

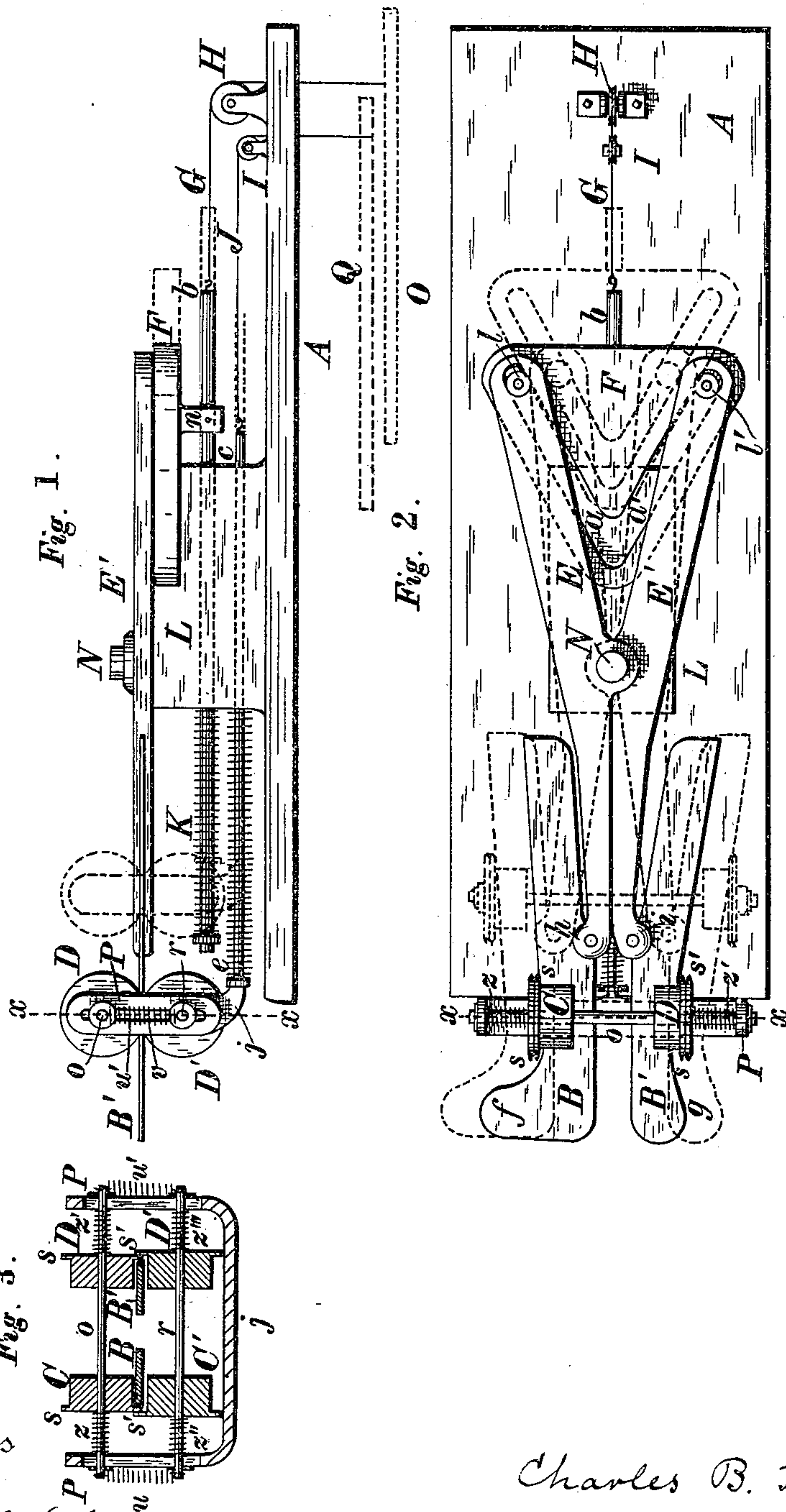
(No Model.)

C. B. HATFIELD.

MACHINE FOR TREEING SHOE LEGS.

No. 354,189.

Patented Dec. 14, 1886.



Witnesses

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UNITED STATES PATENT OFFICE.

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MACHINE FOR TREEING SHOE-LEGS.

SPECIFICATION forming part of Letters Patent No. 354,189, dated December 14, 1886.

Application filed September 6, 1886. Serial No. 212,776. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. HATFIELD, a citizen of the United States, residing at Rochester, New York, have invented an Improved Machine for Treeing Shoe-Legs, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to certain improvements in machines for treeing shoe-legs, which improvements are fully described and illustrated in the following specification and accompanying drawings, and the novel features thereof specified in the claims annexed to the said specification.

In the accompanying drawings, representing my improved machine for treeing shoe-legs, Figure 1 is a side elevation. Fig. 2 is a plan view. Fig. 3 is a section on the line *x x*, Figs. 1 and 2.

My improved machine for treeing shoe-legs consists, essentially, of the base A, the stretching-jaws B B', and the pressure-rollers C C' D D', and suitable mechanism for operating the jaws and rollers.

The shoe is treed while on the stretching-jaws by causing the pressure-rollers to travel backward and forward, as indicated by the full and dotted lines in the drawings. The stretching-jaws are arranged to be opened, when the shoe has been placed on them, by means of the levers E E' and sliding cam F, connected by cord G with a suitable treadle. The pressure-rollers are caused to travel along the stretching-jaws in one direction by the pressure of the foot of the operator on a suitable treadle, the return movement in the opposite direction being effected by the spring *e* on the rod *c*.

On the base A is secured a block, L, to which the levers E E' are pivoted at N. The stretching-jaws or plates B B' are pivoted to the ends of the levers E E' at *h* and *i*, Fig. 2. The opposite ends of the levers are bent outward and provided with lugs or rollers *l l'*, which project into the inclined grooves *a a'* in the sliding cam F. The arrangement is such that when the cam is moved from left to right, as represented by the full and dotted lines in Fig. 2, the ends of the levers carrying the

rollers *l l'* are drawn together, and the other ends are separated, so as to move the stretching-jaws outward, as shown by the dotted lines. The cam F is connected by an arm, *n*, Fig. 1, with the rod *b*, which extends through the block I, being provided with a spring, K, which is compressed when the cam is moved to spread the jaws B B'. A cord, G, attached to the rod *b* is carried over a suitable corner-pulley, H, and attached to a treadle, (indicated by dotted lines O, Fig. 1.) As indicated in Fig. 2, the stretching-jaws are provided with suitable projections, *f* and *g*, adapted to receive and hold the legs of shoes placed thereon.

The pressure-rollers are placed in pairs on each side of the stretching-jaws, being supported on the rods *o* and *r*, Fig. 3, carried by a frame, P, the lower cross-bar of which, J, is secured to the rod *c*, arranged to slide through the block L in a suitable opening. The ends of the rods *o* and *r* are attached together by the springs *u u'*, Fig. 3. The rods pass through slots *v* in the frame P, so that they are free to play up and down.

The pressure-rollers C C' D D' are arranged to revolve freely on the rods *o* and *r*. The rollers are provided with the flanges *s s'* on their outer margins, the rollers themselves being pressed toward the outer edges of the stretching-jaws by the springs *z z' z'' z'''* on the rods *o* and *r*.

It is obvious that from the construction shown, when the stretching-jaws are separated, the rollers will be moved outward, sliding along the rods *o* and *r*, and compressing the springs *z z' z'' z'''*. The rod *c* is attached to a cord, J, which passes around a corner-pulley, I, and is fastened to a suitable treadle, Q. The rod *c* is provided with a spring, *e*, which tends to force the pressure-rollers away from the block L.

The operation of my improved machine for treeing the legs of shoes will have been already understood from the foregoing description. The operator, pressing his foot on the treadle Q, draws the pressure-rollers toward the block L, as indicated by the dotted lines in Figs. 1 and 2, so as to permit the leg of the

shoe to be placed on the stretching-jaws B B'. The jaws are then separated by the action of the treadle O drawing back the cam F, and the treeing of the shoe-leg is then effected by causing the pressure-rollers to travel along the leg stretched on the jaws by alternately pressing on the treadle Q and allowing the spring *e* to move the rollers toward the operator by releasing the pressure on the rollers. The flanges *s s'* are arranged to overlap each other, so that one of the springs *z z'* may be dispensed with, or a spring may be employed to draw the rollers C and D toward each other.

It is obvious that the pivoted separable stretching-jaws B B' may be used for treeing shoes in connection with a hand-rubber of any suitable kind, the pressure-rollers being dispensed with.

The stretching-jaws B B', being pivoted at *h* and *i* to the ends of the levers E E', adapt themselves to the shape of the shoe-legs applied to them.

It is obvious that the rollers C and D and the rollers C' and D' may be made in one piece—being recessed at the middle of their length, so as to pass over the pivots *h* and *i*—if made sufficiently long and without flanges. In this construction the springs *u u'*, or their equivalents, would still be retained to press the rollers against the leather of the shoe-leg on the stretching-jaws.

I claim—

1. The combination, in a machine for treeing shoe-legs, of the separable stretching jaws B B' and the reciprocating pressure rollers C C' D D', substantially as described.

2. The combination, in a machine for treeing shoe-legs, of the stretching-jaws B B' and the rollers C C', having overlapping flanges *s s'*, substantially as described.

3. The combination, in a machine for treeing shoe-legs, of the separable stretching-jaws B B', and the reciprocating flanged rollers C C' and D D', rods *o* and *r*, and suitable springs connected to the rods, substantially as described.

4. The combination, in a machine for treeing shoe-legs, of the separable stretching-jaws B

B', and the reciprocating flanged rollers C C' D D', and a suitable spring or springs arranged to force the flanges against the edges of the jaws, substantially as described.

5. The combination, in a machine for treeing shoe-legs, of the separable stretching-jaws B B', the reciprocating flanged pressure-rollers C C' D D', rods *o* and *r*, a spring or springs connecting the rods, and a suitable spring or springs arranged to force the flanges against the edges of the jaws, substantially as described.

6. The combination, in a machine for treeing shoe-legs, of pivoted stretching-jaws, operating-levers to which said jaws are pivoted, and reciprocating pressure-rollers co-operating with the said jaws, and means, substantially as set forth, for operating said levers, all substantially as described.

7. The combination, in a machine for treeing shoe-legs, of the separable stretching-jaws B B', reciprocating flanged pressure-rollers C C' D D', rods *o* and *r*, suitable springs for connecting the rods together and pressing the flanges against the jaws, frame P, and rod *c*, substantially as described.

8. The combination, in a machine for treeing shoe legs, of the separable pivoted stretching-jaws B B', levers E E', and sliding cam F, operating to open the jaws, substantially as described.

9. The combination, in a machine for treeing shoe-legs, of the separable pivoted stretching-jaws B B', levers E E', cam F, having inclined grooves *a a'*, rod *b*, and spring K, substantially as described.

10. The combination, in a machine for treeing shoe-legs, of the separable pivoted stretching-jaws B B', reciprocating pressure-rollers on each side the jaws, and suitable mechanism arranged to be operated by the treadles O and Q, for opening the jaws and causing the rollers to reciprocate lengthwise of the jaws, substantially as described.

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Witnesses:

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