(No Model.)

G. JAMES.

Mechanism for Cutting Out Heel Lifts.

No. 236,162. Patented Jan. 4, 1881.

Fig: 1.

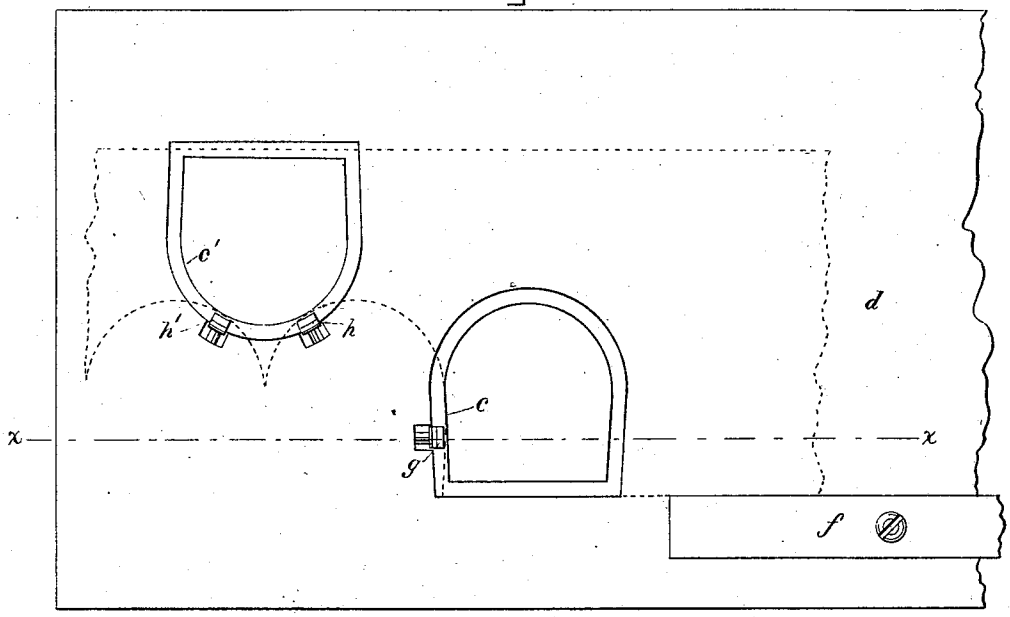


Fig: 2.

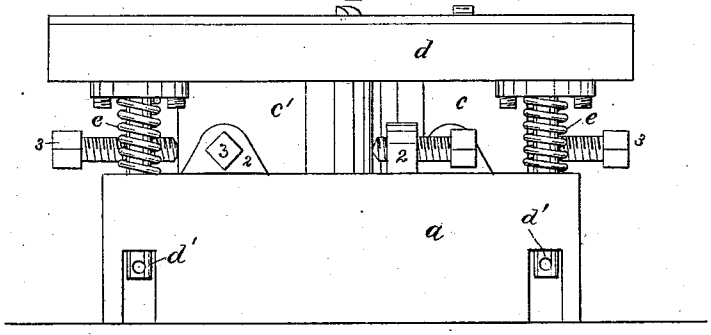
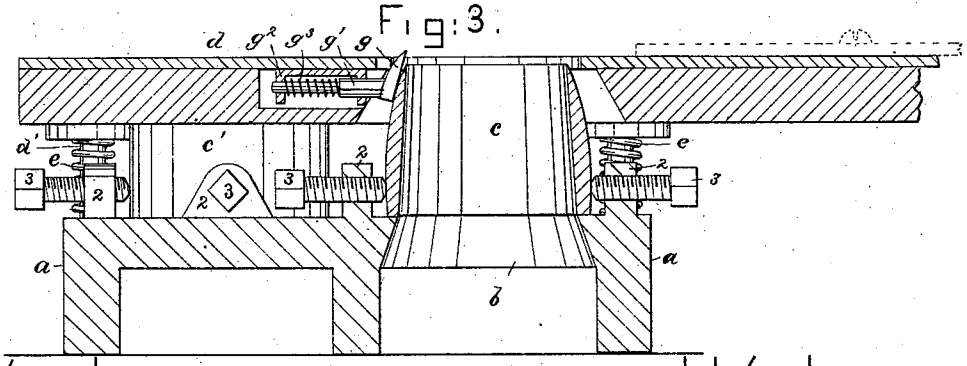


Fig: 3.



WITNESSES-

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UNITED STATES PATENT OFFICE.

GEORGE JAMES, OF BOSTON, MASSACHUSETTS.

MECHANISM FOR CUTTING OUT HEEL-LIFTS.

SPECIFICATION forming part of Letters Patent No. 236,162, dated January 4, 1881.

Application filed July 24, 1880. (No model.)

To all whom it may concern:

Be it known that I, GEORGE JAMES, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Mechanism for Cutting out Heel-Lifts, of which the following description, in connection with the accompanying drawings, is a specification.

This invention relates to mechanism for cutting out heel-lifts, and has for its object to furnish an apparatus to cut out heel-lifts in accordance with the plan described in my United States Patent No. 219,583, dated September 16, 1879, to which reference may be had, the rounded ends of the heel-lifts of one section being made to fall in between the rounded ends of the other series of heel-lifts, such system of cutting reducing the waste leather to the minimum.

Figure 1 is a top view of my improved apparatus for cutting out heel-lifts, the figure showing the vertically-movable bed or support, its attached gages, and the edges of the cutting-dies. Fig. 2 is a left-hand end view, and Fig. 3 a section on the line *x x*, Fig. 1.

The base *a* of the machine has suitable openings, *b*, coinciding with each heel-lift cutting-die *c c'*. Standards 2, properly threaded, receive set-screws 3, by which to adjust and hold the dies firmly in position.

The support or bed *d* has at its under side legs or rods, *d'*, which are extended through springs *e* and openings in the base *a*. The springs rest upon and sustain the support or bed *d* in such manner as to permit it to descend under pressure applied at its upper side and compel it to rise quickly when relieved of such pressure.

Attached to the support *d* at one edge is the edge-gage *f*, against which one of the longer edges of the strip to be cut into heel-lifts is kept pressed to guide or direct the strip forward in a straight line.

Near the farthest side of the die or cutter *c* there is secured to the support *d* a registering or heel-lift gage, *g*, shown plainly in Fig. 3, it being, as therein shown, provided with a shank, *g'*, guided in a bracket, g^2, and surrounded by a spiral spring, g^3, to permit the gage to adapt itself to the size of the die or cutter being used, the spring being strong enough to keep the gage pressed against the cutter or die.

Near the die or cutter *c'* I have placed two gages, *h h'*, each constructed as the gage *g*.

In Fig. 1 the dotted lines of regular length represent the outline of a strip of sole-leather from which two or more lifts have been cut, and the said strip is supposed to be in position to be again cut as the support and table again descend. In the figure, the curved edges of the sole-leather next where the heel-lifts were previously cut out rest against the gages *g h h'*, which correctly position the leather over the dies or cutters *c c'*, so as to necessitate the least possible quantity of leather, and so placed, a wooden or other suitable block, presser, stamp, or hammer, operated by power or hand, is caused to descend or fall and strike the upper side of the leather, when it and the support *d* descend far enough to cause the dies or cutters to cut through the leather, the heel-lifts passing down through the dies or cutters and being discharged from the openings *b*. As soon as the leather is relieved from pressure the support or table *d* rises under the action of the springs, lifting the leather from the dies, when the leather may be again moved forward against the lift or registering gages *g h h'*.

I am not aware, prior to this my invention, that a gage has ever been used near a fixed die or cutter so as to exactly position the leather with relation to the die before cutting out the lift. In my apparatus I am enabled to cut out two lifts simultaneously, and by placing the dies with relation to each other as shown in Fig. 1, I am enabled to cut out the lifts with the minimum waste of stock.

The gages *g h h'* are made to come close into line with the edge of the cutters when the bed *d* is elevated. The metal forming the cutters is beveled, and as the bed is depressed the said gages strike the beveled outer portions of the cutter and recede.

I claim—

1. In an apparatus for cutting out heel-lifts, two stationary dies, located with relation to each other as described, combined with a movable supporting bed or table and regis-

tering or lift gages located about the edges of the dies, to act upon and position the edges of the leather left by cutting out other heel-lifts with relation to the dies, as set forth.

2. The yielding spring-sustained support or bed *d* and its connected gages *f g h h'*, combined with the two cutters *c c'*, fixed below it, to operate substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE JAMES.

Witnesses:
G. W. GREGORY,
N. E. C. WHITNEY.