

A. G. HOTCHKISS.

Pointing Wire.

No. 113,885.

Patented April 18, 1871.

Fig. 1

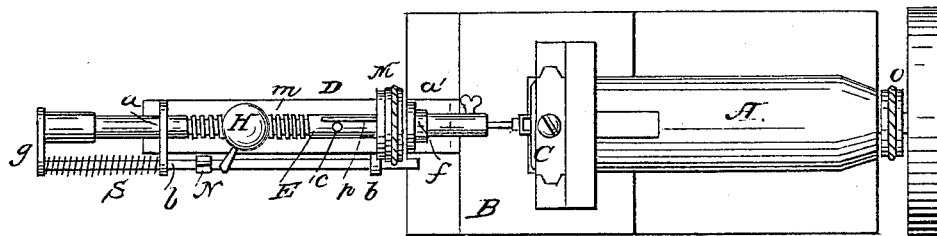


Fig. 3

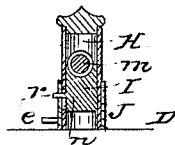
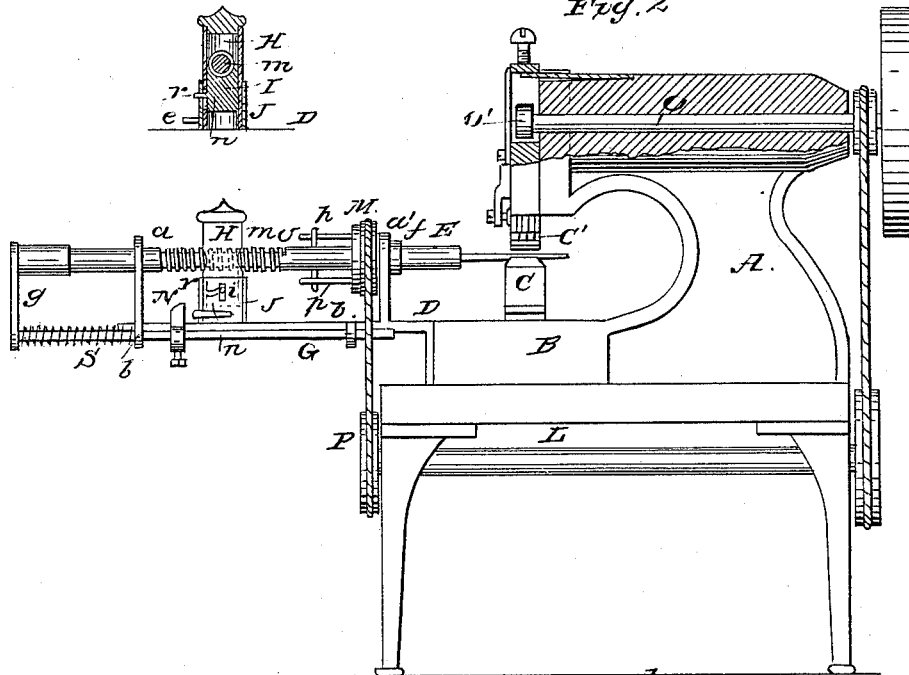


Fig. 2



Witnesses
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 Albert G. Hotchkiss
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United States Patent Office.

ALBERT G. HOTCHKISS, OF WOLCOTTVILLE, CONNECTICUT.

Letters Patent No. 113,885, dated April 18, 1871.

IMPROVEMENT IN MACHINES FOR REDUCING OR POINTING WIRE.

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, ALBERT G. HOTCHKISS, of Wolcottville, in the county of Litchfield and State of Connecticut, have invented a new and useful Improvement in Machines for Reducing and Pointing Wire for Needles or Pins; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing forming a part of this specification.

This invention consists in a novel construction of the feed-motion of a machine for reducing and pointing wire, by means of which the wire to be operated upon is rotated and fed between the dies throughout the intended length of the needle or pin, and the stock or shaft which holds or carries it automatically tripped from its operating-gear, and, by a spring, shot back, so as to remove the wire from the dies.

In the accompanying drawing—

Figure 1 is a plan or top view of a machine constructed according to my invention;

Figure 2 is a partially-sectional side view thereof; and

Figure 3 is a transverse section of the same.

Similar letters of reference indicate corresponding parts in the several figures.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation with reference to the drawing.

The frame A of the machine, bed-plate B, and dies C C' are of ordinary construction.

The movable die C' is operated by an eccentric, O', on the shaft O.

Secured to the front of the bed-plate B is a frame, D, projecting upwardly from which are bearings *a a'*, in which the shaft E is capable both of rotating and of moving longitudinally; and on the same frame are other bearings or guides, *b b*, in which slides a rod, G, which is connected with the rear end of the said shaft E by an arm, *g*, in such manner that the shaft and rod move longitudinally together.

On this frame D, between the bearings *a a'*, is a hollow standard, H; and surrounding the lower portion of this standard is a loose sleeve, J, to which is attached a lever, *e*, that projects over the rod G.

In the upper portion of the standard H is a hole, through which the shaft E passes; and below this hole there is within the said standard a segmental nut, I, which is thrown in or out of gear with a screw-thread, *m*, on the shaft by the operation of a pin or projection, *i*, formed on the nut (see fig. 2) within a vertical slot, *n*, in the standard, and an oblique one,

r, in the sleeve, so that, when the sleeve is turned, the said nut is raised or lowered.

The shaft E extends forward beyond the frame D, its forward end forming the stock or chuck in which the wire is received and carried.

M is a pulley, on the rear side of which is a collar, *f*, which fits within the bearing *a*.

This collar forms the inner bearing of the shaft E. From the front of this pulley there project two pins, *p p*, which engage with a pin, *c*, inserted through the shaft E, said pins *p p* and *c* forming a clutch, by which the pulley is coupled to the shaft.

On the rod G, between the bearings *b b*, is a tappet or dog, N, which, in the forward movement of the chuck, acts against the lever *e*, and turns the sleeve, so as to disengage the nut I from the shaft E.

Surrounding that portion of the rod G between the outer bearing *b* and the arm *g* is a spiral spring, S, which, when the shaft E is not engaged by the nut, presses back the rod and with it the shaft, so that the wire is withdrawn from between the dies.

Power is transmitted to the pulley M by belt from a pulley, P, on a shaft, L, to which power is communicated from the driving-shaft O.

The operation is as follows:

The shafts are first moved forward by hand till the pin *c* engages with the pins *p p* on the pulley M, and the clutch is connected. The sleeve is then turned by hand, by means of the lever *e* attached to it, to throw the nut I into gear with the screw-thread *m* on the shaft E, which is now rotated by the pulley M, turning the wire between the dies during their operation on it, and, at the same time, feeding it forward till the dog N on the shaft G comes in contact with the lever *e*, and turns the sleeve J, thereby disengaging the nut I from the shaft E, which is then shot back by the spring S on the shaft G, withdrawing the wire from between the dies, and leaving the machine in condition to commence a repetition of the operation when the piece of wire has been removed and a new piece inserted.

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

The combination, with the dies C C', of the rotating and longitudinally-moving shaft E, clutch *p p c*, engaging and disengaging gear I J *e* N, and spring S, the whole arranged and operating substantially as and for the purpose herein set forth.

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Witnesses:

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