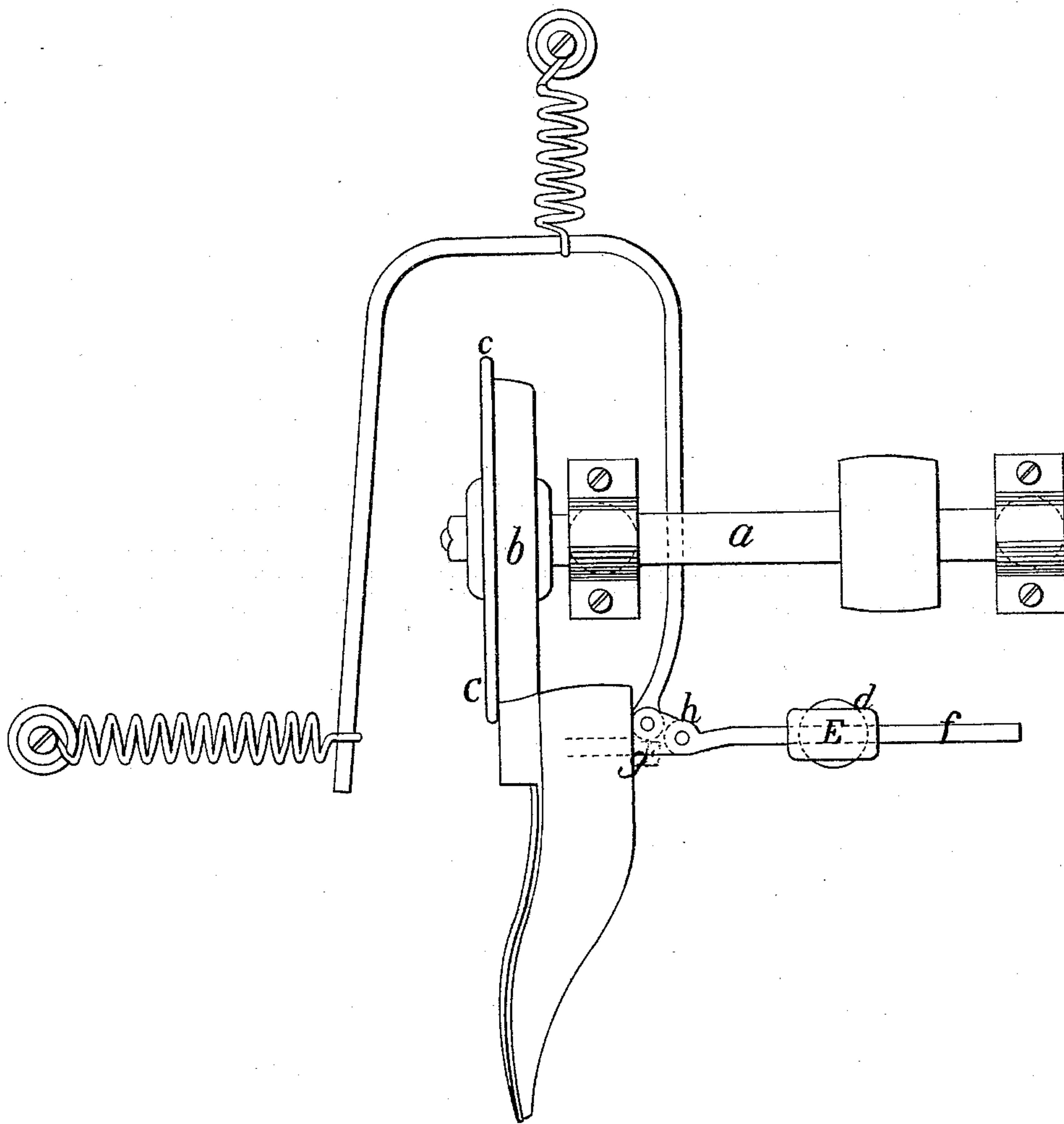


S. W. CHAMBERLIN.

Heel Polishing Machine.

No. 32,859.

Patented July 23, 1861.



Witnesses

J. B. Crosby
W. H. Adams

Inventor

S. W. Chamberlin

UNITED STATES PATENT OFFICE.

SAMUEL W. CHAMBERLIN, OF STONEHAM, MASSACHUSETTS.

IMPROVED MACHINE FOR POLISHING SHOE AND BOOT HEELS.

Specification forming part of Letters Patent No. 32,859, dated July 23, 1861.

To all whom it may concern:

Be it known that I, SAMUEL W. CHAMBERLIN, of Stoneham, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Machines for Polishing the Heels of Boots or Shoes; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention so full and exact as to enable those skilled in the art to practice it.

My invention is designed as an improvement upon a rotating buffing or polishing apparatus and a holding, guiding, and pressing mechanism in combination therewith for the purpose of imparting a highly-finished surface to the curved outline of boot or shoe heels after they have been reduced to form by the action of cutting implements.

The drawing represents in plan a mechanism embodying my invention.

A shaft *a* is arranged like the arbor of a circular saw to rotate the wheel *b*. This may be of any suitable material and of any required diameter, thickness, and curvature of face. I find common sandstones are well adapted for use as the polishing or buffing wheel *a*. The flange *c* is combined with *b*, as shown in the drawing. It may form part of *b*, if desired; but I prefer to make it of plate metal and separate from *b*, by which the formation of the wheel *b* is rendered very simple, and one flange suffices for use with any number of wheels of different face curvatures. Both the wheel and flange are confined to the arbor *a* similarly to the manner in which circular saws are commonly arranged. The tubular support *d* is arranged to swivel on the center *e*, and the rod *f* is fitted in *d* so as to slide freely through it. A pin *g*, which is the "last-pin," fits a hole bored in the last used within the shoe, and is jointed or hinged to *f* at *h*. By means of the swiveling movements obtained by the employment of two pivots *h* and *e*, together with the sliding movement permitted to *f*, it will be evident that all parts of the concave outline of the heel can be brought into contact

with the wheel *b*, provided the curvature of its face is of radius equal to or less than that of the greatest concavity of the heel. The piece *i*, which is hinged or otherwise suitably connected to *g*, affords facility for the connection of springs or weights, which may be variously attached, by which the heel of the shoe which is on the last-pin *g* is forced upon *b* and toward *c*.

In operating upon heels by means of my invention the workman takes hold of the toe of the shoe and turns the article upon the pin *g*, rocking the shoe sidewise when required to obtain contact between the wheel and the heel. The operation of the mechanism is such that the tread of the heel is always subjected under pressure to the contact of the rotating flange, which solidifies and hardens the corner or edge of the heel formed at the juncture of the tread and the curved outline of the heel and prevents the formation of a "burr" or ragged edge from the material of the heel projecting beyond the tread, which is always made when a wheel without the flange is used for polishing the heel. The wheel when made of suitable material or covered with sand, glass, or emery may be used to finish out knife-marks.

Polishing compounds—such as black-ball, &c.—may be applied to the wheel while it rotates, and these are transferred to the heel and polished thereupon.

When the wheel is not made of sandstone, but of some close-grained material, such as wood, iron, &c., and is used with polishing-pastes, as just mentioned, the operating-surface of the wheel may be variously indented to aid in holding and conveying the black-ball.

By my invention a perfect corner or edge is formed and retained around the heel, and a hitherto laborious manipulation is dispensed with, inasmuch as the operative is not obliged to expend his muscular force in pressing the heel against the wheel, but can give undivided attention to simply controlling the position of the heel.

I claim—

1. The combination of the flange *c* with the

polishing-wheel *b*, when arranged to operate together as specified.

2. The combined arrangement, operating substantially as specified, of a sliding and swiveling holding mechanism with a polishing-wheel with or without a flange.

3. The combination of springs or their equivalents, operating substantially as set forth, with a sliding swiveling holding mech-

anism and a polishing-wheel with or without a flange.

In testimony whereof I hereunto set my hand this 3d day of May, A. D. 1861, in the presence of witnesses.

SAMUEL W. CHAMBERLIN.

Witnesses:

J. B. CROSBY,

W. H. CADES.