J. POWER Y ZABALA.

PRESS FOR SOLES OF PLAITED YARN.

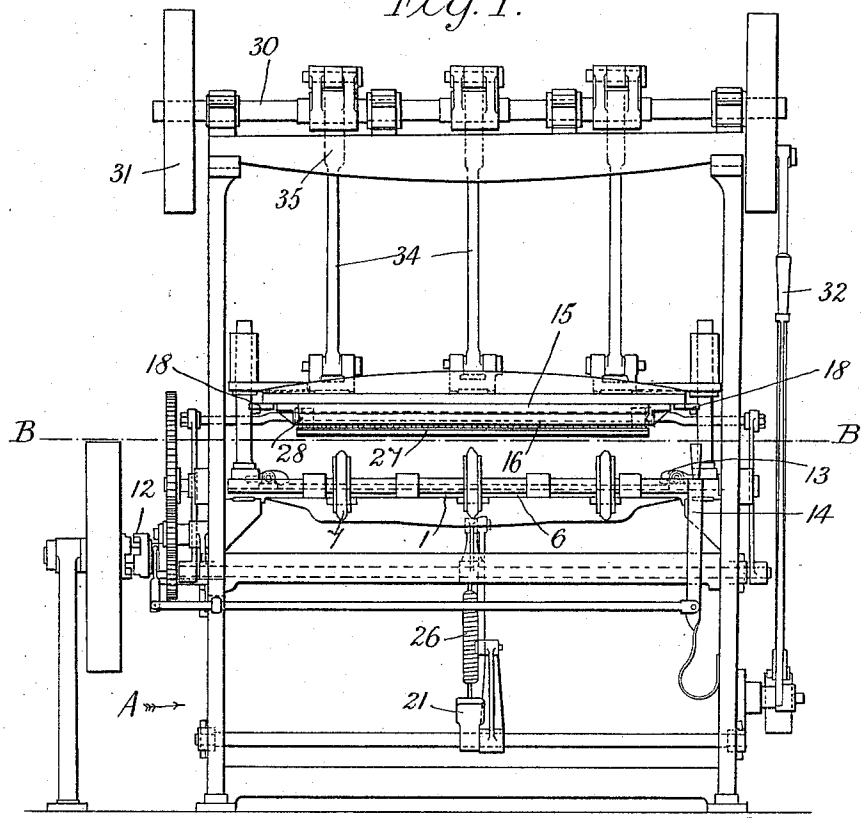
APPLICATION FILED FEB. 12, 1915.

1,183,265.

Patented May 16, 1916.

2 SHEETS—SHEET 1.

Fig. 1.



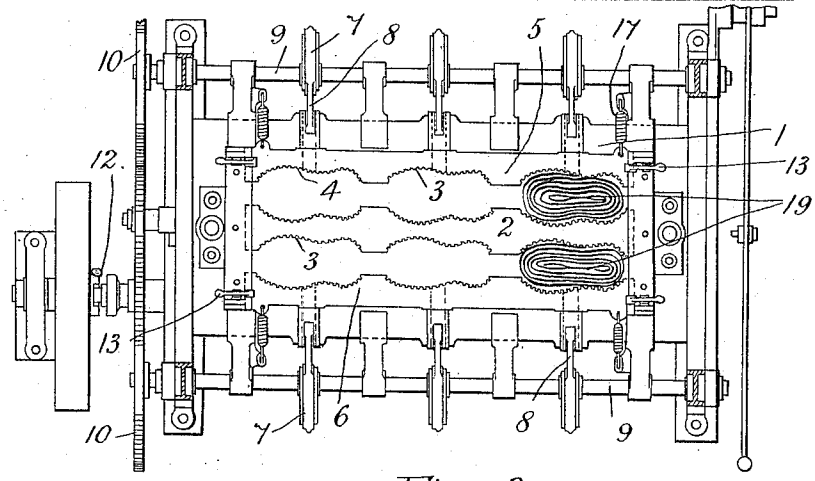


Fig. 3.

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2 SHEETS—SHEET 2.

Fig. 2.

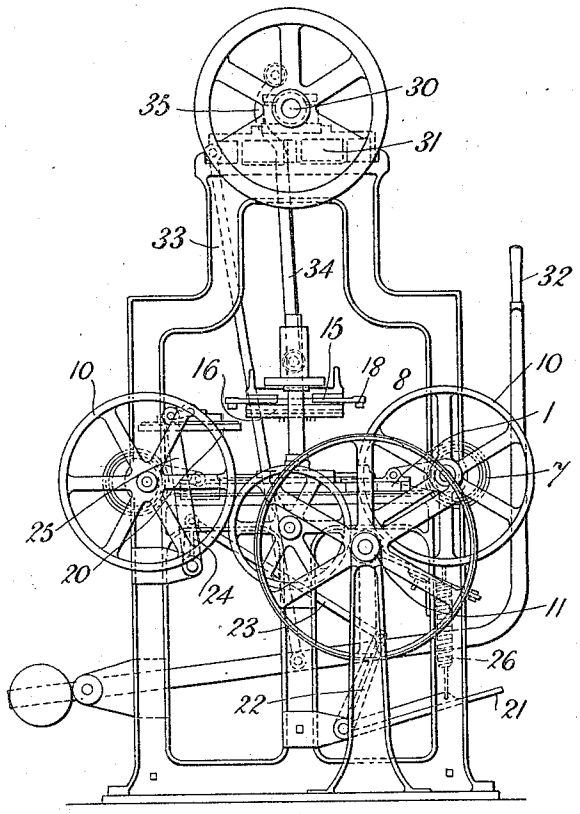


Fig. 4.

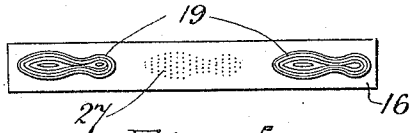
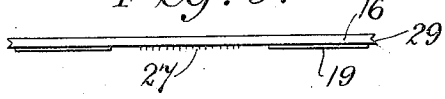


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOSEPH POWER Y ZABALA, OF DUNDEE, SCOTLAND.

PRESS FOR SOLES OF PLAITED YARN.

1,183,265. Specification of Letters Patent. Patented May 16, 1916.

Application filed February 12, 1915. Serial No. 7,810.

To all whom it may concern:

Be it known that I, JOSEPH POWER Y ZABALA, a subject of the King of Spain, residing at Viewpark, West Ferry, Dundee, in the county of Forfar, Scotland, have invented certain new and useful Improvements in Presses for Soles of Plaited Yarn, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to presses used in the process of making soles of plaited yarn.

In order that my said invention and the manner of putting the same into practice may be properly understood, I have hereunto appended an explanatory sheet of drawings in which the same reference numerals are used to indicate corresponding parts in the figures shown.

Figure 1 is a face view of the machine. Fig. 2 is a view looking in the direction of the arrow A (Fig. 1.) Fig. 3 is a sectional plan at B. B. (Fig. 1.) Fig. 4 is a face view of a length of wood for receiving and holding the soles and Fig. 5 is a side elevation of same.

After the soles have been so far formed in a lapping machine as to approximate to the shape of a sole and after the toes and heels have been sewn in a sewing machine a number are placed in the press, in the illustration six can be dealt with, where they are flattened, pressed together laterally to the correct shape and mounted on lengths of wood, preparatory to being treated in the transverse sewing machine. The press performs three operations as above indicated and is in one form, as shown, of the duplex type, that is it deals with two rows of soles at one time.

The press consists of a flat table 1 on the longitudinal center of which is fixed a plate 2 having on each side a number of molded recesses 3 each corresponding in shape to the longitudinal half of the sole. In these molded recesses are a series of rectangular indentations 4 forming teeth. On each side of the fixed plate is a movable plate 5 and 6 these having corresponding molded recesses so that when the two movable plates are slid forward against the central fixed plate, there are two rows of molds each shaped like a sole.

The movable plates 5 and 6 can be simultaneously moved forward by eccentrics 7 and push rods 8 operated by side shafts 9 a spur wheel 10 on each shaft and a pinion 11 and clutch gear 12 in connection with the driving pulley, the plates being automatically held and stopped when at the extreme limit of travel of the eccentrics by means of the catches 13 after which the clutch is disengaged by means of the spring handle 14 and its connections. When in this closed position the plates 5 and 6 can only be released when the movable plate 15 carrying the two lengths of wood 16 comes down on them whereupon each plate springs back to the original position because of the action of the springs 17 and the releasing of the catches 13 by the pressure of the projections 18. The catches 13 are in the form of short levers which are pivotally mounted upon the table of the machine for movement upon horizontal axes. The inner ends of these catches are adapted to engage the outer edges of plates 5 and 6 when in operative position adjacent to the plate 2. The projections 18 depend to a sufficient distance below the platen to permit them to engage the outermost arms of the catches 13 alone, whereby the latter will be tripped after the platen has descended to release the plates 5 and 6, which latter will return automatically to their inoperative positions, as has just been described.

The first operation consists in placing the lapped and partly sewn soles 19 to be treated against each molded recess of the fixed plate 2. They are then flattened by a board 20 which is actuated by a spring foot lever 21 and connecting levers and rods 22, 23, 24 and 25. When the pressure is taken off the foot lever the board is automatically drawn back by the action of the spring 26 to its original position. The second operation consists in subjecting the soles to lateral pressure between the fixed plate 2 and the movable plates 5 and 6 as previously described. The third operation consists in mounting the soles 19 on their respective boards 16. Each board is provided with a number of sharp pointed pins 27 regularly arranged in vertical rows and shaped like the soles. The two boards are slid into position against the underside of the platen 15 and held by suitable projections 28 and recesses 29 after which the platen is lowered and pressed against the soles until the face of each board is hard against the upper surfaces of the soles, at which time the sliding plates 5 and 6 are released by the projections 18 and the soles are firmly and suitably held by the pins on

the boards. When the boards with the mounted soles are removed they are in the desired condition for treatment at the next machine.

The platen is operated by an overhead crank shaft 30 having at each end counterweighted fly wheels 31 operated by a suitable counterweighted hand lever 32 and connecting rod 33; the connecting rods 34 are thinned and bent at 35 in order that they may have some elasticity and thus reduce shock.

Although I have given in some detail particulars of the means for performing the various operations, yet I may alter details of the mechanism without departing from my invention.

Having now described my invention what I claim as new and desire to secure by Letters Patent is:—

1. A press for soles of plaited yarn comprising a table adapted to support the newly-formed soles, a pair of relatively movable plates having mold recesses adapted to register when the plates are brought together into operative position to compress a sole into proper form, yieldable means tending normally to retract said plates into separated inoperative position, means by which the plates may be moved into operative position, releasable means adapted to lock the plates automatically upon reaching operative position, a platen movable toward and away from the table, a board adapted to be carried by the platen, pointed pins projecting from the said board and adapted to project into the mold recesses of the said plates when the platen moves into operative position contiguous to the table, means for operating the platen, and means for releasing the locking means for the said plates when the platen reaches its operative position.

2. A press for soles of plaited yarn comprising a table adapted to support the newly-formed soles, a pair of relatively movable plates having mold recesses adapted to register when the plates are brought together into operative position to compress a sole into proper form, yieldable means tending normally to retract the said plates into separated inoperative position, means by which the plates may be moved into operative position, normally operative, movable catches having locking arms and tripping arms, the locking arms of said catches being adapted to engage the said plates automatically upon reaching operative position to lock the same therein, a platen movable toward and away from the table and adapted to contact with the tripping arms of the catches when it moves into operative position contiguous to the table to release the catches from operative engagement with the said plates, a board adapted to be carried by the platen, pointed pins projecting from the said board and adapted to project into the mold recesses of the said plates when the platen is in operative position, and means for operating the platen.

3. A press for soles of plaited yarn comprising a table adapted to support the newly-formed soles and having a recess conforming in shape to each of the latter, a pair of relatively movable plates having mold-recesses adapted to register with each other when the plates are brought together into operative position and to register as a whole with the table recess, yieldable means tending normally to retract the said plates into separated inoperative position, means by which the plates may be moved into operative position, releasable means adapted to lock the plates automatically upon reaching operative position, a platen movable toward and away from the table, a board adapted to be carried by the platen, pointed pins projecting from the said board and adapted to project into the recesses of the said plates and table when the platen moves into operative position contiguous to the table, means for operating the platen and means for releasing the locking means for the said plates when the platen reaches its operative position.

4. A press for soles of plaited yarn comprising a table adapted to support the newly-formed soles, a flattening board adapted to be moved into operative position contiguous to the table for contact with a sole mounted thereon, means for operating this board, a pair of relatively movable plates having mold recesses adapted to register when the plates are brought together into operative position to compress a sole mounted upon the table into proper form, yieldable means tending normally to retract the said plates into separated inoperative position, means by which the plates may be moved into operative position, releasable means adapted to lock the plates automatically upon reaching operative position, a platen movable toward and away from the table, a board adapted to be carried by the platen, pointed pins projecting from the said board and adapted to project into the mold recesses of the said plates when the platen moves into operative position contiguous to the table, means for operating the platen, and means for releasing the locking means for the said plates when the platen reaches its operative position.

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

JOSEPH POWER y ZABALA.

Witnesses:

MAUD CARGILL,

GEORGE CAMERON DOUGLAS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."