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A. J. WEISS

1,934,835

CONVEYER ADVANCE MECHANISM

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FIG. 2.

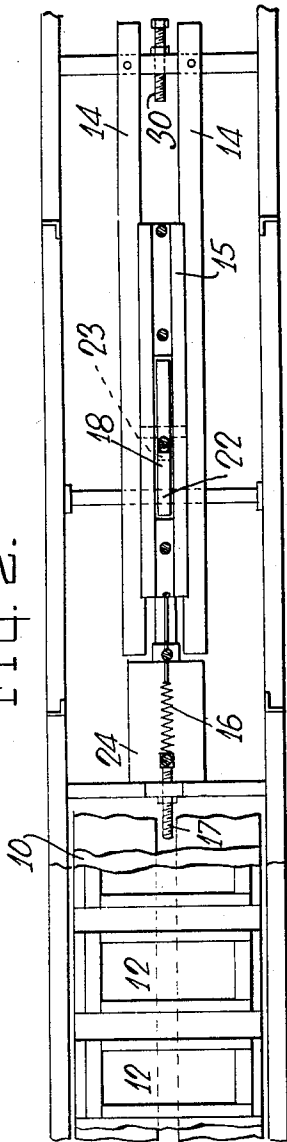


FIG. 1.

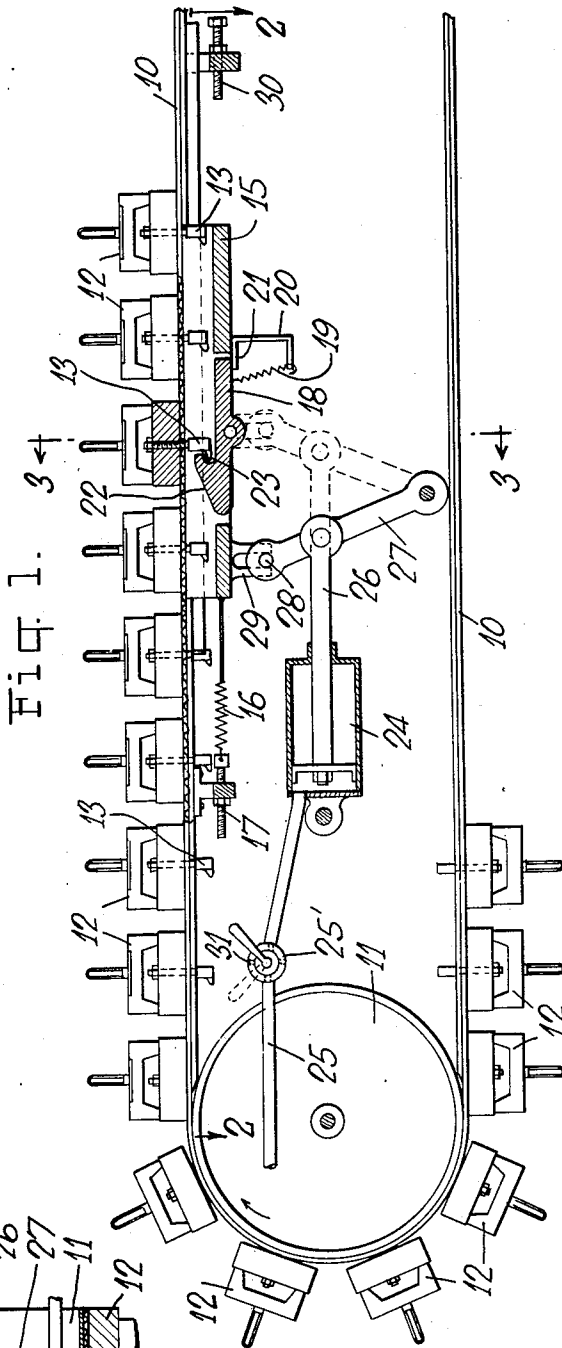
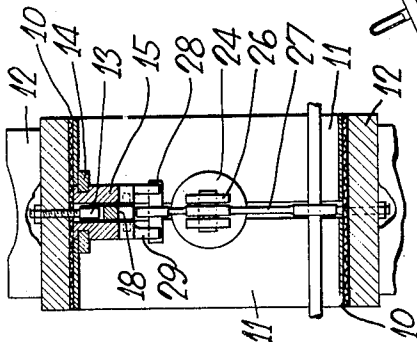


FIG. 3.



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CONVEYER ADVANCE MECHANISM

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5 Claims. (Cl. 198—203)

This invention relates to mechanisms for intermittently advancing conveyers or the like, and is particularly applicable to machines such as are used in the manufacture of footwear, as, for example, to sole-laying or sole-affixing machines of the multiple-press type.

A general object of the invention is to provide an apparatus of simple and sturdy construction which operates with ease and efficiency, advancing the conveyer to which it is applied quickly and to the exact extent desired.

A more specific object of the invention is to provide an intermittent advance mechanism for use on conveyers or carriers of the multiple-press type of sole-laying or sole-affixing machines, whereby as the operation on one shoe is completed and the press loaded at the loading station, an operator may advance the carrier to present the next press and so on successively as the presses are loaded and unloaded with a minimum loss of time and energy.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereinafter set forth, and the scope of the application of which will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention reference should be had to the following detailed description taken in connection with the accompanying drawing, in which:

Fig. 1 is a side elevational view partly in section, showing one end of a multiple-press shoe machine embodying the preferred form of the present invention;

Fig. 2 is a sectional view of Fig. 1 taken along the lines 2—2 and looking in the direction of the arrows.

Fig. 3 is a vertical transverse sectional view of Fig. 1 taken along a line 3—3 looking in the direction of the arrows.

The intermittent advance mechanism is adapted for application to many types of the machines, as will be readily understood by one skilled in the art, but for purposes of simplicity the illustrated disclosure and the description herein will be confined to a conveyer type of carrier and to a sole-affixing machine of the multiple-press type to which the device is particularly applicable.

Referring more specifically to the drawing, it will be seen that in Fig. 1 there is shown some-

what diagrammatically one end of a machine having a conveyer 10 passing over a drum 11 and on which is mounted a plurality of shoe presses 12. Projecting down from the conveyer and in the specific illustrative embodiment shown, also serving as part of a means for securing the presses 12 onto the conveyer is a lug 13 for each position of advance. Also located beneath the upper traverse conveyer is a pair of parallel rails 14 on which rides a latch carrier 15 which is normally retracted by a coil spring or the like 16 toward the end of the conveyer from which the presses approach the advance mechanism, the tension of the spring being adjustable by means of the nut and bolt 17.

The latch carrier 15 carries a pivoted latch 18 which is normally held in position to engage the lugs 13 by means of a coil spring or the like 19. As is shown particularly in Fig. 1, a bracket 20 provides not only an angle for the end of the coil spring 19 but also provides a stop 21 to insure that the latch normally remains in horizontal position. The latch is further provided with a tapered head 22 and preferably with a notch 23 which cooperates with a corresponding projection on the lugs 13 to insure free sliding movement in one direction with respect to the lugs and firm engagement when moved in the other direction.

The advance movement of the latch carrier and associated parts is accomplished by means of a fluid pressure cylinder 24, pivotally mounted on a suitable transverse shaft by means of a bearing fixed to one end thereof, and connected to a source of fluid pressure by a pipe 25 and controlled by a valve such as 25' and having a piston and piston rod 26 which is connected to a pivoted arm 27 having a pin 28 riding within a downwardly projecting fork 29 at one end of the latch carrier. A suitable type of fluid pressure is compressed air which will be referred to hereafter for convenience. The distance the latch carrier advances may be accurately adjusted by means of a stop screw 30, and the return thereof is accomplished by turning the valve 25' to the dotted line position, at which time the air is released from the piston through a vent 31 whereupon the mechanism is pulled back by means of the spring 16.

It is to be understood that the disclosure and the above description is by way of exemplification only and that it is for reasons of convenience and simplicity that the illustrated embodiment of the invention has been confined to a preferred type of carrier and to the air pressure type of press. It is to be understood, how-

ever, that the invention is not limited to these features or to the use in sole-affixing machines as distinguished from sole-laying or sole-leveling machines, and since certain changes may be made in the above construction, and different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which as a matter of language might be said to fall therebetween.

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

1. A carrier advancing mechanism including, in combination, a movable carrier having a series of projecting lugs thereon, a pivotally mounted air pressure piston, means including a reciprocating carriage and a lever articulated to said piston and carriage for operatively connecting said piston to one of said lugs in one direction of motion, and means for returning the piston to a position whereby said connecting means is engaged with a successive lug.

2. A mechanism of the class described including, in combination, a movable carrier having a series of projecting surfaces thereon, a carriage, a pivoted latch member thereon adapted successively to engage said surfaces, a lever fulcrumed at one end and having a pin and slot connection with said carriage at the other end, a pivotally mounted piston connected in driving relationship to said lever, and means to return said latch member to its original position.

3. A mechanism of the class described including, in combination, a movable carrier having a series of spaced projecting lugs extending there-

from, a pivoted latch member, means laterally embracing said latch member and those proximate lugs which cooperate therewith to confine the member and lugs to the same colinear path, means to move said latch member in one direction to advance said carrier by engagement with one of said lugs, and means to return said latch after said driving action whereby the latch comes into engaging position with a succeeding lugs.

4. A mechanism of the class described comprising, in combination a conveyer, a plurality of individually operable working units, fastening pins for securing said units to the conveyer and passing through and beyond the latter to provide a series of lugs spaced equivalently to the units, a pivoted latch member normally positioned to engage one of said lugs, an air pressure piston connected with said latch member and adapted to drive the same to advance said carrier by engagement with one of said lugs, and means to return said latch and said piston after said driving action whereby the latch comes into engaging position with a succeeding lug.

5. A machine of the class described comprising, in combination, a conveyer, a plurality of individual working units mounted on said conveyer, a series of lugs extending from the bottom of said conveyer and spaced equivalently to the units, opposed guide-ways disposed beneath said conveyer and adjacent said lugs, a latch carriage slotted to receive and laterally to confined said lugs and mounted for movement in said guide-members, a pivoted latch mounted for lateral confinement in the slot on said carriage whereby said lugs and latch are confined to the same colinear path, an air pressure piston connected to said latch carrier and adapted to drive the same to advance said conveyer through the engagement of a lug by the pivoted latch, and means for returning said latch carrier and piston to their original position.

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