The invention relates to new and useful improvements in a machine for applying a sealing compound to a container end, and more particularly a container end which is irregular in contour, as for example, an end having straight sides and rounded corners or an end which is oval in contour.

An object of the invention is to provide a machine which is adapted to flow a measured amount of sealing compound into the channel of the can end and which is facing upwardly.

A further object of the invention is to provide a machine of the above type wherein the can end is clamped against its support by a channel engaging member shaped to conform to the channel of the can end and disposed so as to determine the outer limits of the coating as applied to the channel.

A still further object of the invention is to provide a machine of the above type wherein a measured amount of sealing material is caused to flow down the inner wall of the channel engaging member into the channel of the can end for coating the same.

Another object of the invention is to provide a machine of the above type with a means for stripping the sealing material from the inner wall of the channel member into the channel.

In the drawings, which show by way of illustration one embodiment of the invention,

Figure 1 is a view partly in section and partly in side elevation showing more or less diagrammatically the improved machine for applying a compound to the channel of a can end;

Figure 2 is a plan view of the same;

Figure 3 is a detail in section showing the can end clamped by the channel engaging member against the support therefor with the stripper in its lowered position;

Figure 4 is a view similar to Fig. 3, but showing the stripper as raised so that the sealing compound in the measuring pocket is permitted to flow along the inner wall of the channel engaging member into the channel of the can end; and

Figure 5 is a view similar to Fig. 4, but with the stripper lowered and the sealing compound stripped from the inner wall of the channel engaging member into the channel of the can end.

The machine for applying the compound to the channel of the can end includes a supporting frame 1 in which is mounted a reciprocating support 2 carrying a can end supporting pad 3. The supporting member 2 is mounted in a sleeve 2a carried by the frame. This supporting member 2 is connected by means of a bolt 8 to a lever 6 which in turn is pivoted at 7 to a supporting bracket. The lever 6 is slotted as indicated at 5, and the bolt 5 passes through said slot.

Any suitable mechanism may be provided for placing the can ends on the pad of the machine with the channel facing upward and for removing the same after the sealing compound has been applied thereto. The lever 6, when swung in a clockwise direction, will raise the can end to a coating position, and when swung in the opposite direction, the can end will be lowered to a position where it may be removed from the supporting pad. The pad is provided with a collar 3a which rests on the upper end of the sleeve 2a when in lowered position.

Mounted on the frame directly above the supporting pad for the can end is a cylinder 8 which is secured to the frame by suitable bolts 9. Said cylinder 8 is provided at the lower inner edge thereof with a depending channel engaging member 10. This channel engaging member 10 is shaped to conform to the channel of the can end which is to be coated. Said channel engaging member, when the can end is raised with the pad 3, enters the channel at the outer regions thereof, and it serves two functions: first, it clamps the end against the pad and it also removes any bends in the metal end due to the warping of the same. In other words, the upper face of the channel is reduced to the same level throughout for coating. Second, the channel engaging member will serve to limit the area of the channel to which coating is applied and insure that the coating shall be flowed against and cover the inner wall of the channel.

A short distance above this channel engaging member is a measuring pocket 11. Disposed within the cylinder 8 is a piston 12 which is adapted to be raised and lowered by a lever mechanism. Said lever mechanism includes a bar 13 mounted on a cross shaft 14. The bar is provided with a pin 18 which is adapted to engage an annular slot 16 in the piston 12. There is a parallel bar 17 attached to the shaft 14 and carrying a pin 18 which likewise engages said annular slot 16. These bars 13 and 17 are connected by a handle member 19.

Mounted on the bar 13 is a block 20 through which a bolt 21 passes. This bolt 21 is threaded into a bracket 22 carried by the frame. The bolt has a thread extending throughout the length thereof, and a stop nut 23 is adjustably mounted on the bolt and serves as a means for limiting the upward movement of the piston. There is a similar bolt 24 threaded into a bracket 25 carried by the frame which is likewise provided with a stop.
nut 26. By adjusting this nut 26, the downward movement of the piston can be regulated. The piston 12 is provided with a central passage 27 which connects with radial passages 28, 29. A pipe 29 is threaded into the upper end of the piston and serves as a means for supplying a sealing compound to the chamber formed by the passages 27 and 28. There is a channel 30 extending around the piston which connects the radial passages 28 so that the compound flowing into the passages 28 will fill this channel 30. When the parts are positioned as shown in Fig. 3, the sealing compound will flow from the channel 30 into the measuring pocket 14 and fill the same, and when the piston is raised to the position shown in Fig. 4, then the lower end of the piston is above the lower end of the pocket and the sealing compound in the pocket will flow therefrom and along the inner wall of the channel member into the channel of the end. The piston has a depending annular stripping member 31, the underface of which is preferably slightly concave as indicated at 32.

The operation of the compound applying machine will be briefly described. The piston is moved to the lower end of its stroke, uncovering the measuring pocket so that it is supplied with the coating compound. At this time, the pad is raised so as to bring the can end into contact with the channel engaging member 10. This channel engaging member is shaped to conform to the channel of the can end. The pad has a raised part which is also shaped to conform to the channel of the can end and serves as a positioning means so that the can end is properly positioned to receive this channel engaging member 10. When the channel engaging member 10 contacts the end, the end will be pressed firmly against the pad, thus removing any unevenness in the bottom of the channel due to warping of the end. In other words, as already noted, the bottom of the channel is leveled so as to insure that a uniform coating of a flowing compound can be obtained. After the end is firmly clamped against the channel engaging member, then the piston is raised to the position shown in Fig. 4. This uncovers the pocket and permits the sealing compound indicated at S to flow along the inner wall of the channel engaging member and into the channel. The channel engaging member defines the outer limits of the channel area to be coated and insures that the sealing material will be placed well back against the shoulder of the can end. After the sealing compound has flowed by gravity out of the measuring pocket, then the piston is lowered and the stripper 31 will strip the sealing material adhering to the inner wall of the channel member and force it into the channel of the can end. This stripper is limited in its downward movement as clearly shown in Fig. 5.

of the drawings. The downward movement may be so regulated that the sealing material discharged into the channel will be forced well back up along the heel or inner channel wall. After the stripper has been lowered in the foregoing manner stated, then the pad is lowered and the can end with the coating applied thereto is removed from the pad.

It is obvious that many changes in the details of construction may be made without departing from the spirit of the invention as set forth in the appended claims.

We claim:

1. A machine for applying a sealing compound to the channel of a can end comprising a support for the can end, a channel engaging member having a cylindrical inner wall and a projecting portion at its lower end adapted to contact with the can end and clamp said end against the support thereof, said channel engaging member having an annular recess in said inner face forming a measuring pocket for the sealing compound, a piston movable along said cylindrical wall of the channel engaging member, said channel engaging member having a supply chamber for the sealing compound above said piston, said piston being movable relative to the recess so as to connect the recess with the supply chamber on the down stroke of the piston and uncover the recess on the upstroke of the piston whereby the measured amount of sealing compound in the recess will flow along the inner wall of the channel engaging member over the supply chamber.

2. A machine for applying a sealing compound to the channel of a can end comprising a support for the can end, a channel engaging member having a cylindrical inner wall and a projecting portion at its lower end adapted to contact with the can end in the outer region of the channel and clamp said end against the support thereof, said channel engaging member having an annular recess in said inner face forming a measuring pocket for the sealing compound, a piston movable along said channel engaging member having a supply chamber for the sealing compound above said piston, said piston being movable relative to the recess so as to connect the recess with the supply chamber on the down stroke of the piston and uncover the recess on the upstroke of the piston whereby the measured amount of sealing compound in the recess will flow along the inner wall of the channel engaging member into the channel of the can end, said piston having a stripper depending therefrom and adapted to strip the sealing compound adhering to the inner wall of the channel engaging member for forcing the compound into the uncovered portion of the channel.

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