F. H. AIKEN.

Machines for Pointing Wire.

No. 141,977. Patented August 19, 1873.

Fig. 1.

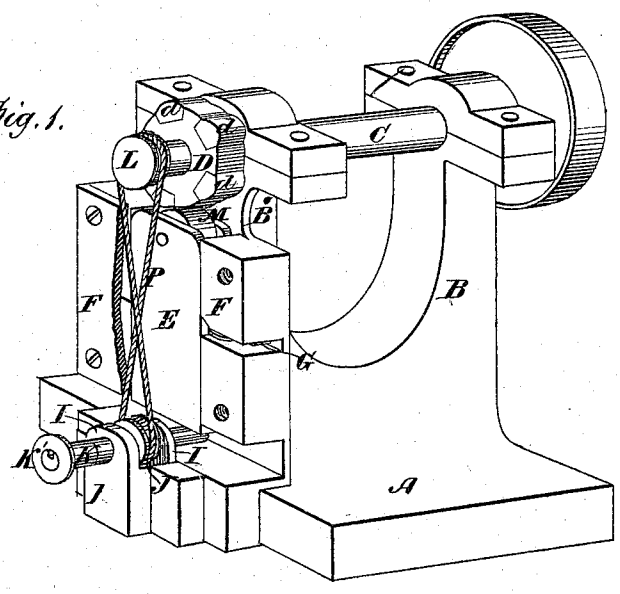


Fig. 2.

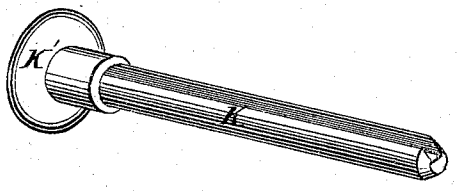
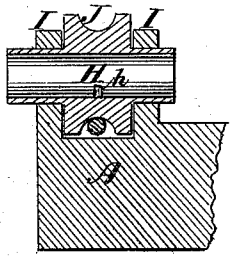


Fig. 3.



Witnesses.
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M Church.

Inventor.
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UNITED STATES PATENT OFFICE.

FRANK H. AIKEN, OF FRANKLIN, NEW HAMPSHIRE.

IMPROVEMENT IN MACHINES FOR POINTING WIRE.

Specification forming part of Letters Patent No. **141,977**, dated August 19, 1873; application filed March 15, 1873.

To all whom it may concern:

Be it known that I, FRANK H. AIKEN, of Franklin, Merrimack county, New Hampshire, have invented an Improved Machine for Compressing Articles of Metal, of which the following is a specification:

Figure 1 is a perspective view; Fig. 2, a perspective view of the blank-holder; and Fig. 3, a section lengthwise of the shell H.

This invention has for its object to effect the compression of articles of metal placed between dies, to one of which a reciprocating motion is imparted by means hereinafter described; and it consists in the application to such machines of a grooved blank-holder rotating in a concentric shell or bearing provided with a pin entering a slot in the blank-holder, as hereinafter more fully set forth.

In the accompanying drawing, A is the bed of the machine, affording the means of fastening the latter to a suitable foundation. B B′ are standards springing from the bed, and supporting boxes in which is mounted the shaft C. Near one end of this shaft, outside the standard B′, is a cam-block, D, firmly fixed on said shaft, and having a number of projections, *d*, or cams set in and extending from its periphery at equal intervals. E is a vertically-reciprocating slide placed beneath the cam-block, and inclosed in a case, F, fastened to the outside of the standard B′, and supported in the case by means of a spring, G, passing transversely through both the slide and the case. H is a hollow shell placed in suitable bearings, I I, rising from the bed A, between which bearings, and on the outside of the shell, is secured a pulley, J. K is the blank-holder, having an external groove running its whole length, which groove receives a pin, *h*, extending inward from the inside of the shell H. The groove in the blank-holder is made larger in diameter or cross-section than the wire to be pointed, so that, when the latter is inserted in the groove and fastened therein by any suitable device, the sides of the groove will project beyond the blank or wire, thus permitting the blank-holder to be inserted in the shell, the pin *h* of the shell projecting a short distance into the grooves, so that a rotary motion will be given the blank-holder as the shell H revolves, the pin *h*, abutting against the upper edge of the groove, and thus locking the blank-holder and shell.

Instead of this arrangement, however, the shell H might have a slot and the blank-holder a pin entering said slot—one way answering as well as the other.

On the extremity of the shaft C is fixed a pulley, L, and from this a belt, P, passes to and around the pulley J on the blank-holder. On the latter is a head, K′, which does not, however, in any manner obstruct the groove in the blank-holder. In the upper end of the slide E, directly beneath the cam-block, is a friction-roller, M.

The arrangement of the cam-block and friction-roller might be reversed, and yet the same result accomplished.

Suppose two dies to be attached, one to the lower end of the reciprocating slide E, and the other to the bed A directly beneath. Let a blank be inserted in the groove of the holder K and fastened to the same, and extended between said dies. Rotary motion being imparted to the shaft C, the cams *d* strike, one after another, on the roller M, and depress thereby the slide E, thus carrying down the upper die, and compressing the blank between it and the lower die. On the passing of each cam *d* the spring G raises the slide again. Thus a series of compressions is imparted to the wire. At the same time, by means of the belt P, the shell H is rotated, carrying round with it the blank-holder K holding the blank, so that the blank receives compression uniformly.

The blank-holder, being connected with the shell H only by a pin and groove, can be drawn out and replaced at any time without stopping the shaft.

I claim as my invention—

1. The combination with dies, one reciprocating and one fixed, of the grooved blank-holder K and shell H, having a pin entering the slot in the blank-holder, substantially as and for the purpose specified.

2. The shaft C, cam-block D, spring G, reciprocating slide E, and friction-roll M, with dies attached, one to the slide, and the other to the bed, vertically beneath it, in combination with the grooved blank-holder K and shell H, all arranged, constructed, and operated as set forth.

FRANK H. AIKEN.

Witnesses:
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