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C. McCROBA

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DEVICE FOR CLEANING THE GROOVES AND LIPS ON CAN OPENINGS AND LIDS

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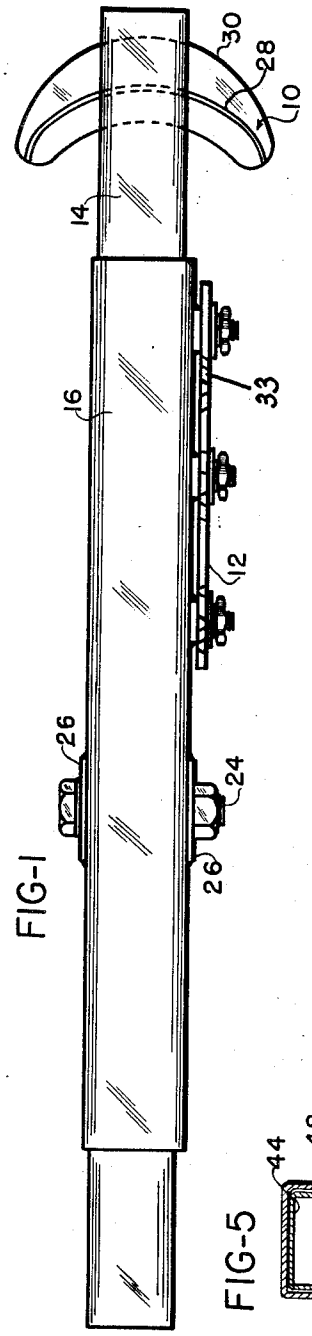


FIG-1

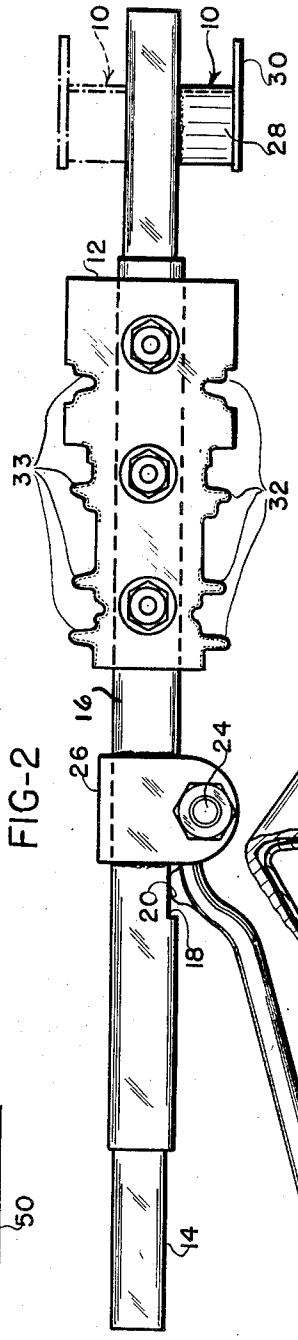


FIG-2

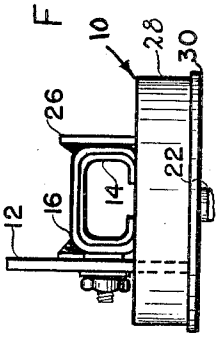


FIG-3

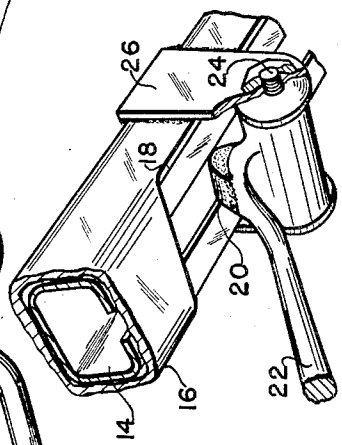


FIG-4

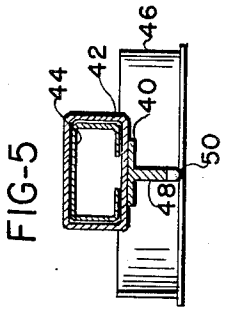


FIG-5

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DEVICE FOR CLEANING THE GROOVES AND LIPS ON CAN OPENINGS AND LIDS

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5 Claims. (Cl. 15—236)

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This invention relates to a cleaning tool, and particularly to a cleaning tool for cleaning out the grooves of paint cans and the like, and also for cleaning the lips extending around the lids for the cans whereby the cans can be tightly closed after having been opened.

In many shops, garages and the like, a great many paint jobs are carried out which require less than a full can of paint, or else a large can of paint may be opened and only a portion thereof used, the purchase of the large can being dictated by reasons of economy. In any case, it is practically impossible to use paint from a can, or to remove it therefrom without some paint getting into the grooves about the top of the can in which a mating tongue on the lid is adapted for seating in order to seal the can. Further, paints are many times shaken to bring them to a state of complete mixture by violently shaking the can while the lid is still in position. Under these circumstances, there is a film of paint on the lid which will run down on the sealing tongue when the lid is removed.

Due to the fact that the paint on the sealing tongue of the lid and on the groove about the top of the can is in the form of a fairly thin film it tends to dry out rapidly and after only a short time it will be found that it is not possible to replace the lid on the can in tight sealing engagement.

Paints and varnishes include highly volatile thinners and driers and even the smallest opening between the lid and the can will permit evaporation of the ingredients from the material within the can, thereby causing a change in the composition of the finish which might make it unsuitable for application without modification, or even entirely unsuitable for use.

In certain instances this evaporation could lead to the formation of a film on top of the finish remaining in the can, which not only represents a waste, but is not always easy to remove in its entirety and because of which there might be small particles left in the finish which would detract from any job on which the finish was employed.

Having the foregoing in mind, the primary object of the present invention is to provide a cleaning tool especially adapted for cleaning the grooves about the top of a paint can or the like, and also for cleaning the tongue extending about the lid of the can.

Another object of this invention is to make a tool of the type referred to above which is readily

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adjustable to substantially any size of commercial container.

A still further object is the provision of a tool of the nature described which is rapid in operation and which is extremely simple to use.

These and other objects and advantages will become more apparent upon reference to the following description taken in connection with the accompanying drawings in which:

Figure 1 is a plan view looking down on top of the cleaning tool, according to my invention;

Figure 2 is a side elevation of the tool;

Figure 3 is an end view thereof looking in from the right end of Figure 2;

Figure 4 is a fragmentary perspective view showing a part of the tool by means of which it can be locked in its adjusted positions; and

Figure 5 is a cross-sectional view showing a modified arrangement of the tool.

Referring to the drawings somewhat more in detail, the tool of this invention comprises a guide element 10 and a scraping element 12 supported for adjustment relative to each other so that guide element 10 can engage the edge of a can or lid while the scraping element is positioned to engage the sealing surface of the can or lid at a diametrically opposite point.

Numerous arrangements can be devised for adjustably supporting elements 10 and 12 in the described manner, but my preferred arranbement consists of mounting element 10 adjacent the end of a bar 14 and which bar is preferably hollow for reasons of economy and in order to lighten the tool, while the element 12 is mounted on another hollow member 16 surrounding bar 14 and within which the said bar is slidable.

Member 16 is preferably open as at 18 along at least a part of its lower surface in order to expose bar 14. A cam lock 20 having a handle 22 is pivoted as by bolt 24 between a pair of ears 26 dependent from the sides of member 16 in the region of the aperture 18. This cam lock is effective, when handle 22 is moved upwardly to its Figure 2 position, to lock members 14 and 16 rigidly together.

Guide element 10 preferably consists of an arcuate portion 28 extending vertically downwardly from beneath bar 14 and having a plate 30 secured to the bottom surface thereof which is arcuate along both edges and which projects both forwardly and backwardly from plate 10. By this arrangement the plate 30 can be engaged beneath the flange about the opening of a can to be cleaned, and the overhanging end of bar 14 will prevent the tool from becoming disen-

gaged from the said flange. The end of bar **14** and plate **30** together with arcuate portion **28** of the guide element form a guide notch for receiving the edge about the opening of a can to be cleaned.

With guide element **10** so engaged with the flange of the paint can, member **16** is moved along bar **14** until the proper one of the several shaped scraping surfaces **32** formed thereon is aligned with the surface to be cleaned. Thereafter, bar **14** and member **16** are locked together by operation of lever **22**, and the cleaning of the surface can take place by holding the end of the cleaning tool in one hand while rotating the can by the other hand. In order to facilitate the cleaning of the surface, the shaped scraping portions **32** of scraping element **12** are preferably somewhat relieved by beveling as indicated in Figures 1 and 2, but it will be understood that this particular feature is not essential to the operation of the tool.

As illustrated in Figures 1, 2 and 3, the scraping element **12** is mounted on one side of member **16**, and in order to provide for the proper cutting action for both directions of rotation of the can being cleaned, the said scraping element preferably has other formed surfaces thereon as at **33** along the upper edge so that the tool can be used as illustrated in full lines in Figure 2, by a left-handed person and for a right-handed person, the bar **14** is removed and rotated on its axis by 180° and then reinserted in member **16** so that guide element **10** occupies the dot-dash position illustrated in Figure 2.

For cleaning can lids, the outermost edge of plate **30** can be availed of to provide a guiding of the tool about the can lid by engaging the inside of the tongue of the can lid. However, a preferred practice is to insert the edge of the can lid behind plate **28** on the scraping element side thereof and between the rear part of plate **30** and bar **14**, and which positioning of the can lid, because of the guide notch between bar **14** and plate **30**, will prevent its becoming dislodged from the cleaning tool during a cleaning operation.

In Figure 5, I illustrate a modification having certain advantageous features in that the cleaning element consists of a T-shaped member **40** dependent from the outer portion **42** of the handle which has slidably mounted therein, the inner portion **44** having secured thereto the guide element **46** in the same manner described in connection with guide element **10** and bar **14**.

T-shaped member **40** has a central dependent leg **48** on the center line of member **42** and the lower edge of this leg has shaped portions **50** adapted for engagement with the surfaces to be cleaned.

The Figure 5 modification can be used in all instances that the first modification can be used and is adapted for either right or left-handed operation without adjustment.

It will be understood that this invention is susceptible to modification in order to adapt it to different usages and conditions, and accordingly, it is desired to comprehend such modifications within this invention as may fall within the scope of the appended claims.

I claim:

1. In a cleaning tool of the nature described; handle means comprising a pair of telescopic members, a guide element secured adjacent the end of one of said members and comprising a plate dependent therefrom and arcuate in the direction of its length and having a plate arcuate in outline secured to the lower edge thereof, a scraper element secured to the other part of the handle comprising a flat plate extending in the direction of the length of the handle and having at least one edge shaped to form scraping surfaces thereon, and means for clamping the parts of said handle in any desired position of telescopic adjustment.

2. In a cleaning tool of the nature described; a hollow outer handle part, an inner handle part slidable within the said outer handle part, a curved plate secured adjacent one end of said inner handle part and projecting downwardly therefrom, a flat plate arcuate in outline secured between its side edges to the bottom edge of said curved plate, thereby forming a guide element defining guide notches with said inner handle part on opposite sides of said curved plate, a scraping element secured to said outer handle part, and having a part dependent from said outer handle part with its edge formed to define a plurality of cleaning edges adapted for engagement with the grooves of paint cans and with the tongues of the lids thereof, and means for clamping said handle parts in any desired position of telescopic adjustment.

3. In a cleaning tool of the nature described; a hollow outer handle part, an inner handle part slidable within the said outer handle part, a curved plate secured adjacent one end of said inner handle part and projecting therefrom at right angles to the axis of the handle part, a flat plate arcuate in outline secured between its edges to the bottom edge of said curved plate, thereby forming a guide element defining guide notches with said inner handle part on opposite sides of the curved plate, a scraping element secured to said outer handle part, and having a portion dependent from said outer handle part with its edge formed to define a plurality of cleaning edges adapted for engagement with the grooves of paint cans and with the tongues of the lids thereof, and means for clamping said handle parts in any desired position of telescopic adjustment, said scraping element being secured to one side of said outer handle part and also having a portion extending upwardly from the said outer handle part having its edge formed to the same shape as the edge of the portion that is dependent from said outer handle part.

4. In a cleaning tool of the nature described; a hollow outer handle part, an inner handle part slidable within the said outer handle part, a curved plate secured adjacent one end of said inner handle part and projecting downwardly therefrom, a flat plate arcuate in outline secured to the bottom edge of said curved plate, thereby forming a guide element defining guide notches with said inner handle part, a scraping element secured to said outer handle part, and having a leg dependent from said outer handle part with its edge formed to define a plurality of cleaning edges adapted for engagement with the grooves of paint cans and with the tongues of the lids thereof, and means for clamping said handle parts in any desired position of telescopic adjustment, said cleaning element comprising a T-shaped member secured to the underneath side of said outer handle part.

5. In a cleaning tool of the nature described; a tubular outer handle part, an inner handle part slidable within said outer handle part, a curved plate secured to said inner handle part inwardly from one end thereof and projecting down-

wardly therefrom, a flat plate secured to the bottom edge of said curved plate and projecting both forwardly and backwardly therefrom and being arcuate in outline whereby said plates form a guide element defining notches on both sides thereof with the said inner handle part for engagement with the outer periphery of a lid to be cleaned or for engagement with the inner periphery of the flange about the opening of a can to be cleaned, a scraping element secured to said outer handle part and having a portion dependent therefrom with an edge formed to define a plurality of cleaning edges adapted for engagement

with the grooves of paint cans or with the tongues of the lids thereof, and means for clamping said handle parts in any desired position of telescopic adjustment.

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