J. GOULDBOURN.

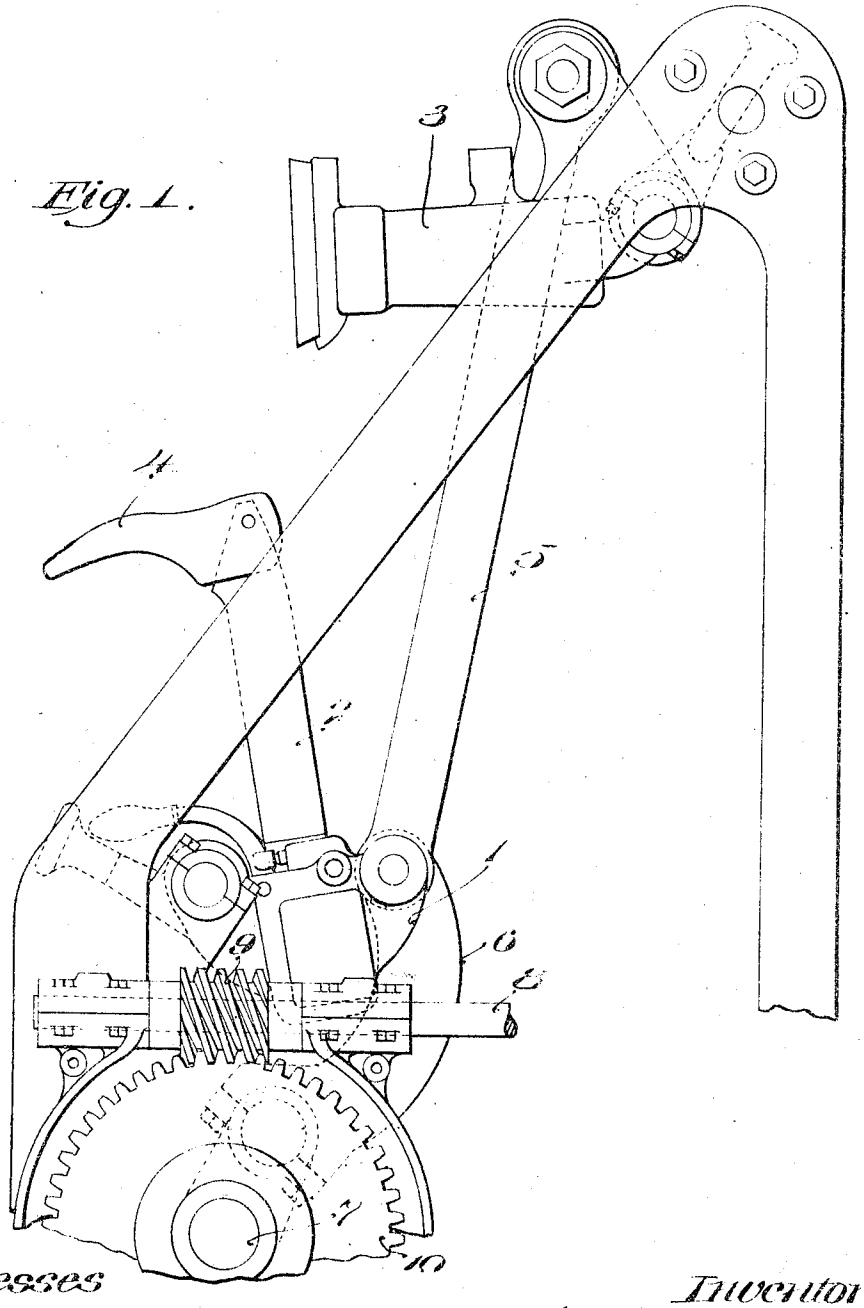
SOLE PRESSING MACHINE.

APPLICATION FILED NOV. 1, 1905.

982,267. Patented Jan. 24, 1911.

3 SHEETS-SHEET 1

Fig. 1.



Witnesses
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3 SHEETS—SHEET 2.

Fig. 2.

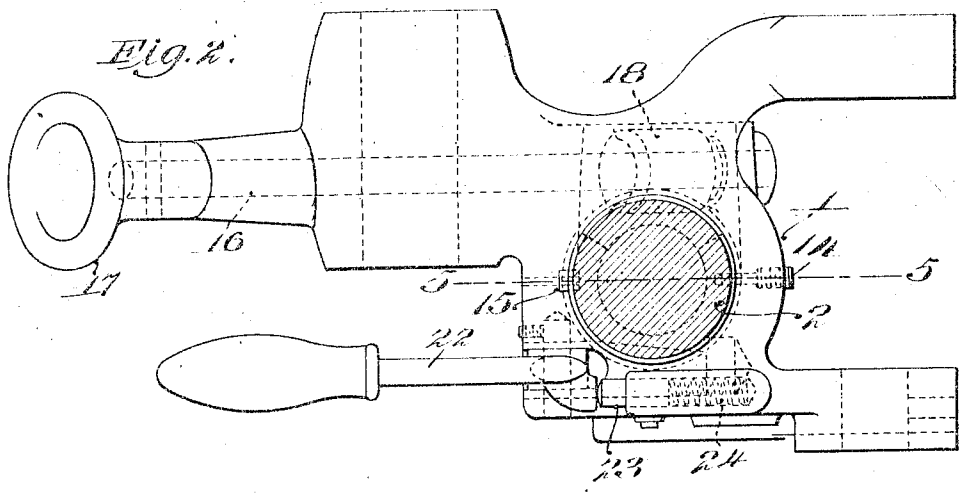

Fig. 3.

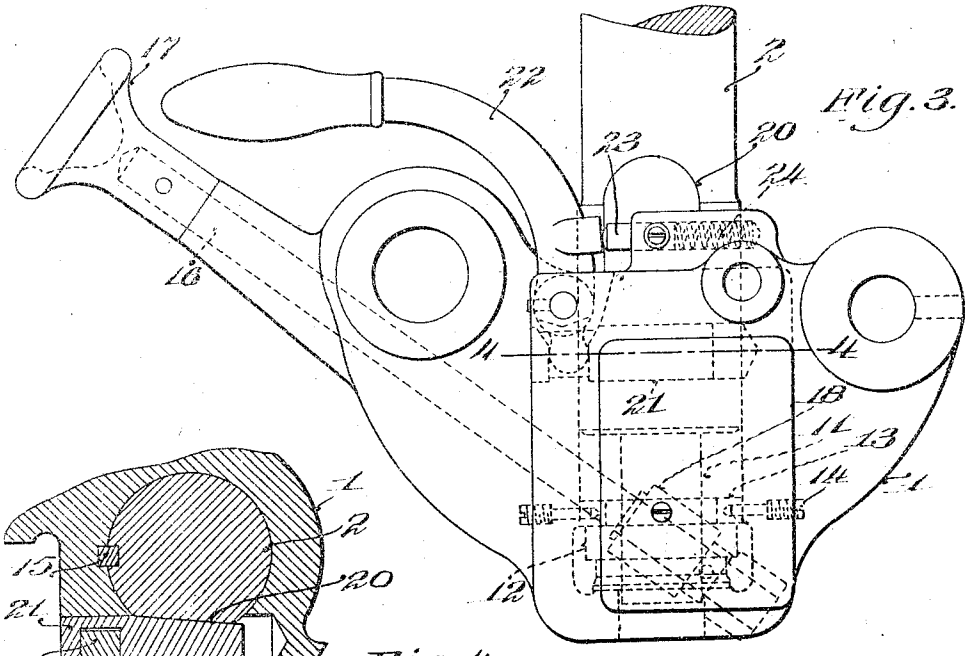

Fig. 4.

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3 SHEETS—SHEET 3.

Fig. 5.

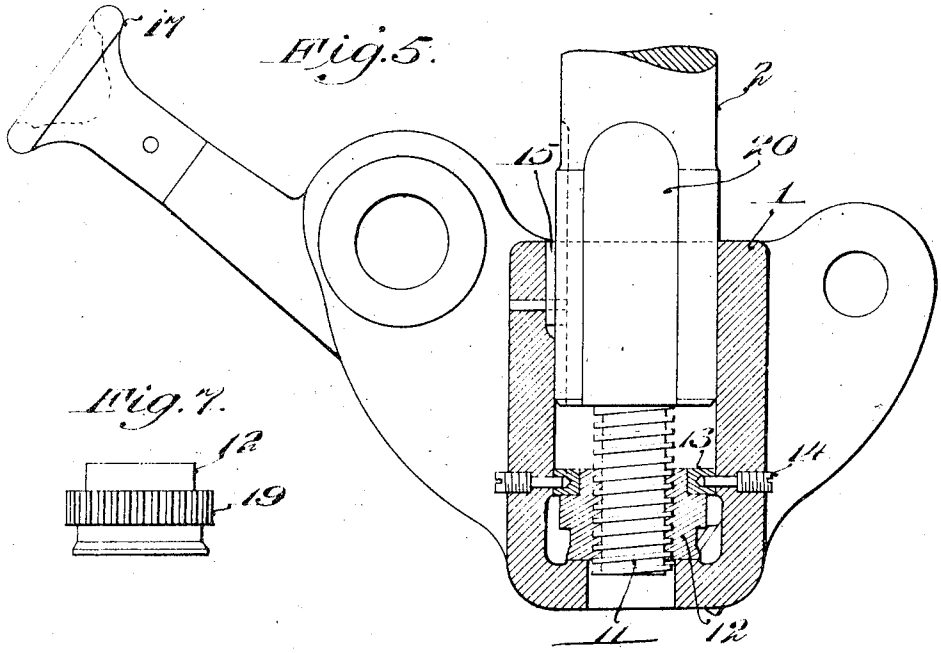
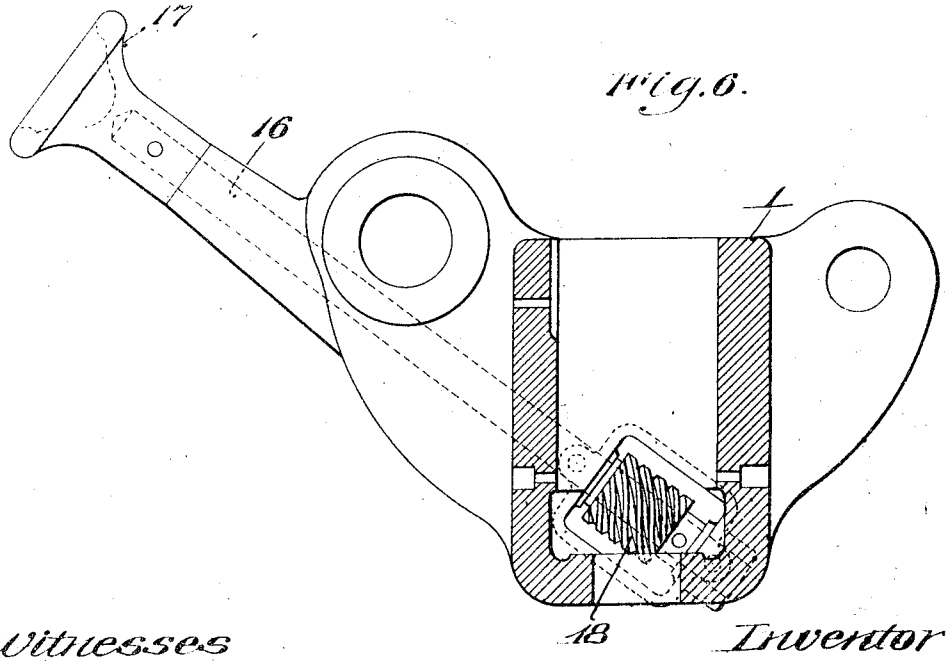


Fig. 7.

Fig. 6.



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UNITED STATES PATENT OFFICE.

JOSEPH GOULDBOURN, OF LEICESTER, ENGLAND, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

SOLE-PRESSING MACHINE.

982,267. Specification of Letters Patent. Patented Jan. 24, 1911.

Application filed November 1, 1905. Serial No. 285,459.

To all whom it may concern:

Be it known that I, JOSEPH GOULDBOURN, a subject of the King of England, residing at Leicester, in the county of Leicester, England, have invented certain new and useful Improvements in Sole-Pressing 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 an improved jack post adjusting mechanism, and is designed particularly for use on sole pressing machines by which the sole of a shoe is subjected to a rolling pressure between a shoe-supporting last or form and a cooperating sole pressing form.

The object of the present invention is to provide a mechanism by which the jack post upon which the shoe-supporting last or form is secured can be readily adjusted longitudinally in its carrier, and by which the jack post after being adjusted is effectually prevented from moving laterally with relation to its carrier and working loose under the lateral strains to which the jack post is subjected during the operation of the machine.

With this object in view, the invention broadly considered contemplates the provision in a sole pressing machine of a jack post mounted in its carrier so as to be adjustable longitudinally therein, and means for locking the jack post against lateral movement with relation to its carrier in any position to which it may be adjusted.

In addition to the features of invention above referred to, the present invention also consists in certain devices, combinations and arrangements of parts which constitute a simple and efficient mechanism for adjusting the jack post longitudinally and for locking it against lateral movement with relation to its carrier, the advantages of which will be apparent to those skilled in the art from the following description of the preferred embodiment of the invention.

Referring to the drawings accompanying this application, Figure 1 is a view in side elevation of a rolling pressure sole pressing machine embodying the present invention in its preferred form, so much only of the machine being illustrated as is necessary to show the connection of the present invention therewith: Fig. 2 is a plan view of the jack post carrier with the jack post adjusting and locking mechanism mounted thereon, the jack post being shown in cross section: Fig. 3 is a view in side elevation of the parts illustrated in Fig. 2: Fig. 4 is a detail sectional view taken on the line 4—4 of Fig. 3, showing the construction and arrangement of the sliding wedge clamp by which the jack post is locked against lateral movement with relation to the carrier: Fig. 5 is a vertical sectional view taken on the line 5—5 of Fig. 2, illustrating particularly the mechanism for adjusting the jack post longitudinally: Fig. 6 is a view similar to Fig. 5 with the jack post and adjusting nut removed: and Fig. 7 is a detail view in side elevation of the adjusting nut.

In the machine illustrated in Fig. 1, 1 indicates the jack post carrier in which the jack post 2 is mounted, and 3 indicates the form carrier upon which the sole pressing form, not shown, is secured, which coöperates with the shoe supporting last or form 4 secured upon the upper end of the jack post. The carriers 1 and 3 are pivotally mounted in the frame of the machine and are connected by a link 5 by which the carriers are caused to oscillate in unison so as to subject the sole of a shoe to a rolling pressure between the last or form 4 and the sole pressing form. In the construction illustrated, the carriers are oscillated by means of a link 6 connecting the carrier 1 with a crank shaft 7 which is driven from a shaft 8 through a worm 9 on the shaft 8, meshing with a worm gear 10 secured to the shaft 7.

The construction and arrangement of the mechanism illustrated in Fig. 1 for oscillating the form and jack post carriers forms no part of the present invention, being substantially the same as that now used in a well-known form of sole pressing machine.

Referring now to Figs. 2–7 inclusive, in which the mechanism constituting the preferred embodiment of the present invention is illustrated in detail, 11 indicates a screw thread cut upon the reduced lower end of the jack post. The lower end of the jack post, except for a flattened portion on one side to be hereinafter referred to, is circular in cross section and is received in a cylindrical socket formed in the jack post carrier. At its lower end this socket has a

seat which is perforated to allow the screw-threaded portion of the jack post to extend therethrough. Within the socket for the jack post and resting upon the seat at the lower end of the socket, is an adjusting nut 12 engaging the thread 11 and held against longitudinal movement between the seat at the lower end of the socket and a retaining ring 13. The ring 13 engages an annular seat at the upper end of the nut 12 and is held in position by means of retaining screws 14, as is clearly indicated in Fig. 5. The jack post is held from rotating by means of a key 15 secured to the jack post carrier and extending into a longitudinal slot formed in the side of the jack post. A rotation of the nut 12 will thus adjust the jack post longitudinally, as the jack post is held against rotation by the key 15 and the nut 12 is held in position between the retaining ring 13 and the seat at the lower end of the socket.

To enable the operator to readily rotate the nut 12 and adjust the jack post longitudinally, a shaft 16 is mounted in the jack post carrier and extends to the front of the carrier, where it is provided with a hand wheel 17 by which the shaft can be conveniently rotated. The shaft 16 passes beneath the pivotal bearing of the carrier, and near its lower end is provided with a spiral gear 18 which bears at each end on the surfaces of a recess formed in the side of the carrier and communicating with the socket for the lower end of the jack post. This recess is closed by a suitable cap shown in dotted lines in Fig. 6, so that the spiral gear 18 is completely inclosed. The adjusting nut 12 is provided upon its periphery with gear teeth indicated at 19, with which the teeth of the spiral gear 18 mesh, so that the adjusting nut is rotated from the spiral gear whenever the shaft 16 is rotated by the operator.

During the operation of sole pressing machines of the type illustrated in Fig. 1, severe lateral strains are brought upon the jack post, tending to move the post in its socket and cause it to work loose. To securely lock the jack post 2 against any lateral movement with relation to its carrier, it is provided near its lower end with a flat surface indicated at 20 in Fig. 5, and a sliding wedge clamp 21 is mounted to slide transversely of the jack post in a suitable guideway in the carrier and arranged to engage the flattened surface 20. The clamp 21 is provided near its outer end with a slot into which the lower end of a lever 22 extends, and in order that the wedge clamp may be conveniently actuated by the operator to release the jack post whenever it is desired to adjust the jack post longitudinally, the lever 22 is extended over the pivotal bearing of the carrier in proximity to the hand wheel 17. The wedge clamp is normally held in engagement with the jack post by means of a sliding pin 23 mounted in a guideway in the jack post carrier and pressed against a projection from the lever 22 by means of a coiled spring 24. When the wedge clamp 21 is in engagement with the jack post the jack post is forced firmly against the walls of the socket in the carrier and is rigidly held against lateral movement with relation to the carrier in any position to which it is adjusted. When the wedge clamp is withdrawn by means of the lever 22, the pressure of the jack post against the walls of the socket is relieved and the jack post can be readily adjusted.

The nature and scope of the present invention having been indicated, and the preferred embodiment of the invention having been specifically described, what is claimed is:

1. A sole pressing machine, having, in combination, a form carrier, a jack post carrier, a jack post adjustable longitudinally therein, means for relatively actuating said carriers to subject the sole of a shoe to a rolling pressure, and means for locking the jack post against lateral movement with relation to the carrier and for unlocking the jack post to permit an adjustment thereof.

2. A sole pressing machine, having, in combination, a form carrier, a jack post carrier, a jack post mounted therein, means for relatively actuating said carriers to subject the sole of a shoe to a rolling pressure, means for adjusting the jack post longitudinally, a clamp arranged to engage the jack post and lock it against lateral movement with relation to the carrier and means for actuating the clamp to permit an adjustment of the jack post.

3. A sole pressing machine, having, in combination a form carrier, a jack post carrier, a jack post adjustable longitudinally therein, means for relatively actuating said carriers to subject the sole of a shoe to a rolling pressure a sliding wedge clamp arranged to engage the jack post and lock it against lateral movement with relation to the carrier, and means for actuating the clamp to permit an adjustment of the jack post.

4. A sole pressing machine, having, in combination, a form carrier, a jack post carrier, a jack post mounted to move longitudinally therein, means for relatively actuating said carriers to subject the sole of a shoe to a rolling pressure, a hand operated adjusting shaft mounted in the jack post carrier, connections between the shaft and the jack post for adjusting the jack post longitudinally, a clamp arranged to engage the jack post and lock it against lateral movement with relation to its carrier, a lever mounted on the jack post carrier in convenient position to be grasped by the operator

while adjusting the jack post, and connections between the lever and clamp for operating the clamp.

5. A sole pressing machine, having, in combination, a form carrier, a jack post carrier, a jack post adjustable longitudinally therein, means for relatively actuating said carriers to subject the sole of a shoe to a rolling pressure and a locking device movable into and out of engagement with the jack post for locking the jack post against lateral movement with relation to the carrier.

6. A sole pressing machine, having, in combination, a form carrier, a jack post carrier, a jack post adjustable longitudinally in a socket in the jack post carrier, means for actuating said carriers to subject the sole of a shoe to a rolling pressure, a clamping wedge mounted in the jack post carrier to slide transversely of the jack post and press the jack post laterally against the walls of the socket, and means for actuating the wedge to unlock the jack post to permit an adjustment thereof.

7. A sole pressing machine, having, in combination, a form carrier, a jack post carrier, a jack post provided with a cylindrical portion engaging a cylindrical socket in the jack post carrier and adjustable longitudinally therein, said cylindrical portion being provided at one side with a flat surface, a clamping wedge mounted in the carrier and arranged to engage said flat surface and press the jack post laterally against the walls of the socket, and means for actuating the wedge to unlock the jack post to permit an adjustment thereof.

8. A sole pressing machine, having, in combination, a form carrier, a jack post carrier, a jack post longitudinally adjustable in a socket in the jack post carrier, a clamping wedge mounted in the jack post carrier and arranged to press the jack post laterally against the walls of the socket, a spring acting on the wedge to force it into engagement with the jack post and a hand lever mounted on the carrier and connected to the wedge for moving the wedge to unlock the jack post.

9. A sole pressing machine, having, in combination, a form carrier, a jack post carrier, a jack post adjustable longitudinally therein, means for relatively actuating said carriers to subject the sole of a shoe to a rolling pressure, a locking device mounted in the jack post carrier arranged to engage the jack post and lock it against lateral movement with relation to its carrier, and means for actuating the locking device to unlock the jack post to permit an adjustment therein.

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

JOSEPH GOULDBOURN.

Witnesses:

GRACE HOLMES,

ARTHUR ERNEST JERRAM.