

(No Model.)

2 Sheets—Sheet 1.

C. B. HATFIELD.

MACHINE FOR BEADING SHOE UPPERS.

No. 334,376.

Patented Jan. 12, 1886.

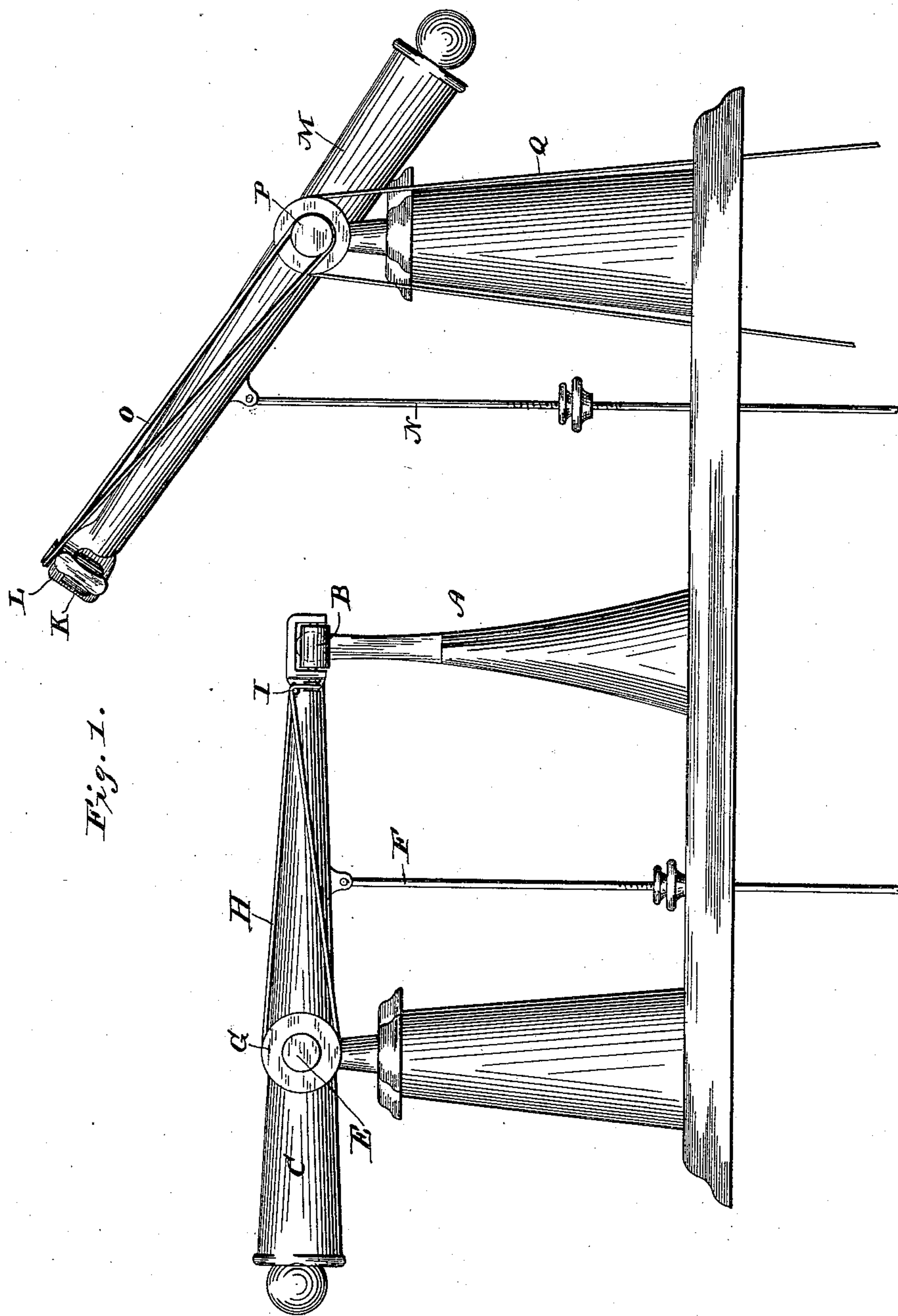


Fig. 1.

Witnesses.
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(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

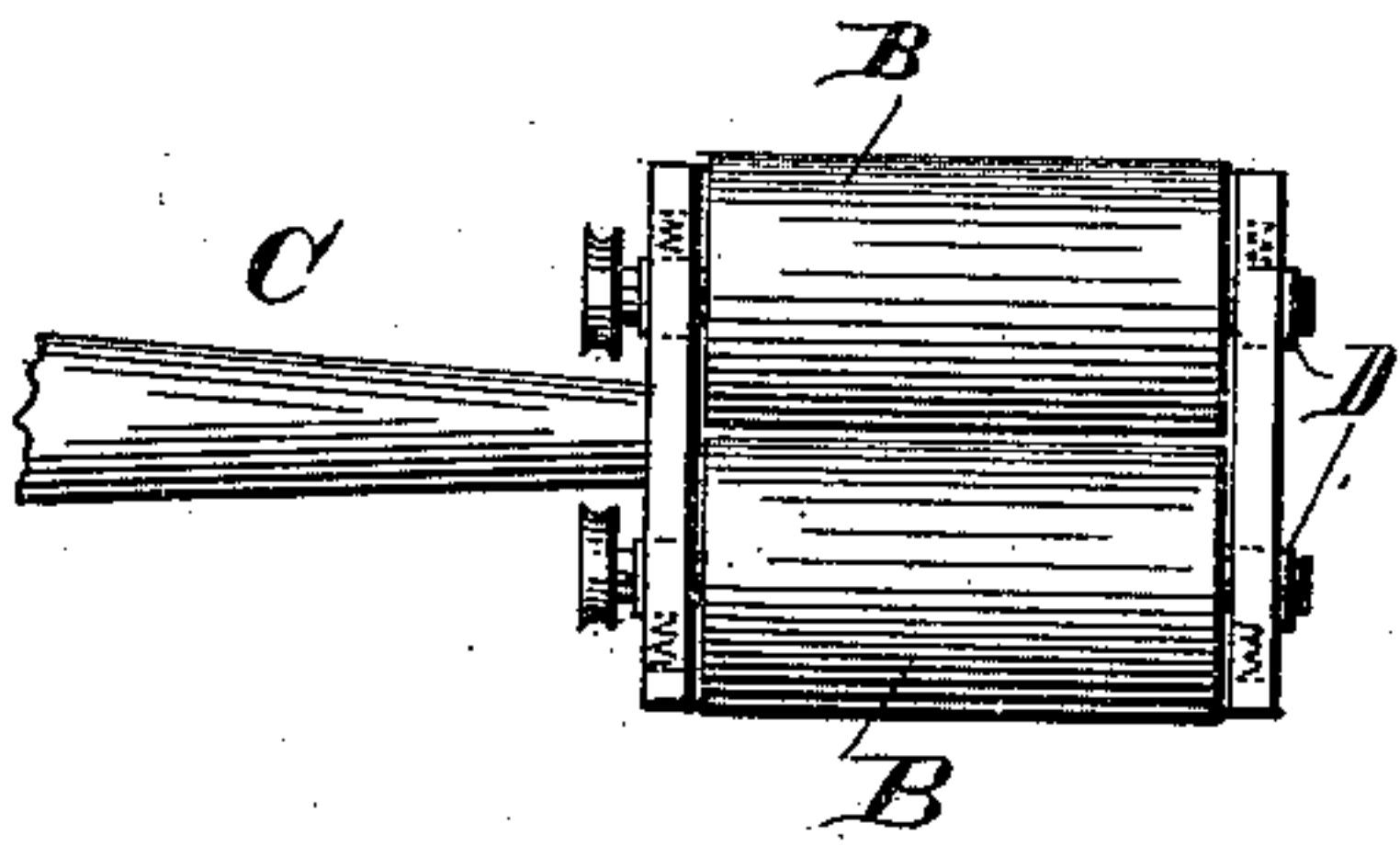


Fig. 3.

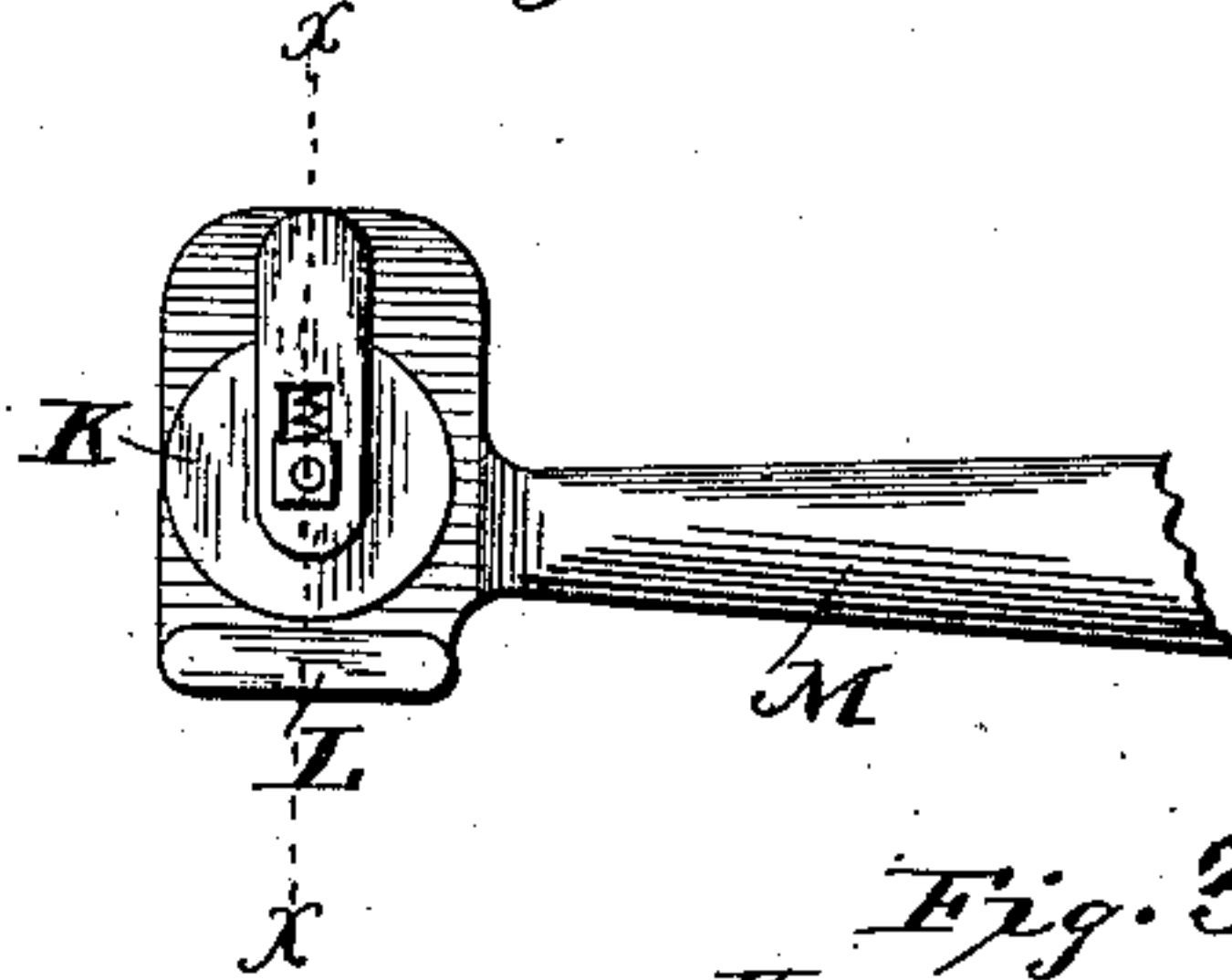


Fig. 3^a.

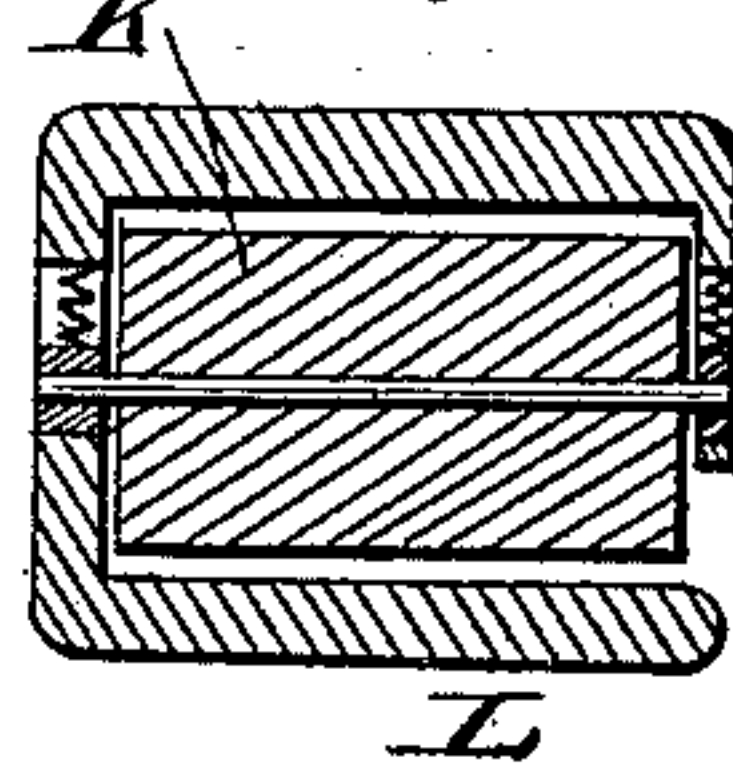
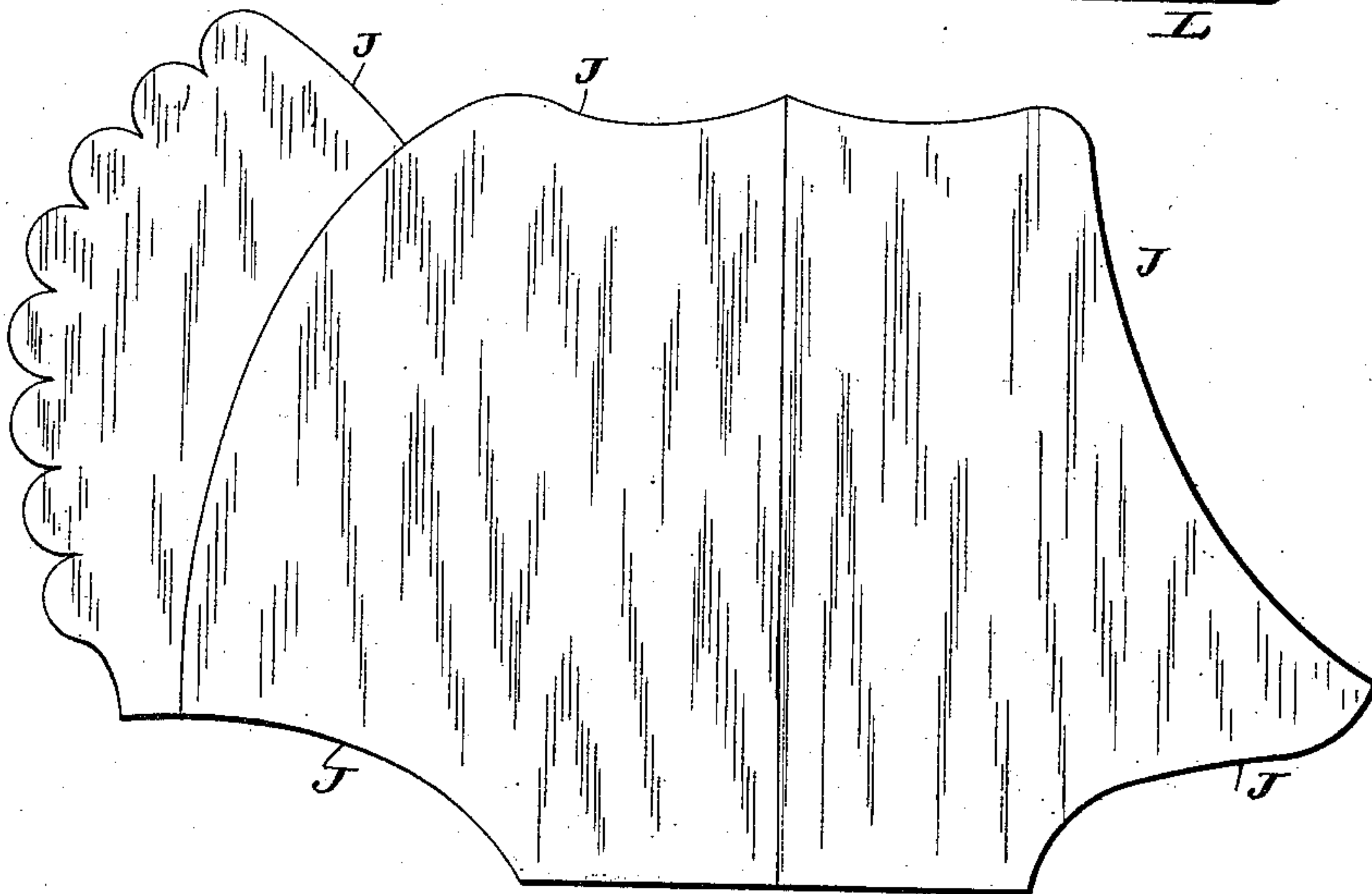


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES B. HATFIELD, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE
AUTOMATIC SHOE BEADER COMPANY, OF SAME PLACE.

MACHINE FOR BEADING SHOE-UPPERS.

SPECIFICATION forming part of Letters Patent No. 334,376, dated January 12, 1886.

Application filed July 10, 1885. Serial No. 171,205. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. HATFIELD, of Rochester, in the county of Monroe and State of New York, have invented certain new and
5 useful Improvements in Machines for Beading Shoe-Uppers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, and to the figures and letters of reference marked thereon.

My present invention is an improvement upon the machine for which Letters Patent No. 318,731 were granted to me on the 26th of
15 May, 1885. In said patented machine there is combined with a turning-iron adapted to hold the work turned right side out a pair of automatic compressing-jaws, which operate to simultaneously compress the edges of the work
20 and finish them. The compressing-jaws have a reciprocating motion toward and from each other in right lines, and the same jaws serve to compress the scalloped edges of the button-fly of an upper, as well as the edges of the
25 quarters thereof.

In my present machine I substitute for the jaws described in the patent two separate compressing devices, one of them consisting of a pair of rollers mounted upon a movable arm,
30 and adapted to particularly compress the scalloped edges of the button-fly, and the other consisting, preferably, of a fixed jaw and a co-operating movable roller, also mounted upon a movable arm, being adapted to compress
35 the edges of the quarters of the upper. The pair of compressing-rollers which compress the edges of the button-fly are preferably, as they grasp the work, given rotation in a direction contrary to the direction of movement
40 of the arm upon which they are mounted, so as to prevent them from injuriously drawing the work, while the roller which is mounted upon the other movable arm, and which co-operates with a stationary jaw, is given preferably a rotary motion, so as to co-operate
45 with its companion compressing-surface to feed the work being operated upon.

The details of construction involved in the new machine will be now described, after

which the features of novelty will be particularly pointed out in the claims at the close of the specification.

Figure 1 represents a side elevation of my improved machine; Fig. 2, a detail view of the pair of compressing-rollers which act upon the scalloped button-fly. Fig. 3 is a similar view of the roller and plain co-operating jaw. Fig. 3^a is a sectional view taken on the line *x x* of Fig. 3. Fig. 4 is a view of the shoe-upper such as my machine is intended to operate upon.

Similar letters of reference in the several figures denote the same parts.

The letter A represents a beading or turning iron constructed substantially as shown in
65 my patent referred to.

B B are two co-operating rollers mounted upon the outer end of the movable arm C, and having spring-seated bearings D, which tend to keep them pressed toward each other, but
70 do not prevent their separation, so as to admit the work between them. The arm C is vibrated upon a fixed shaft or center, E, and is capable of being swung up and down by means of a rod, F, that leads to a treadle. (Not
75 shown.) Upon the shaft E is fixed a pulley, G, to which is secured a strap or belt, H, that passes over a bearing, I, and around small pulleys on the shafts of the rollers B B. The pulley G being fixed and the belt H being rigidly
80 secured to it at G, it results that when the arm C is vibrated a rotary motion will be imparted to the rollers B B in a direction contrary to that in which said arm C is moving.

In practice the work to be operated upon is
85 turned right side out and placed upon the beading iron or holder, substantially as indicated in my former patent. The arm C is then caused to vibrate up and down, and each time it moves down its rollers B B compress the
90 edge of a scallop simultaneously from opposite sides, and as the arm goes up the work is by the operator again adjusted upon the beading-iron, so that the next scallop will be in turn acted upon, and so on until the entire button-
95 fly has been beaded.

For beading or compressing the edges J of the quarter, as shown in Fig. 4, these same

compressing-rollers B B may be employed; but this portion of the work can be performed with greater facility by the roller K and co-operating jaw L on the second vibrating arm

5 M. The arm M is provided with treadle-connection N, also adapted to be vibrated up and down. The button-fly having been acted upon and the arm C swung up out of the way, the work is properly adjusted upon the iron

10 and the arm M is brought down, so as to cause the edges of the quarter to be confined between the roller K and co-operating jaw L. While in this position the work is then drawn laterally, so as to cause the entire edge of the upper to be subjected to the compressing action.

15 The lateral motion of the work may be effected entirely by the operator, or the roller K, by means of a belt, O, pulley P, and driving-belt Q, may be revolved, so as to cause the work

20 to be wholly or partially fed along automatically. It would of course be practicable to arrange the pair of compressing-rollers B B and the compressing-roller K and the co-operating jaw L upon the same arm; but for convenience I prefer to arrange the two sets of compressing devices upon different arms, so that

25 one set can be operated at a time—the first by the left foot and the second by the right foot of the operator.

30 I claim as my invention—

1. In a shoe-beading machine, the combination, with a turning-iron adapted to receive the work turned right side out, of co-operating spring-seated compressing-rollers carried

35 by a movable arm or support and operating simultaneously on both sides of the edge of the work, to compress the same between them while the work is still on the turning-iron, substantially as described.

2. In a shoe-beading machine, the combination, with the turning-iron adapted to receive the work turned right side out, of a pair of spring-seated compressing-jaws mounted upon a movable arm or support and operating simultaneously on both sides of the edge of the

45 work, to compress the same between them while the work is still on the turning-iron, and means, substantially as described, for imparting to said rollers rotation in a direction contrary to that of the movable arm on which

50 they are supported, substantially as described.

3. In a shoe-beading machine, the combination, with a turning-iron adapted to receive the work turned right side out, of a compressing-roller and a co-operating jaw carried by a

55 movable arm or support operating on both sides of the edge of the work, to simultaneously compress the same while it is still on the turning-iron, substantially as described.

4. In a shoe-beading machine, the combination, with a turning-iron adapted to receive the work, of a pair of automatic compressing-rollers mounted upon a movable arm or support, and an independent compressing-roller and a co-operating jaw, substantially as described.

65

5. In a shoe-beading machine, the combination, with a turning-iron having yielding jaws and adapted to receive the work turned right side out, of compressing-rollers mounted upon

70 a movable arm or support and operating on both sides of the edge of the work, to simultaneously compress the same while it is still on the turning-iron, substantially as described.

CHARLES B. HATFIELD.

Witnesses:

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FRED F. CHURCH.