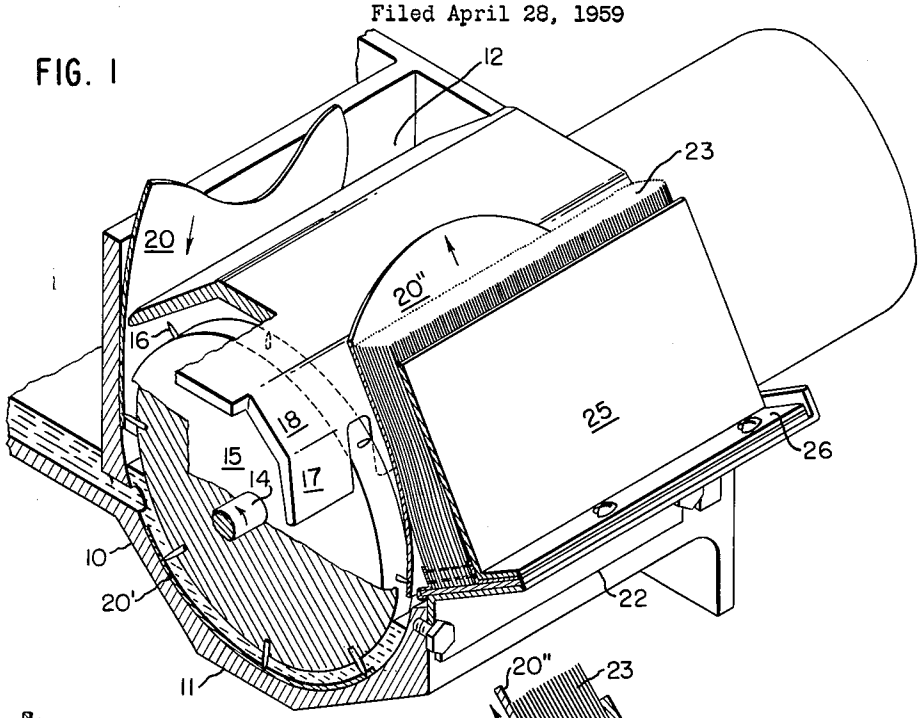
April 3, 1962 R. W. MORSE ET AL 3,027,867

CONDITIONING MACHINE FOR BOX TOE BLANKS

Filed April 28, 1959

FIG. 1



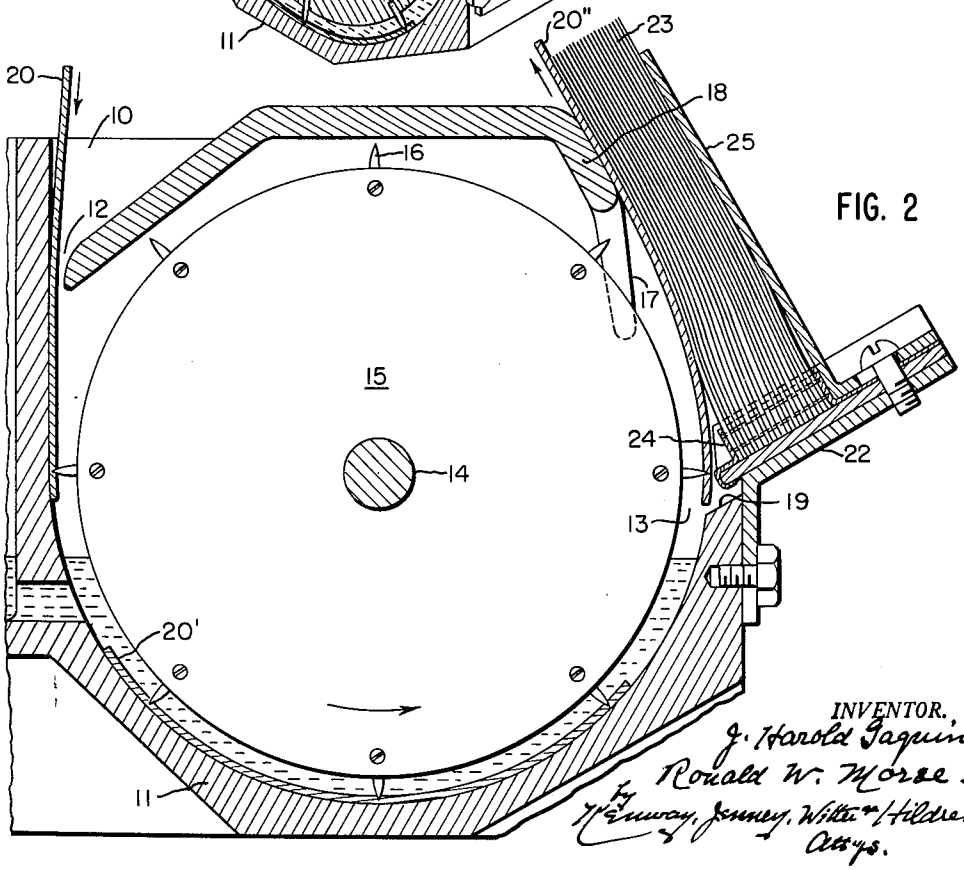


FIG. 2

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CONDITIONING MACHINE FOR BOX TOE BLANKS

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5 Claims. (Cl. 118—109)

This invention comprises a new and improved conditioning machine for solvent-softenable box toe blanks, and in one aspect is an improvement in conditioning machines of the type described in U.S. Patent No. 2,818,832 January 7, 1958, Bushway.

In such machines the dry stiff blank is saturated in solvent by being swept through a solvent reservoir and delivered in soft wet condition preparatory to being pulled-over or lasted in the upper of a shoe. It sometimes happens that the conditioned blank will carry free drops of solvent from the reservoir and in dealing with certain thin or delicate upper leathers staining is likely to result under these conditions.

An object of this invention is to insure a smooth and uniform distribution of solvent over the entire area of the conditioned blanks and the removal therefrom of all surplus solvent beyond that actually required for softening them. This not only increases the field of use of the machine but is an advantage from the standpoint of economy in that it results in a saving of 10% or more in solvent, the surplus being returned to the working supply in the reservoir of the machine.

As herein shown these advantages are secured by mounting a bristle mass adjacent to the delivery outlet of the machine in position to engage an ejected blank with a flat side surface of the bristles. With this construction an effective wiping action is carried out over a substantial area of the blank, surplus drops of solvent are removed and may be conveniently returned to the reservoir.

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

FIG. 1 is a view of the machine in perspective, partly in section, and

FIG. 2 is a view in cross section on a somewhat larger scale.

As herein shown the machine comprises a metal casing **10** having a base, not fully shown, by which the casing is supported at convenient height upon a bench adjacent to pulling-over or lasting machinery. The casing has a concave bottom wall **11** shaped to form a reservoir for solvent and presents an inner cylindrical surface. The casing is also shaped to provide an overhead inlet opening or slot **12** and a front wall delivery opening **13**.

Blank feeding means are provided with the casing in the form of a series of spaced wheels or disks **15** fast upon a transverse shaft **14** concentrically located with respect to the bottom cylindrical surface of the reservoir. Each disk **15** is provided with radially extending spurs **16** which engage a blank **20** as it is dropped into the inlet opening, sweep it across the bottom cylindrical surface of the reservoir and eject it from the outlet opening **13** wringing wet and saturated with the solvent in which it has been immersed. A blank **20'** is shown in passage through the solvent at the bottom of the reservoir, and a blank **20''** is shown as just leaving the delivery opening **13**.

The casing includes a stationary transverse and inclined guiding and pressing surface **18** and from this downwardly projects a series of stripper fingers **17** located between

the disks **15** and acting positively to strip the saturated blanks from the spurs **16** as the blanks leave the delivery opening **13**. The front wall of the casing is inwardly beveled at **19** adjacent to the delivery opening **13** to direct solvent freed from the blank **20''** back into the reservoir. Secured by bolts to the front wall of the casing **10** is an angular bracket **22** and upon this is mounted a substantially rectangular mass of bristles **23**. The bristles are held at their base in a sheet metal holder **24** and backed up by a spring steel plate **25** which is flanged outwardly at its lower edge and bolted to the bracket **22** so as to act as a clamp for the holder **24**. The spring plate **25** overlies the entire outer surface of the bristle mass **23** and presses the bristles toward the inclined guiding surface **18** of the casing with the result that the blank **20''** as it emerges from the delivery opening **13** is passed yieldingly upwardly with a wiping action against the flat side surface of the bristle mass. It will be apparent that the spurs **16** remain in engagement with the blank long enough to bring its upper edge above the bristles in convenient position for removal of the blank by the operator. The pressure of the bristles due to the action of the spring plate **25**, and the wiping action of the mass acts as already explained to remove free drops of solvent from both surfaces of the blank, spread the solvent uniformly and return surplus solvent to the reservoir. Yielding pressure of the spring plate **25** may be regulated by adjusting the plate upon the inclined face of the bracket **22**.

While the principal field of use of the machine of our invention is in the treating of box toe blanks as above described, the machine is of course useful in treating counters or other shoe parts and is often set up in the stitching room or making room of shoemaking plants for such purposes. It is also to be understood that it is within the scope of our invention to arrange the bristle mass so as to engage either or both sides of the saturated blank as it emerges from the machine.

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

1. A conditioning machine for solvent-softenable box toe blanks, comprising a casing forming a reservoir with a curved bottom and having an input and a delivery opening for the blanks, toothed feed wheels for advancing blanks across the curved bottom of the reservoir to saturate them with liquid solvent and pass them out through the delivery opening, a brush comprising a rectangular mass of bristles located adjacent to the delivery opening with the bristles extending parallel to the direction of movement of the blank and in position to engage an ejected blank with a flat side surface of the bristle mass.

2. A conditioning machine for solvent-softenable box toe blanks, comprising a casing containing a solvent reservoir and having a delivery opening, blank-feeding means within the casing, and a bristle mass mounted adjacent to the delivery opening with the bristles extending parallel to the direction of movement of the blank and in position to engage an ejected blank with a flat side surface of the bristle mass.

3. A conditioning machine as defined in claim 2 further characterized by the provision of spring means biasing the bristle mass toward a blank issuing from the delivery opening.

4. A conditioning machine as defined in claim 2 further characterized in that the casing includes a flat guiding surface located in opposed cooperative relation with respect to the side surface of the bristle mass.

5. A conditioning machine for solvent-softenable box toe blanks, comprising a casing having walls forming an enclosed reservoir with an overhead inlet passage and a

front wall delivery passage, a blank feeding disk within the casing for sweeping a blank from the inlet passage and ejecting it through the delivery passage, the casing having a cylindrical inner wall concentric with said disk and extending substantially to the delivery passage, an outwardly extending shelf adjacent said delivery passage, an inwardly inclined spreading and stripping brush carried by the shelf, a cooperating guiding and pressing surface located above the delivery passage and formed as a part of the casing, and an inwardly inclined surface formed as a part of the casing for directing surplus solvent from the stripping brush back into the reservoir.

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