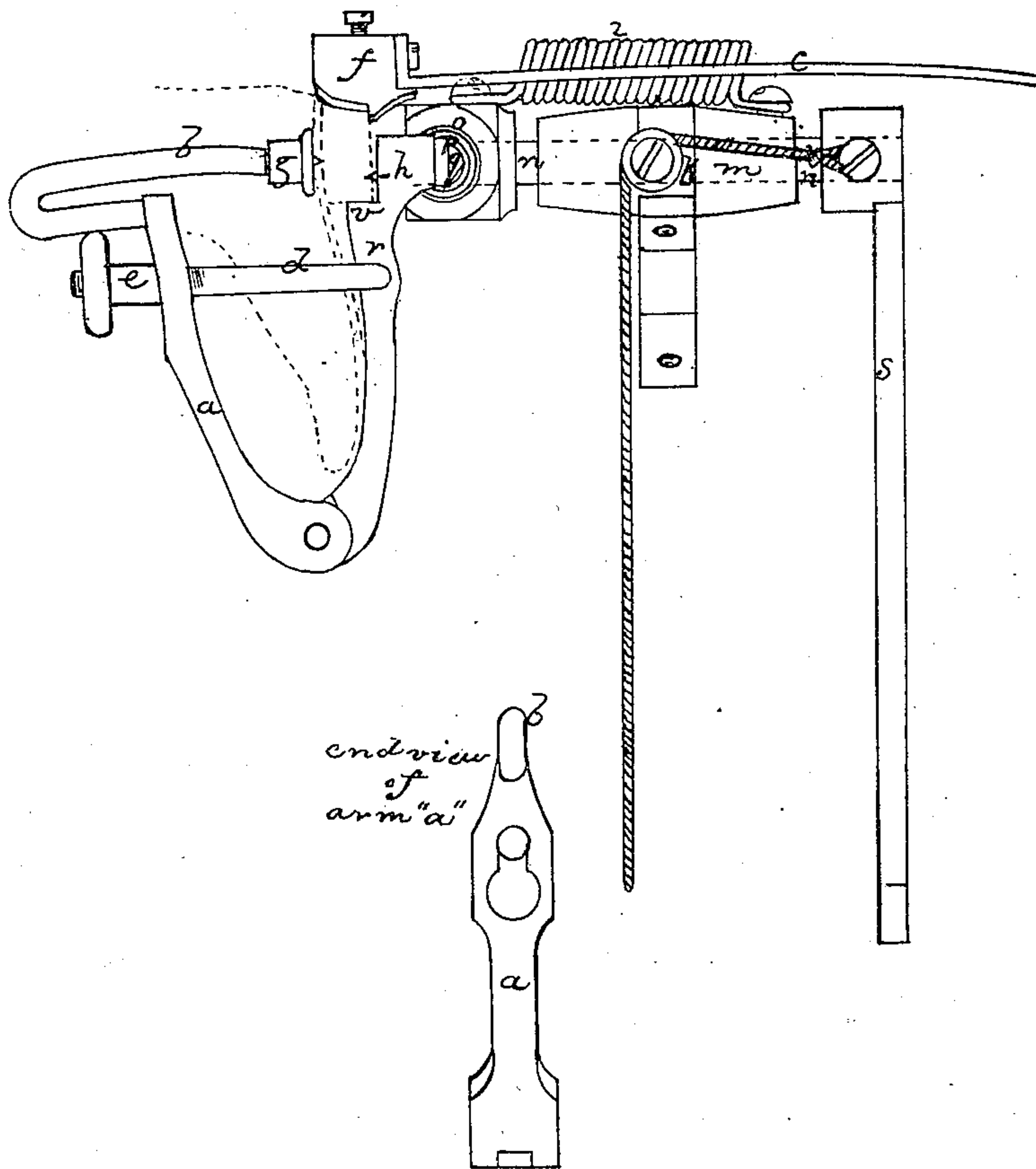


No. 82,798.

PATENTED OCT. 6, 1868.

B. Q. BUDDING.
BOOT OR SHOE HEEL POLISHING MACHINE.



Witnesses
J. B. Kipper.
L. Warren Brown

B. Q. Budding
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B. Q. BUDDING, OF WORCESTER, MASSACHUSETTS.

Letters Patent No. 82,798, dated October 6, 1868.

IMPROVED BOOT AND SHOE-HEEL-POLISHING MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, B. Q. BUDDING, of Worcester, in the county of Worcester, and State of Massachusetts, have invented an Improvement in Boot and Shoe-Heel-Polishing Machines; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practise it.

United States Letters Patent, No. 42,555, were granted to me, May 3, 1864, for an "Improved Machine for Polishing Heels of Boots and Shoes," in which machine a boot-holding jack having a compound motion is used, to enable all parts of the heel to be polished to be brought properly into contact with the polishing-tool, as may be seen by reference to such patent.

My present invention has reference to the construction of such jacks.

In the jack illustrated in said patent, there is no provision for holding the heel against any surface, to prevent the outer lift from spreading or tearing away at its edge, under the action of the polishing-tool against the general edge of the heel, and the principal object of my present improvement is to remedy this difficulty, by giving to the jack a capability of end-movement, relatively to the main frame and polisher, or relatively to the bearing which supports the shaft that carries the jack-supporting arm, so that, if the jack be drawn out by the operator, when the boot or shoe is applied, the spring will force the shoe inwards, thereby pressing the edge of the heel against a lip or projection made on the face of the polishing-tool.

It is in this construction that my invention primarily consists, and the drawing represents a jack embodying the improvement.

For convenience in comparing the mechanism with that shown in my above-mentioned patent, I will use the same reference-letters so far as the parts correspond, the drawing representing a side view of my improved jack-mechanism. *m* denotes the bracket-bearing, for supporting the shaft *n*, whose outer end carries the arm *o*, to which the jack is hung by means of a rotating pin, *p*, extending into and from and turning in the arm, the jack being directly hung upon this pin by means of another rotating pin, *q*, which turns freely on the end of pin *p*, the rotation of pins *p* and *q* giving to the jack a sort of universal movement, so as to permit the edge of the heel to be rolled laterally, relatively to the surface of the polishing-tool, as well as in the direction of its length.

The jack is made with a shoulder, *v*, for supporting the front edge of the heel, and, in my present invention, the jack-plate *r* has hinged to it another arm or plate, *a*, from which projects a horn, *b*, provided, at its end, with a clamp-block, *g*. A rod, *d*, is fixed to and projects from the plate *r*, through a slot in the arm *a*, the end of rod being screw-threaded, and carrying a clamp-nut, *e*.

The rod *d* swings vertically; from end to end of the slot, and at bottom the slot is enlarged into an eye, through which the shank of the nut *e* slips freely, while, when the rod is carried to the upper part of the slot, the end of the nut-shank bears against the arm *a*, (at the opposite sides of the slot,) so that, if the outer face of the heel be placed against the pin *h* of the jack-plate *r*, and the horn be thrust into the boot or shoe, so as to bring the clamp-block *g* against the inner surface of the shoe, opposite the heel-face, (the body of the shoe projecting down between the plate *r* and arm *a*,) the boot or shoe may be clamped tightly in position by turning up the clamp-nut *e*, as will be readily understood. When the heel has been polished, the shoe is readily removed from the machine by loosening the nut, forcing down the rod *d*, and allowing the arm *a* and rod *d* to swing back.

In my patent, above referred to, the polishing-tool is shown, at *f*, as attached to a spring, *c*, and my present or improved jack is similarly used, in connection with a similar polishing-tool, excepting that the polishing-surface has a lip or flange projecting down from it, against which lip the edge of the heel, or that corner where the edge and heel-face meet, is pressed.

The shaft *n* not only rotates in the bearing *m*, (which is made long and sleeve-like,) but it also slides in such bearing, and the arm *o* is held normally up to the end of the sleeve-bearing by a strong spring, *i*, one end of which is fastened to the arm *o*, and the other end to the bearing *m*. On one side of the bearing is a sheave,

k, over which runs a cord, l, whose upper end is fastened to the top of arm s, the cord extending over the sheave, and down to a suitable treadle. When the shoe is being or is to be jacked, pressure upon the treadle forces the arm o and its jack away from the polisher. After the shoe is jacked, this pressure upon the treadle is withdrawn, and the spring then carries the heel up to the polisher, and the edge of the heel against the polisher-flange, where such edge is held by stress of the spring, while the polishing operation is in progress, and while the jack is rotated or rocked, to bring all parts of the heel-edge under action of the polisher.

By this means, the lifts of the heel (and especially the outer lift) are kept from spreading, and a smooth and polished corner is made at the bottom of the heel-edge.

I claim, in combination with the jack-supporting bearing or bracket, a jack, held up towards the polishing-tool by a spring, substantially as set forth.

I also claim, in combination with the jack-plate r, the heel-clamping mechanism, substantially as shown and described.

B. Q. BUDDING.

Witnesses:

W. E. BUCK,

C. E. RICH.