(No Model.)

C. KEIGHLEY.

HEEL BURNISHING MACHINE.

No. 266,838. Patented Oct. 31, 1882.

Fig. 1.

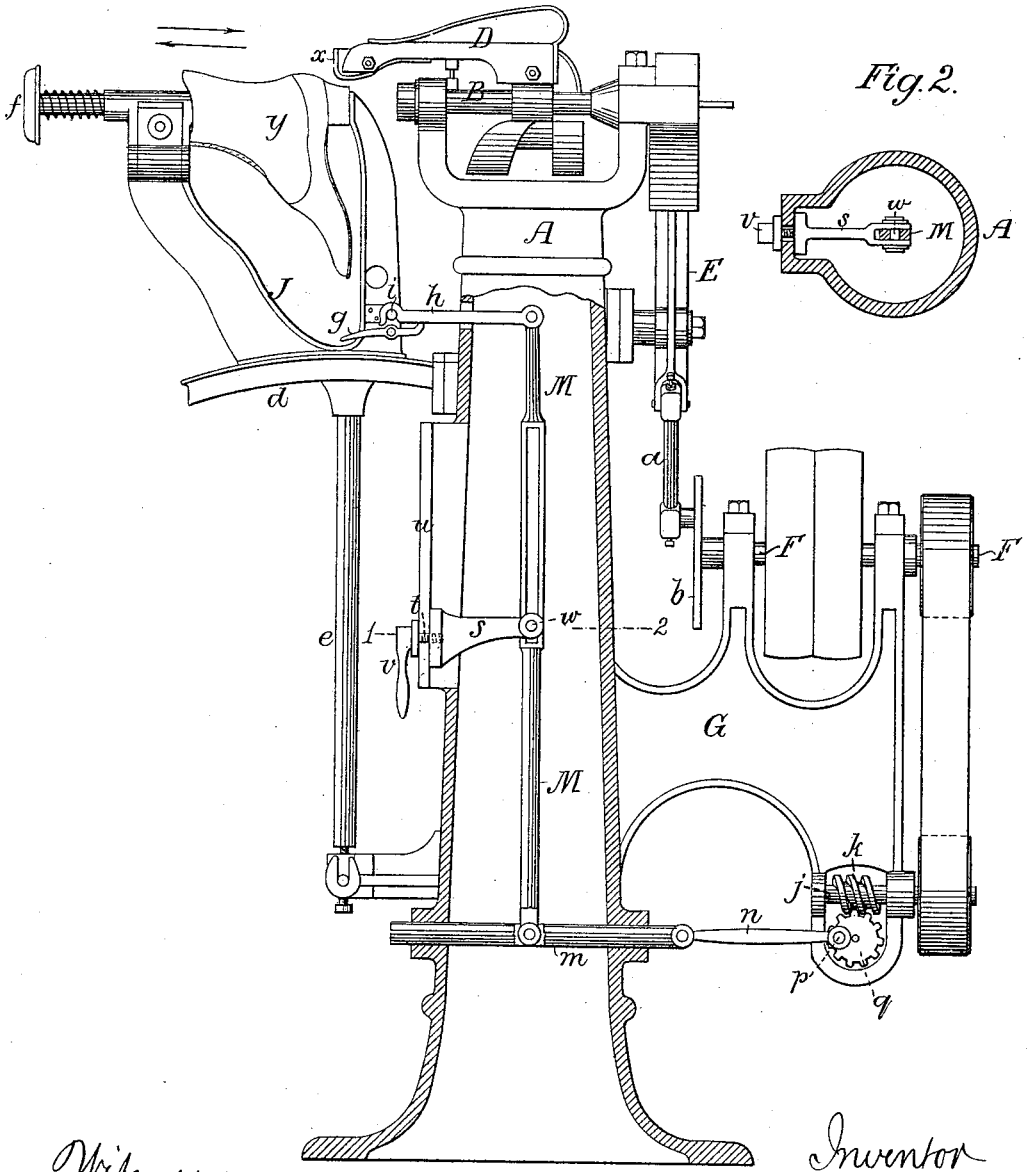

Fig. 2.

Witnesses
Harry Drury
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UNITED STATES PATENT OFFICE.

CHARLES KEIGHLEY, OF VINELAND, NEW JERSEY.

HEEL-BURNISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 266,838, dated October 31, 1882.

Application filed December 14, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES KEIGHLEY, a subject of the Queen of Great Britain and Ireland, and a resident of Vineland, Cumberland county, New Jersey, have invented certain Improvements in Heel-Burnishing Machines, of which the following is a specification.

My invention relates to certain improvements in the well-known "Tapley" heel-burnishing machine, the object of my invention being to dispense with the necessity of employing an attendant for each machine—an object which I attain by performing automatically a duty, which, in the machine as at present constructed, demands the continual attention of the person in charge.

In the accompanying drawings, Figure 1 is a side view, partly in section, of a Tapley heel-burnishing machine with my improvements; and Fig. 2, a sectional plan on the line 1 2.

A is the main column or standard of the machine, on the top of which are formed bearings for the rock-shaft B, which is furnished with a counterbalanced arm, D, and to the outer end of the latter is pivoted the burnishing-tool *x*. The vibrating movement is imparted to the rock-shaft by means of the usual segmental rack and pinion, the segmental rack being formed on one arm of a lever, E, the other arm of which is connected by a rod, *a*, to a crank-pin on a disk, *b*, secured to the driving-shaft F, the latter being furnished with the usual fast pulley and loose pulley, and being adapted to bearings in a frame, G, projecting from the rear of the standard A. As the rock-shaft vibrates the burnishing-tool is caused to traverse back and forth around the heel of a shoe, *y*, which is clamped in a frame, J, the latter being guided by a slotted segmental arm, *d*, on the standard, and being secured to the upper end of a rod, *e*, the lower end of which passes through a pivoted box and is acted upon by a set-screw, so as to raise or lower the rod *e* and bring the heel of the shoe into proper relation to the burnishing-tool. All of these parts are common to the machine as now constructed, and in operating such a machine it is necessary to impart a movement in the direction of the arrows to the frame J, carrying the shoe, in order that the heel may be caused to traverse longitudinally beneath the burnishing-tool while the latter moves around said heel. This duty is performed by the attendant, who presses his shoulder against the head *f* of a spring-rod connected to one of the clamping-jaws of the frame, one of the arms of the latter being grasped by the hand, so that the necessary forward-and-backward movement can be imparted to said frame. This method of operation necessarily requires an attendant for each machine, and, in order to avoid this necessity, I cause the longitudinal movement to be imparted to the frame J automatically, so that the duty of the attendant is confined simply to applying shoes to and removing them from the clamping-frame J, whereby one attendant is enabled to take charge of a number of machines. In the present instance the frame J has a projecting pin, *i*, to which is adapted the hooked outer end of a link, *h*, which passes through a slot in the standard A, and is connected at its inner end to one arm of a lever, M, contained within the standard, the other arm of said lever being connected to a rod, *m*, which is adapted to slide in bearings in the lower portion of the standard, and is connected by a link, *n*, to a crank-pin, *p*, on a worm-wheel, *q*, the latter receiving motion from a worm, *k*, on a shaft, *j*, which is adapted to bearings in the frame G, and is driven from the main shaft F through the medium of a belt and pulleys, or equivalent devices.

It will thus be seen that when the machine is in operation a slow or comparatively-slow reciprocating movement of the frame J is effected, so as to properly present all parts of the heel for the action of the burnishing-tool.

In order to vary the extent of movement of the frame J, I slot the lever M for the reception of the fulcrum-pin *w*, the latter being carried by a bracket, *s*, which is adjustable vertically on the standard A, a clamping-bolt, *t*, passing through a slot, *u*, in said standard, and being furnished with a handle, *v*, so as to readily secure the bracket in any position to which it may be adjusted. By the vertical adjustment of the fulcrum-pin of the lever the relative length of the arms of the latter may be varied and the extent of movement of the frame J increased or diminished, as required, the movement of the rod *m* being uniform.

When it is desired to draw the frame J outward, in order to apply a shoe thereto or remove one therefrom, the said frame is released

from the control of the link *h* by elevating the hooked end of the latter, so as to free the pin *i*. A lever, *g*, provides a means of readily accomplishing this result.

Various modifications of the mechanism for transmitting motion to the frame J may be devised within the scope of my invention. For instance, the link *h* might be connected directly to a crank-pin on a wheel driven from the shaft F, the crank-pin being adjustable, so as to vary the length of stroke; or the frame J might in some cases be stationary, the longitudinal movement being imparted to the burnishing-tool, the result being the same in both cases—namely, the traversing of the burnisher over all parts of the heel without the necessity of any attention on the part of the operator. The arrangement shown is preferred, however, as it can be applied to the machines as now made without any material alteration or rearrangement of the parts of said machines.

I claim as my invention—

1. The combination, in a heel-burnishing machine, of a vibrating shaft carrying a burnisher, a shoe-carrying frame, a driving-shaft, and mechanism, substantially as described, whereby said driving-shaft imparts to the frame or burnisher a definite reciprocating movement in a direction at right angles to the plane of vibration of the burnisher-shaft, as set forth.

2. The combination of the standard A, the vibrating burnisher, the shoe-carrying frame J, adapted to move in a plane at right angles to the plane of movement of the burnisher, the lever M, connected to the said frame J, and mechanism for vibrating said lever, all substantially as specified.

3. The combination of the slotted standard A, the vibrating burnisher, the shoe-carrying frame, the link *h*, the lever M, the vertically-adjustable bracket *s*, carrying the fulcrum-pin *w*, and means for clamping the bracket to the standard, as set forth.

4. The combination of the standard, the vibrating burnisher, the shoe-carrying frame, the lever M, the link *h*, the guided rod *m*, and the worm-wheel and worm for actuating the latter, as specified.

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

CHAS. KEIGHLEY.

Witnesses:
HARRY DRURY,
HARRY SMITH.