

J. J. GILLESPIE.
 WORK SUPPORT.
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1,022,412.

Patented Apr. 9, 1912.

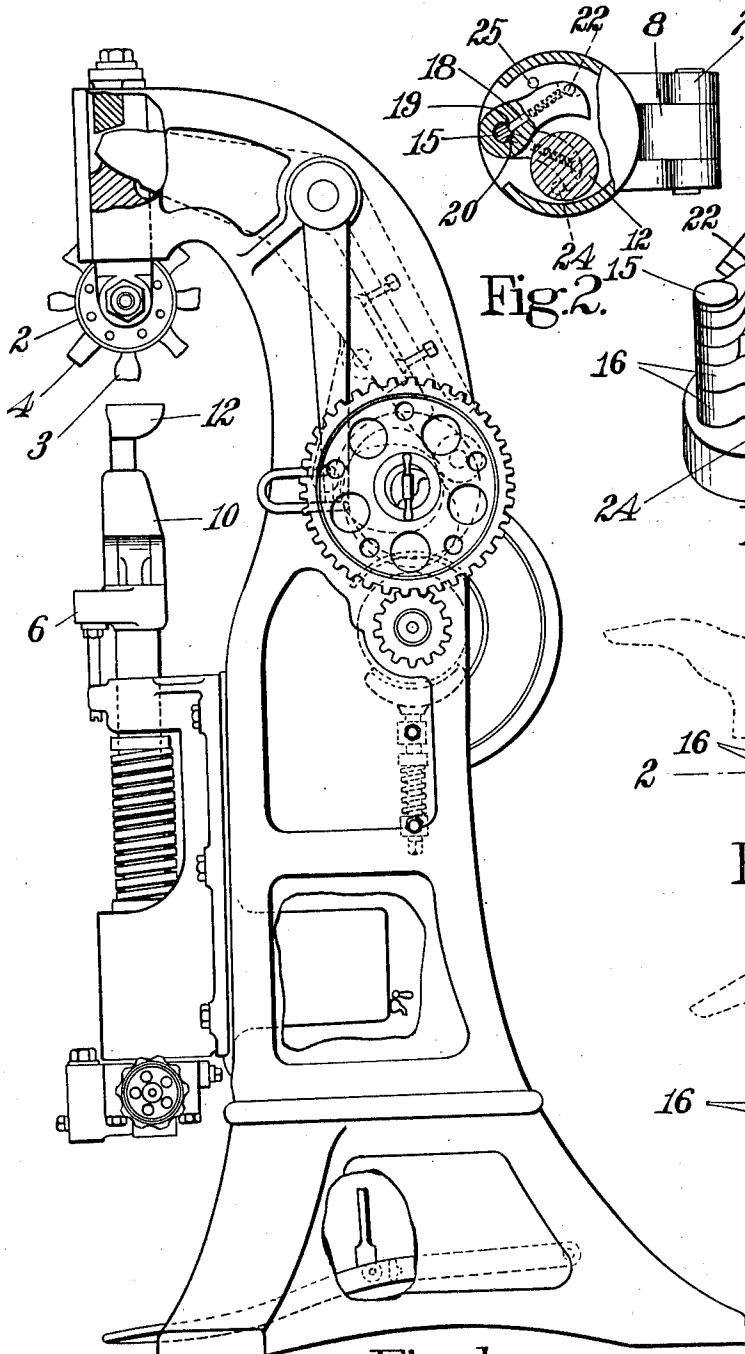


Fig. 1.

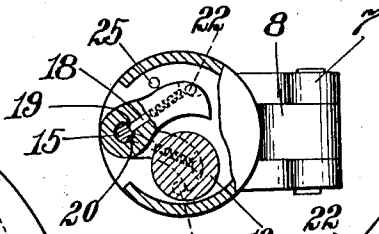


Fig. 2.

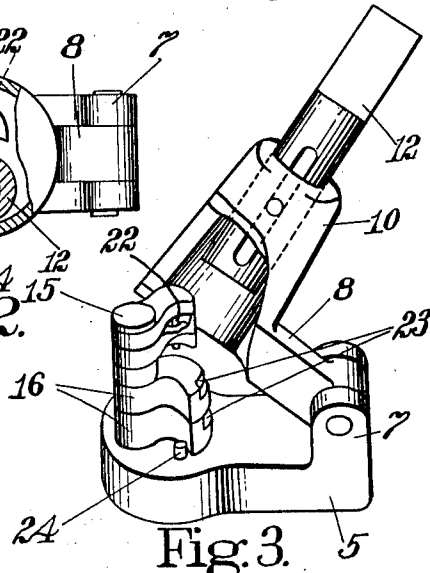


Fig. 3.

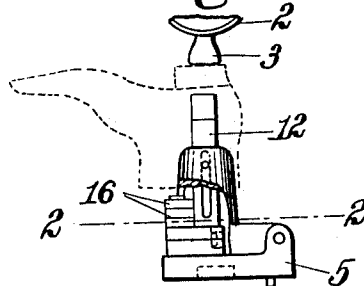


Fig. 4.

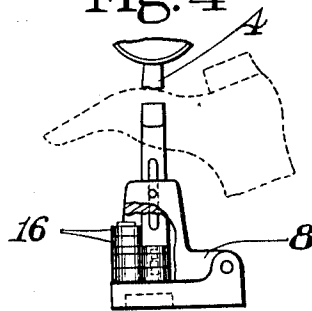


Fig. 5.

WITNESSES.

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WORK-SUPPORT.

1,022,412.

Specification of Letters Patent.

Patented Apr. 9, 1912.

Original application filed October 7, 1908, Serial No. 456,572. Divided and this application filed November 5, 1909. Serial No. 526,395.

To all whom it may concern:

Be it known that I, JOHN J. GILLESPIE, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Work-Supports, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to work supports for presses and other machines for operating upon shoes and other articles and it is herein shown as embodied in a work support for a shoe stamping machine. These machines are employed for stamping trade or other marks upon the bottoms of shoes. In many instances the manufacturer desires to stamp the shoe bottom in a plurality of places—as, for example, to stamp a trademark or name upon the tread face of the heel and a price or other mark upon the tread face of the shank or other portion of the sole. The difference in thickness of the stock interposed between the stamp and the support at the heel and at the sole requires relative adjustment of the support and stamp. It has heretofore been proposed to provide work supports, which, by means of screws or pawl and ratchet devices, can be adjusted for differences in thickness of the work, but in machines intended for such work as that described it is desirable that provision be made for effecting an adjustment of fairly definite extent and for varying in a definite manner the adjustment for heels of different standard heights. In accordance with the present invention provision is made for adjusting the work support through definite predetermined distances and this adjustment can be made while the shoe is on the support and between the operation of stamping upon the sole and stamping upon the heel.

In the construction shown, the work support comprises a pivoted guide in which a spindle is mounted for vertical movement and devices are provided which are arranged to be moved into and out of position for raising the spindle to determine the height at which it will be supported in the guide. These devices are shown as comprising a plurality of pivoted blocks one or more of

which may be swung from and toward position to support the spindle. The pivoted guide is shown as provided with a flaring portion located below its spindle guiding surfaces and adapted to inclose the swinging blocks both when they are in their operative position and when they are in their inoperative position.

A further feature of this invention consists in the construction and arrangement of the spindle supporting blocks by which a plurality of said blocks are arranged for movement together by forces applied to one of them. The upper block or the upper blocks each have a depending pin or stud adapted to engage a side face or a notch in the next lower block so that by applying force to any one block all the blocks below it will be moved together. Stops are provided for arresting the movement of the blocks when they are in their operative and inoperative positions and preferably also spring-controlled means are provided for yieldingly holding the blocks in their operative or inoperative positions and this means is arranged so that when the blocks are moved from their operative position half way toward their inoperative positions they will be automatically forced the remaining distance.

These and other features of the invention, including certain details of construction and arrangements of parts, will be explained in connection with the following description of a preferred embodiment of the invention and will be pointed out in the claims.

In the drawings: Figure 1 is a side elevation of a bottom stamping machine embodying the present invention. This machine is in its general construction and operation essentially similar to a machine shown in an application for Letters Patent filed by Gordon and Topham, Serial No. 186,368, and an application filed by John Gillespie, Serial No. 456,572, of which the present application is a division. Fig. 2 is a section on approximately the line 2—2 of Fig. 4. Fig. 3 is a perspective view of the shoe supporting means. Figs. 4 and 5 show the shoe supporting means and the stamp in different adjusted positions for marking the heel and sole of a shoe, respectively.

The machine comprises a wheel or turret adapted to carry a plurality of stamps 3,

4 for the heel and sole, respectively, together with suitable means for actuating the turret toward the work-supporting means located below it. The work-supporting means comprises, in accordance with this invention, a base 5 adapted to rest upon a post 6 and sustaining means therefor, which may be like that shown in said applications and adapted to yield for slight variations in the thickness of the work or it may be of any other suitable type. The base 5 has, at one side of the line of pressure applied by the stamp, ears 7 between which is pivoted a laterally projecting arm 8 from a spindle guide 10 in which the work-supporting spindle 12 is arranged for adjustment. A pivot pin 15 projects upwardly from the base and holds in assembled relation a plurality of superposed blocks 16 adapted to swing from and toward a position in alinement with or vertically under the spindle 12 where they form auxiliary rests for the spindle. Each of these blocks is provided with a spring-pressed plunger 18 adapted to bear on one or the other of the two beveled surfaces 19 and 20 of the pin 15. These plungers, engaging the beveled faces of the pin, hold the swinging blocks normally in one or the other of two definite positions and when a block is moved slightly past the center in one or the other direction the plungers will continue that movement and force the block fully to the definite position which it is approaching. Each block except the bottom one is provided with a depending stud indicated at 22 adapted to engage a recess 23 in the adjacent face of the next lower block. The recesses are so shaped that when any block is turned from its inoperative position toward its operative or spindle-raising position all the blocks below it are also compelled to turn in that direction. When any of the blocks are engaged and turned toward inoperative position all the blocks above it are compelled to move with the block to which the turning force is applied. Limiting studs 24, 25 are arranged to stop the lower block in its two positions and the engagement of the pins 22 in the recesses 23 causes the other blocks to be stopped in alinement with the bottom block. The blocks or part of them are or may be proportioned in thickness to the standard heights of heels so that different groups of them will produce different adjustments in the height of the spindle according to the standard height of the heel on the shoes being stamped. The number of the blocks and the thickness or relative thickness of the several parts may be varied as conditions may require. The spindle has a pin and slot connection with the guide 10 which permits the spindle to be lifted sufficiently to introduce all the blocks 16 beneath it if desired. This connection limits the move-

ment of the spindle in the guide when the guide is tipped and so prevents the spindle from being accidentally displaced or being withdrawn from the guide.

In the use of the invention the shoe may be applied to the spindle as indicated in Fig. 4 for stamping the tread face of the heel. Then, while the stamp-carrying turret is raised the spindle with its guide may be tipped, as shown in Fig. 3, to raise the spindle and give access to the blocks, whereupon the operator will engage as many of the blocks as are required to compensate for the difference in thickness of the sole and the particular heel of the shoe being stamped and will swing those blocks into their operative position under the spindle. The spindle guide will then be tipped back to its upright position and in this movement the spindle, after contacting with the upper face of the top block in operative position, will be raised to elevate the work to the altitude in which the tread face of the sole to be stamped is in the same or substantially the same relation to the stamp as was the tread face of the heel. In shifting the blocks toward their operative position it is only necessary to engage the top one of the blocks which it is desired to use, because the pins 22 compel each of the blocks below the top one to move with that one. It is unnecessary for the operator to restrain the upper blocks from moving because the spring plungers 18 by their engagement with the inclined face of the pin 15 holds those blocks from movement. Similarly when moving the blocks to their inoperative position it is only necessary to engage the lowest block which is to be turned and all the others are compelled to turn with it.

Having explained the nature of this invention and described a preferred construction embodying the same, I claim as new and desire to secure by Letters Patent of the United States:—

1. In a machine of the class described, a shoe supporting jack comprising a spindle, a guide in which the spindle is adjustable endwise, and spindle supporting means independent of the guide and including a plurality of blocks movable in parallel paths one or more of which may be positioned under the spindle to determine the altitude at which the work will be sustained.

2. In a machine of the class described, a shoe supporting jack comprising a spindle, a guide in which the spindle is adjustable endwise, and spindle supporting means including a plurality of blocks of different thicknesses mounted to permit one or more to be shifted from a position at one side of the spindle into a position under the spindle.

3. A machine of the class described, having in combination, a shoe supporting jack comprising a spindle, a spindle guide, a base

upon which the guide and spindle are pivotally mounted and upon which the spindle normally rests, and a block pivotally mounted on the base at one side of the spindle and adapted when the spindle and guide are rocked away therefrom to be swung into or out of position to rest the spindle.

4. In a machine of the class described, a work support comprising a spindle, a guide in which the spindle is movable endwise, means for resting the spindle and a block normally supported in an inoperative position adjacent to the spindle, said block being movable about an axis at one side of the line of pressure upon the spindle to or from position under the spindle to change the elevation at which the spindle will be supported.

5. In a machine of the class described, a work support comprising a spindle, a guide in which the spindle is movable endwise, and a plurality of blocks connected for movement together or separately at the will of the operator and adapted to be positioned under the spindle.

6. In a machine of the class described, a work support comprising a spindle, a guide in which the spindle is movable endwise, a plurality of blocks arranged for movement under the spindle to determine the height at which it is supported and means connecting the blocks constructed and arranged to cause the subjacent block or blocks to be moved with any block to which force is applied for shifting toward operative position.

7. In a machine of the class described, a work support comprising a spindle, a guide in which the spindle is movable endwise, a plurality of blocks arranged for movement under the spindle to determine the height at which it is supported and means connecting the blocks constructed and arranged to cause the superposed block or blocks to be moved with a block to which force is applied for shifting it away from operative position.

8. In a machine of the class described, a work support comprising a spindle, and a plurality of superposed spindle supporting blocks connected for movement together by

force applied in one direction to the lower block and for movement together by force applied in the opposite direction to the upper block.

9. In a machine of the class described, a work support comprising a spindle, a plurality of superposed spindle supporting blocks 16, and the pin 22 carried by one block and arranged to engage the laterally open recess or side face 23 of the adjacent block as and for the purpose described.

10. In a machine of the class described, a work support comprising a spindle, a plurality of superimposed spindle supporting blocks mounted for movement toward and from spindle supporting position and means for yieldingly retaining the blocks in the positions to which they are moved.

11. In a machine of the class described, a work support comprising a spindle 12, a guide 10, and blocks 16 pivoted at 15 for movement from and toward position to support the spindle, each block when in operative position supporting the block above it.

12. In a machine of the class described, a sliding spindle, guiding means therefor, means for limiting the movement of said spindle relatively to said guiding means, and a plurality of superposed supporting blocks for said spindle arranged for movement about a common axis into or out of alinement with said spindle.

13. A device of the class described having, in combination, a spindle, a guiding member for the spindle pivoted to permit movement about an axis at one side of the line of pressure upon the spindle, and a plurality of superposed supporting blocks for said spindle arranged for movement about a common axis so that one or more blocks may be positioned in alinement with said spindle.

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

JOHN J. GILLESPIE.

Witnesses:

HERBERT W. KENWAY,
JAMES R. HODDER.