

(No Model.)

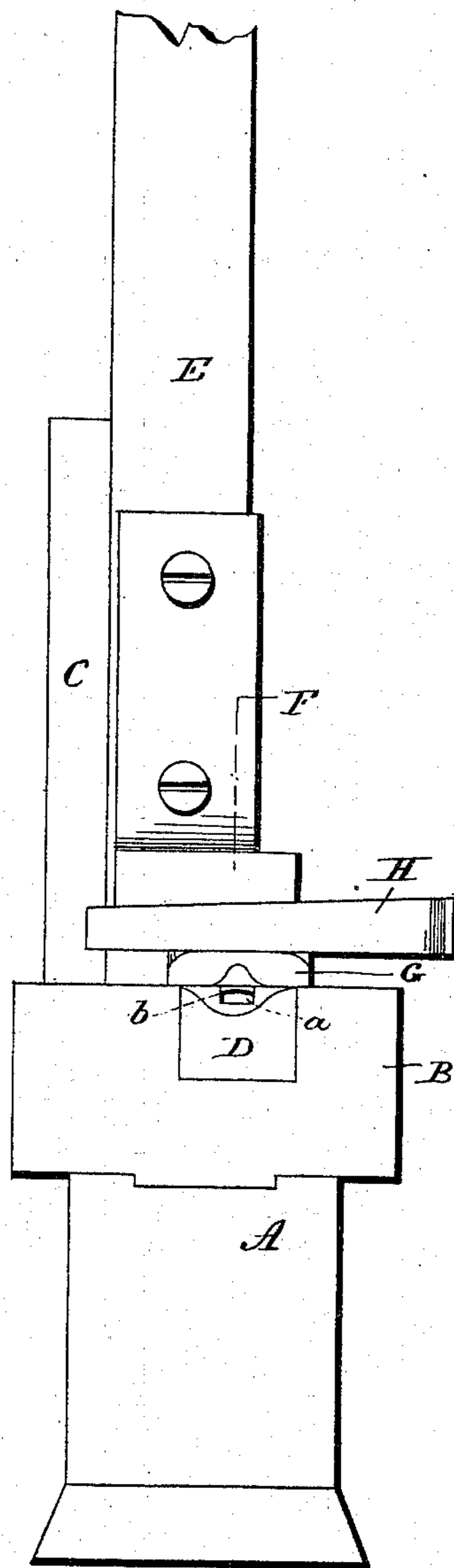
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M. L. HOTCHKISS.  
MACHINE FOR CAPPING CORSET WIRES.

No. 537,891.

Patented Apr. 23, 1895.

*Fig. 1*



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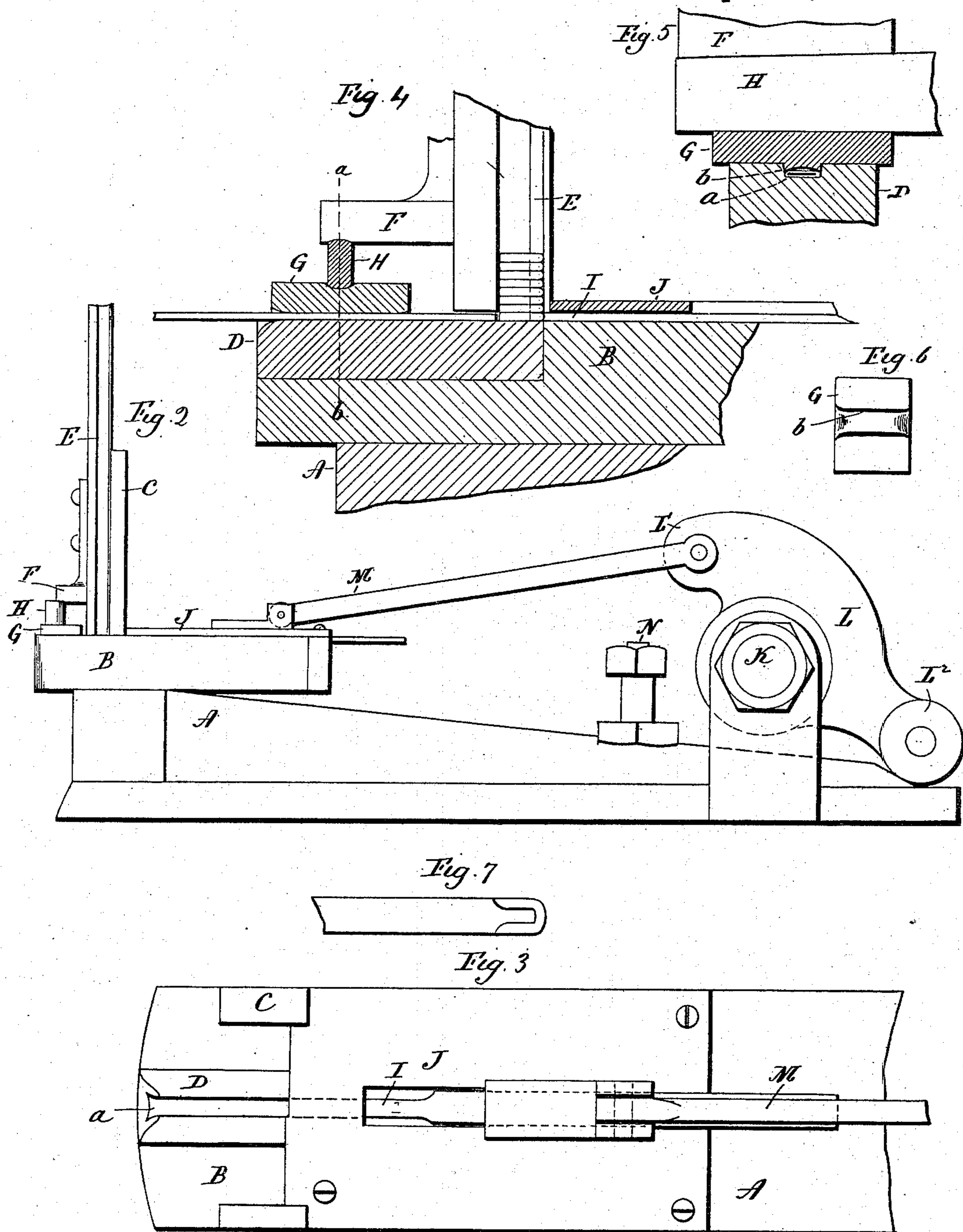
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# UNITED STATES PATENT OFFICE.

MERRITT L. HOTCHKISS, OF DERBY, CONNECTICUT.

## MACHINE FOR CAPPING CORSET-WIRES.

SPECIFICATION forming part of Letters Patent No. 537,891, dated April 23, 1895.

Application filed February 4, 1895. Serial No. 537,194. (No model.)

*To all whom it may concern:*

Be it known that I, MERRITT L. HOTCHKISS, of Derby, in the county of New Haven and State of Connecticut, have invented a new Improvement in Machines for Capping Wires; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a front view of the machine; Fig. 2, a side view of the same; Fig. 3, a top view of the forward end of the machine with the hopper and upper die removed; Fig. 4, a vertical section through the forward end of the machine; Fig. 5, a section on the line *a—b* of Fig. 4; Fig. 6, an under side view of the upper die; Fig. 7, a view of one end of a corset wire with the cap affixed, on an enlarged scale.

This invention relates to an improvement in machines for tipping corset-wires, and particularly such wires as are covered with paper, or other fabric, and which are used as substitutes for whale-bones in stiffening corsets, and other articles of women's wearing apparel, the object of the invention being to produce a machine in which the caps or tips are automatically swaged upon the ends of the wires, and it consists of a pair of dies through which the tipped ends of the wires are forced, and so that said tips are firmly swaged upon the ends of the wires, and in certain details of construction as will be hereinafter described.

A, represents the bed of the machine, at the forward end of which is mounted a die-block B, formed with an upright post C, and recessed at its forward end to receive the lower die D. This die is formed with a transverse groove *a*, which contracts from its inner end toward the mouth, and the outer end of the block is cut away to form a wide mouth or opening into the groove. To the post C a chute E is secured, which leads from a suitable hopper, not shown. To the outer face of the chute E, a lug or shoulder F is secured, and between which and the die D, the upper die G is arranged. This die G, is formed with a rib *b*, which is concave in cross section, and

the outer edge of the die is cut away, as shown in Fig. 1, which cut away portion, in connection with the cut away portion of the die D, forms a convenient entrance opening. This upper die D is preferably held in its position by a key H, which is passed between the lug F and die G, thus securely holding the die G in contact with the die D, the rib *b* entering the groove *a*, which prevents lateral displacement. The said rib inclines from its rear end forward, so as to contract the space between the bottom of the groove and the rib. The block B, is grooved throughout its length in rear of the die D, and in this groove a slide I is arranged, which slide is held in position by a slotted plate J, which is secured to the block, the edges of said slot overlapping the edges of said slide, which is thereby held in position. The forward end of the slide corresponds in width and thickness to the contracted space between the two dies D and G, between which it is adapted to pass.

In the rear of the machine, upon a rock-shaft K, a bell-crank-lever L is mounted, the forward arm L' of which is connected to the slide I by a link M. The rear arm L<sup>2</sup> is connected with an operating-treadle, not shown. In the bed of the machine a spring stud N is arranged, upon which the forward arm L' will strike when it is thrown forward, and thus avoid jarring the machine.

The caps or tips are formed from sheet-metal of the shape shown in Fig. 7, and are fed to the machine from the hopper, through the chute E, into a vertical column upon the rear end of the die D, the lower tip of the column resting in the groove *a*, and in front of the forward end of the slide I.

The wire to be capped is fed by the operator through the groove *a* between the dies D and G, and its end extended into the lowest cap in the column in the chute. The treadle is then operated, which raises the arm L<sup>2</sup>, and hence depresses the arm L', which through the medium of the link M, moves the slide forward, which forces the cap on the end of the wire between the two dies, and owing to the contraction of the opening between the dies, the said tip is swaged or forced onto the end of the wire, the covering of the wire permitting the cap to be firmly embedded therein, so that when the cap is fixed, the capped end

of the wire is scarcely larger than the main portion of the wire. In thus moving forward, the slide holds the column of tips out of the groove *a*, but as the slide returns, the column  
5 of tips falls, and a second tip is allowed to enter the groove *a*, ready to receive the end of the next wire.

It will be understood that the size of the die corresponds to the size of the caps to be  
10 affixed.

In operation, the arm *L'* of the lever will strike the spring-pin *N*, which will slightly yield, and thus not only limit the movement of the lever, but prevent the jarring which would  
15 occur should the arm *L'* strike the bed of the machine.

It is apparent without further description or illustration that the dies may be connected in any desired manner, and also that the  
20 chute *E* may be attached to the machine in any convenient way. I therefore do not wish to be understood as limiting my invention to the exact arrangement and construction of parts as shown; but,

25 Having fully described my invention, what I claim is—

1. In a machine for capping corset wires, a pair of dies, one of which is formed with a tapered groove and the other with a tapered  
30 rib less in thickness than the depth of said groove, which it enters, thus forming an opening between them which is contracted in width and thickness from its rear end forward, and a slide adapted to move through  
35 said opening, substantially as described.

2. In a wire capping machine, a pair of dies, one of which is formed with a tapered groove and the other with a tapered rib less in thickness than the depth of said groove, which it enters, thus forming an opening between  
40 them which is contracted in width and thickness from its rear end forward, a chute adapted to deliver caps in rear of said dies, and a slide mounted in line with the opening between the dies and adapted to be moved  
45 forward through said opening, substantially as described.

3. The herein described machine for capping wires, consisting of a grooved die-block, a grooved die mounted in the forward end  
50 thereof, said groove contracting from its rear end forward, a second die mounted above the grooved die, and formed with a rib corresponding in width to the width of the groove  
55 in the first die, said rib inclined from its rear end forward so as to diminish the space between said dies, a slide mounted in the grooved block in rear of said dies, a lever in connection with said slide for imparting horizontal movement thereto, and a chute adapted  
60 to deliver caps into the groove at the rear end of said dies, substantially as described.

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

MERRITT L. HOTCHKISS.

Witnesses:

CHARLES S. CHAFFEE,  
WM. S. BROWNE.