

Virian K. Spear.
Heel Burnishing Machine.

No. 119,422.

Fig. 1.

Patented Sep. 26, 1871.

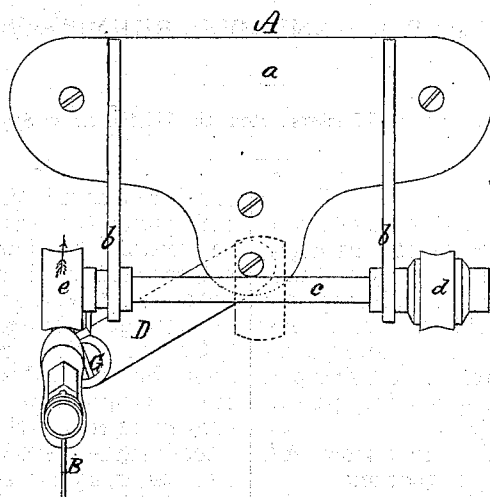


Fig. 2.

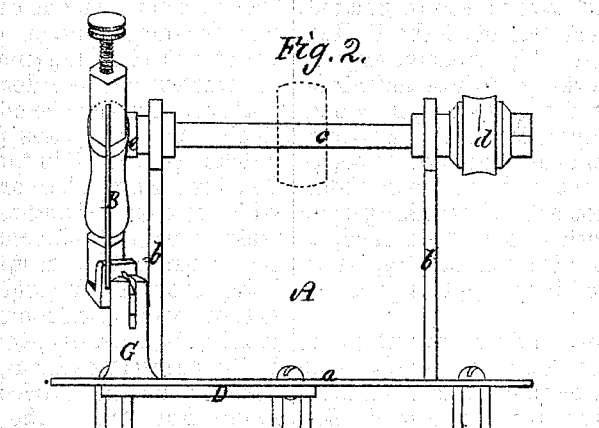
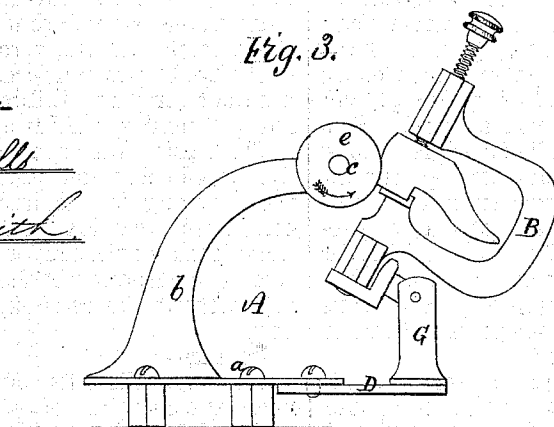


Fig. 3.

Witnesses.

Charles H. Mills
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by his Attorney,
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UNITED STATES PATENT OFFICE.

VIVIAN K. SPEAR, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN SOLE-AND-HEEL BURNISHING MACHINES.

Specification forming part of Letters Patent No. 119,422, dated September 26, 1871.

To all whom it may concern:

Be it known that I, VIVIAN K. SPEAR, of Lynn, in the county of Essex and State of Massachusetts, have made an invention of a new and useful Machine for Finishing or Burnishing the Edges of Boot-and-Shoe Heels; and do hereby declare the following to be a full, clear, and exact description thereof, due reference being had to the accompanying drawing making part of this specification, and in which—

Figure 1 is a plan, Fig. 2, a front view, and Fig. 3, an end elevation of my invention.

I am aware that many machines have been devised for polishing or burnishing the edges of boot-and-shoe heels, and have myself originated several for which Letters Patent of the United States have been allowed. My extensive experience in the practical working of these machines has convinced me that the system upon which all now in use operate upon the heel is a wrong one, inasmuch as it tends to loosen or to separate the lifts of a heel and to raise a bur about its tread, since the motion of the burnishing-tool, describing a curved path about the heel-edge, and the slope of such heel contracting, as it does, toward its bottom, both tend to produce this result.

My present invention consists, primarily, in the employment of a revolving wheel or wheels mounted upon a shaft supported in a suitable frame and combined with a carriage or "jack" for supporting the boot whose heel is to be operated upon, under such an arrangement that the path of revolution of the wheel tends toward the base of the same, or the boot, rather than toward the tread of the heel; by this means avoiding the danger now prevalent of loosening the lifts of the heel, and producing a rough and unfinished edge thereto, as before stated. Secondly, this invention consists in an original mode of applying the boot-supporting carriage or jack to the machine frame by pivoting it thereto in such manner that it and the boot may be presented to the action of either the finishing or burnishing-wheel carried by the machine, without the necessity of employing duplicate jacks and shifting the boot from one to the other, as is now, of necessity, practiced.

The accompanying drawing represents, at A, the frame of my present machine, as composed of a flat plate or base, *a*, and two curved end

standards or uprights, *b b*, erected thereupon, such standards serving to support at their upper extremity a horizontal shaft, *c*, which revolves in suitable bearings carried by such standards. Upon each extremity of the shaft *c*, and, by preference, outside of the adjacent standard *b*, I mount a circular wheel or disk, *d* or *e*, one of such wheels, viz., *d*, being composed of soap-stone or other equivalent substance, which will serve to finish or reduce the heel-edge to a uniform and smooth surface, while the other disk is of polished steel or an equivalent material, which polishes or burnishes the heel-edge after the latter has been subjected to the action of the reducing-wheel. The perimeter of one or both the wheels *d* or *e* may be convex, flat, or concave transversely, but I prefer that such perimeter should be concave to some extent, in order to cover as great a proportion of the surface of the heel-edge as is practicable, by this means producing a better and quicker polish. B in the accompanying drawing denotes a curved bar or yoke, the lower arm of which is mounted and turns loosely upon a stud, making part of a bracket, which is swiveled to the upper end of an upright post, G, this post being erected in a rigid manner upon the outer extremity of a horizontal vibrating arm or carrier, D, the inner extremity of which is fulcrumed to the base-plate of machine-frame in such manner that the jack carried by said carrier may be swung from one to the other of the wheels *d e*. The yoke B, mounted as explained, constitutes the jack for receiving the boot and presenting its heel-edge to the action of one of the wheels.

It will be observed that the wheel, revolving in the direction of the arrow thereon, will, if the heel-edge be pressed forcibly in contact with its periphery, impart a brilliant polish to such edge, and will tend to solidify and condense such heel.

With a machine organized as herein explained the boot-heel is first presented to the action of the reducing disk *d*, and this operation being completed, is carried about in a circular path, with the fulcrum of the carrier D as a center, and presented to the action of the burnishing-wheel, and this without the removal or disturbance of the boot.

I claim—

1. In a machine for burnishing boot-and-shoe heels, the combination, with the boot carrier, of the revolving wheel, under the arrangement sub-

stantially as shown and described, so that the wheel shall revolve against the heel-edge in a direction inward toward the boot, for the purposes stated.

2. In a machine containing a means of reducing or finishing and of burnishing a heel-edge, the boot-carrier or "jack," constructed and applied to the machine-frame, substantially as herein shown and described, so as to permit of a boot-heel being presented to the action of either wheel, at the discretion of the operator, without removing

or disturbing the boot from its position within the jack.

3. The combination of one or both of the wheels *d* or *e*, and the jack or carriage B, the whole being organized and operating substantially as herein explained.

VIVIAN K. SPEAR.

Witnesses:

FRED. CURTIS,

EDWD. GRIFFITH.