

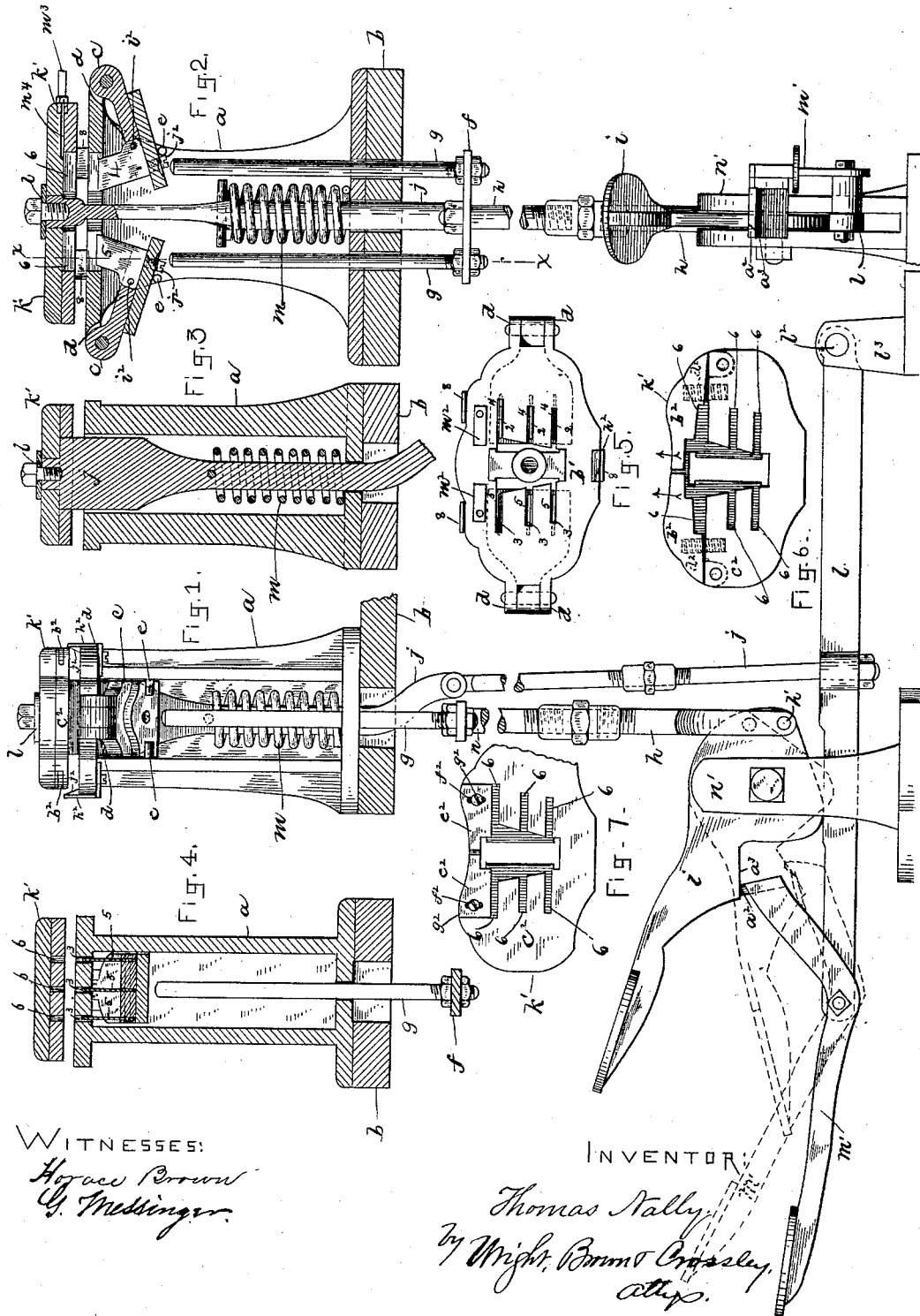
(No Model.)

T. NALLY.

MACHINE FOR CRIMPING THE QUARTERS OF BOOTS AND SHOES.

No. 345,915.

Patented July 20, 1886.



WITNESSES:

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UNITED STATES PATENT OFFICE.

THOMAS NALLY, OF LYNN, MASSACHUSETTS.

MACHINE FOR CRIMPING THE QUARTERS OF BOOTS AND SHOES.

SPECIFICATION forming part of Letters Patent No. 345,915, dated July 20, 1886.

Application filed May 18, 1886. Serial No. 202,561. (No model.)

To all whom it may concern:

Be it known that I, THOMAS NALLY, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Machines for Crimping Quarters of Boots and Shoes, of which the following is a specification.

This invention has for its object to provide means for crimping the lower edge of the inside of a quarter of boots or shoes for the purpose of forming a stop or gage for the vamp, and to locate on the quarter the fullness required to enable the inner side of the upper to be properly fitted to the inner side of the last, and is an improvement on the machine for which Letters Patent of the United States were granted to me September 1, 1885, No. 325,267.

The invention consists in the combination of two series of crimping-jaws, devices whereby said jaws may be moved in such manner as to form corrugations in the "quarters" by plates attached thereto, a fixed bed having slots, through which said jaws are adapted to pass, a spring-raised cross-head, and mechanism for depressing said cross-head.

The invention also consists in certain details, all of which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents an edge view of my improved machine attached to a support, and the rods connecting the machine with the operating-levers shown broken off, the scale of the drawing being one-third full size. Fig. 2 represents a longitudinal section of the same. Fig. 3 represents a cross-section of the same. Fig. 4 represents a section on line *x x*, Fig. 2. Fig. 5 represents a top view of the bed-plate, showing the slots therein and the top end of the reciprocating-rod, the top plate being removed. Fig. 6 represents a view of the under side of the top plate. Fig. 7 is a similar view showing a different construction of the same.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents the frame of the machine, and *b* the support thereof, (which is usually in form of a bench,) to which the machine is secured in any suitable manner.

The top portion of said frame is constructed to form a bed for the quarter or vamp to be operated upon, (see Fig. 5,) and is provided with two series of openings or slots, 2 2 2, 3 3 3, through which the crimping-jaws 4 4 4, 5 5 5 are adapted to pass and act on the quarters interposed between them and the slots 6 6 6 in the cross-head *k'*. Said jaws 4 4 4, 5 5 5 are suitably secured to arms *c c*, pivoted to ears *d d* on the frame, and normally resting on pins *e e* in the said frame.

f represents a cross-bar, (see Fig. 2,) at the outer ends of which are secured standards *g g*, said standards extending upwardly to within a short distance of the under sides of the arms *c c*, and are adapted to force said arms upwardly, in a manner hereinafter explained.

h represents a stout rod secured to the cross-bar *f* at its upper end, and at its lower end to a cam-lever, *i*. (See Fig. 1.) Said rod *h* is forked at its lower end, and is fastened to said cam-lever by a pin, *h'*.

j represents a rod having a shoulder and boss at its upper end (see Figs. 2, 3, and 5,) adapted to fit a hole in the cross-head *k'*, said cross-head being secured thereto by a bolt and washer, *l'*. The rod *j* is provided with an offset near its bottom end, and is connected with another rod, *j'*, which rod *j'* is connected to a long lever, *l*, pivoted at 1 2 to a support, 13. A spiral spring, *m*, surrounds the rod *j*, and by its force holds the said rod and cross-head *k'* in the raised position shown, which is the position of said rod and plate before a quarter is operated upon.

m' represents an auxiliary lever pivoted to the inner side of lever *l*, and considerably at one side of said lever, in order to clear the cam-lever *i* when the latter is in its depressed position. Said lever *m* is intended to be operated as a "let-off" lever—that is, when the cam-lever is depressed the inner end of lever *m'* will be elevated and its end *a'* will engage the under side of lever *i*, at the notch or shoulder *a'* of the same, and by the placing of the operator's foot upon the inner end of lever *m'*, and exerting a downward pressure upon the same, lever *i* will be quickly and easily thrown upward, the machine being thus put in position to release the "stock," as will be explained hereinafter.

The positions of levers i and m' , when the same are depressed, are indicated by dotted lines in Fig. 1.

It is necessary oftentimes to vary the lengths of rods h and j' , the better to accommodate the machine to various thicknesses of stock, and also to procure accurate adjustment of the top plate, k' , and jaw-supporting arms c . To this end I have constructed the said connecting-rods in separate parts, and have cut right and left hand screw-threads on the ends thereof, and have connected the same by a sleeve-nut having correspondingly-cut threads, so that by turning said nut in one direction I am enabled to lengthen the rods, and by turning said nut in the opposite direction I am enabled to shorten the same.

It will be observed that the lever i is provided with a cam portion at the point where it engages with lever l . Said lever being pivoted at n' is, when depressed, adapted to depress the lever l slightly, and at the same time raise rod h . This causes the standards $g g$ to engage the under side of arms $c c$, and thereby raise the same, with their attached jaws, through the slots in bed b' , and causing the said jaws to act on the stock interposed between the bed and cross-head. At the same time the action of the cam-lever i is raising rod h and the devices above described, the cam portion of said lever acts upon the upper edge of lever l , and depresses the latter and causes said lever l to exert a downward pull on rod j' , and through said rod and rod j the cross-head k' is depressed, thus bringing the cross-head and crimping-jaws together by one movement of cam-lever i . As before stated, the lever m will now be used to release the cam-lever i by throwing the same into its normal position, and thereby allowing spring m to raise the cross-head, the raising of lever i allowing standards $g g$ and crimping-jaws $c c$ to assume the positions shown.

The lever i and rods $h j$, with standards $g g$, constitute an important feature of my invention.

I have shown in Fig. 6 the under portion of cross-head k' constructed with two of the slots 6 so arranged as to open or close, as may be necessary. The object of this construction is to enable the ready removal of the quarter after the crimping operation of said quarter is completed, as it is liable to bind when being removed from the slot.

In the construction shown in said Fig. 6 the cross-head k' is provided with movable sections $b^2 b^2$, pivoted at their outer ends to the main portion c^2 of the cross-head. Spiral springs $d^2 d^2$ (shown in dotted lines) are interposed between said parts $b^2 b^2$ and c^2 , which springs press the parts b^2 outwardly in the direction of the arrows.

I have shown in Fig. 7 different devices for adjusting the outside slots 6 by means of separate parts $e^2 e^2$ of section c^2 , having slots $f^2 f^2$, through which slots pass screws $g^2 g^2$,

said screws securely holding the parts $e^2 e^2$ to the main portion of the cross-head k' . By loosening the said screws the adjustment of parts $e^2 e^2$ can be readily made.

The above-described pivoted parts $b^2 b^2$ (shown in Fig. 6) are pressed to place to form the corrugation in the leather in the following manner: When the cross-head k' is drawn down, by means already described, the outer edges of parts $b^2 b^2$ will engage with an inclined bracket, $h^2 h^2$, secured to the under side of bed d by screws, and made adjustable laterally. As the said cross-head k' is moved downwardly to exert a pressure on the interposed leather, the outside edges of portions $b^2 b^2$ come in contact with the inclined inner face, j^2 , of the brackets $h^2 h^2$, and are pressed inwardly to the extent required by the adjustment of said parts, as will be readily seen, and when cross-head k' is raised springs $d^2 d^2$ will press the portions $b^2 b^2$ outwardly, thus widening the slot and releasing the corrugations of the leather.

The jaws 4 5 may be adjusted so as to exert varying strain on different portions of the leather to be corrugated. It will be seen by reference to Fig. 2 that said jaws are secured to arms c by pins i^2 , said pins extending through the entire width of said arms c , and located near one side of jaws 4 5. Set-screws are inserted through arms c on the under side thereof, and engage with the lower left-hand edge of jaws 4 5. (Shown here in dotted lines in Fig. 2.) In this case the same set-screws are shown as bearing against the outer jaws, 4 5, and are shown in dotted lines through arms c , thus rendering the adjustment of jaws 4 5 an easy matter.

$m^2 m^2$ represent thin plates of metal, secured to the bed-plate b' and having a piece of rubber or any suitable material to operate as a spring inserted on the under side thereof. Said plate operates as a tension to prevent the slipping of the leather interposed between the top and bottom plates of the machine when said plates are being brought together.

If desired, gas can be introduced to effect the heating of the leather, so as to facilitate the crimping operation. To this end I have shown a passage-way, m^4 , into which I insert a pipe, m^3 , through which the gas can be introduced and flame admitted into slots 6 of cross-head k' .

Gages 8 8, Figs. 1, 3, and 5, insure the uniform insertion of the quarter, so that the corrugations may be formed at uniform distances from the edge of the quarters.

I claim—

1. The combination of the fixed bed having the two series of slots, the movable cross-head or plate k' , having slots coinciding with those of the fixed bed, the two series of jaws normally standing below the fixed bed and adapted to rise through the same and into the slots of the cross-head, the rod j , and a suitable treadle connected thereto, whereby the cross-head may be depressed, the spring m , which

normally raises the cross-head, and mechanism, substantially as described, for operating the jaws, as set forth.

2. The combination of the fixed slotted bed, 5 the slotted cross-head, the two series of jaws, the rod *j*, and lever *l*, connected to the cross-head, the spring *m*, whereby the cross-head is raised, the cam-lever *i*, pivoted to a fixed support and bearing on the lever *l*, the rod *h*, 10 connected to the lever *i*, and the rods *g g*, supported by the rod *h* and adapted to operate the jaws, as set forth.

3. The combination of the fixed slotted bed, the slotted cross-head, the two series of jaws, 15 and the lever *m*, pivoted to the lever *l* and bearing at one end against the lever *i*, as set forth.

4. The cross-head having the slots 6 6 6, in

combination with the movable parts $b^2 b^2$, whereby the slots near one edge are made adjustable, as set forth. 20

5. The cross-head having the slots 6 6 6, the pivoted parts $b^2 b^2$, forming the outer sides of two of said slots, and the springs $d^2 d^2$, whereby said pieces are swung outwardly, combined 25 with the fixed bed having the inclined brackets, whereby the parts $b^2 b^2$ are swung inwardly, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two 30 subscribing witnesses, this 31st day of March, 1886.

THOMAS NALLY.

Witnesses:

C. F. BROWN,
H. BROWN.