Nov. 18, 1947. I. GALPER 2,431,033

ORNAMENTING MACHINE FOR SHOE UPPERS

Filed Aug. 17, 1946

Fig. 1

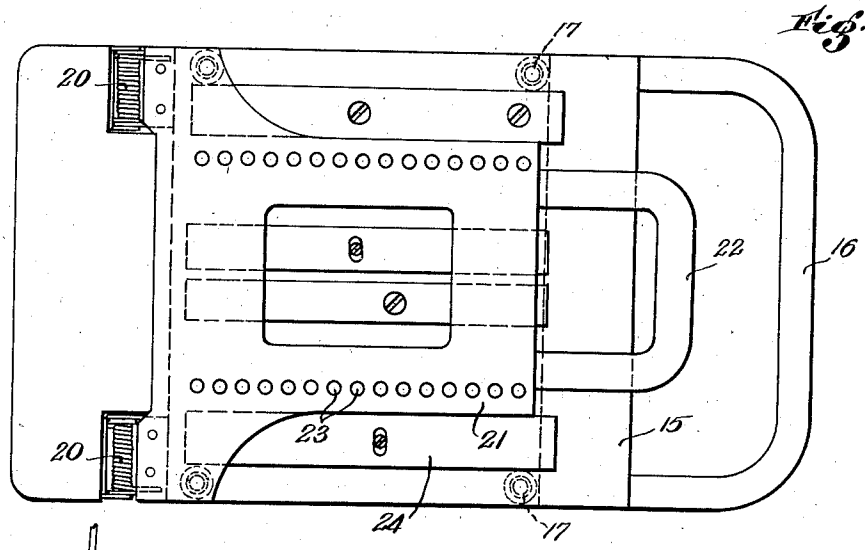


Fig. 2

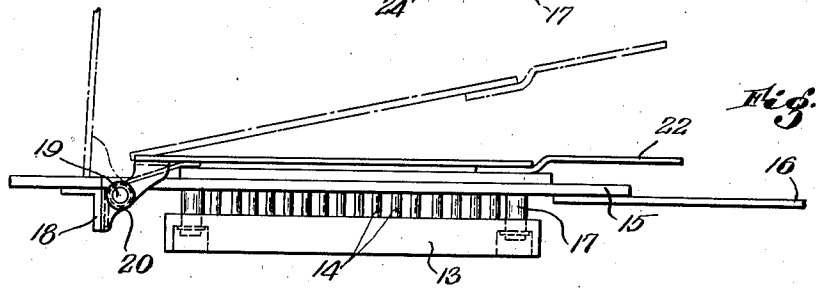


Fig. 3

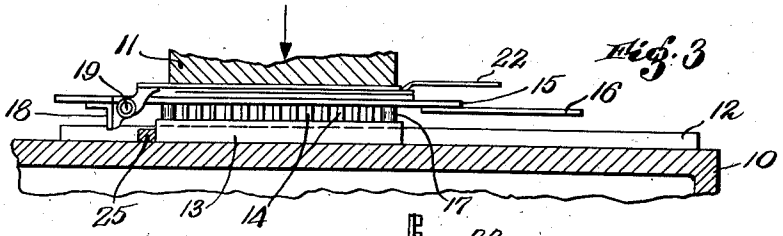


Fig. 4

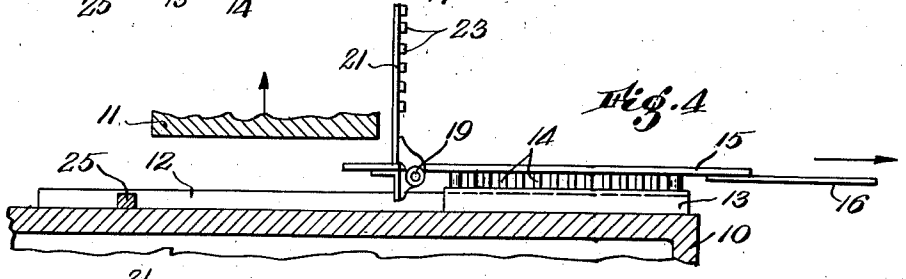
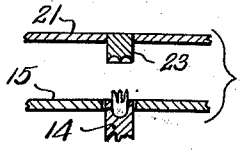


Fig. 5



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UNITED STATES PATENT OFFICE

2,431,033

ORNAMENTING MACHINE FOR SHOE UPPERS

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Application August 17, 1946, Serial No. 691,229

4 Claims. (Cl. 1—4)

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This invention relates to press machines used in the manufacture of shoes for ornamenting the upper by stamping, perforating, or attaching thereto decorative studs or the like.

Machines of this type include in their construction a work holder in which the shoe upper or the vamp or other upper blanks are placed by the operator in carefully gauged position while the holder is drawn forwardly into a readily accessible loading or unloading position. The holder without obstruction includes a stripper plate and mask which the operator heretofore has been obliged to close upon the work in order to hold it in flat condition and against displacement. After closing the mask, the holder is pushed rearwardly to locate the work properly with respect to the operating instrumentalities of the machine. The head of the machine is then caused to descend and the perforating or ornamenting operation effected. Subsequently the holder must be again drawn forward by the operator, the mask lifted, and the ornamented upper removed from the holder.

In one aspect the present invention consists in a mask arranged to open and close automatically thus relieving the operator of two operations in each cycle of the machine, insuring proper closing of the mask, and so organizing the machine that when the holder is drawn forwardly to its work-receiving and delivering position the mask will have been already raised so that the upper may be immediately removed from the holder.

These and other features of the invention will be best understood and appreciated from the following description of a preferred embodiment thereof, selected for purposes of illustration and shown in the accompanying drawings in which:

Fig. 1 is a plan view of the holder showing the mask in closed position,

Fig. 2 is a similar view in side elevation,

Fig. 3 is a view in longitudinal section showing the holder in its operative position in the machine,

Fig. 4 is a similar view showing the holder in its work-receiving position, and

Fig. 5 is a fragmentary sectional view of the stripper plate and mask showing a stud in setting position.

For purposes of illustration, the invention is shown as embodied in a machine of the general type disclosed in Letters Patent No. 1,681,033, August 14, 1928, Freeman, although it will be understood that my invention is in no sense limited to that or to any specific type of press machine.

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In Figs. 3 and 4 a portion of the base 10 of the machine is shown, this being provided with horizontal guideways 12 for the holder, and also a portion of the reciprocatory plunger or head 11 of the machine.

The holder itself, as shown in Figs. 1 and 2, comprises a slide plate or base plate 13 designed to move freely in the ways 12 from an outer or loading position to an inner position in line with and beneath the head 11. In the plate 13 is set a series of dies 14 arranged in an ornamental pattern and each having a cavity in its upper end shaped, in this instance, to hold a pronged stud in position for setting in a shoe upper. A thin stripper plate 15, perforated to permit free passage of the dies 14, is yieldingly mounted by encased springs 17 on the plate 13 at the level of the upper ends of the dies 14. The stripper is provided with a loop-shaped handle 16 at its rear end by which the whole holder assembly may be conveniently moved back and forth by the operator.

Secured to the under face of the stripper plate 15 at its inner end is a transverse angle iron 18 carrying at either end hinges 19. Connected to these hinges above the stripper plate is a mask 21 which comprises a thin plate arranged to overlie and hold flat an upper part placed on the stripper. The pintles of the hinges 19 are both surrounded by torsion springs 20 which act, when permitted to do so, to swing the mask 21 in counterclockwise direction into the upright position shown in Fig. 4. For convenience, the mask is provided at its outer end with a loop-shaped handle 22 similar to that of the stripper plate. As herein shown, the mask 21 is provided with a series of up-setting dies 23 arranged to register with the dies 14 and to cooperate with them in clenching the prongs of an ornamental stud upon a vamp or other upper part presented on the stripper plate. For the purpose of locating the work, the stripper is provided with two pairs of transversely adjustable gauge bars 24. The base of the machine is provided with a positive stop 25 for the purpose of limiting the inward movement of the holder assembly and locating it properly beneath the reciprocating head 11 of the machine.

In operation a vamp, for example, is placed on the stripper plate while the holder occupies its outer loading position as shown in Fig. 4, the mask 21 then occupying its upright position so that the surface of the stripper plate is entirely exposed and the work may be freely positioned thereon. When the machine is to be used for in-

serting ornamental studs, a single stud is placed in the cavity of each die 14 as indicated in Fig. 5. The holder is then pushed forwardly beneath the head 11 and in this movement the mask 21 encounters the head and is swung downwardly, as suggested in Fig. 2, into parallelism with the stripper plate in which position the upsetting dies 23 register with the dies 14 of the base plate. The treadle of the machine is then depressed and the head 11 makes its operative stroke as indicated in Fig. 3. When this occurs, the stripper plate is depressed against the springs 17 and the mask is forced downwardly so that the prongs of the studs penetrate the vamp and are engaged by the upsetting dies 23 and clenched. The head 11 then moves upwardly to its initial position and the operator is free to move the holder assembly outwardly again to its position as shown in Fig. 4. In this movement the springs 20 swing the mask 21 upwardly as it is moved out of contact with the head 11, and when this outward movement is completed, the mask again occupies its upright position. The ornamental vamp may then be removed and the machine is in readiness for a new cycle.

The holder has been described as adapted for the operation of inserting ornamental studs, but it will be understood that it is also adapted for forming ornamental perforations in parts of uppers, and in this case the dies 14 would be replaced by punches and the mask 21 would be perforated for the passage of the punches which would either cut against a paper backing on the head 11 or cooperate with punching dies.

It will be understood that the mask requires no attention on the part of the operator. It automatically assumes its open position when permitted to do so, fully exposing the face of the stripper whereon the work is to be positioned, and then is automatically closed by engaging the head 11 when the holder is pushed inwardly into operative position.

Having thus disclosed my invention and described in detail an illustrative embodiment thereof, I claim as new and desire to secure by Letters Patent:

1. In a press machine having a base with a guideway therein and a head reciprocating at right angles to the guideway, a work holder comprising a slide plate having a series of stud-holding recesses, a stripper carried by the slide plate, and a mask hinged to the stripper and having a series of clenching dies therein arranged to clench studs presented in the said recesses beneath the head of the machine.

2. In a press machine having a base with a guideway therein and a head reciprocating at right angles to the guideway, a work holder comprising a slide plate movable inwardly and outwardly in said guideway and having stud-holding recesses, a stud-clenching mask pivotally mounted adjacent to the inner end of the slide plate, and spring means normally maintaining the mask in elevated position and acting to lift the mask after it has been depressed by the head of the machine.

3. In a press machine having a base with a guideway therein and a head mounted to reciprocate at right angles to the guideway, a work holder having a bottom plate slidable in the guideway, a spring stripper plate mounted thereon, a mask hinged to the stripper and arranged to flatten a shoe upper part thereon, and spring means for automatically swinging open the mask when the holder is moved outwardly to carry the mask out of contact with the head of the machine.

4. A work holder for use in a press machine having a base with a guideway and a reciprocatory head, said holder comprising a slide plate shaped to slide horizontally in the guideway to and from a position beneath the head of the machine, a mask mounted in the inner end of the holder to swing about a horizontal axis, and spring means normally holding the mask in upright position in which it will contact with the said reciprocatory head when the holder is pushed into the machine and be closed downwardly by such contact during the inward movement of the holder.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,908,895	Freeman	May 16, 1933
2,175,673	Shields	Oct. 10, 1939