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J. F. AMES.

MOLD FOR DEPOSITING PRINTING ROLLER COMPOSITION ON FABRIC.

APPLICATION FILED FEB. 17, 1905.

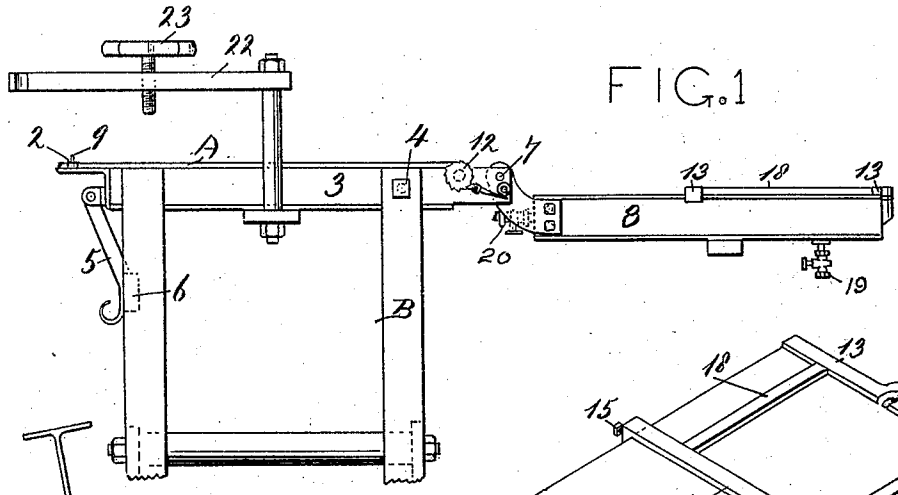


FIG. 1

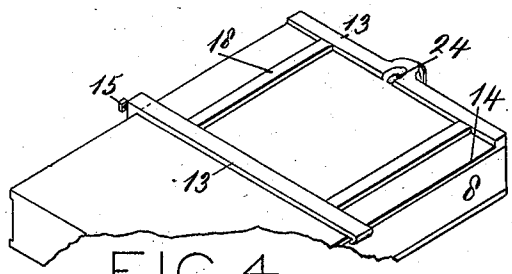


FIG. 4

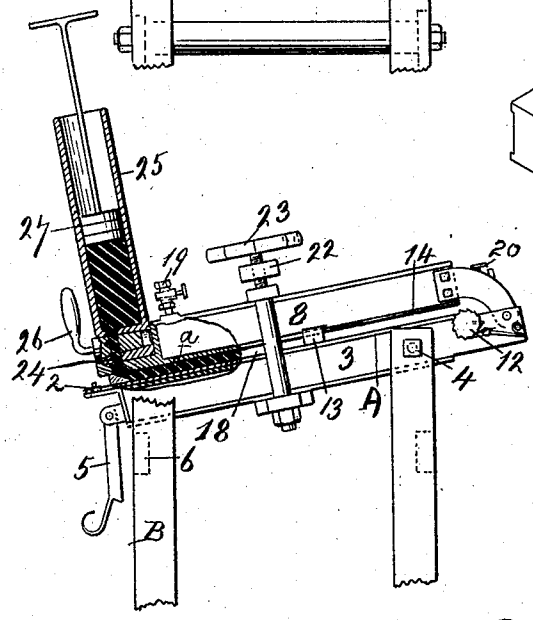


FIG. 2

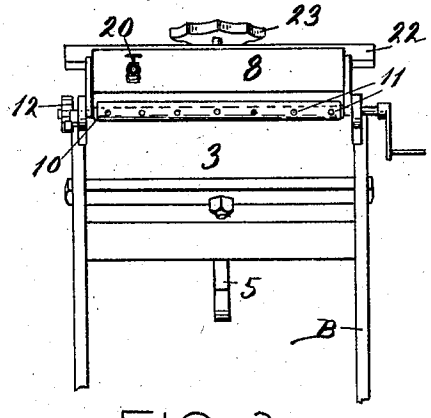


FIG. 3

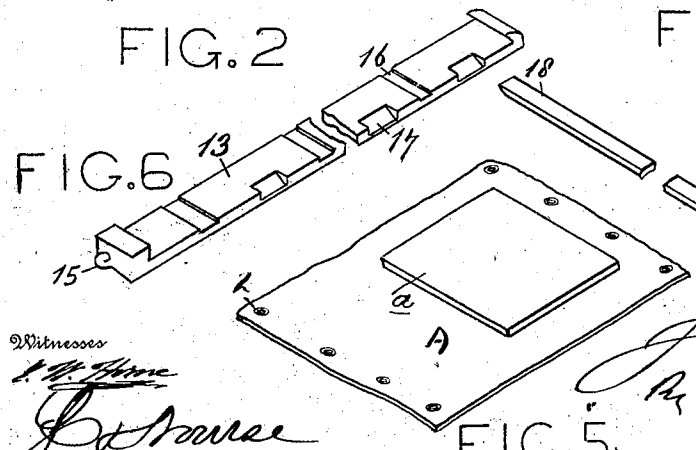


FIG. 6

FIG. 7

FIG. 5

Witnesses

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MOLD FOR DEPOSITING PRINTING-ROLLER COMPOSITION ON FABRICS.

No. 816,144. Specification of Letters Patent. Patented March 27, 1906.

Application filed February 17, 1905. Serial No. 246,085.

To all whom it may concern:

Be it known that I, JOHN F. AMES, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented new and useful Improvements in Molds for Depositing Printing-Roller Composition on Fabric, of which the following is a specification.

My invention relates to an apparatus for preparing inking-pads for use in printing-presses, and pertains especially to a means for applying a gummy or gelatinous elastic ink-transferring composition to removable pads for inking-rolls of presses of the cylinder type.

The invention consists of the parts and the construction and combination of parts, as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a side elevation of the mold opened out and the pump-cylinder removed. Fig. 2 is a side elevation or partial section of the mold closed, showing method of applying the composition to the fabric. Fig. 3 is a rear end view of the mold. Fig. 4 is a perspective of the under side of a fragment of the top presser-plate. Fig. 5 is a perspective view of a finished inking-pad. Figs. 6 and 7 are perspective views, respectively, of the horizontal and longitudinal adjustable wall-strips.

A represents a pad of canvas or like fabric of suitable size and generally rectangular in shape, to which it is designed to apply a suitable ink-transferring composition, as indicated at *a*, Fig. 5. This pad is provided at the ends with suitable means, as the eyelets 2, whereby it may be held both in the molding-machine when the composition is applied and subsequently upon the roller where the completed pad is used.

B represents a suitable frame for the molding-machine, and 3 a flat-topped bed-plate pivoted at one end, as shown at 4, to the frame, and adapted to be supported in horizontal position by suitable means, as the pivoted arm 5, on the bed-plate engaging the cross-bar 6 on the frame, as in Fig. 1, or to be supported in inclined position directly on the cross-bar 6, as shown in Fig. 2. Hinged to the bed-plate at one end and adjacent to pivots 4, as indicated at 7, is a hollow presser-plate or cover 8, which is arranged to be folded over into a plane parallel with the surface of the bed-plate and separated therefrom only by a space equal to the thickness of the canvas and of the composition to be applied thereto. The bed-plate is provided with the pins 9 at one end, over which the eyelets in one end of the canvas A are engaged. The other end of the bed-plate carries a rotatable shaft or rod 10, having pins 11, to engage the eyelets in the other end of the canvas. This rod is fitted with a pawl and ratchet 12, so that when the canvas is drawn taut it will be held in position. Having thus secured the canvas in position, the next thing is to determine the space to be occupied by the printing composition. The under side of the presser-plate or cover is provided with the guide-strips 13, running crosswise of the cover, and one or both of these strips may be adjustable to and from each other to adapt them to the desired length of the body of composition. As here shown, one strip is permanently secured to the presser-plate, while the other has under-turned ends engaging corresponding guides 14 on the sides of the presser-plate. This adjustable strip is locked in place by appropriate means, as the set-screw 15. The side of the adjustable strip 13 adjacent to the presser-plate is transversely channeled, as at 16, to permit air to escape when the composition is poured or forced in, as will be explained shortly. The adjacent edges of the strips 13 have notches 17 to receive the ends of the side strips 18, which are positioned according to the desired width of the body of the composition and according to the desired location of the composition on the canvas.

The thickness of the strips 13 18 is equal to the desired thickness of the composition body to be applied, and the joints of the strips with each other and with the presser-plate and the canvas when the presser-plate is closed down and clamped on the canvas are such as practically to furnish a tight inclosure except for the air-vents 16, above mentioned.

The location and extent of the composition body is varied on different pads by moving the end strips 13 nearer to or farther from each other and by employing side strips 18 of required length and adjusting them toward or from each other and to one side or the other of the presser-plate.

The presser-plate is hollow to provide a chamber either for the receipt of a heating medium, as steam, or a cooling medium, as water, any well-known arrangement of

valved inlet and outlet pipes—as, for instance, at 19 20—being provided for the desired circulation of the steam and water through the plate and for the discharge of water from said plate.

With the spacing-bars adjusted the hollow presser-plate is clamped down on the canvas by appropriate means, as the clamping-bars 22 and hand-wheel 23. The mold is then lowered into inclined position, as shown in Fig. 2, ready to receive the composition.

The end of the presser-plate has a socket communicating through a port 24 with the space inclosed by the strips 13 18. A cylinder 25 seats snug and is supported in the socket, but is readily removed therefrom and has an opening, controlled by a plug-valve 26, registrable with port 24.

The printing composition, which is a suitable gummy or gelatinous and elastic matter in a proper state of fluidity or semifluidity, is placed in the cylinder, the valve 26 opened, and by means of the plunger 27 the composition is forced down into the space inclosed by the strips 13 18 between presser-plate and canvas. Prior to this molding operation steam is passed through the presser-plate to heat the same to a high temperature to assist in maintaining the proper degree of fluidity of the composition. The latter by being made to flow uphill, due to the incline of the mold, reaches into all the corners of the latter and forms a solid casting free from air-holes, since the air is allowed to pass out of the mold through the vents 16 and ahead of the encroaching fluid. As soon as the mold is filled the cock 26 is turned off and a stream of cold water run through the presser-plate to chill and set the composition. Subsequently the cylinder 25 may be detached, the presser-plate unclamped and opened, and the completed pad removed.

By having the several parts of the pump separately removable it becomes easier to open up the mold, allows the cylinder to be maintained upright to prevent spilling of the composition, and renders cleaning of the parts comparatively a simple matter.

It is possible that various modifications in my invention may be made without departing from the principle thereof, and I do not wish to be understood as limiting myself to the specific construction as herein shown and described.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A means for depositing elastic inking-bodies on fabric, comprising a bed-plate having means for the reception and stretching of the fabric, a cover or presser-plate, adjustable guides on the under side of the presser-plate forming the walls of the mold, means for clamping the presser-plate to the bed-plate and means for injecting the composition which is to form the inking-body into the space inclosed by said guides.

2. A means for depositing elastic inking-bodies on fabric, comprising a bed-plate having means for the reception and stretching of the fabric, a cover or presser-plate, adjustable guides on the under side of the presser-plate forming the walls of the mold, means for clamping the presser-plate to the bed-plate and means for injecting the composition which is to form the inking-body into the space inclosed by said guides, and means for heating the mold and for suddenly cooling it.

3. A mold for applying inking composition to fabric comprising two plain-surfaced parts, one of which is provided with means for holding and stretching a fabric and the other of which constitutes a fluid-chamber and is provided with adjustable strips forming the walls of the mold, means for clamping the two parts together and means for injecting a fluid composition into the space inclosed by said strips.

4. A mold consisting of a bed-plate pivotally supported at one end and a presser-plate hinged to the bed-plate, adjustable strips on the side of the presser-plate adjacent to the bed-plate, said strips forming the walls of the mold, means for locking the plates together, and means for injecting a fluid composition into the space between said strips.

5. A mold consisting of a bed-plate having means to receive and stretch a fabric, a second plate constructed with means for permitting the circulation of a fluid said second plate movable to and from said bed-plate, and having means on its side adjacent to the bed-plate forming the walls of the mold, means for clamping the plates together, and means for injecting a fluid composition into the space inclosed by said walls.

6. A mold comprising a bed-plate, a hollow presser-plate provided with means on its under side which form the walls of the mold, means for clamping the two plates together, and means for injecting fluid composition into the space inclosed by said walls, the chambers of said hollow presser-plate having inlet and outlet passages for the ingress and egress of a heating or cooling medium.

7. A mold comprising a bed-plate, a presser-plate provided with an internal chamber for the admission of a fluid said presser-plate provided with means on its under side which form the walls of the mold, means for clamping the two plates together, means for injecting fluid composition into the space inclosed by said walls, and means for holding said plates in inclined position.

8. A mold comprising a pivotally-supported bed-plate provided with means for the receipt and stretching of fabric, a presser-plate pivoted to the bed-plate and having means on its side adjacent to the bed-plate delimiting the extent of the application of the fluid

composition and means for injecting a fluid composition between the plates and within the area bounded by the delimiting means.

9. A mold comprising a pivotally-supported bed-plate provided with means for the receipt and stretching of fabric, a hollow presser-plate pivoted to the bed-plate and having adjustably-secured means on its side adjacent to the bed-plate delimiting the extent of the application of the fluid composition, means for injecting a fluid composition between the plates and within the area bounded by the delimiting means and means for heating the mold and for cooling it.

10. A mold comprising a bed-plate, a presser-plate, one of said plates provided with means for the reception of a fabric, means including fixed and adjustable members interposed between the two plates forming the walls of the mold, means for locking the parts together and means for injecting a fluid composition into the space inclosed by said walls.

11. A mold consisting of a bed-plate pivotally supported at one end, a presser-plate hinged to the bed-plate, adjustable strips on the side of the presser-plate adjacent to the bed-plate, said strips forming the walls of the mold, means for locking the plates together and means for injecting a fluid composition into the space between said strips, said last-named means including removable pump mechanism carried by the presser-plate.

12. A mold consisting of a bed-plate having means to receive and stretch fabric, a second plate movable to and from said bed-plate and having means on its side adjacent to the bed-plate forming the walls of the mold, means for clamping the plates together, and means for injecting a fluid composition into the space inclosed by said walls, said last-named means including removable pumping mechanism carried by the presser-plate.

13. A mold comprising a tiltable bed-plate, a presser-plate carried by and tiltable with the bed-plate, means on the bed-plate for holding a fabric between the plates, means interposed between the two plates forming the walls of the mold, means for locking the plates together and means for injecting a fluid composition into the space inclosed by said walls.

14. A mold comprising a tiltable bed-plate, a presser-plate carried thereby, means on said presser-plate forming the walls of the mold, means for locking the plates together and means including a removable pump-cylinder carried by the presser-plate for injecting a fluid composition into the space inclosed by said walls.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN F. AMES.

Witnesses:
S. H. NOURSE,
JESSIE C. BRODIE.