

Patented Apr. 1, 1902.

J. A. ARMOUR.
WIRE STRETCHER AND CUTTER.

(Application filed Dec. 16, 1901.)

(No Model.)



WITNESSES:

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JAMES A. ARMOUR, OF SEDGWICK, KANSAS.

WIRE STRETCHER AND CUTTER.

SPECIFICATION forming part of Letters Patent No. 696,395, dated April 1, 1902.

Application filed December 16, 1901. Serial No. 86,142. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. ARMOUR, a citizen of the United States, residing at Sedgwick, in the county of Harvey and State of Kansas, have invented certain new and useful Improvements in Wire Stretchers and Cutters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in wire-stretchers and means for cutting the wire after it has been stretched, the cutting being effected by means of the tension on the wire, and the apparatus consists, in connection with the rotary reel and geared connections for operating the same, of a sliding lever, to which a pawl is journaled for engagement with the top of the ratchet-wheel on the reel-shaft, and in the provision of shearing-knives, which are actuated by said lever when the hinged pawl is thrown into engagement with the ratchet-wheel.

The invention consists, further, in various details of construction to be hereinafter more fully described and then specifically defined in the appended claims and illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this application, and in which drawings—

Figure 1 is a side elevation of the apparatus. Fig. 2 is a top plan view. Fig. 3 is a sectional view on line 3 3 of Fig. 2. Fig. 4 is a cross-sectional view on line 4 4 of Fig. 2.

Reference now being had to the details of the drawings by letter, A designates the frame with suitable legs, and in said frame is journaled a shaft B, on which are mounted a reel C and also a gear-wheel D and ratchet E, all rotating with said shaft. A pawl F is provided, which engages the teeth of the ratchet E, and a counter-shaft G, suitably journaled in the frame, has a crank H keyed to one end thereof and also a gear-wheel K, which is in mesh with the gear-wheel D.

L designates a sliding link which is held by means of a pin L' to the frame and has a longitudinal slot M, which allows said link to

slide longitudinally, and a spring N (shown in Fig. 3 of the drawings) has one end secured to a pin N' and its other end fastened to said link L and provided for the purpose of throwing said link to the position shown in Fig. 3 of the drawings. Hinged to said link L is a pawl O, the free end of which is adapted when thrown into the position shown in Fig. 3 to engage the teeth of the ratchet-wheel Q, which ratchet-wheel is keyed to and rotates with the main operating-shaft B. It will be observed that the free end of said pawl is flat and adapted to engage the flat edge of each ratchet-tooth against which it has a bearing. The inner end of the link L is pivoted at P to an angle-lever R, which lever is pivoted at R' to said frame, adapted to have a tilting movement thereon. The free end of the lever R rests underneath one end of the shearing-knife S, provided with a shearing-blade S', which is positioned over a fixed shearing-blade P, which latter is fastened to the cross-piece of the frame, with its upper end projecting a slight distance above the concave portion of the cross-piece of the frame, as shown plainly in Fig. 4 of the drawings.

In operation when the wire has been wound upon the reel and the wire sufficiently stretched the purchase is held by means of the pawl F, and when it is desired to sever the wire the pawl O is thrown forward, so that it will be in line with the link L, with its free end engaging the ratchet-teeth of the reel Q, and then by releasing the pawl F from engagement with the teeth of the ratchet-wheel E the tension of the wire will cause a backward rotation of the shaft and reel, together with the ratchet-wheel Q, and the pressure of the teeth of said ratchet-wheel against the end of the pawl will cause the latter to force the link L away from the reel and will cause the lever R to tilt, and the shearing-knife S' will come down against the fixed blade T and sever the wire which rests upon said fixed shearing-blade.

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

1. A wire stretching and cutting apparatus, comprising in combination with a frame, a shaft journaled thereon, a reel on said shaft, a ratchet-wheel rotating with said reel, a sta-

tionary and a pivoted shearing-blade, an angle-lever for tilting said pivoted shearing-blade, a longitudinally-movable bar pivoted at one end to said angle-lever and a pawl
5 hinged to said bar and adapted to engage said ratchet-wheel and means for rotating the reel on which a wire is designed to be wound the tension of which is adapted to actuate the pivoted shearing-blade, as set forth.
10 2. An apparatus for stretching and cutting wire, comprising in combination with the frame, a shaft journaled therein, a ratchet-wheel and pawl engaging the same, geared wheels and means for rotating the shaft, a
15 fixed shearing-blade, fastened to the frame, a pivoted blade, mounted on the frame and

adjacent to said fixed blade, an angle-lever pivoted to the frame and having one end positioned underneath said pivoted shearing-blade, a sliding link pivoted at one end to
20 said angle-lever, a pawl hinged to the other end of said link, adapted to be thrown into engagement with the teeth of the ratchet-wheel on said shaft, and a spring secured at one end, to the frame, and its other end to
25 said link, as shown and described.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

JAMES A. ARMOUR.

Witnesses:

OTTO G. ECKSTEIN,
EDWARD DILL.