

J. B. HADAWAY.  
IMPRESSION STITCH MACHINE.  
APPLICATION FILED SEPT. 16, 1904.

1,003,451.

Patented Sept. 19, 1911.

2 SHEETS—SHEET 1.

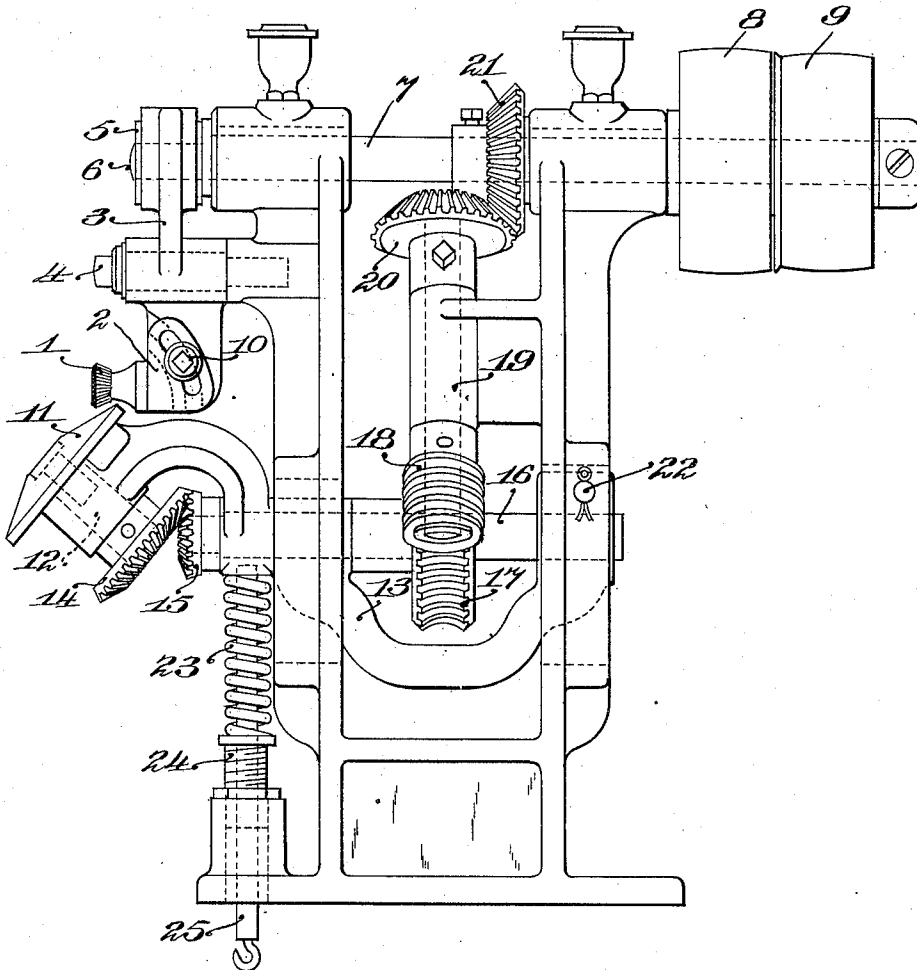


Fig. 1.

Witnesses  
Edward S. Day  
Farnum F. Dorsey

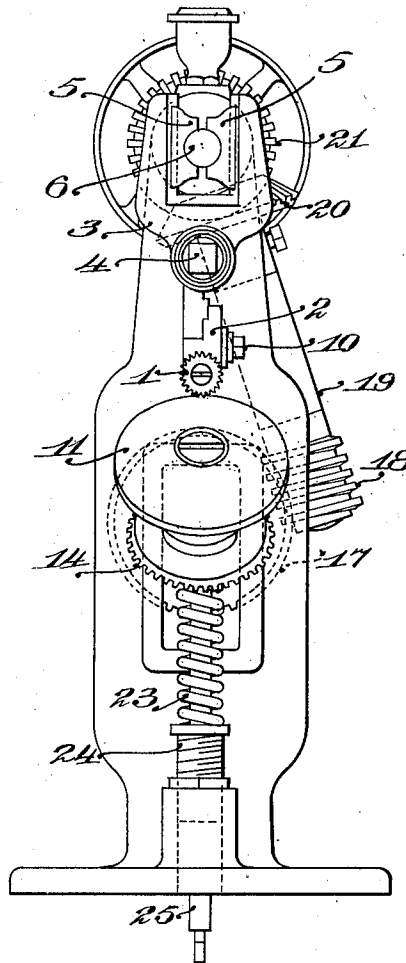
Inventor  
John B. Hadaway  
by his Attorneys  
Phillips Van Coven & Cook

J. B. HADAWAY.  
IMPRESSION STITCH MACHINE.  
APPLICATION FILED SEPT. 16, 1904.

1,003,451.

Patented Sept. 19, 1911.

2 SHEETS—SHEET 2.



*Fig. 2.*

*Witnesses*  
*Edward S. Day*  
*Farnum F. Dorsey*

*Inventor*  
*John B. Hadaway*  
*by his Attorneys*  
*Phillips Van Coven & Fish*

# UNITED STATES PATENT OFFICE.

JOHN B. HADAWAY, OF BROCKTON, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

## IMPRESSION-STITCH MACHINE.

1,003,451.

Specification of Letters Patent. Patented Sept. 19, 1911.

Application filed September 16, 1904. Serial No. 224,660.

To all whom it may concern:

Be it known that I, JOHN B. HADAWAY, a citizen of the United States, residing at Brockton, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Impression-Stitch Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to impression or imitation stitch machines which are adapted to form ornamental indentations upon the upper surface of the projecting edge of a shoe sole, and which comprise a rotary indenting wheel provided with teeth so shaped and spaced as to produce the desired form of indentations.

More particularly the present invention relates to impression or imitation stitch machines in which a bodily vibrating movement is imparted to the indenting wheel in the line of feed to cause the wheel to roll back and forth over the work so that each portion of the work is acted upon a plurality of times by the wheel.

It is desirable in machines to which the present invention relates to provide means for relatively adjusting the indenting wheel and work support to change the angle between the work engaging surfaces of the wheel and support. In accordance with a feature of the present invention this relative adjustment is effected by angularly adjusting the indenting wheel, the angular adjustment being made about a center substantially coincident with a point at which the indenting wheel contacts with the work, whereby the indenting wheel is not moved bodily toward or from the work support during its angular adjustment so as to necessitate an additional adjustment of the wheel or a vertical or angular adjustment of the work support.

In addition to the features of invention above referred to, the present invention also consists in certain constructions and arrangements of parts hereinafter described and claimed, the advantages of which will be obvious to those skilled in the art.

A preferred form of the present invention is illustrated in the accompanying drawings, in which—

Figure 1 is a view in side elevation of an impression or imitation stitch machine embodying the same, and Fig. 2 is a view in front elevation of the machine illustrated in Fig. 1.

Referring to the drawings, the indenting wheel is indicated at 1 and is secured upon the outer end of a shaft mounted to rotate freely in a block 2 secured upon the lower end of a vertically arranged lever 3. The lever 3 is pivoted at 4 upon the frame of the machine, and at its upper end is provided with a slot in which sliding blocks 5 are mounted. In these blocks a bearing is formed which receives an eccentric pin 6 projecting from the forward end of a driving shaft 7 journaled in the upper portion of the machine frame. The driving shaft is provided at its rear end with fast and loose belt pulleys 8 and 9. When the machine is in operation the belt is upon the fast pulley 8 and a continuous rotation is imparted to the driving shaft 7 and through the eccentric pin 6 blocks 5 and lever 3, a bodily vibrating movement in the line of feed is imparted to the indenting wheel. As the indenting tool vibrates the resistance offered by the work to the teeth of the wheel causes the wheel to roll back and forth over the work so that as the work is fed through the machine each portion is acted upon a number of times by the wheel.

The angular adjustment of the indenting wheel is secured by adjusting the block 2 upon the lower end of the lever 3, and to this end the lower end of the lever and the block are provided with cooperating curved guide ways and projections, the curves being struck about a center substantially coincident with the point at which the outer end of the indenting wheel contacts with the work. The adjustment of the block 2 upon the lever 3 thus serves merely to change the inclination of the axis of the indenting wheel without moving the indenting wheel bodily in a vertical direction. A bolt 10 passing through a grooved slot in the block 2 and screwing into the lever 3 serves to lock the block in its adjusted position.

The rotary work support is indicated at 11 and as illustrated is frusto conical in shape and is rigidly secured to the outer end of a short inclined shaft 12 journaled in an arm projecting from a frame 13. To the inner end of the shaft 12 is secured a bevel gear

14 with which a bevel gear 15 secured upon the outer end of a shaft 16 meshes. The shaft 16 is journaled in bearings in the frame 13 and between its bearings is provided with a worm wheel 17 which is engaged by a worm 18 upon the lower end of an inclined shaft 19 journaled in the main frame of the machine. At its upper end the shaft 19 is provided with a bevel gear 20 which meshes with a similar gear 21 upon the driving shaft 7. The work support 11 is thus geared directly to the driving shaft, so that during the operation of the machine the work support is continuously rotated in a direction to feed the work past the indenting wheel.

The frame 13 is pivotally connected to the main frame of the machine at 22 and at its forward end is pressed upwardly by means of a coiled spring 23 interposed between the frame and an adjustable sleeve 24, screwing into a boss on the main frame. The spring 23 acting upon the frame 13 forces the work support upwardly toward the indenting wheel with sufficient pressure to cause the work inserted between the work support and the wheel to be indented to the desired depth. When no work is in the machine the upward movement of the frame 13 is limited by a suitable stop on the frame of the machine. In order to enable work to be inserted between the work support and the indenting wheel a rod 25 is provided which extends upwardly through the sleeve 24 and spring 23 and is secured to the forward end of the frame 13. This rod is connected at its lower end to a foot treadle, not shown, the depression of which swings the

frame 13 about its pivot 22 and lowers the work support a sufficient distance to enable the work to be placed in position beneath the indenting wheel.

The operation of the machine illustrated in the drawings and above specifically described will be readily understood by those skilled in the art, and a separate description thereof is considered unnecessary.

The nature and scope of the present invention having been indicated and a machine embodying the preferred form thereof having been specifically described, what is claimed is:—

1. A machine for making impression or imitation stitches, having in combination, an indenting tool, a work support, and means for angularly adjusting the indenting tool about a center substantially coincident with a point at which the tool contacts with the work, substantially as described.

2. A machine for making impression or imitation stitches, having in combination an indenting wheel, means for rolling the wheel back and forth over the work, a work support, and means for angularly adjusting the indenting wheel about a center substantially coincident with a point at which the wheel contacts with the work to vary the angle between the work-engaging surfaces of the indenting wheel and work support, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses.

JOHN B. HADAWAY.

Witnesses:

FRED O. FISH,  
HORACE VAN EVEREN.