

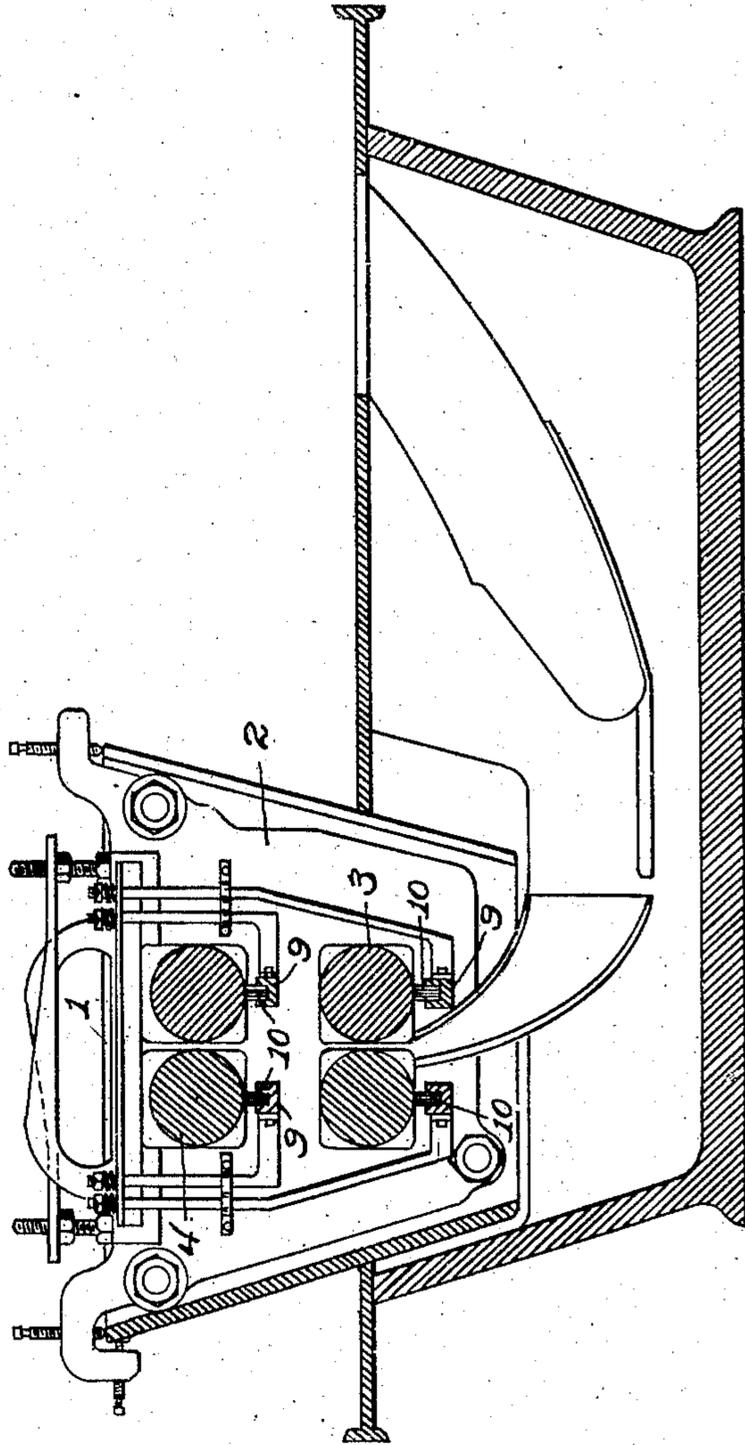
No. 843,223.

PATENTED FEB. 5, 1907.

A. J. MASKREY.
ROLL WIPER FOR TINNING POTS.
APPLICATION FILED NOV. 23, 1906.

2 SHEETS—SHEET 1.

FIG. 1



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2 SHEETS—SHEET 2.

Fig. 2.

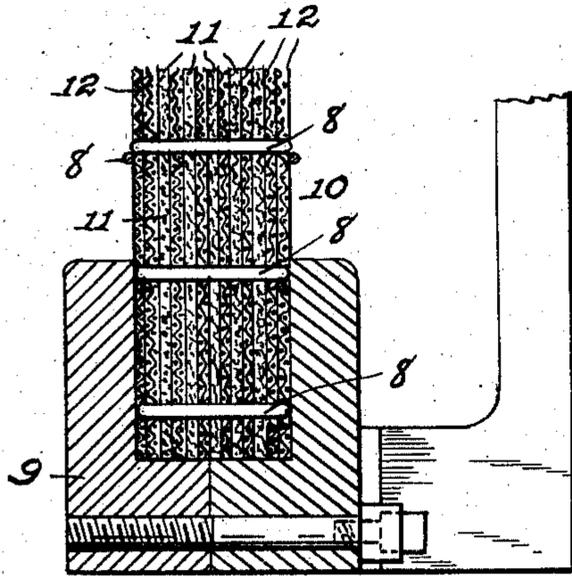
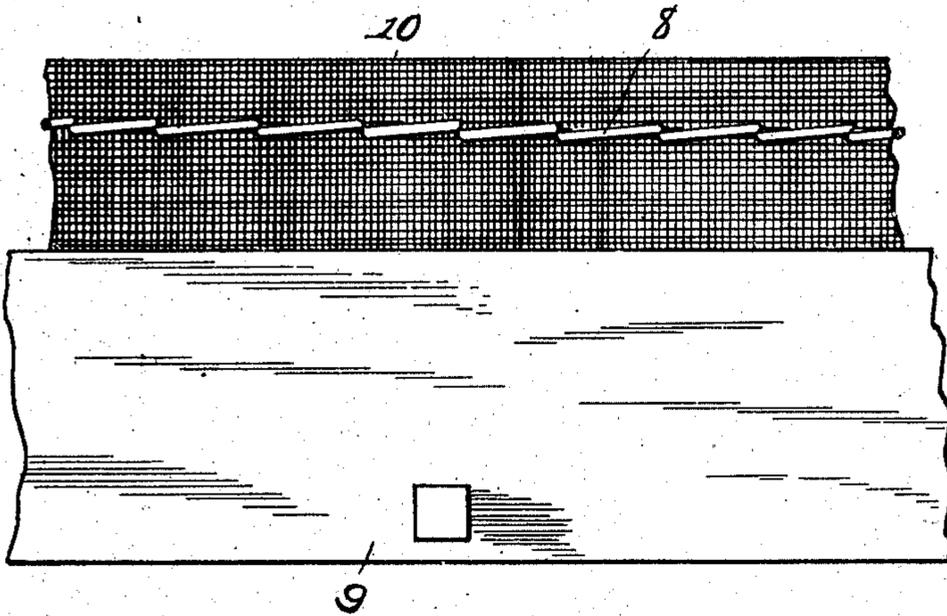


Fig. 3.



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ROLL-WIPER FOR TINNING-POTS.

No. 843,223.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed November 23, 1906. Serial No. 344,688.

To all whom it may concern:

Be it known that I, ARTHUR JAMES MASKREY, a citizen of the United States of America, and a resident of Chester, county of Hancock, and State of West Virginia, have invented certain new and useful Improvements in Roll-Wipers for Tinning-Pots, of which the following is a specification.

My invention relates to new and useful improvements in apparatus for reducing the metallic coating on tin and terne plates, and more particularly to a device for wiping and cleaning the rolls of tinning-pots; and it consists in the particular construction, arrangement, and combination of parts which will hereinafter be fully described.

In coating metal plates or sheets with tin under existing methods the plates or sheets are passed through a pot containing a molten body of tin submerged in a body of palm-oil, said sheets being carried through said pot by means of a series of rolls or sets of rolls. In passing through the pot said sheets are covered with a coating of the molten tin. The discharge-rolls of the pot are intended to squeeze from the sheet all possible superfluous coating, since the lighter the coating on the sheet the cheaper is the cost of production, owing to the high commercial value of said coating. The said discharge-rolls, however, become thickly coated with the molten metal from the sheets which pass therethrough, and the nip of the rolls also carries a small body of said molten metal. This results in giving the sheets as they pass through the rolls what may be termed a "second coating." Consequently a heavier coating is deposited on the sheet than is necessary or desirable. Furthermore, the metal which the sheet receives in the nip runs down the faces of the sheet and hangs in small globules along the lower edge thereof, and besides a much heavier coating is carried by the lower part of the sheet than by the upper part. This uneven coating is most undesirable, but hitherto has not been obviated.

In addition to the heavy and uneven coating carried by the finished plates produced in the manner hereinbefore described each plate as it emerges from the discharge-rolls is covered with innumerable minute granules which rise above the surface of the plate, readily discernible through a strong magnifying-glass, and which dull the brilliance of the plate, these granules—termed "scuff" or "scruff"—appearing to be in reality small

raised blisters. The surfaces of the discharge-rolls are also covered with this scruff and deposit a portion thereof on the sheets as they pass therethrough.

Now the object of my invention is to provide means for removing from the discharge-rolls all scruff and excess of metal which adheres thereto and for preventing the molten metal from being carried into the nip as well as preventing any scruff from being deposited on the sheets by the rolls. The removal of the scruff and superfluous metal from the discharge-rolls results in a finished plate being produced, having an even coating free from scruff, and therefore possessed of great brilliancy. Furthermore, because a much lighter coating is deposited on the sheet the cost of production is reduced. In addition to this, since no molten metal is carried into the nip the rolls may be operated at a much greater rate of speed without increasing the coating on the sheet than can at present be done. The result of this is a pronounced increase in production, or rather an increase in the capacity of the pot, or, if operated at the ordinary speed, there is a resultant reduction in the amount of the coating deposited on the sheets.

In describing my invention in detail reference is herein had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a longitudinal section of a tinning-pot equipped with the invention. Fig. 2 is a cross-section, enlarged, of a wiper; and Fig. 3 is a side elevation of a portion of the same.

Referring to said drawings, in which like reference-numerals designate like parts throughout the several views, 1 indicates the sides, and 2 the frame, of an ordinary tinning-pot, having a plurality of carrying-rolls 3 and a set of discharge-rolls 4, all arranged in the usual manner.

Against the under side of each of the discharge-rolls is adjustably supported in a suitable clamp 9 a longitudinal strip 10 of roll-wiping material, consisting of a plurality of layers 11 of heavy woven asbestos fabric and a plurality of layers 12 of fine wire-netting, said layers of wire-netting being interposed between the layers of asbestos fabric, and one or more layers of said wire-netting are mounted against the outer faces of the outer layers 11 of said fabric. The layers of fabric and netting are held edgewise by said

clamp, as shown. The wire-netting not only serves to scrape and wipe the rolls, but also serves to stiffen and strengthen the asbestos fabric, preventing the latter from breaking down under the pressure applied. To further strengthen said fabric, fine wires are preferably woven in with the asbestos strands or threads when the fabric is made.

The strips extend longitudinally the entire lengths of the rolls, and when properly adjusted wipe from the moving rolls the scruff and excess of molten metal, leaving said rolls bright and clean for engaging the faces of the metal sheets passing through the pot. This wiping keeps the rolls clean and prevents the rolls from carrying metal into the nip and also prevents said rolls from depositing scruff upon the faces of the sheets. The sheets are consequently not subjected to as heavy a coating as when they must pass through a body of molten metal in the nip, and they emerge from the rolls comparatively free from scruff.

The strip of roll-wiping material has its layers or sheets of asbestos fabric and wire-netting bound into a compact body by stitching or sewing the same together with wire 8, as shown in Figs. 2 and 3.

The clamps extend longitudinally across the pot parallel to the rolls and are adjustably supported at each end in any suitable manner. Said clamps hold the wiping material with the edges of the sheets or layers thereof presented to the rolls, as shown.

As is clearly apparent, wipers may be applied to any or all the sets of rolls in the pot, if desired.

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

1. The combination with the rolls of a tinning-pot, of wipers arranged adjacent to the surfaces of the rolls for removing the surplus molten metal therefrom, said wipers comprising a plurality of suitably-mounted sheets of woven asbestos fabric and sheets of wire-netting bound together.

2. The combination with the rolls of a tinning-pot, of wipers arranged adjacent to the surfaces of the rolls for removing the surplus metal therefrom, each of said wipers comprising a plurality of sheets or layers of woven asbestos fabric and sheets of wire-netting mounted with their edges presented to the rolls.

3. A device for removing surplus coating metal from the rolls of a metal-coating machine, consisting of a plurality of layers of woven asbestos fabric with layers of wire-netting interposed between them; substantially as described.

4. A device for removing surplus coating metal from the rolls of a metal-coating machine, consisting of a plurality of layers of

woven asbestos fabric strengthened by layers of wire-netting.

5. A device for removing surplus coating metal from the rolls of a metal-coating machine, consisting of a plurality of layers of asbestos with strengthening layers of wire-netting.

6. A device for removing surplus coating metal from the rolls of a metal-coating machine, consisting of a plurality of layers of woven asbestos fabric, layers of wire-netting interposed between said layers of fabric, and a holding-clamp for said layers.

7. A device for removing surplus molten metal from the rolls of a tinning-pot, consisting of alternate layers of asbestos fabric and wire-netting.

8. A device for removing surplus molten metal from the rolls of a tinning-pot, consisting of alternate layers of asbestos fabric and wire-netting stitched together into a compact body.

9. A device for removing surplus molten metal from the rolls of a tinning-pot, consisting of layers of asbestos fabric and wire-netting stitched together into a compact body, and a holding-clamp therefor.

10. A device for removing surplus molten metal from the rolls of a tinning-pot, consisting of a plurality of alternate layers of asbestos fabric and wire-netting bound together in a compact body.

11. A device for removing surplus molten metal from the rolls of a tinning-pot, consisting of a plurality of layers of asbestos fabric and wire-netting bound together in a compact body, and a holding-clamp therefor.

12. A device for removing surplus molten metal from the rolls of a tinning-pot, consisting of a plurality of layers of asbestos fabric, a plurality of layers of wire-netting, the layers of netting and fabric being bound together in a compact body and mounted with their edges presented to the rolls.

13. A device for removing surplus molten metal from the rolls of a tinning-pot, consisting of a holding-clamp, a plurality of layers of woven asbestos fabric, layers of wire-netting interposed between said layers of fabric, said wire-netting being adapted to strengthen the fabric, preventing it from breaking down under pressure, and being also adapted for wiping and scraping the rolls, said layers of fabric and netting being mounted in said clamp and presenting their edges to the rolls.

In testimony whereof I affix my signature in presence of two subscribing witnesses.

ARTHUR JAMES MASKREY.

Witnesses:

JOHN J. MARSHALL,
NICK CENULLEY.