# W. H. Kimball.

## Sewing Machine,

No. 44,636. Patented Oct. 11, 1864.

Fig. 3.

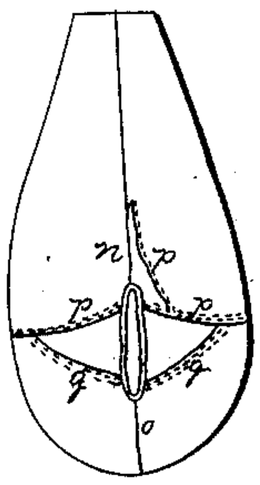



Fig. 4

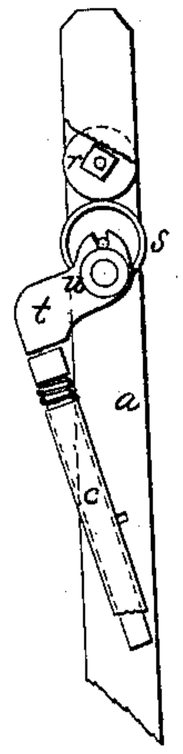



Fig. 5.

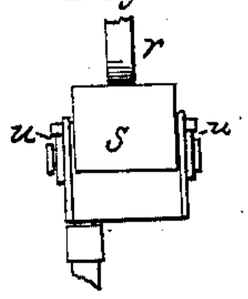



Fig. 2.

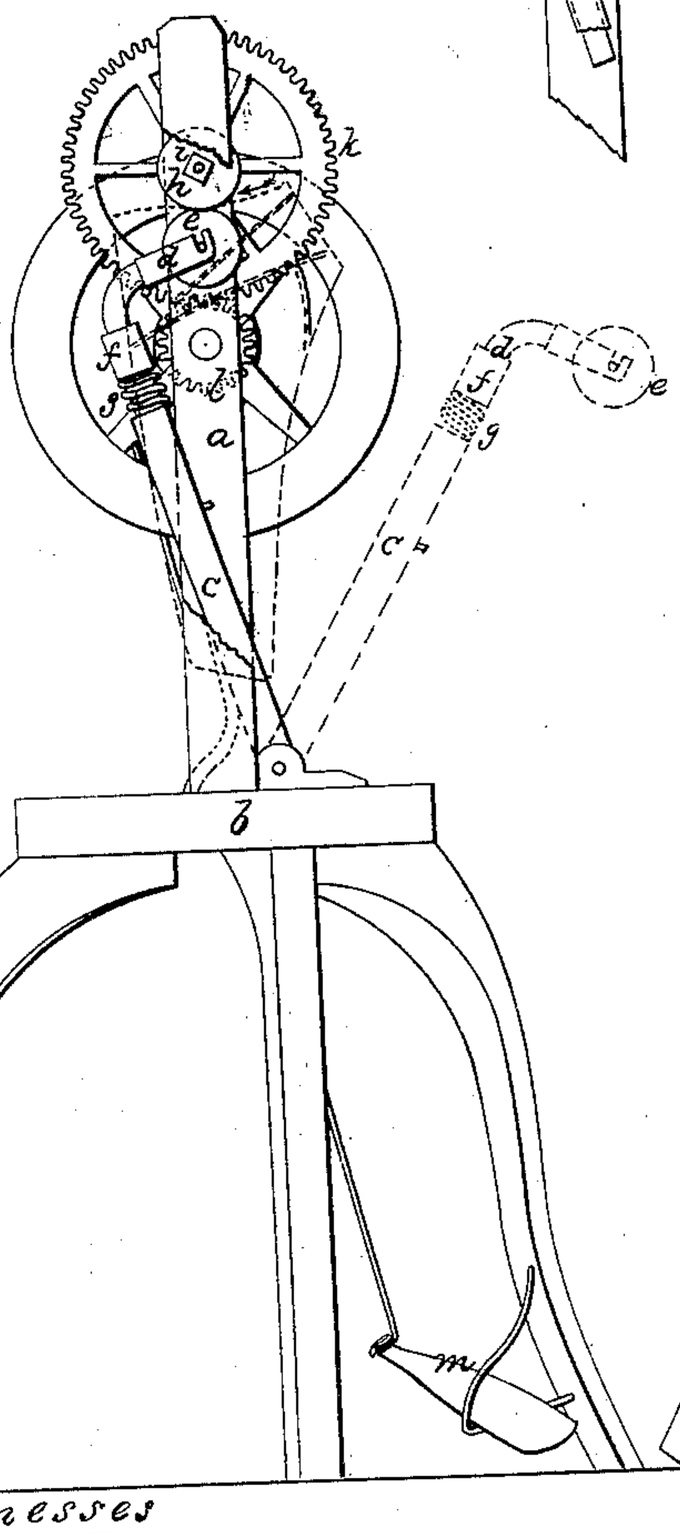
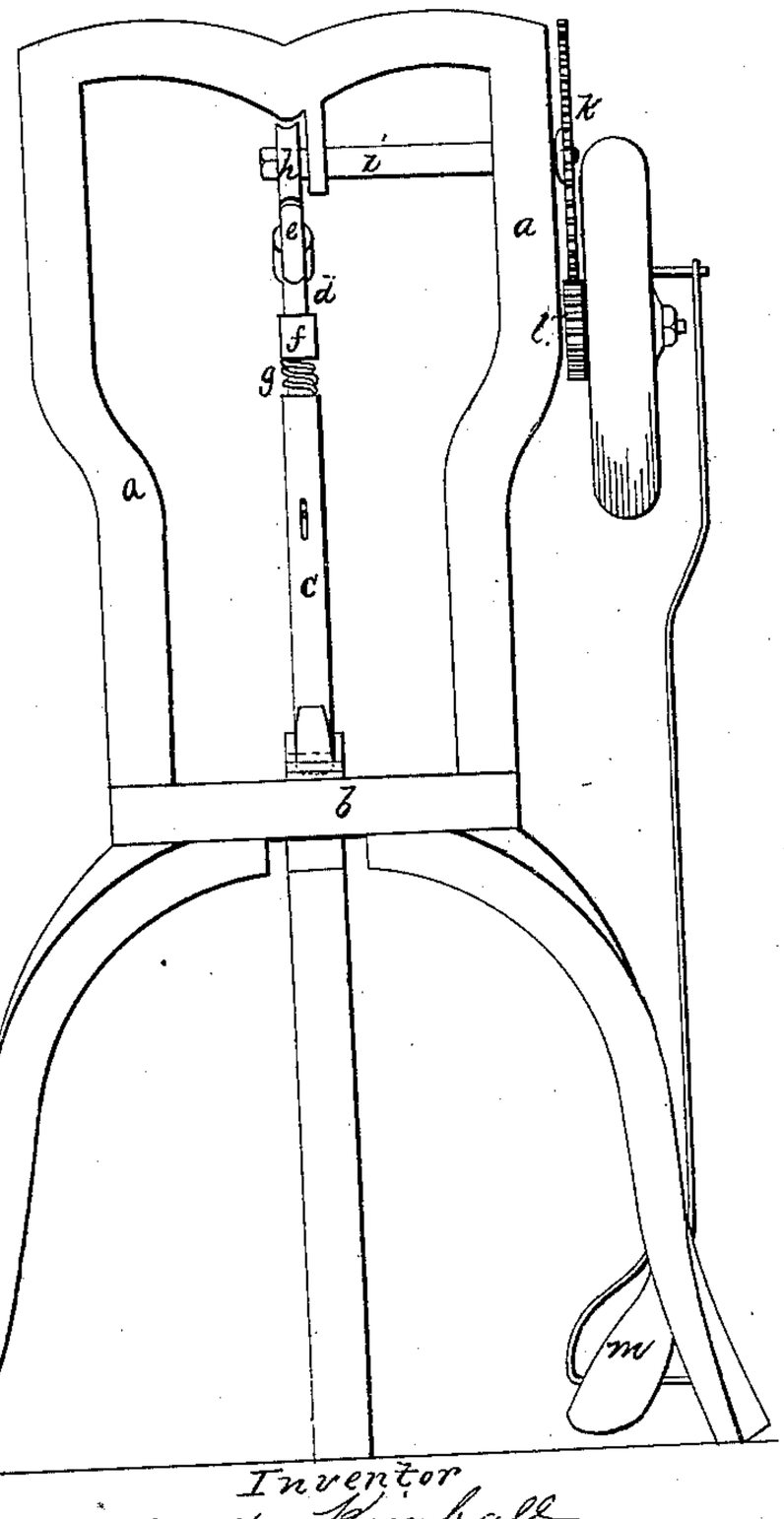



Fig. 1.

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# UNITED STATES PATENT OFFICE.

WILLIAM H. KIMBALL, OF LYNN, MASSACHUSETTS.

## RUBBING SEAMS OF BOOTS OR SHOES.

Specification forming part of Letters Patent No. **44,636**, dated October 11, 1864.

*To all whom it may concern:*

Be it known that I, WILLIAM H. KIMBALL, of the city of Lynn, county of Essex, and State of Massachusetts, have invented an Improved Machine for Rubbing Seams of Boot or Shoe Uppers; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

This invention relates to mechanism employed for rubbing down, pressing, or "ironing" the seams of boot or shoe uppers before they are bottomed; and the invention consists in the arrangement and method of operation of the parts of the machine.

The drawings represent a machine embodying my improvements, Figure 1 showing a front elevation, and Fig. 2 a side elevation, of the same.

*a* denotes a frame-work upon a bed-plate *b* of which a tubular vertical post or column *c* is supported, said post being hung upon a joint-pin, so that it may freely swing forward from the erect or nearly erect position (seen in Fig. 2) to the inclined position indicated therein by red lines. This post has within it and projecting from its top an arm *d*, the top of which is bent and serves as a bearing for a convex rubber or roll *e*. The arm *d* has a screw cut upon it encircled by a cylindrical nut *f*, the bottom of which rests against a spring *g* on top of the post *c*, said spring tending to keep the roll *e* in contact with a concave or grooved roll *h* and allowing the roll to yield to the thickness and inequalities of the stock or material being passed through or between the rolls. The roll *e* turns loosely upon or in the arm *d*, while the roll *h* is fixed upon the end of a horizontal shaft *i*, turning in bearings in the frame *a* and having rotary motion imparted to it through gears *k l*, the latter of which is placed on a crank-wheel shaft, the crank of which is jointed to a treadle *m*. Power may of course be communicated to the shaft *i* and roll *h* in any other manner, the arrangement shown being intended for use where the machine is to be run entirely by the operative.

The rollers shown in Figs. 1 and 2 are for the purpose of rolling, pressing, or rubbing down seams which come upon back and front center lines of the boot or shoe upper, like the seams *n o*, (seen in Fig. 3, which shows a sketch of an upper.) The seam *n* or *o* being entered between the rolls, with the inner surface or the contiguous edges of the two parts opened out upon the convex surface of the lower roll, the upper roll presses and rounds over the outer surface and irons down the same upon the contiguous edges within the upper. The seam is run through the rolls in the direction of the arrow, and the upper is dropped down upon the bed-plate *b*. Another upper is then treated in a similar manner, and when a considerable quantity of them is collected the post is tipped forward, as shown by the dotted lines, to allow the uppers to be removed. In this manner the work of pressing the seams is very expeditiously performed.

To press the flat seams upon the sides of the upper, like those shown at *p q* in Fig. 3, cylindrical rolls *r s* (see Figs. 4 and 5) are employed, the lower roll *s* being journaled in an arm *t*, to be applied to the post *c* in the same manner as in the arm *d*. This roll *s* is made hollow and with one end open, so that a heater, iron, or the flame from a gas-pipe or other burner may be introduced therein to heat the surface of the cylinder, and thereby to facilitate the pressing down of the seams.

To prevent heating of the oil upon which the journals of the cylinder would run, friction-rolls *u* are employed for the journals to turn upon.

With a machine organized and arranged as shown the work of rubbing down and pressing seams of closed uppers is much simplified, and can be effected in a better manner and with more facility and expedition than heretofore. The roller *s* is only to have heat applied to it when cloth seams are to be pressed.

A horizontal arm may be hung in a yoke supported across the frame *a*, such arm having the lower roll journaled upon its end and being so hung as to hold the lower roll in contact with the upper one, pressure of the same being increased or diminished by a cam or other means, this arrangement being for the

purpose of pressing the seams of boot-legs, which are drawn or fed over or around the arm, as will be readily understood.

I claim—

1. The combination of the convex and grooved rolls, when arranged substantially as described, for the purpose of rubbing or pressing down the seams at the heel end and front of a closed boot or shoe upper before same is bottomed.

2. The combination of the cylindrical roll *r* with the hollow open roll *s*, in the manner and for the purpose substantially as described.

3. The arrangement of the lower roll upon the top of a post (or an arm projecting therefrom) to allow said roll to extend into the inside of the upper, substantially as set forth.

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Witnesses:

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