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J. E. THAYER.

SOLE ROUNDING AND CHANNELING MACHINE.

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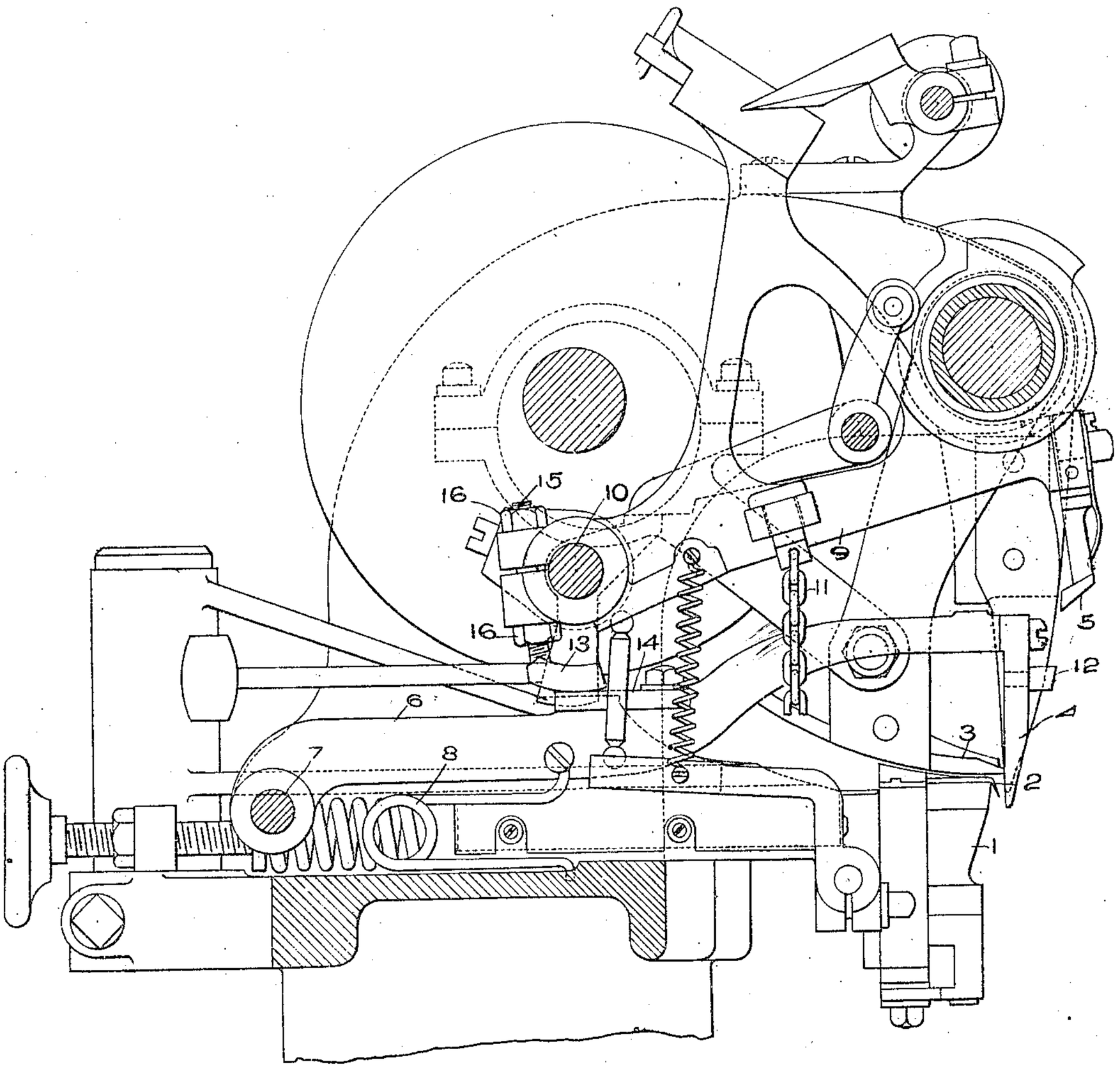

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SOLE ROUNDING AND CHANNELING MACHINE.

No. 845,277. Specification of Letters Patent. Patented Feb. 26, 1907.

Application filed May 12, 1903. Serial No. 156,791.

To all whom it may concern:

Be it known that I, JOSEPH E. THAYER, a citizen of the United States, residing at West Bridgewater, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Sole Rounding and Channeling 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 sole-rounding or sole rounding and channeling machines, and is intended primarily as an improvement on the machine disclosed in Patent No. 599,602, granted to Z. T. French and W. C. Meyer February 22, 1898.

In the machine of Patent No. 599,602 the position of the shoe with relation to the trimming-knife is controlled by two guides, one of which controls the position of the shoe while the shank portion of the sole is being trimmed and the other of which controls the position of the shoe while the fore part of the sole is being trimmed. The fore part guide is mounted to move into and out of contact with the shoe and also to move while in engagement with the shoe to vary the position of the shoe with relation to the trimming-knife. The shank-guide is also movably mounted and is moved with the fore part guide while the fore part of the sole is being trimmed, so as to remain in contact with the upper surface of the welt and prevent the formation of a ridge thereon, as would be the case if the shank-guide were stationary. In this machine and in all sole-rounding machines with which I am familiar which comprise a shank-guide and a fore-part guide the shank-guide is in its extreme retracted position while the shank portion of the sole is being trimmed, so that the shank portion of the sole is trimmed as close to the upper as any portion of the fore part. The necessity of trimming the shank portion of the sole as close to the upper as any portion of the fore part renders these machines defective in operation when it is desired to trim the fore part of the sole or any portion thereof close to the upper, as the shank portion of the sole is trimmed so close to the upper as to render the subsequent operation of sewing the shoe on the outsole-stitcher extremely difficult, if not impossible.

The object of my invention is to obviate the difficulty above referred to in the operation of sole-rounding machines and to produce a sole-rounding machine comprising a shank-guide and a fore-part guide by which the fore part of the sole of a shoe can be trimmed as close to the upper as may be desired without trimming the shank portion of the sole so close as to interfere with the operation of the outsole-stitcher.

With this object in view my invention contemplates providing a sole-rounding machine comprising a shank-guide and a fore-part guide with means for relatively moving the shank-guide and trimming-knife to allow the fore part of the sole to be trimmed closer to the upper than the shank portion.

Broadly considered, my invention contemplates the provision in a sole-rounding machine comprising a shank-guide, a fore-part guide, and a trimming-knife of any means for relatively moving the shank-guide and the trimming-knife to allow the fore part of the sole to be trimmed closer to the upper than the shank portion. On account of the simplicity of such a construction and its certainty of operation, however, I prefer to secure the relative movement of the shank-guide and trimming-knife by retracting the shank-guide.

In addition to the features of invention above referred to my invention also consists in the devices, combinations, 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 my invention is illustrated in the accompanying drawing, which illustrates in sectional elevation a rough rounding and channeling machine embodying the same, the machine being that disclosed in Patent No. 599,602, above referred to, and so much of the machine being illustrated as is necessary to show the connection of my invention therewith.

Referring to the drawing 1 indicates the work-support, 2 the channeling-knife, 3 the trimming-knife, 4 the shank-guide, and 5 the fore-part guide, these parts and the various other parts illustrated on the drawing and not hereinafter specifically referred

to being constructed, arranged, and operated in the same manner as the corresponding parts of the machine of Patent No. 599,602. As in the machine of the patent, the shank-guide is secured to an arm 6, pivoted at 7 on the frame of the machine and pressed upwardly by means of a spring 8. The fore-part guide 5 is mounted upon an arm 9, which is rigidly secured to a pivot-shaft 10. The arm 9 is held raised in the position illustrated in the drawing by means of a spring (not shown) and is moved to bring the fore-part guide 5 into engagement with the shoe at the proper time during the sole-rounding operation by means of a foot-treadle connected to the arm by means of the chain 11, the construction of the arm 9 and the means for actuating the arm to move the fore-part guide into and out of engagement with the shoe being the same as in the machine of the patent. When the arm 9 is depressed to bring the fore-part guide into engagement with the shoe, an adjustable block on the arm engages a projection 12 on the shank-guide, so that while the fore-part guide is in engagement with the shoe the shank-guide is moved with the fore-part guide when the fore-part guide is moved to vary the position of the shoe with relation to the trimming-knife, this construction and mode of operation being also the same as in the machine of the patent.

In carrying out my present invention I have provided means for holding the arm 6 depressed against the tension of spring 8 while the fore-part guide 5 is in its raised position and for releasing the arm and allowing it to rise during the downward movement of the fore-part guide into engagement with the shoe. The shank-guide 4 is thus held in projected position during the trimming of the shank portion of the sole and is retracted when the fore-part guide is moved toward the shoe, so that the whole or any portion of the fore-part of the sole can be trimmed closer to the upper than the shank portion. The means which I have illustrated in the drawing for accomplishing this result consists of a cam-block 13, mounted to move with the arm 9 and to engage the upper surface of the arm 6 or a plate 14, secured thereto, the construction being such that when the arm 9 is in its raised position the cam-block 13 engages the plate 14 and holds the arm 6 depressed, and when the arm 9 is lowered to bring the fore-part guide 5 into engagement with the shoe the cam-block 13 is moved out of engagement with the plate 14 to allow the arm 6 and shank-guide 4, mounted thereon, to be raised by the spring 8. In the construction shown in the drawing the cam-block 13 is secured to or formed integral with the lower end of a screw-threaded rod 15, which passes through the ears of the split hub of the arm 9. The screw-threaded rod is held in position by means of clamping-nuts 16, which serve to clamp the split hub of the arm 9 to the pivot-shaft 10, and also as a means of adjustment for the cam-block 13. By adjusting the cam-block 13 the distance to which the arm 6 and shank-guide 4 are depressed when the fore-part guide is in its raised position and the distance to which the shank-guide is retracted during the movement of the fore-part guide toward the shoe can be varied as desired.

It will be understood that except for the retracting movement of the shank-guide when the fore-part guide is moved toward the shoe the operation of the various parts illustrated in the drawing is the same as that of the corresponding parts of the machine disclosed in Patent No. 599,602. Thus after the fore-part guide is brought into engagement with the shoe it may remain stationary during the operation of rounding the fore part of the sole, or it may be moved to vary the position of the shoe with relation to the trimming-knife. The construction and mode of operation of the machine is fully illustrated and described in Patent No. 599,602, and further description and illustration thereof in this application is considered unnecessary.

Having thus indicated the nature and scope of my invention and having specifically described a construction embodying a preferred form thereof, I claim as new and desire to secure by Letters Patent of the United States—

1. A sole-rounding machine, having, in combination, a trimming-knife, a shank-guide, a fore-part guide movable into and out of engagement with the shoe, and means for relatively moving the shank-guide and trimming-knife to allow the fore part of the sole to be trimmed closer to the upper than the shank portion, substantially as described.

2. A sole-rounding machine, having, in combination, a trimming-knife, a shank-guide, a fore-part guide, and means for moving the fore-part guide into operative position and for retracting the shank-guide, substantially as described.

3. A sole-rounding machine, having, in combination, a trimming-knife, a fore-part guide movable into and out of engagement with the shoe and movable to vary the position of the shoe with relation to the trimming-knife, a shank-guide movable with the fore-part guide when in engagement with the shoe, and means for retracting the shank-guide when the fore-part guide is moved into engagement with the shoe, substantially as described.

4. A sole-rounding machine, having, in combination, a trimming-knife, a shank-guide arranged to act along the shank and fore part of a shoe, a fore-part guide movable into and out of engagement with the shoe,

and means for retracting the shank-guide when the fore-part guide is moved into engagement with the shoe, substantially as described.

5. A sole-rounding machine, having, in combination, a trimming-knife, a fore-part guide movable into and out of engagement with the shoe and movable to vary the position of the shoe with relation to the trimming-knife, a shank-guide movable with the fore-part guide when in engagement with the shoe, a spring for retracting the shank-guide, and means actuated by the movement of the fore-part guide for holding the shank-guide projected while the fore-part guide is out of engagement with the shoe and for permitting a retraction of the shank-guide when the fore-part guide is moved into engagement with the shoe, substantially as described.

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

JOSEPH E. THAYER.

Witnesses:
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