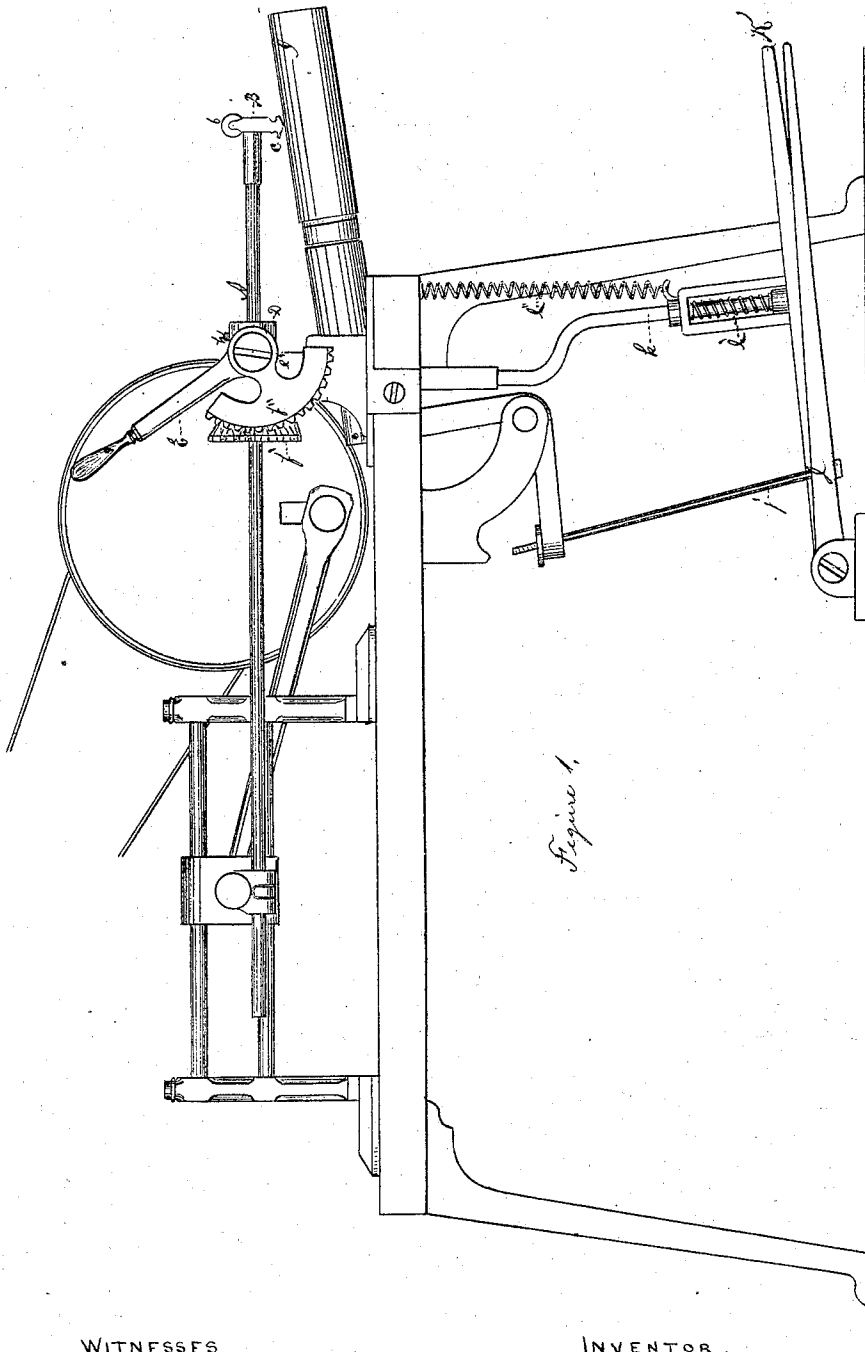


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No. 138,713.

Patented May 6, 1873.



WITNESSES

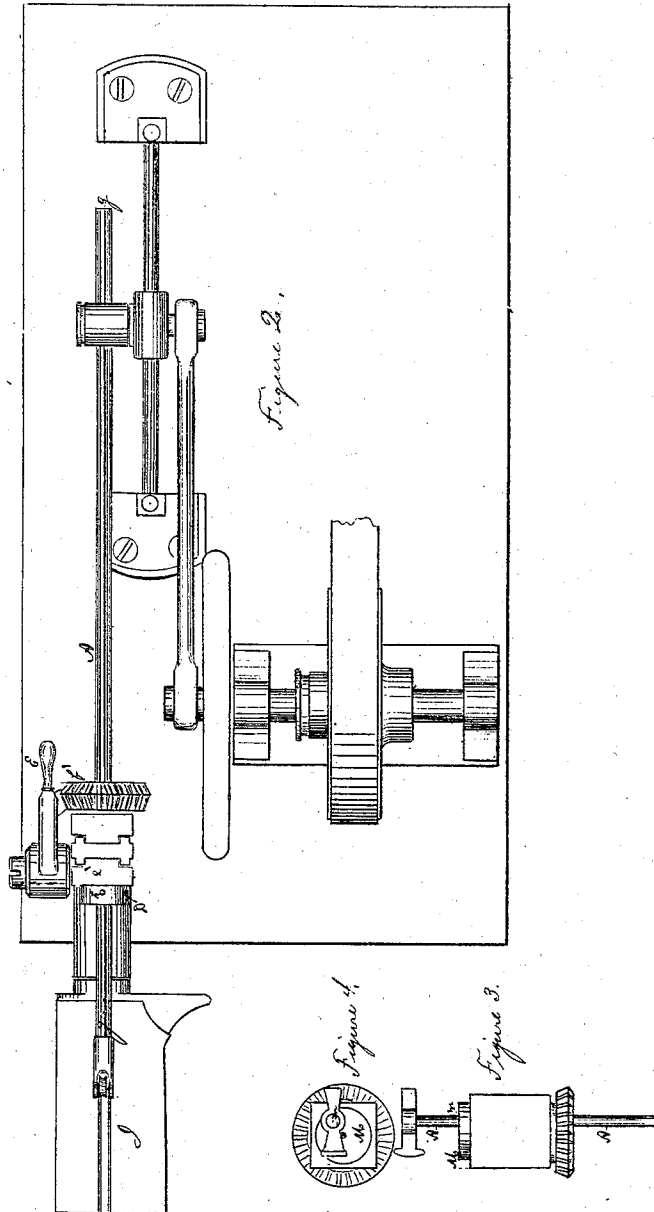
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WITNESSES

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IMPROVEMENT IN MACHINES FOR RUBBING AND ROLLING SEAMS OF BOOTS.

Specification forming part of Letters Patent No. **138,713**, dated May 6, 1873; application filed June 5, 1873.

To all whom it may concern:

Be it known that I, ALBERT THOMPSON, of Boston, Massachusetts, have invented certain Improvements in Machines for Rubbing and Rolling down the Seams of Boots and Shoes, of which the following is a specification:

The object of my invention is a machine which shall more effectually rub or roll down the seams of boots and shoes than is done by any machine now in use or by hand; which shall be capable of operating upon the seams either with a rubbing or rolling motion, as may be desired; which shall also stretch a boot-leg to be acted on; and which may be so arranged as to adapt it to boot and shoe uppers of different thicknesses, or impart more or less pressure to the boots or shoes operated on in the rubbing-down process.

In order better to understand my invention, reference may be had to the accompanying drawing, in which—

Figure 1 represents a side view of a machine embodying my improvements, and Fig. 2, a plan of the same. Fig. 3 represents a side view of a second form of the operating end of the reciprocating-rod, hereafter to be described, and Fig. 4 a front view of the same.

A' represents the reciprocating-rod, at the operating end of which is placed the double head B, having two faces; first, *b*, a small roller, by means of which the operation is performed by a rolling motion; and second, *c*, which fulfils the office of rubbing instead of rolling down, when that method is preferred. The reciprocating-rod A runs through the sleeve D, upon which is fixed the toothed wheel *f'*, which gears into a segment of a toothed wheel, *f''*, forming part of the lever E. This lever is fixed to a box, *e'*, through which the sleeve D is placed. A slot, *g g*, runs along the whole length of the reciprocating-rod A, and through the sleeve, into this slot runs a pin, *h*. By means of the lever E and the gearing *f'* and *f''* the sleeve D is caused to revolve in the box *e'*; and, when it revolves, by means of the pin *h*, the reciprocating-rod A is reversed, so that, in working the machine, either face, *b* or *c*, may be used, according as a rubbing or rolling action is desired. I is a form or stretcher upon which the boot or shoe to be operated on is placed, and which may be

opened so as to stretch the boot-leg for the purpose of better operating upon it by means of the treadle J and the connecting-rod *j*. K is a treadle, which, by means of its connecting-rod *k*, brings down the reciprocating-rod A with its operating-faces *b* and *c* upon the stock to be operated on, and which can thus impart to the work more or less pressure, at the pleasure of the operator; and, also, by means of this device, the operating extremity of the reciprocating-rod may be elevated so as to allow a boot or shoe which has already been operated on to be removed from the form I and another one placed thereon without stopping the machine. By means of the spring *l'* a certain degree of elasticity is imparted to the operation of the reciprocating-rod, when the treadle K is clamped down, as it is designed to be ordinarily, so that the operating end of this rod may adapt itself automatically to slight differences of thickness in the boot or shoe upper which is being worked upon. By means of the spring *l''* the treadle K is brought up, when unclamped, and consequently the rod A. M, in Figs. 3 and 4, represents the extremity of a sleeve, through which, at *m*, the rod A passes, and the rod A is reversed by its revolution with the sleeve, instead of by means of a pin and slot, as above described. This mode of reversing the rod A possesses no advantage over the method above described; but, it being an entirely different mode of accomplishing a result of great use in my machine, I think it well to describe and claim it.

Having thus described the object of my invention, and the general construction of a machine embodying it, its operation will be readily understood.

The machine is operated and motion imparted to the reciprocating-rod A in any suitable way; and, as I make no claim to any mode of operating the machine or imparting power to the rod A, it will not be necessary to indicate any particular method other than that shown in the drawing, by means of a belt and pulley attached to a shaft.

The boot-leg or shoe to be operated on is placed on the form or stretcher I. By means of the treadle the form is opened to such an extent as may be desired by the operator, so as properly to open the seam. The rod A is

then turned by the means described above, so as to bring into operation either faces *b* or *c*, according as a rolling or rubbing action is desired. The operating end is then brought down so as to be applied with the necessary force to the work by the treadle *J*, and the treadle is then clamped. The machine is then set in motion, and the rod *A*, reciprocating through the sleeve *D*, the pin *h* passing easily along the slot, rubs or rolls down the seams by means of its operating-faces *b* or *c*, as the case may be. When the work is done the treadle *K* is unclamped, the operating end of the rod *A* is lifted up, by means of the spring *l'*, enough to allow the boot or shoe which has been finished to be taken off and another one placed on the form *I*, and the operation is repeated.

It often happens that, in consequence of the front and back of a boot or shoe being of different materials and of uneven thicknesses, the stock, when operated on, if the force, in rubbing down, is applied directly upon the seam, will bend or tip over toward the thinner material, and thus prevent the work from being properly done. This can be fully overcome by slightly turning the rod *A* so that the faces *b* or *c* may come upon the stock at an angle, the precise degree of which can be readily determined by any ordinary workman.

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

1. The improved rubbing-down machine for seams of boots and shoes, consisting of the reciprocating-rod *A* with the slot *g*, the lever *E*, the gearing *f'* and *f''*, the sleeve *D*, the operating ends *b* and *c*, the treadles *J* and *K* with their several connecting-rods, and the stretcher or form *I*, in combination, substantially as above described.

2. The reciprocating rod *A* with the slot *g* passing through the sleeve *D* with the pin *h*, the double head *B*, the lever *E*, and the gearing *f'* and *f''* in combination, in the manner and for the purpose substantially as above described.

3. The stretcher operating as a holding device for rubbing or rolling down the seams of boots and shoes, in combination with the double head *B* adapted for either rubbing or rolling, and actuated by a reciprocating rod.

4. The reciprocating rod *A* passing through the sleeve *M* eccentrically, so as to be revolved with it by means of suitable gearing, and the lever *E*, substantially as above described.

ALBERT THOMPSON.

Witnesses:

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ALPHEUS R. HALE.