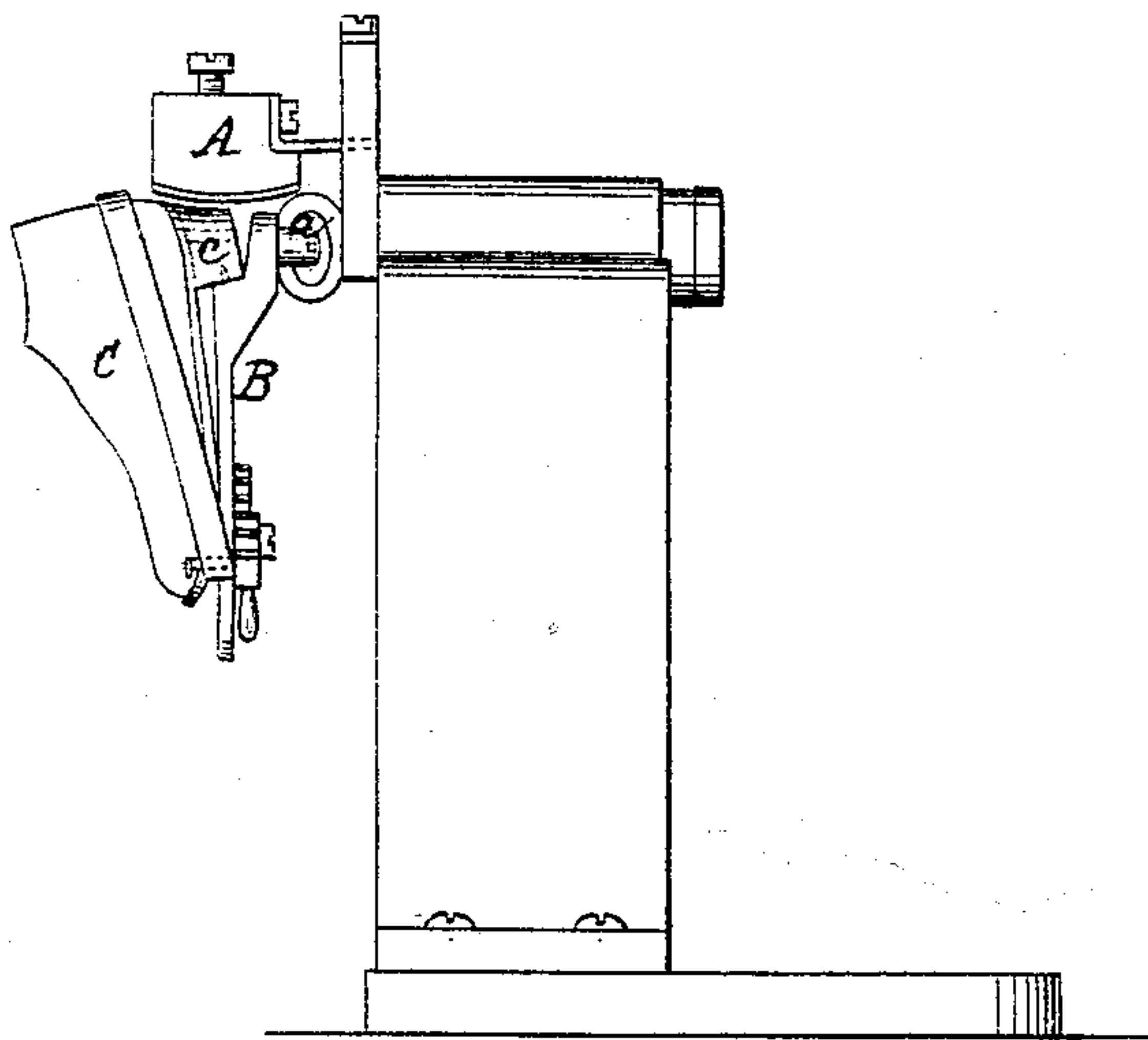


J. BEASLEY.

Method of Burnishing Boot and Shoe Heels by  
Machinery.

No. 135,259.

Patented Jan. 28, 1873.



Witnesses.

C. B. Nottingham.

Alonzo Hughes

Inventor.

Joshua Beasley

by A. Pollak  
his atty



# UNITED STATES PATENT OFFICE.

JOSHUA BEASLEY, OF LYNN, MASSACHUSETTS, ASSIGNOR TO TAPLEY  
HEEL-BURNISHING-MACHINE ASSOCIATION, OF SAME PLACE.

IMPROVEMENT IN METHODS OF BURNISHING BOOT AND SHOE HEELS BY MACHINERY.

Specification forming part of Letters Patent No. 135,259, dated January 28, 1873.

*To all whom it may concern:*

Be it known that I, JOSHUA BEASLEY, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in the Method of Burnishing Boot and Shoe Heels by Machinery, of which the following is a specification:

The burnishing of boot and shoe heels by machinery has heretofore been effected in various ways, generally involving the principle of a short and rapid vibratory movement of the burnisher under a considerable pressure upon successive portions of the surface of the heel. Machinery thus operating has been found to be defective and objectionable for several reasons: First, the machine in operation produces severe jars, making it difficult for the operator to work, and rendering the machinery very liable to derangement and necessitating frequent repairs. Second, the machines, being run at high speed and with great pressure of the tool upon the heel, require considerable power to drive them. Third, the work effected by the machines, owing to the rapid and short vibratory movement of the tool over successive portions of the heel, is such as to produce upon the heel a surface not only wavy and irregular, but also, in many instances, more or less cracked and otherwise imperfect.

The object I have had in view has been to overcome the difficulties and disadvantages above named; and to this end I have devised a new method of operation in the burnishing of boot and shoe heels by machinery, viz: In lieu of giving the burnishing-tool a quick vibratory movement over successive portions of the heel-surface, I cause the tool to pass with a comparatively slow motion entirely around, or nearly so, the curved portion of the heel in one direction at each movement, this result being attained by making the burnishing-tool stationary, and giving the heel an oscillatory or vibratory movement back and forth in a curved path under the tool, so that at each oscillation or vibration the tool will pass entirely or almost entirely around the curved portion of the heel; or by giving the burnishing-tool this extended movement around the stationary heel, or by making both the tool and heel movable, giving them, for instance, a movement in opposite di-

rections, so timed and of such length as that, at each conjoined movement of the two, the tool will pass over the entire curved part of the heel, there being in all cases but a comparatively light pressure of the tool upon the heel. In this way a superior finish for the heel can be obtained more quickly and with less expenditure of power, while there is no liability or danger of cracking the surface, and the operator is enabled to perform the work with greater ease. A larger amount of work can also be produced, and the machine requires to be repaired but seldom, there being but little wear and tear.

My invention may be adapted to most, if not all, of the burnishing-machines in use. I have applied it with success, for instance, to the machine known as the Budding machine, for which Letters Patent, No. 42,555, were granted to Benj. A. Budding on the 3d May, 1864. In this machine the tool, as usual, has a quick, short, vibratory movement. But in lieu of putting this tool in motion I allow it to remain at rest, and then either by hand or by machinery, similar in principle to that which ordinarily drives the vibratory tool, as will be readily understood by all mechanics, I impart a long, sweeping, comparatively-slow vibratory movement to the boot-jack on which the shoe or boot to be burnished is mounted in the usual manner, so that the heel shall be compelled to travel in a path which, at each vibration, will bring its edge or curved portion throughout its whole length, or nearly so, in contact with the tool, a continuous but yielding pressure being maintained between the two, as customary in machines of this class; which pressure, however, should be comparatively light, and not so great as has heretofore been employed.

The accompanying drawing represents a portion of a Budding machine, such as above referred to, which may be used to carry my invention into effect. A is the stationary burnisher, having a spring connection with the frame, so that it may yield to any little inequalities in the surface of the heel. B is the jack, united with its support by a universal joint, *a*, and upheld by weights, treadle, or spring, as shown in the aforesaid patented machine, so as to maintain the heel in yielding-



pressure contact with the tool. The shoe and heel are shown at C c.

In order to carry my invention into effect with this mechanism the jack should be swung by hand or by machinery to and fro in a plane about parallel with the front of the machine, and in a path of such length that at each vibration the tool will pass around the heel from one end to the other of its curved edge, a yielding-pressure contact being maintained between the two during this operation, as hereinbefore provided.

As above stated, however, it is immaterial, so far as the principle of my invention is concerned, whether the burnishing-tool travel about the heel, the latter remaining at rest, or whether the heel travel about a stationary tool, or whether both tool and heel travel to a greater or less extent, provided, of course, that at each vibration the tool is brought in contact with the heel from one end to the other of its curved edge, or nearly so. In all these cases the same result is effected, and a

uniformly even and smooth surface is imparted to the heel much superior to that produced in machines operated in accordance with the method heretofore practiced.

What I claim, therefore, and desire to secure by Letters Patent, is—

The mode herein specified of burnishing boot and shoe heels by machinery—that is to say, giving the burnishing-tool or the heel to be burnished, or both, such a vibratory movement that at each vibration of either or both the tool shall be caused to pass around the whole or nearly the whole curved portion of the heel while maintained in yielding-pressure contact therewith, substantially as described.

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

JOSHUA BEASLEY.

Witnesses:

A. POLLOK,  
FRED. CURTIS.

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