

Nov. 13, 1928.

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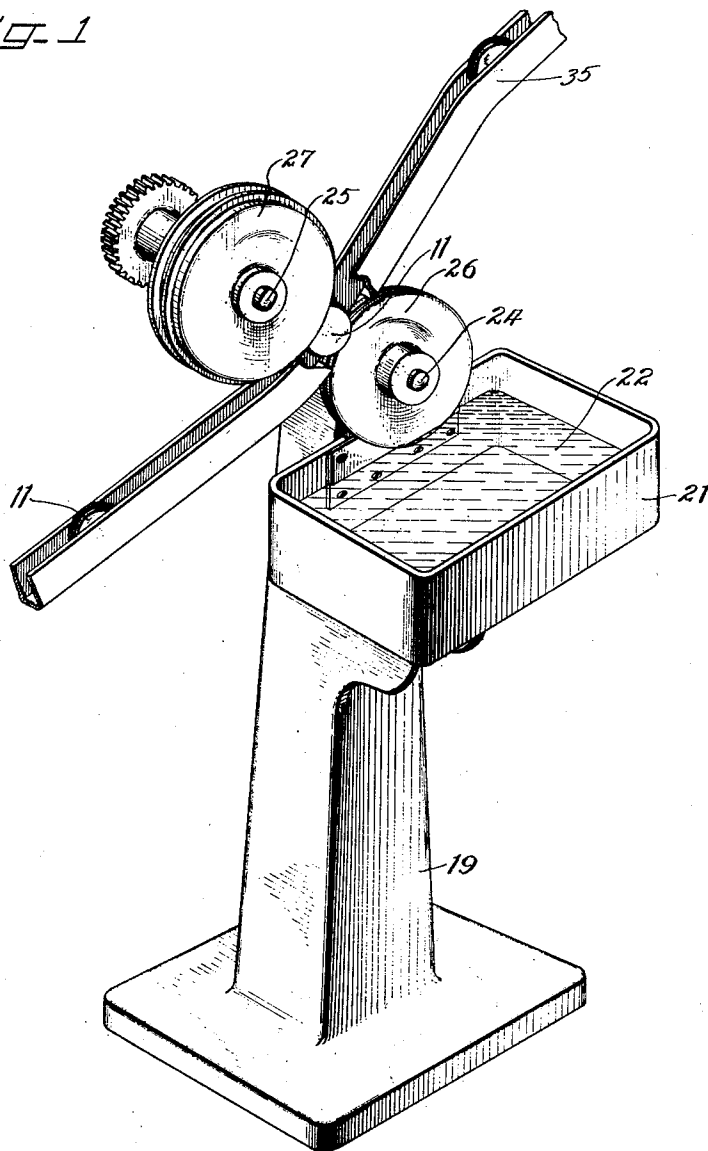
G. F. MILLER

SEALING OF SLIP COVER CANS OR CONTAINERS

Filed June 16, 1924

2 Sheets-Sheet 1

FIG. 1



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2 Sheets-Sheet 2

FIG. 2

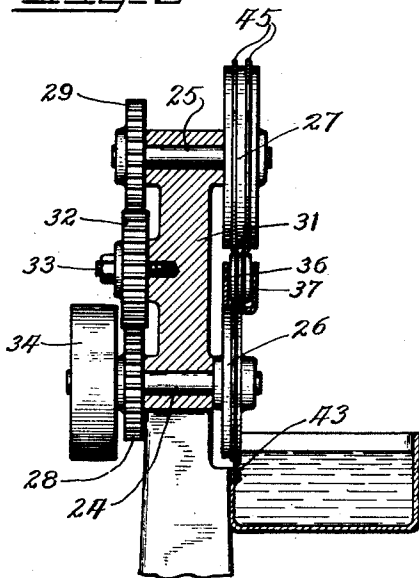


FIG. 3

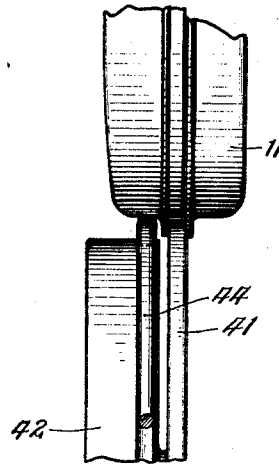


FIG. 4

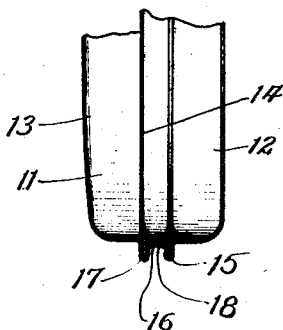
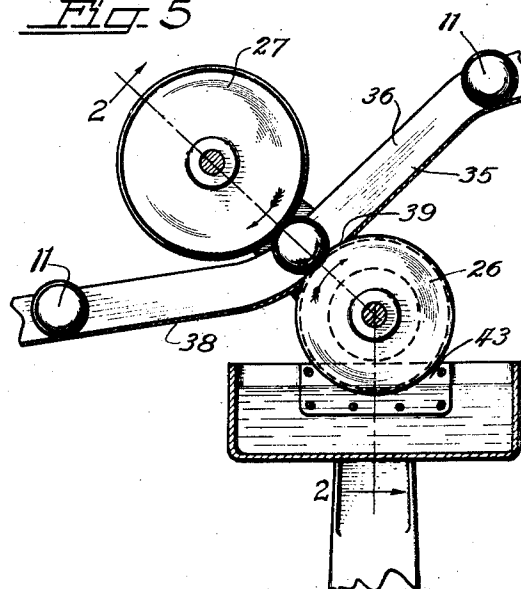


FIG. 5



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SEALING OF SLIP-COVER CANS OR CONTAINERS.

Application filed June 16, 1924. Serial No. 720,409.

This invention relates to the sealing of slip cover cans and containers and while the embodiment of it hereinafter described and selected for the purpose of illustration relates more particularly to the sealing of containers of the character provided for the packaging of shoe polish and the like where pryoff beads are provided, it will be readily understood that the invention has other and more general application with slight modifications in the apparatus.

Materials are frequently packed in slip cover cans which require exclusion of the air in order that the material may be kept in usable condition until in the hands of the consumer. Where the cans and bodies are made with new dies a sufficiently tight closure for this purpose is easily attained but with use such dies wear slightly with resultant loosening of the fit so that maintenance of die accuracy becomes a serious and expensive problem. Moreover, where such fit is provided difficulty of opening the container is appreciable even with coin pryoff beads or where other opening devices are provided.

My invention has for a principal object the provision of a simple apparatus for economically applying a sealing material to connect the edge of the cover flange with the body of the container, thereby permitting effective and complete hermetic closing of the can or container without requiring the tightness of fit generally required in cans or containers of this kind prior to my invention. In thus providing an effective closure with a looseness of fit, the manufacture of the can or container is greatly facilitated as is also the opening of the same in the hands of a consumer. My invention relates both to a new finished container and to the apparatus by which it is practiced.

Another important object of my invention is the provision of an apparatus for applying a sealing material to cans or containers of the type described above and of other types, which will be of simple construction, comprising few moving parts, of certain and full automatic operation.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the

accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawings,

Figure 1 is a perspective view of an apparatus embodying my present invention;

Fig. 2 is a section taken substantially on the line 2—2 of Fig. 5;

Fig. 3 is an enlarged fragmentary view showing the relation of the sealing material applying roll to the can in the material applying operation;

Fig. 4 is a partial section through a can embodying my present invention; and

Fig. 5 is a vertical section disclosing certain details of construction as will be later apparent.

A can embodying my invention from certain aspects is shown on the drawing in the preferred form in Figs. 3 and 4 and is generally indicated by reference character 11. It consists of a drawn body 12, a drawn cover 13 adapted to telescope in slip cover fashion. The edge flange of the body is bent in slightly as indicated at 14 and the body is provided therebeneath with the encircling flattened bead 15 which limits the telescoping or slip cover closing movement of the cover. The cover has a flange 16 adapted to fit over the flange 14 of the body and it also is provided with a flattened bead 17 which, with the bead 15, forms shoulders adapted to be engaged by a coin or other pryoff tool for opening the container. The beads 15 and 17 form a channel within which, when the container is closed, the flange edge of the cover is arranged.

In order that extreme tightness of fit needed to form a closure precluding escape of moisture and other volatile matter from the contents may not be required, I provide a sealing material 18 in this channel and covering the cover flange edge. This sealing material, which may be paraffine, cement or other substance adapted to set either upon cooling or upon the drying out of a solvent, is preferably applied in accordance with my invention with the preferred embodiment of the apparatus shown in Figs. 1 to 4 and 5. In these figures reference character 19 indicates a base of suitable form or construction which supports a tank 21 containing a bath 22 of sealing material. The base or frame extends up above this bath and provides

bearings for two shafts 24 and 25 on which are mounted respectively rolls or disks 26 and 27. The shafts 24 and 25 carry gear wheels or pinions 28 and 29 upon the opposite side of the frame part 31 in which the shafts are mounted. A pinion or gear 32 carried upon a stub shaft 33 is in mesh with the gears 28 and 29 so that the three gears constitute a train. A pulley 34 is or may be mounted on shaft 24 for actuating the rolls. A chute 35, comprising side walls 36 and 37 and bottom wall 38, is adapted to convey cans to and away from the entrained rolls 26 and 27. The chute bottom is cut away at 39 to permit the roll 26 to extend up into the chute. The roll 26 is the sealing material applying member and has a roll part 41 which extends down into the bath 22 of sealing material and close to a side thereof. A driving disk 42 is arranged upon the shaft 24 and close to the member 41 and if desired may be integral therewith at the hub. A thin wall part 43 is provided in the tank to extend between the roll 41 and the disk 42. This wall part excludes any material amount of compound from or wipes it from the outer sides of the roll 41, so that compound is not necessarily applied for the entire space between the two beads of the box but is substantially confined to the corner where is located the edge of the cover. The disk 42 is provided with a friction member 44 for engaging the can body or cover as shown in Fig. 3. From this figure it will be apparent that the roll applying member moves between the beads 15 and 17 so that the sealing material is there delivered and the disk 42 through its friction member 44 engages the can outside the channel formed by these beads. The roll 27, which is provided to insure rotation of the can body in contact with the roll 26 and to insure also a slow advance of the can body in engagement with the roll 26, is provided with two circumferential ribs 45 which engage the circumferential surfaces of the container upon opposite sides of the beads 17 and 15. The peripheral speed of the roll 27 is preferably greater than the peripheral speed of the roll 26 and this may be accomplished through the gearing or by

difference in roll diameters, the roll 27 being shown in the drawing as larger than the roll 26.

The cans ready for closing roll down the chute 35 and into engagement with the rolls 26 and 27. The roll 27 causes a spinning or revolving action of the can body in contact with the roll part 41 with the resultant application of the material across the cover flange edge throughout the entire circumference.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A compound applying machine for applying compound to closed beaded sheet metal boxes, having in combination an applying roll shaped to enter between the beads of the body and cover of the box, means for supplying fluid compound to said roll, an opposing roll, whereby the box is held between and rotated by said rolls, mechanism connected with the shaft of each of said rolls for rotating the same, and a chute having box guiding sides and extending to the space between said rolls in line with said applying roll.

2. A compound applying machine for applying compound to closed beaded sheet metal boxes, having in combination an applying roll shaped to enter between the beads of the body and cover of the box, means for supplying fluid compound to said roll, an opposing roll engaging the outer sides of said beads at the side of the box, whereby the box is held between and rotated by said rolls, mechanism connected with the shaft of each of said rolls for rotating the same, and a chute having box guiding sides and extending to the space between said rolls in line with said applying roll.

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