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MACHINE FOR AFFIXING SHOE HEELS.

APPLICATION FILED OCT. 21, 1920.

1,366,417.

Patented Jan. 25, 1921.

2 SHEETS—SHEET 1.

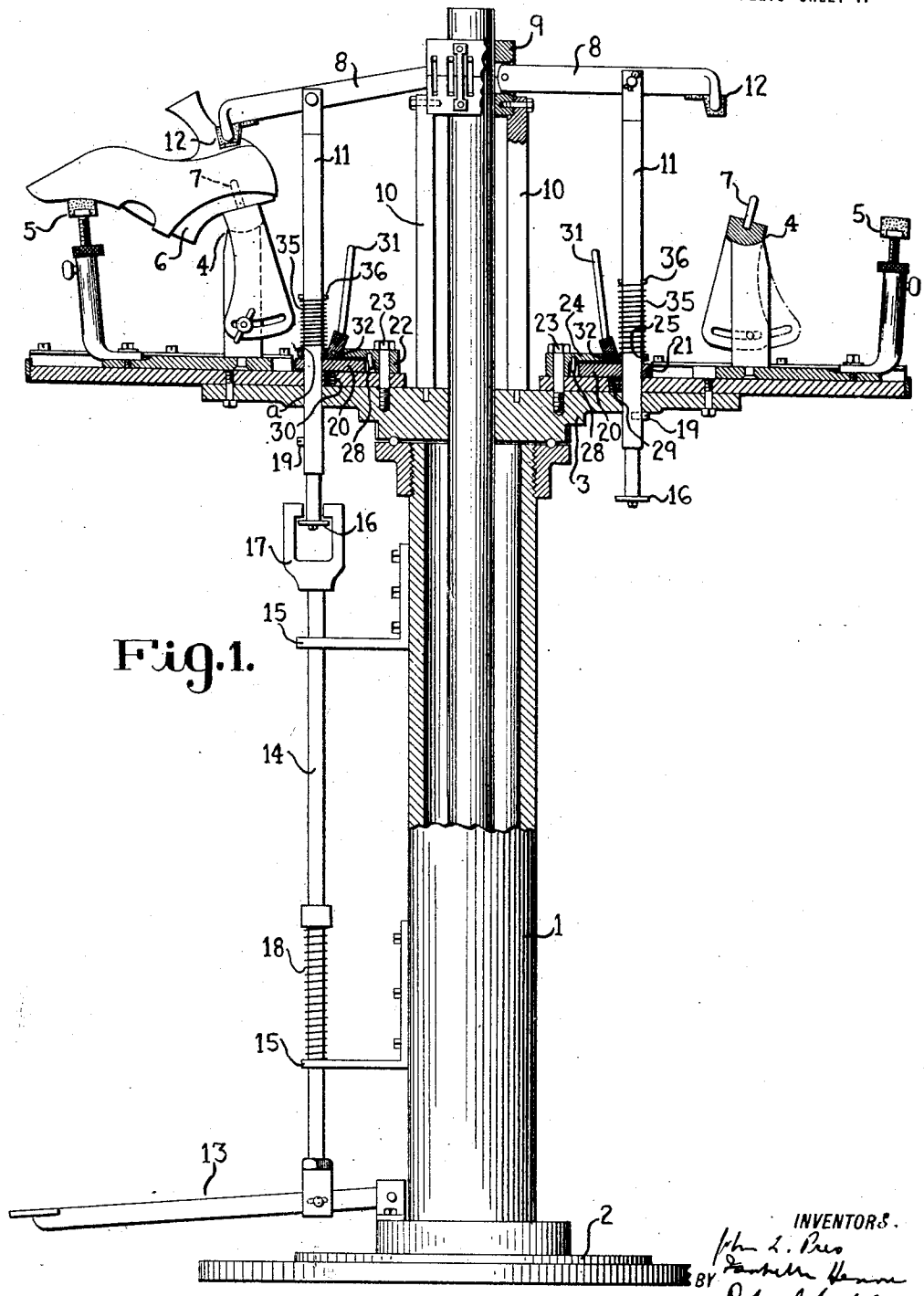


Fig.1.

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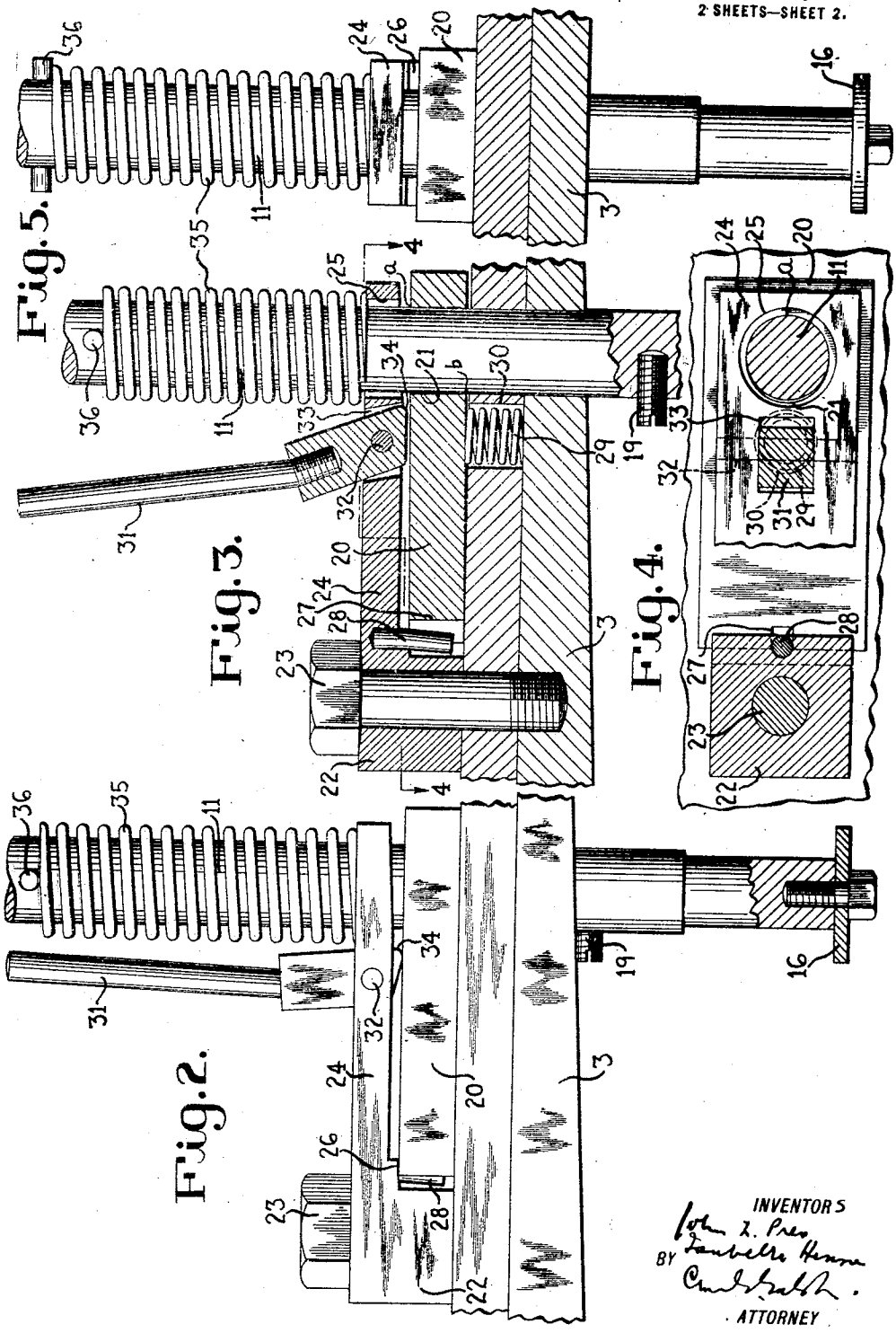
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MACHINE FOR AFFIXING SHOE-HEELS.

1,366,417. Specification of Letters Patent. Patented Jan. 25, 1921.

Application filed October 21, 1920. Serial No. 418,438.

To all whom it may concern:

Be it known that we, JOHN L. PREO and ISABELLE HENNE, citizens of the United States, residing in the city and State of New York, have jointly invented a new and useful Improvement in Machines for Affixing Shoe-Heels, of which the following is a specification.

This invention relates to a machine for affixing shoe heels, and is more particularly an improvement upon and within the machine disclosed in application filed March 31st, 1920, Serial No. 370,269. The object is to provide such a machine with improved clutch means for holding the heel-pressing members, after being depressed, in such manner that the clutch seizes and holds reliably at any point. A further object is to provide a simple, strong and long-wearing construction for this purpose. Other objects and features will become apparent as the specification proceeds.

In the accompanying drawings, forming a part hereof:

Figure 1 is a view of the machine, mainly in central vertical section, showing only two of the circular series of shoe-mounts and the coöperative heel-pressing mechanisms, one of the latter being raised and the other depressed;

Fig. 2 is an enlarged fragmentary elevation including the clutch means seen at the right of Fig. 1;

Fig. 3 is a vertical longitudinal section through Fig. 2;

Fig. 4 is a horizontal section on the line 4—4 of Fig. 3; and

Fig. 5 is a sectional end view of the clutch.

The machine has a pedestal 1 rising from a base 2 and rotatably supporting a table 3. The latter is adapted to be turned in a step-by-step manner and bears a circular series of shoe-mounts, including the tiltable last-supports 4 and toe-rests 5. The lasts 6 bearing the shoes are placed upon the pins 7 of the last-supports, with the toes resting upon the toe-rests. A corresponding circular or radiating series of heel-pressing arms 8 are fulcrumed at their inner ends in an elevated hub 9 supported from and rotatable with the central part of the table by pillars 10, and are adapted to be depressed by rods 11 pivoted to the arms and passing vertically downward through openings in the table. When these arms are pulled down, their forked and padded outer extremities 12 are caused to bear upon the sloping backs of the heels, as seen at the left in Fig. 1, for the purpose of clamping the heels to the shoe bodies until the cement is set.

The rods 11 are depressed successively when they come in front of the operator's station by means of a treadle 13 and a rod 14 slidable in brackets 15 on the standard 1. The rods 11 pass into and out of operative relation to the rod 14 as the table is turned step by step, by virtue of heads 16 on the lower ends of the rods 11 and a yoke 17 on the upper end of the rod 14, a spring 18 acting to sustain the rod 14 at the proper height, so that the heads may enter laterally within the yoke when said heads are in their upper position, as determined by stops 19.

When the operator forces the arms 8 down upon the heels and then removes the foot pressure from the treadle, it is important that the clamping action of the heel-pressing members be preserved without slip-back or relaxation until such time as it should be desired to remove the shoe. For this purpose the means about to be described, constituting the more particular novelty of the present invention, are provided.

At the region where each of the rods 11 passes through a guide opening in the table, there is a flat clutch plate 20 lying loosely upon the table and provided in its outer end portion with an opening 21 slightly larger than the rod. A fixed block 22 is secured to the table at the inner end of this plate by a screw 23. It has a top portion 24, which projects horizontally over the plate at a slight distance therefrom, its outer end having an opening 25 for the passage of the rod. Adjacent the screw said block is formed with a shoulder 26 overlying the inner end of the clutch plate, in such manner as to permit slight tilting movement thereof while preventing bodily upward movement. The rear end of each plate is slotted or notched, as indicated at 27, to coöperate with a pin 28 projecting downward from the block to constitute means for preventing lateral displacement of the plate. Each plate is normally tilted upward by a spring 29 contained in a recess 30 in the table beneath the plate. Manual means are provided for pressing each of the clutch plates downward so as to release the corresponding rod 11, the said means in

each instance preferably comprising a hand lever 31 fulcrumed on a pin 32 in an opening 33 of the block 22, so that its nose 34 will act upon the top of the plate. When the plate is released in this manner the rod 11 and arm 8 are urged upward by a spring 35, which in this instance encircles the rod between the top portion 24 with the fixed block and a cross-pin 36 in the rod.

In operation, when foot pressure is removed from the treadle 13, the clutch plate 20 immediately grips and holds immovably the corresponding rod 11, the gripping action taking place at the diagonally opposite corners *a*—*b* of the opening 21, the clutch plate being prevented from rising with the rod by the restraint of the abutment 26 bearing upon its remote end. The heel-clamping mechanism is thus held absolutely until such time as the operator moves the lever 31 to the position shown in Fig. 2, thereby pressing the plate down flat upon the table, so that the gripping at the points *a* and *b* is removed.

What is claimed as new is:

1. In a heel-affixing machine, a rotatable table, a circular series of shoe-mounts thereon, heel-pressing arms, depressing rods extending downward from said arms through the table, springs for raising the rods and arms, and means for acting upon said rods to force the arms down upon the heels; in combination with upwardly spring-pressed clutch members on the table having gripping openings through which said rods pass, and manual means for releasing said members.

2. In a heel-affixing machine, a table, a shoe-mount thereon, a heel-pressing arm in coöperative relation to the shoe-mount, a depressing rod extending downward from the said arm, a spring for raising the rod and arm, and means for acting upon the rod to force the arm down upon the heel; in combination with an upwardly spring-pressed plate having a gripping opening through which said rod passes, means confining said plate on the table with capacity for slight tilting movement, and manual means for pressing the plate downward to free the rod.

3. In a heel-affixing machine, a table, a shoe-mount thereon, a heel-pressing arm in coöperative relation to the shoe-mount, a depressing rod extending downward from the said arm, a spring for raising the rod and arm, and means for acting upon the rod to force the arm down upon the heel; in combination with a plate having a gripping opening through which said rod passes, said plate lying loosely on the table, an abutment on the table overlying the portion of the plate remote from its gripping opening, means preventing lateral displacement of the plate, a spring in the table beneath the plate acting upwardly thereon, and a lever for pressing the plate downward to free the rod.

4. In a heel-affixing machine, a table, a shoe-mount thereon, a heel-pressing arm in coöperative relation to the shoe-mount, a depressing rod extending downward from the said arm, a spring for raising the rod and arm, and means for acting upon the rod to force the arm down upon the heel; in combination with a plate having a gripping opening through which said rod passes, said plate lying loosely on the table and having a retaining slot, an abutment on the table overlying the portion of the plate remote from its gripping opening, a pin cooperating with said slot to prevent lateral displacement, a spring in the table beneath the plate acting upwardly thereon, and a lever for pressing the plate downward to free the rod.

5. In a heel-affixing machine, a table, a shoe-mount thereon, a heel-pressing arm in coöperative relation to the shoe-mount, a depressing rod extending downward from the said arm, a spring for raising the rod and arm, and means for acting upon the rod to force the arm down upon the heel; in combination with a plate having a gripping opening through which said rod passes, said plate lying loosely on the table, a fixed block on the table overlying said plate and affording an abutment coöperating therewith remote from its opening, so as to permit the plate to tilt slightly while preventing bodily upward movement, a spring in the table acting upwardly upon the plate, and a releasing lever mounted in the block to act upon the top of the plate.

6. In a heel-affixing machine, a table, a shoe-mount thereon, a heel-pressing arm in coöperative relation to the shoe-mount, a depressing rod extending downward from the said arm, a spring for raising the rod and arm, and means for acting upon the rod to force the arm down upon the heel; in combination with a plate having a gripping opening through which said rod passes, said plate lying loosely on the table, a fixed block on the table overlying said plate and affording an abutment coöperating therewith remote from its opening, so as to permit the plate to tilt slightly while preventing bodily upward movement, means on the block preventing lateral displacement of the plate, a spring in the table acting upwardly upon the plate, and a releasing lever mounted in the block to act upon the top of the plate.

7. In a heel-affixing machine, a table, a shoe-mount thereon, a heel-pressing arm in coöperative relation to the shoe-mount, a depressing rod extending downward from the said arm, a spring for raising the rod and arm, and means for acting upon the rod

to force the arm down upon the heel; in combination with a plate having a gripping opening through which the rod passes, said plate lying loosely on the table, a fixed block on the table overlying said plate, said block presenting an abutment coöperating with the plate at its region remote from the gripping opening, and being further provided with an opening at one side of the rod, means acting through said opening in the block for pressing the plate down, a spring in the table acting upward upon the plate, and a pin projecting downward from the block preventing lateral displacement of the plate.

8. In a heel-affixing machine, a table, a shoe-mount thereon, a heel-pressing arm in coöperative relation to the shoe-mount, a depressing rod extending downward from said arm, and means for acting upon the rod to force the arm down upon the heel; in combination with a plate on the table having a gripping opening through which the rod passes, a fixed block on the table overlying said plate, means for pressing the plate down to free the rod, and a spring encircling the rod above said block for raising the rod and arm.

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In presence of—
JULIUS J. KAUDER.