No. 776,875. PATENTED DEC. 6, 1904.

E. A. TRIPP.

HEEL COMPRESSING MACHINE.

APPLICATION FILED FEB. 24, 1903.

NO MODEL. 4 SHEETS—SHEET 1.

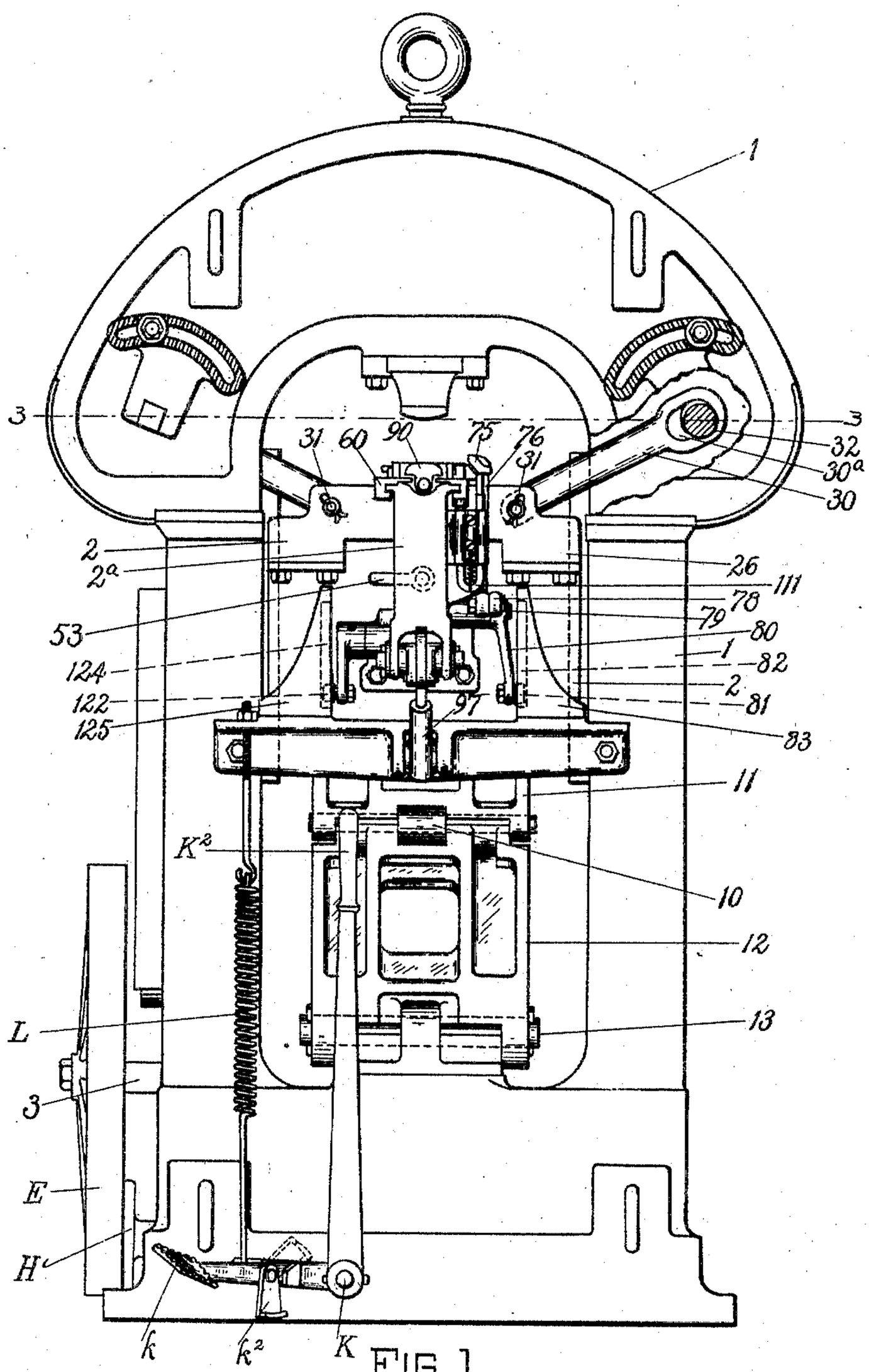

FIG. 1.

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NO MODEL. 4 SHEETS—SHEET 2.

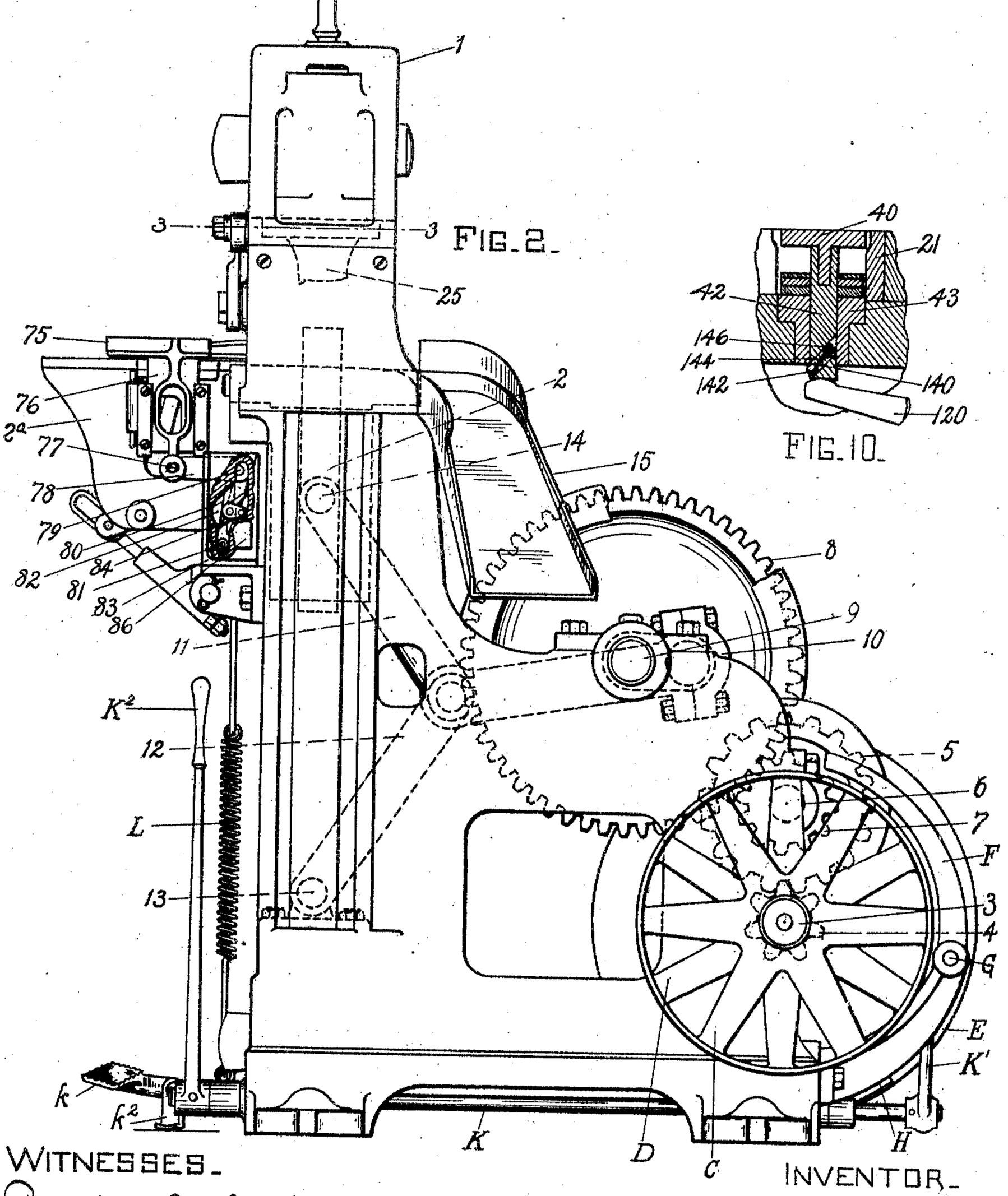

FIG. 2.

FIG. 10.

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NO MODEL. 4 SHEETS—SHEET 3.

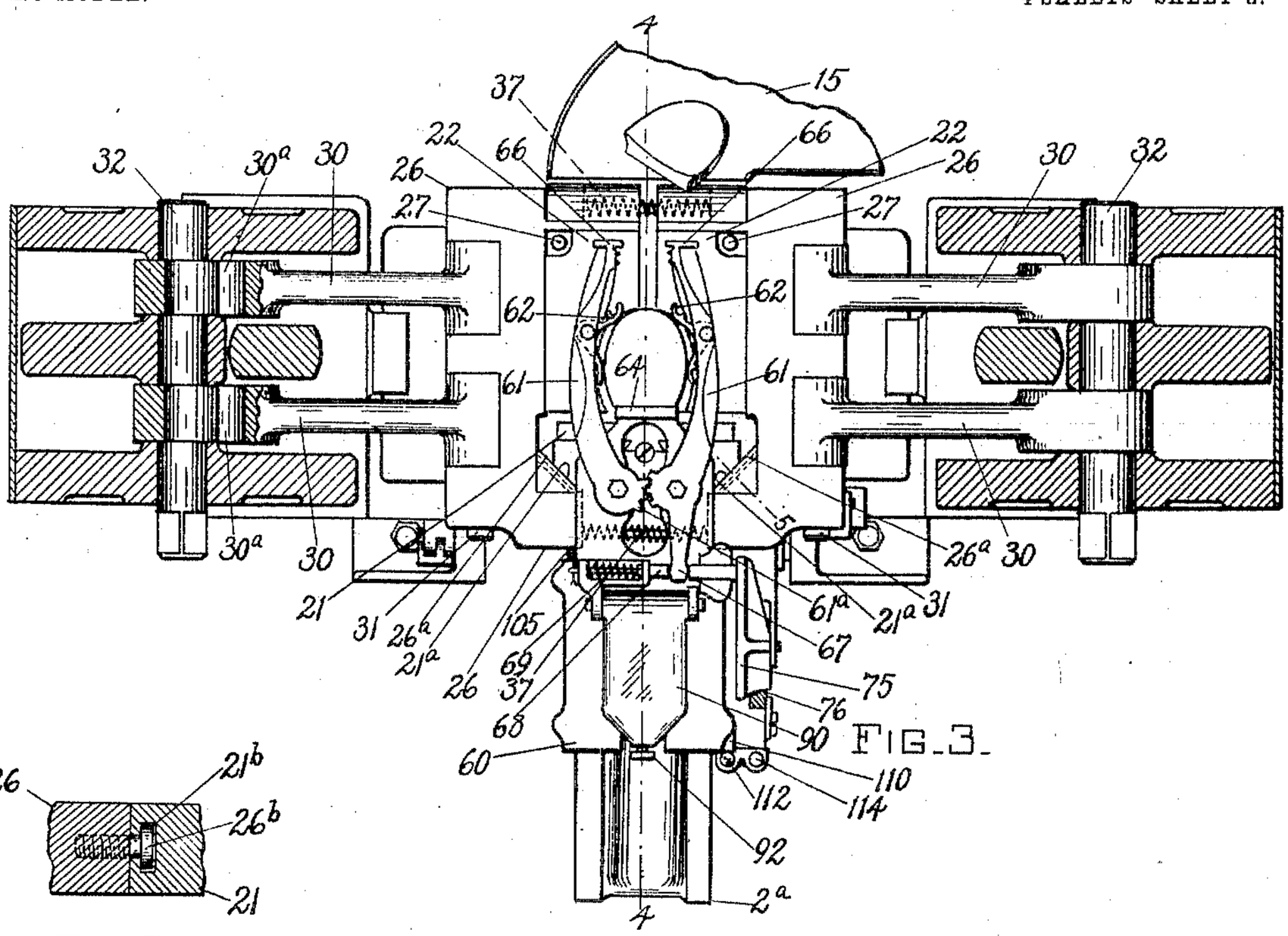

FIG. 3.

FIG. 5.

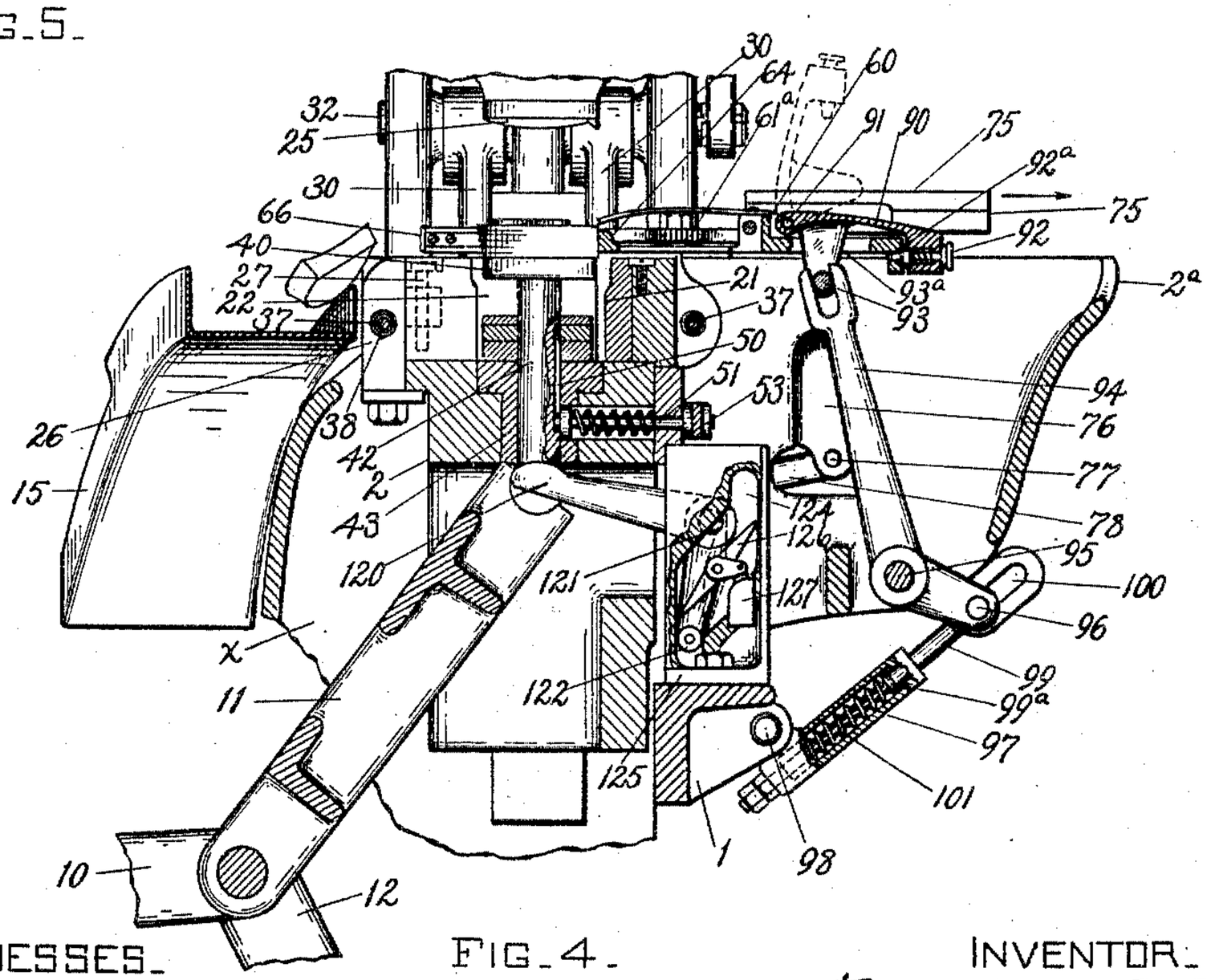

FIG. 4.

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HEEL COMPRESSING MACHINE.

APPLICATION FILED FEB. 24, 1903.

NO MODEL. 4 SHEETS—SHEET 4.

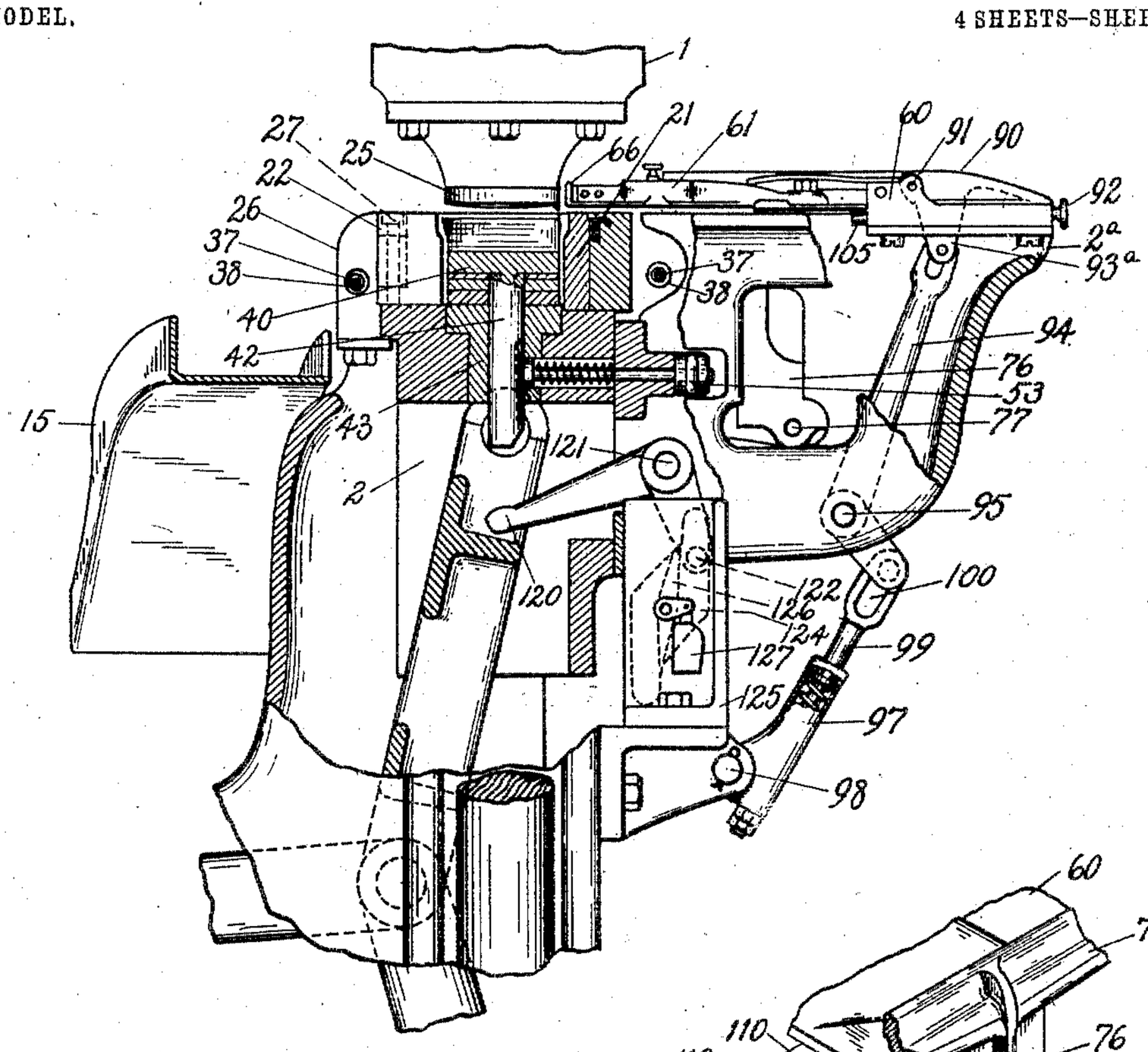

FIG. 6.

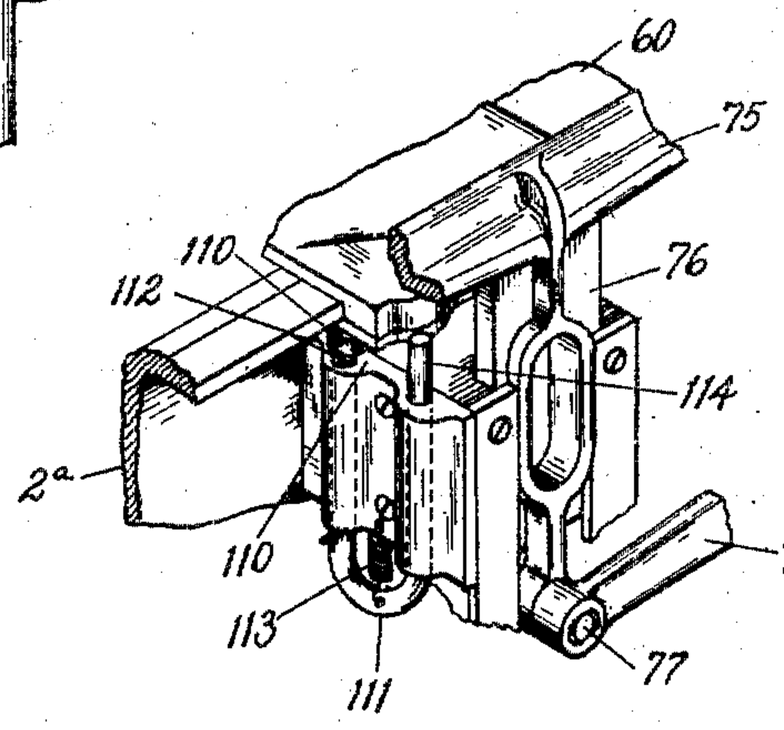

FIG. 8.

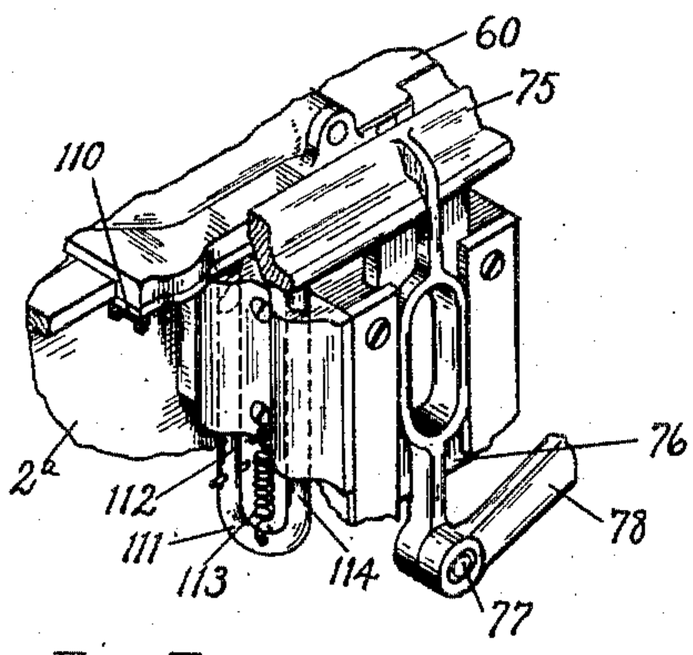

FIG. 7.

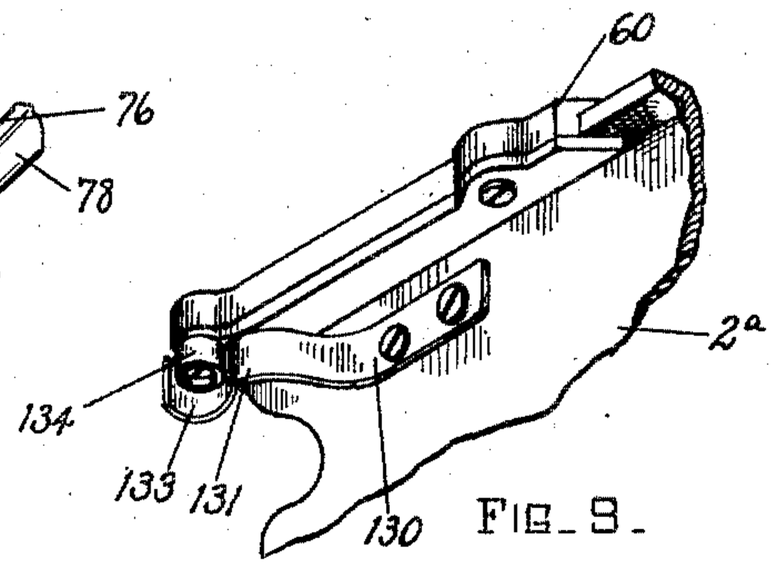

FIG. 9.

WITNESSES.

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No. 776,875. Patented December 6, 1904.

UNITED STATES PATENT OFFICE.

ELIPHALET A. TRIPP, OF NEW BEDFORD, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, AND BOSTON, MASSACHUSETTS, A CORPORATION OF NEW JERSEY.

HEEL-COMPRESSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 776,875, dated December 6, 1904.

Application filed February 24, 1903. Serial No. 144,857. (No model.)

To all whom it may concern:

Be it known that I, ELIPHALET A. TRIPP, a citizen of the United States, residing at New Bedford, in the county of Bristol and State of Massachusetts, have invented an Improvement in Heel-Compressing Machines, 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 heel-compressing machines; and its object is to improve and perfect machines of this class.

An important feature of the invention consists in novel means for connecting the feeding-slide with its actuating mechanism, whereby the feeding-slide may be readily detached from the actuating mechanism for the purpose of permitting the slide to be removed from the machine. This is an improvement on prior constructions, in which it was necessary to disconnect the parts of the actuating mechanism in order to permit the removal of the feeding-slide.

Another feature of the invention consists in an improvement in the means for actuating the feeding-slide whereby the forward or feeding movement of the slide is yieldingly effected. This avoids the danger of straining or breaking the machine in case the feeding-slide meets an obstruction which interrupts its feeding movement and is an improvement on the prior constructions in which a shear-pin or break-pin was employed for connecting the parts of the feeding mechanism, said shear-pin or break-pin being adapted to give way when the feeding-slide met an abnormal resistance. In such constructions the shear-pin did not give way until the machine had been strained to an objectionable extent, and, moreover, the replacing of broken shear-pins consumed considerable time.

Another feature of the invention consists in improved means for checking the forward movement of the feeding-slide near the end of the feeding movement of said slide, so as to reduce the jarring of the machine. In the machine to which my invention is herein shown as applied the feeding-slide is moved rapidly forward to carry a heel-blank into position to be compressed. In the embodiment of my invention here shown a device which serves as a brake to check the forward movement of the slide also acts as a locking device to prevent rebound of the feeding-slide after it reaches the end of its forward movement.

Other features of the invention will be described in the specification and pointed out in the claims.

In the accompanying drawings, which show a preferred form of my invention, Figure 1 is a front elevation of the machine. Fig. 2 is a side elevation thereof. Fig. 3 is a horizontal section on the line 3 3 of Figs. 1 and 2. Fig. 4 is a vertical section on the line 4 4 of Fig. 3. Fig. 5 is a detailed sectional view on the line 5 5 of Fig. 3. Fig. 6 is a view similar to Fig. 4 with the parts in a different position. Figs. 7 and 8 are detailed views of the braking and locking mechanism, said figures showing the parts in different positions. Fig. 9 shows a modified form of braking and locking mechanism, and Fig. 10 shows a modified form of retainer for the top-lift plate.

1 indicates the rigid framework which supports the actuating mechanism of the machine.

2 indicates a head which is adapted to be vertically reciprocated in suitable guideways formed in the sides of the rigid frame and which is hereinafter referred to as the "head" or the "reciprocating head" of the machine.

3 indicates a driving-shaft mounted in bearings in the rear portion of the frame of the machine and provided with suitable fast and loose pulleys. The driving-shaft carries a pinion 4, which engages with a gear 5 on a counter-shaft 6. The counter-shaft carries a pinion 7, which engages a gear 8 on the crank-shaft 9. A link 10 is connected to the crank-shaft 9 and also to a toggle composed of members 11 and 12.

The toggle member 12 is pivoted at 13 to the rigid portion of the frame near its base, and the toggle member 11 is pivoted at 14 to the reciprocating head 2.

15 indicates a chute attached to the frame of the machine and adapted to conduct away compressed heels as they are ejected from the compressing mechanism.

The reciprocating head supports a heel-mold which comprises a top-lift plate 40, a breastplate 21, and laterally-movable side compressing-dies 22 22. (See Figs. 3 and 4.)

25 indicates a heel-seat die removably supported in the upper portion of the frame 1 in alinement with and in position to coöperate with the heel-mold carried by the reciprocating head 2.

The side compressing-dies 22 22 are removably supported in slides 26 26 and are held in place in said slides by pins 27 27 passing through interlocking ears in the side compressing-dies and the slides 26 26. (See Figs. 3 and 4.) The slides 26 are provided with beveled faces 26^a, and the breastplate 21 is provided with beveled faces 21^a, coöperating with the similar faces on slides 26. The faces 21^a are each provided with an undercut groove 21^b, while the faces 26^a of the slides are provided with ribs or lugs 26^b, shaped to be guided in the grooves 21^b, as shown in Fig. 5, whereby when the slides are moved to open or close the sides of the mold the breastplate 21 will also be moved to open or close the front of the mold. This arrangement insures that the members 21, 22, and 22 of the mold shall be actuated simultaneously in opening and closing the mold. The side compressing-dies and breastplate are actuated to close the mold for compressing the heel laterally by links 30, which are pivotally connected at their inner ends by pins 31 with the slides 26 and are connected at their outer ends by pivot-pins 32 with a fixed portion of the frame, as shown in Figs. 1 and 3. The arrangement is such that when the reciprocating head is in its lower position the links extend obliquely from their pivotal connection with the frame to their connection with the slides, as shown in Fig. 1, and as the head rises the links are turned toward a horizontal position, and in moving toward this position the links move the slides 26 and force the breastplate 21 and the side compressing-dies 22 22 together to close the mold. The links 30 are slotted at 30^a at their connection with the pivot-pins 32 to permit them to slide with relation to said pivot-pins and allow for lost motion, so that the slides 26 are moved toward and from each other during only a portion of each reciprocation of the head 2. The movement of the slides toward each other by the links takes place during the latter part of the upward movement of the reciprocating head. The links will also be effective for moving the slides from each other for opening the mold during the last portion of the descent of the head. It is desirable, however, that the mold be opened immediately after the heel has been compressed—that is, during the first part of the descent of the head—and for this purpose compressed springs 37 are interposed between the slides 26, as shown in Figs. 3 and 4. The springs have their ends inclosed in sockets 38 in the adjacent faces of the slides and serve to separate the slides as soon as the head begins to descend.

The top-lift plate 40 has a supporting block or stem 42, which is provided on one side with a vertical groove 50, and a spring-pressed bolt 51 is mounted in the head 2 and has one end taking into the slot in the stem 42. (See Fig. 4.) The bolt 51 locks the top-lift plate against rotation and permits the plate to have a limited amount of vertical movement. The locking-bolt 51 has a handle or operating member 53, by means of which the bolt may be withdrawn from the slot in the stem 42 for permitting the top-lift plate to be removed from the machine.

In Fig. 10 I have shown a modified form of means for limiting the upward movement of the top-lift plate. The stem 42 is provided with an oblique slot 140, which receives a ball 142. The opening through the wall of the stem of the lower end of the slot is large enough to let a portion of the ball project through, but not large enough to allow the ball to escape. The ball is pressed into the lower end of the slot by a spring 144, the tension of which is regulated by a screw-plug 146 in the upper end of the slot. The side of the ball 142, projecting through the stem 42, is in position to engage the lower side of the pressure-block 43 in the reciprocating head and act as a yielding stop to limit the upward movement of the top-lift plate and prevent the top-lift plate being accidentally raised too high. The ball can be pressed back into its slot by a suitable instrument when it is desired to remove the top-lift plate.

The reciprocating head 2 has a forward extension 2^a, (see Figs. 2, 3, and 4,) which constitutes a table or support for the feeding mechanism. The feeding mechanism comprises among its parts a feeding-slide 60, movable on suitable guides on the table. Heel-blank-clamping arms 61 61 are pivotally mounted on the slide 60 and are provided with grasping-fingers 62, which are pivotally connected to the arms.

64 indicates an abutment on the front end of the slide 60, which is adapted to engage the breast of the heel held by the grasping-fingers. The fingers 62 are actuated by springs, (not shown,) and together with the abutment 64 they constitute a clamp for embracing and holding a heel-blank while it is being fed into position on the top-lift plate 40 and beneath the heel-seat die 25.

The free ends of the arms 61 are provided with enlargements or shoulders 66 to contact with and push a compressed heel off the top-lift plate and out of the machine when the slide is moved forward into the position shown in Fig. 4 for feeding an uncompressed heel

into position to be compressed. The adjacent faces of the arms 61 opposite their pivotal connections to the slide 60 are formed as interlocking segmental gears 61ª. One of the arms 61 has an extension 67, the end of which lies between lugs on a bolt 68, which is actuated in one direction by a spring 69 for holding the arms closed together and in the opposite direction by a cam-plate 75 for opening said arms. (See Figs. 3 and 4.)

The cam-plate 75 is supported on a slide 76, which is vertically movable in guideways formed in the side of the table or extension 2ª of the reciprocating head. (See Figs. 1, 2, 7, and 8.) The slide 76 is supported by a pivotal connection at 77 with one arm, 78, of a bell-crank lever, which is fulcrumed at 79 on the reciprocating head. (See Figs. 1, 2, and 7.) The other arm, 80, of the bell-crank lever is provided with a roll 81, which is received in a cam-groove 82 in a plate 83, attached to the frame of the machine. The plate 83 is provided with a movable latch 84, located in the cam-groove 82. The latch is fast on a rock-shaft having a horizontal arm to which is attached a weight 86. The weight normally holds the rock-shaft in such a position that the latch extends across the cam-groove in the position shown in full lines in Fig. 2, but permits the latch to be moved into the position shown in dotted lines in said figure. The latch divides the cam-groove 82 into two paths, the right-hand one of which is followed when the head and the bell-crank lever are ascending. When this movement takes place, the cam-roll rocks the latch into the dotted-line position as it passes the latch, and when it has passed the latch the weight returns the latch to its full-line position. When the reciprocating head 2 descends, the roll travels downwardly relatively in the left-hand path, the latch forming one wall of an inclined portion of said path, as is clearly shown in Fig. 2. The cam-groove acting through the bell-crank lever holds the cam-plate 75 approximately at rest during the first portion of the rise of the head and again during the first portion of the descent of said head, while permitting the cam-plate 75 to move in unison with the head during the latter parts of the upward and downward movements of the head. By this means the cam-plate 75 is caused to contact with the sliding bolt 68 to open the clamp and release a heel-blank after it has been fed into position to be compressed. The plate also holds the clamp open during the retraction of the feeding-slide 60 to position for receiving a heel-blank. The plate 75 has a portion extending parallel with the feeding-slide and of a length somewhat greater than the extent of movement of the slide for the purpose of retaining the clamp open during the backward movement of the feeding-slide. After a heel-blank has been inserted in the clamp and while the reciprocating head is descending the cam-plate 75 is held at rest, so that the bolt 68 is withdrawn from contact with it to permit the clamp to be closed by the spring 69.

The mechanism for reciprocating the feeding-slide back and forth on the table or extension 2ª for feeding in the heel-blanks and ejecting the compressed heels comprises the following mechanism: The slide has a member or tailpiece 90 pivotally connected thereto at 91 and provided at its rear end with a latch-bolt 92, taking into an opening 92ª in the rear end of the main portion of the slide 60. The tailpiece is provided on its lower side with an arm or extension 93ª, supporting a roller or bar 93. 94 indicates a lever, shown as a bell-crank lever, pivoted at 95 to the table or extension 2ª of the reciprocating head 2. The lever 94 is forked at its upper end to engage the roll 93 on the pivoted tailpiece of the reciprocating slide, and thereby permits a detachable connection between the feeding-slide and said lever. The tailpiece may be swung on its pivot 91 by first releasing the latch-bolt 92, and in this swinging movement the roll 93 is withdrawn from the forked upper end of the lever 94, and the feeding-slide is thereby disconnected from said lever. When this has been done, the feeding-slide may be moved backwardly on its guideways in the direction of the arrow in Fig. 4 to remove it entirely from the machine. It is desirable thus to remove the feeding-slide at times in order to obtain access to the parts of the machine beneath the feeding-slide and its attached parts.

The lower arm of the lever 94 is provided with a roll 96. (See Fig. 4.)

97 indicates an arm pivotally connected to the frame 1 at 98 and bored longitudinally to receive a rod or link 99, which is slotted at its upper end to receive the roll 96 and has its lower end extended through the bore of the arm 97.

101 indicates a spring encircling the rod 99 within the bore of the arm 97. One end of the spring rests against a flange in the lower portion of the arm, and the other end of the spring rests against a collar 99ª on the rod 99. The spring is strong enough to hold the rod 99 normally in its uppermost position and support said rod when the head is reciprocated to actuate the lever 94, and thereby move the feeding-slide back and forth. If, however, the feeding-slide meets an obstruction which prevents its forward movement, the spring 101 will yield to permit the rod 99 to be forced downwardly through the arm 97 and allow the slide to remain at rest, thus avoiding breakage of the machine. When the head 2 is raised, the collar 99ª abuts against a flange in the upper part of the bore of the arm 97, so that the arm 97 and rod 99 cannot be extended, and the lower end of the lever 94 is then pulled down to retract the feeding-slide positively. It will thus be seen that the forward movement of the feeding-slide is

yieldingly effected, while the backward movement of said slide is positively effected.

The feeding-slide is provided on its left-hand front corner with a buffing-block 105, adapted to strike one of the slides 26 when the feeding-slide reaches the limit of its feeding movement. On the rear right-hand corner the feeding-slide is provided with a laterally-projecting cup-shaped lug 110.

111 indicates a two-arm U-shaped device which is slidingly mounted in the side of the table or extension of the reciprocating head. The device 111 is normally pressed upward by a spring 113. (See Figs. 1, 7, and 8.) One arm, 112, of the device 111 stands in the path of the lug 110, carried by the feeding-slide, and the device is held normally in such position that the lug 110 contacts with the arm 112 of said device as the feeding-slide approaches the end of its forward movement in feeding a blank. The arm 112 acts at this time as a drag or brake to check the forward movement of the slide 60. The slide in completing its movement carries the cup-shaped lug 110 just beyond the arm 112, which then is forced upward into the lug 110 and acts as a lock to prevent rebound of the feeding-slide, as shown in Fig. 8. The device 111 thus constitutes a braking and locking means for the feeding-slide. The other arm, 114, of the braking and locking device stands in the path of the vertically-movable cam-plate 75. When the reciprocating head and cam-plate 75 approach each other for the cam-plate to open the clamping-arms of the feeding-slide for releasing a heel-blank after the feeding-slide has carried said blank into position to be compressed, said cam-plate contacts with the arm 114 to depress the device and move the arm 112 out of the path of the lug 110, as shown in Fig. 7, before the feeding-slide is retracted.

In Fig. 9 I have shown a modified form of braking and locking device comprising a spring 130, secured to the table or extension 2^a and provided with a shoulder 131 and a seat 133. Coöperating with this spring is a roller-stop 134, secured to the feeding-slide in position to meet the shoulder 131 of the spring as the feeding-slide approaches the end of its forward movement and to be received in the seat 133 of the spring when said feeding-slide has completed its forward movement.

For the purpose of putting a heel in position to be ejected after it has been compressed the top-lift plate 40 is raised and lifts the compressed heel above the side compressing-dies.

120 indicates an arm secured to the rock-shaft 121, journaled in the reciprocating head 2. The rock-shaft has another arm the lower end of which is provided with a roll 122, adapted to move in a cam-groove 124 in a plate 125, supported on the frame of the machine.

126 indicates a movable latch, and 127 a weight for actuating said latch.

The plate 125, the cam-groove 124, the movable latch 126, and weight 127 are similar in all essential respects to the plate 83, cam-groove 82, latch 84, and weight 86 heretofore described.

The free end of the arm 120 is directly beneath the lower end of the top-lift-plate-supporting block 42, and the movement imparted to the arm 120 by the cam-groove 124 causes said arm to hold said block 42 against descent with the reciprocating head 2, whereby relative movement is produced between the top-lift plate, which constitutes the bottom of the mold, and the side compressing-dies 21, 22, and 22, which constitute the side walls of the mold. This relative movement is sufficient to bring the upper surface of the top-lift plate level with the upper surface of the side compressing-dies and the compressed heel in position to be ejected by the feeding-slide during the forward movement of said slide, as shown in Fig. 4. The groove 50 in the supporting-block 42 and the guide-pin 51, located therein, permit the vertical movement of the top-lift plate, but limit its extent, so that the top-lift plate cannot be accidentally thrown out of place.

The driving-shaft is provided with fast and loose pulleys C and D and with a fly-wheel E. F indicates a belt-shifter carried on a lengthwise-movable rod G, upon which is also carried a brake H in position to engage the side of the fly-wheel and stop the machine when the belt is shifted onto the loose pulley. The rod G is actuated by a rock-shaft K, having one arm K′ in engagement with said rod and the other arm provided with a handle K^2 within convenient reach of the operator. The rock-shaft K is also provided with a foot-treadle *k*, by means of which said shaft may be turned by the foot of the operator to cause the machine to be started, while a returning-spring L moves the rock-shaft to cause the machine to be stopped when the pressure of the foot-piece *k* or the handle K^2 is removed. These parts constitute a very effective starting and stopping mechanism, which renders the machine completely under the control of the operator at all times. A foot k^2, pivotally connected to the treadle, may be turned down into the position shown in full lines in Fig. 1 to secure the treadle against being accidentally depressed and the machine started at times when it is desired to insure that the machine shall remain inoperative—as, for instance, while it is being adjusted. The foot k^2 may be turned into the dotted-line position when it is not wanted for use.

The operation of the machine is as follows: When the reciprocating head 2 is in its lower position, the several parts of the mechanism occupy the position shown in Figs. 1, 2, 3, 4, and 8, a heel-blank having been fed onto the

top-lift plate and being still held in the grasp of the clamp, as shown in Figs. 3 and 4. The feeding-slide is at this time locked in its advance position by the device 111. When the machine is started, the head 2 begins to rise and the clamp is opened to release the heel-blank and the locking device 111 depressed by the cam-plate 75, which for this purpose is held approximately stationary for a moment by the cam 82 while the head rises. The top-lift plate is also held approximately stationary for a short time by the cam 124 while the head rises to cause the side compressing-dies and breastplate to rise around the heel-blank on the top-lift plate. During the first portion of the rise of the head 2 the links for actuating the slides 26, carrying the side compressing-dies, move with relation to their pivot-pins 32, and this lost motion permits the side compressing-dies and the breastplate to remain separated until said parts have risen and surrounded the heel. During the last half of the rise of the reciprocating head the side compressing-dies and breastplate are moved to close the mold around the heel, which is in the mold between the top-lift plate and the heel-seat die. By this means the heel is compressed. The feeding-slide is during this time retracted into position to have a new heel-blank put into the heel-clamp, the feeding-slide having been unlocked from the device 111. During the first part of the descent of the reciprocating head the side compressing-dies are forced apart by the springs 37 acting on the slides 26, and the breastplate is also moved back by its connection with the slides 26. The arm 120 of the rock-shaft 121 is actuated to raise the top-lift plate with relation to the side compressing-dies for lifting the compressed heel into position to be ejected. The cam-plate 75 is held stationary while the head descends to permit the arms 61 to close the clamp around the new heel-blank which has been put into the clamp by the workman, or it may be automatically after the retraction of the feeding-slide. During the latter part of the descent of the head the feeding-slide is moved forward. If, however, the feeding-slide meets an obstruction which interrupts its forward movement, the spring 101 yields to permit the slide to be stopped without causing any breakage or disarrangement of the machine. When near the end of its forward movement, the feeding-slide is checked by the combined braking and locking device, and as it reaches the end of its travel the buffer 105 strikes against the slide 26, and the feeding-slide is simultaneously locked against rebound. This movement of the feeding-slide carries the blank held in the clamp into position on the top-lift plate and simultaneously with the feeding in of the new blank the shoulders 66 of the arms 61 strike against and push off from the top-lift plate the heel which has been compressed, the compressed heel falling into the chute 15.

I am aware of the improvements in heel-compressing machines described and claimed in the application of Sanford D. Leland, Serial No. 121,473, filed August 29, 1902, and also of the improvements described and claimed in the application of Charles L. Allen, Serial No. 131,017, filed November 12, 1902, and I do not claim anything claimed in either of said applications, as said improvements are not of my invention; but

What I do claim, and desire to secure by Letters Patent of the United States, is—

1. In a heel-compressing machine, a feeding-slide comprising a plurality of relatively movable members, and actuating means connected with one of the members and arranged to be disconnected therefrom by the relative movement of the slide members.

2. In a heel-compressing machine, a feeding-slide comprising a plurality of relatively movable members, and actuating means connected with one of said members and arranged to be disconnected therefrom by relative movement of the slide members, in combination with means for locking said slide members against relative movement.

3. In a heel-compressing machine, a feeding-slide having a member movable relatively to the body thereof, and actuating means for said slide arranged to engage the movable member for operating the slide, and means for securing said movable member in operative engagement with the actuating means.

4. In a heel-compressing machine, a feeding-slide having a tailpiece movably connected thereto and having a depending arm, actuating means having a part forked to removably engage said arm, said tailpiece being provided with means for securing it in operative position and being adapted to be moved into inoperative position for disconnecting the slide from the actuating means.

5. In a heel-compressing machine, a reciprocating head, a feeding-slide mounted on said head, and a lever also mounted on said head, and means connecting said lever with a fixed portion of the machine, said connecting means comprising a sleeve provided with a boss on one side by which it is pivotally connected to a fixed portion of the machine-frame, a rod pivoted to said lever and extending through said sleeve, and a spring inclosed by the sleeve and forming a yielding support for the rod, the arrangement being such that the slide is yieldingly actuated to feed the work as the reciprocating head moves in one direction and is retracted as the reciprocating head moves in the other direction.

6. In a heel-compressing machine, a feeding-slide and means to reciprocate it, in combination with a brake for checking the slide near the end of its feeding movement, means to hold

the brake in operative position, and means to engage the brake at times to withdraw it from operative position.

7. In a heel-compressing machine, a feeding-slide and means to actuate it, and a brake for checking said slide near the end of its feeding movement, said brake comprising a portion to frictionally engage said slide, a spring to hold the brake in operative position, and a portion arranged to be engaged by a moving part of the machine to withdraw said brake from operative position during the return movement of the feeding-slide.

8. In a heel-compressing machine, a feeding-slide and means to actuate it, a combined braking and locking device for checking the slide near the end of its feeding movement and locking said slide against rebound, means to hold said device yieldingly in operative position, and means for engaging said device intermittently to withdraw it from operative position to permit the slide to be reciprocated.

9. In a heel-compressing machine, a top-lift plate provided with a stem, a support through which said stem extends, and means for intermittently lifting said top-lift plate, in combination with a yielding stop carried by said stem for limiting the movement of said top-lift plate in one direction.

10. In a heel-compressing machine, a top-lift plate provided with a stem, a support through which said stem extends, and means for intermittently lifting said top-lift plate, in combination with means for limiting the movement of said top-lift plate, said means comprising a ball mounted in said stem and projecting through an opening in the side of said stem in position to engage the said support, and means for yieldingly pressing said ball into said opening.

11. A compressing-machine comprising a mold to receive a blank, a feeding-slide for delivering blanks to the mold, means for actuating said slide, and means for checking the advance movement of said feeding-slide and locking it against rebound, said means comprising a stop carried by the feeding-slide, a coöperating member movably mounted on a fixed support in position to be engaged by said stop, and means arranged to engage said coöperating member at times for moving it with relation to its support to withdraw it from the path of the stop.

12. A compressing-machine comprising a mold to receive a blank, a feeding-slide for delivering blanks to the mold, yielding means for actuating said slide, and means for checking and limiting the advance movement of the slide and locking said slide against rebound, said means comprising a recessed stop carried by the feeding-slide, and a coöperating member yieldingly mounted in position to be engaged frictionally by said stop, whereby the advance movement of said feeding-slide is checked and thereafter as the movement of the slide is completed the yielding member is received in the recess of the stop for locking the slide, combined with means arranged to engage said coöperating member for withdrawing it from the recess in the stop.

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

ELIPHALET A. TRIPP.

Witnesses:
ARTHUR L. RUSSELL,
EDWARD H. PALMER.