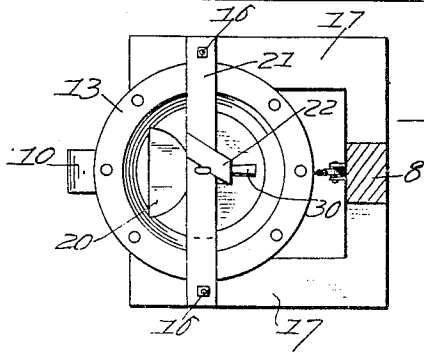
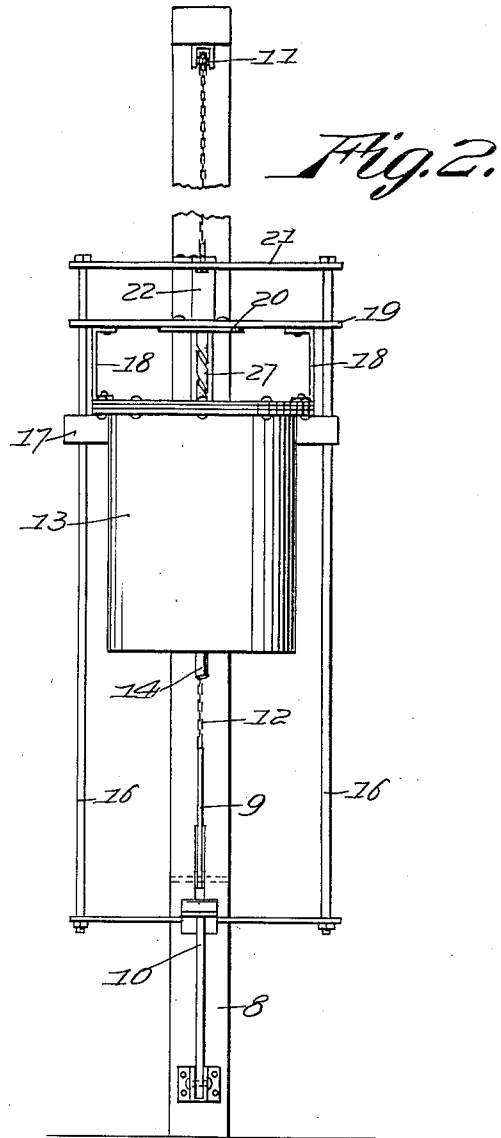
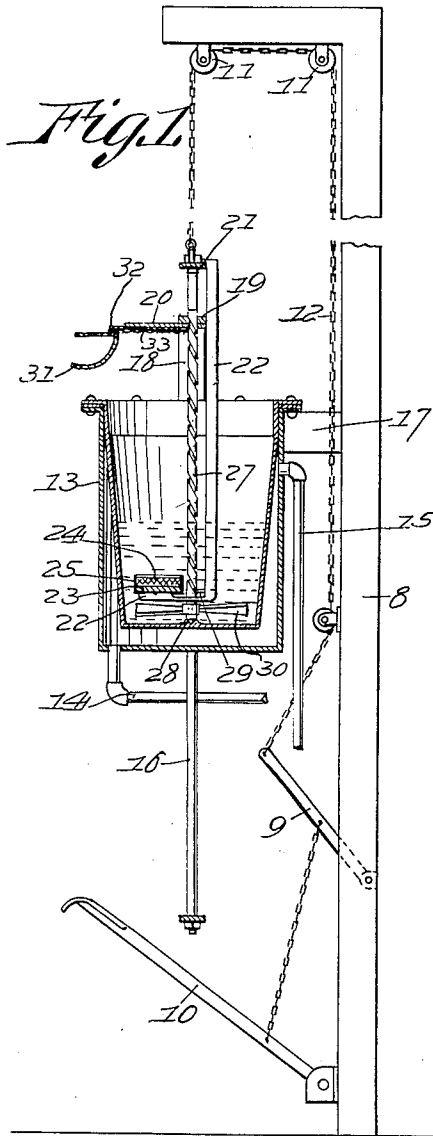


R. P. FRYE.
MACHINE FOR MAKING SHOE BOXINGS.
APPLICATION FILED APR. 21, 1917.

1,236,832.

Patented Aug. 14, 1917.
2 SHEETS—SHEET 1.



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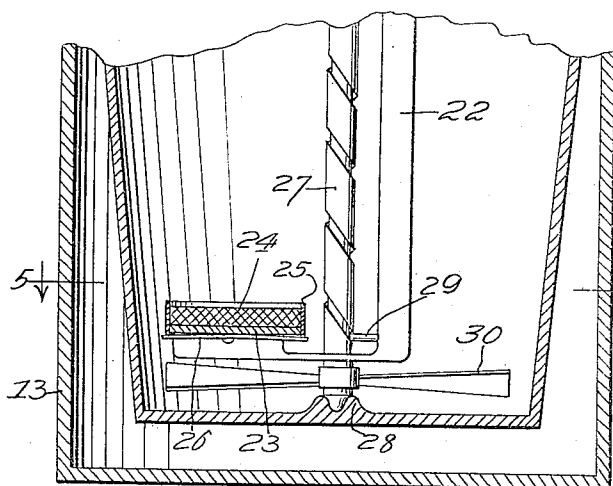


Fig. 4.

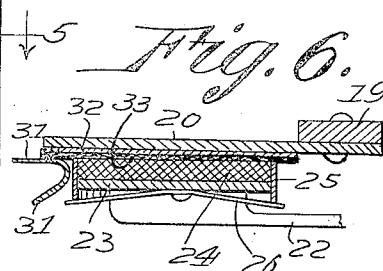


Fig. 6.

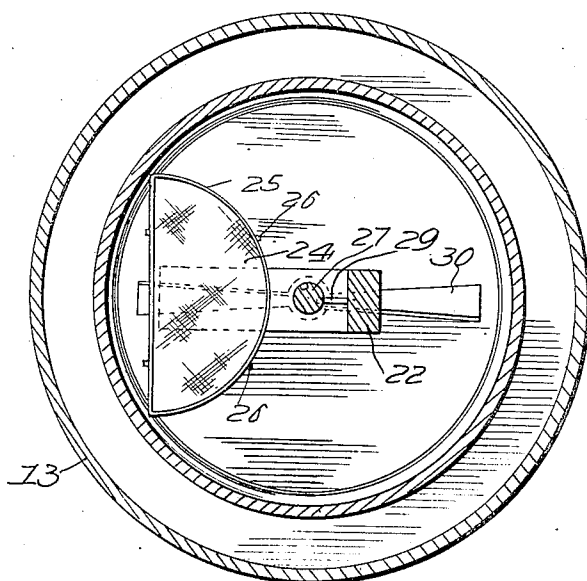


Fig. 5.

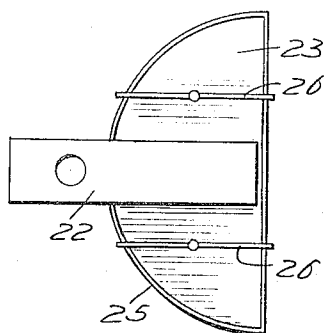


Fig. 7.

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UNITED STATES PATENT OFFICE.

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MACHINE FOR MAKING SHOE-BOXINGS.

1,236,832.

Specification of Letters Patent.

Patented Aug. 14, 1917.

Application filed April 21, 1917. Serial No. 163,736.

To all whom it may concern:

Be it known that I, ROBERT P. FRYE, a citizen of the United States of America, and resident of Marlboro, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Machines for Making Shoe-Boxings, of which the following is a specification.

This invention relates to the manufacture of boxings for shoes and particularly to means for producing a boxing stiffening which can be substituted for the leather boxings now so commonly employed without materially detracting from the durability or efficiency of the product in which the substituted boxing is employed.

An object of this invention is to provide novel means for impregnating, saturating or substantially saturating a fabric, preferably a textile fabric, with a liquid material which will, upon drying or cooling, solidify and reinforce or stiffen the fabric to such an extent as to be useful as a boxing for shoes, means being also provided whereby the said fabric may be treated while the shoe is in process of manufacture and after the fabric has been secured to the vamp of the shoe, and also to the tip, or when the vamp, tip and fabric are sewed together, thus making it possible for the operator to apply the stiffening agent to the fabric and shape the boxing together with the vamp and tip on a last while the fabric is pliable and before the coating or stiffening agent has hardened, it having been found in practice that this insures proper contouring of the tip and boxing with relation to the last and by reason of the fact that the fabric is secured to the vamp, creeping or independent movement of the boxing is prevented.

A still further object of this invention is to provide novel means by which the coating or stiffening agent is applied to the fabric and also to provide means for agitating the material at each operation of the machine to prevent sediment collecting and the invention further contemplates the production of a device of the character noted which will possess advantages in points of simplicity, efficiency and durability, proving at the same time inexpensive to produce.

With the foregoing and other objects in

view, the invention consists in the details of construction, and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail, reference will be had to the accompanying drawings forming part of this specification, wherein like characters denote corresponding parts in the several views, and in which—

Figure 1 illustrates a view in elevation, partly in section, showing a device for coating fabric;

Fig. 2 illustrates a front view thereof;

Fig. 3 illustrates a top plan view with the actuating mechanism omitted;

Fig. 4 illustrates an enlarged detail sectional view of a receptacle and parts associated therewith;

Fig. 5 illustrates a sectional view on a line corresponding with the line 5—5 of Fig. 4;

Fig. 6 illustrates an enlarged detail sectional view of the coating members adapted to apply the fluid to a fabric; and

Fig. 7 illustrates an underneath plan view of the presser head.

In these drawings 8 denotes a suitable frame which, in the present embodiment of the invention, has levers 9 and 10 pivoted to it, the latter of which constitutes a pedal which may be operated for communicating motion to parts of the apparatus as will presently appear. The frame 8 is also provided with guide pulleys 11 over which a chain 12 or other flexible connection may operate, the said flexible member being connected to the lever 9. It is obvious that any appropriate means may be substituted for the operating means as the only requirement is that provision should be made for raising and lowering parts of the mechanism for the purpose of bringing the movable parts into operative relation to a stationary or other part which will coact with the movable member or part, substantially as will presently appear.

I prefer to employ a jacketed receptacle 13 with pipes 14 and 15 communicating with the interior of the jacket so that a heating agent may be circulated for the purpose of melting the contents of the receptacle. As at present carried on, I utilize an element or agent for stiffening the fabric which has a

relatively high melting point and, therefore, it is necessary to have a capacity to heat the said agent to liquefy it and this, of course, would depend upon the agent to be employed, and that may be changed to suit particular requirements.

A yoke 16 reciprocates in arms or other stationary means 17 which support the jacketed receptacle, or otherwise, and brackets 18 support a cross head 19, and said cross head carries a mandrel 20 against which a presser head operates as will presently appear. The head 21 of the yoke carries a depending arm 22 which arm extends within the jacketed receptacle and the said arm has a right angular extension which carries a presser head 23, the said presser head comprising a plate and a cushion 24, which cushion is preferably of an absorbent nature which will take up a quantity of the liquid contained within the receptacle. As a further means for insuring a supply of the fluid, a shield 25 is applied to the presser head and the said shield consists of a band of metal embracing the edge of the presser head and in normal position, its edge extends slightly above the upper surface of the cushion so that a film or layer of liquid will be held on the cushion when the presser head is elevated. The shield is yieldingly held in place by springs 26 extending across the bottom of the plate and projecting under the said shield, so that when the presser head moves upwardly and the edge of the shield engages the fabric, the springs yield sufficiently to permit the shield to move with relation to the presser head as is shown in Fig. 6 of the drawing.

As a means for agitating the contents of the receptacle, a stirrer shaft comprising a worm or the like 27 is journaled in a bearing 28 in the bottom of the receptacle and a pin 29 carried by the depending arm 22 engages the worm and as the arm is reciprocated, it causes the worm to rotate, thus carrying the stirrer blades 30, causing them, as stated, to agitate the contents of the receptacle. The worm may have its upper end journaled in the cross arm 19.

The construction and operation will, it is thought, be understood from the foregoing description and a consideration of the drawings, it being apparent that a fabric may be coated and impregnated by being applied to the mandrel 20 while the vamp 31, a fragment of which is shown, the tip 32, and the tip lining 33 are held in substantially the position shown in Fig. 1, after which the treadle can be operated to raise the yoke and with it the arm 22 carrying the presser head, so that material carried by the saturated cushion and confined thereon by the shield is brought into contact with the fabric, thus pressing the fabric between the presser head and mandrel, and forcing or

squeezing the liquid into said fabric. Thereafter, the tip and tip lining may be brought into contact with the opposite surfaces of the coated fabric and the three layers of material will be caused to adhere, since as stated, the coating will begin to harden as soon as the temperature is reduced and immediately thereafter, the shoe may be lasted to give the boxing the required configuration and when the coating has hardened, a satisfactory product will result.

By means of the apparatus, therefore, and the mode of operation, a shoe having a boxing may be made expeditiously and the boxing thereof will remain stiff under ordinary conditions of wear.

I claim

1. Means for making shoe boxings comprising a member against which material may be pressed, a member adapted to carry a coating of liquid and an additional supply of said liquid, and means for forcing the said member against the material whereby the liquid is forced into the body of the fabric.
2. In a machine for making shoe boxings, a receptacle for fluid, an arm extending into the receptacle, a presser head comprising plate and cushion and a shield for confining a material carried by the presser head, a member with which the presser head coacts, and means for operating the presser head with respect to the said member.
3. In a machine for making shoe boxings, a receptacle for fluid, an arm extending into the receptacle, a presser head comprising a plate, a cushion and a shield for confining material carried by the presser head, a member with which the presser head coacts, means for operating the presser head with respect to the said member, and means for agitating the contents of the receptacle.
4. In a machine for making shoe boxings, a receptacle, an arm extending therein, a presser head comprising a plate, a cushion thereon, a shield embracing the edge of the plate, a cushion means for yieldingly supporting the shield with relation to the presser head, a member with relation to which the presser head coacts, and means for operating the presser head with relation to said member.
5. In a machine for making shoe boxings, a presser head comprising a plate and a cushion, a shield embracing the edge of the plate and cushion and having its edge extending above the surface of the cushion, means for yieldingly supporting the shield in its normal position, a member with relation to which the presser head and shield coact, and means for operating the said presser head with relation to the said member.
6. In a machine for making shoe boxings, a presser head comprising a plate and a

cushion, a shield embracing the edge of the plate and cushion and having its edge extending above the surface of the cushion, means for yieldingly supporting the shield in its normal position, a member with relation to which the presser head and shield coact, means for operating the said presser head with relation to the said member, a receptacle with relation to which the presser head is moved, and means operated by the movement of the presser head for agitating the contents of the receptacle. 10

ROBERT P. FRYE.