March 13, 1951 E. F. McGEADY 2,545,293

CAN DRAINING MACHINE

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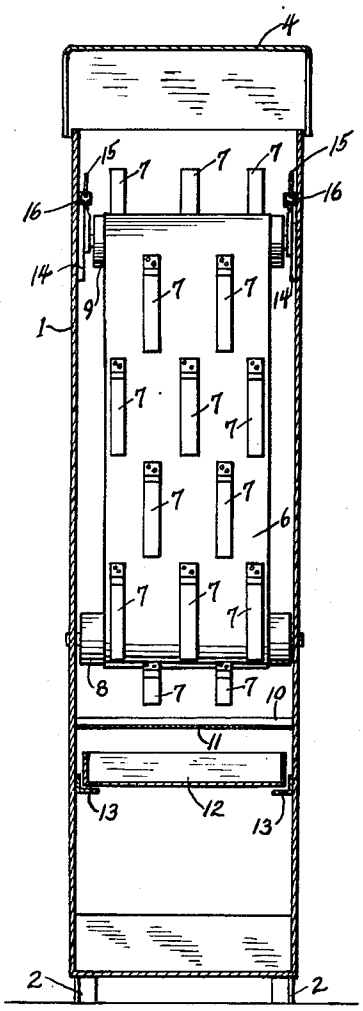


Fig. 3

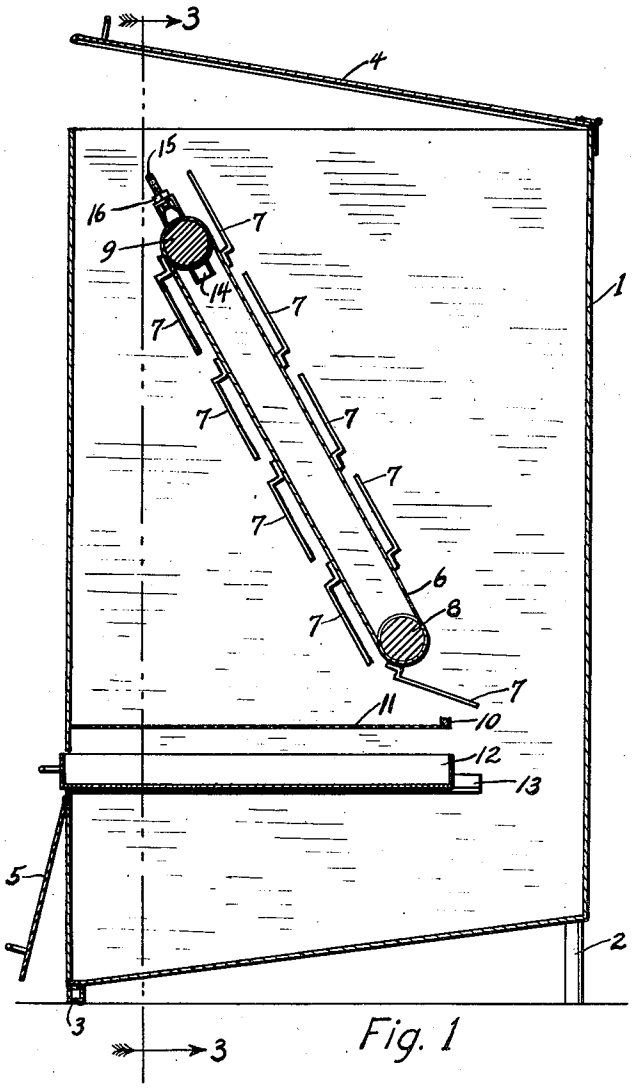


Fig. 1

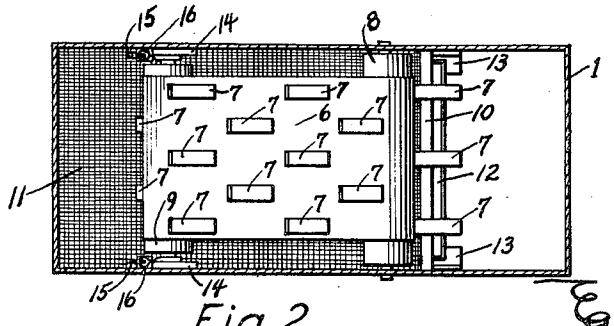


Fig. 2

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CAN DRAINING MACHINE

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3 Claims. (Cl. 222—112)

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This invention relates to a hand operated drain for cans.

In the opening of tin cans especially in service stations where the tin cans are used for oil, the oil is poured into the motor crank case but a large portion of oil still remains adhering to the can and that oil is frequently thrown away because it does not appear to be good practice to the patrons of the establishment to drain it out. This invention relates to a closed drain which will be concealed from the patrons and yet the oil be salvaged in a most satisfactory manner. The invention is directed to a hand operated machine involving relatively few moving parts and those few parts are so simple in construction that they do not get out of order readily.

The draining device consists primarily of an endless belt mounted on spaced rollers and positioned at an incline inside a cabinet. The belt has horizontal rows of hooks which are preferably staggered in adjacent vertical rows on which the cans are placed in an inverted position, the hook entering the top of the can, after inversion, through the hole made for pouring the oil from the can. The staggering of hooks in adjacent vertical rows largely prevents the oil from an upper can draining upon the outside of a lower can. The oil drains from the cans and the conveyor into a tray after passing through a screen to take out impurities. The tray may be readily removed for collecting the salvaged oil. Cans are placed in horizontal rows on the top row of hooks on the conveyor and as successive cans are placed on successively appearing hooks, as they round the top roll, the cans are pushed down, thereby pushing the conveyor down so that successive cans may be placed in rows on the conveyor. The conveyor is made adequately long to hold several rows of cans so that they will have time to drain completely before they are dropped from the hooks by their inversion at the lower run of the conveyor. The screen and tray in which the oil is collected are spaced from the back of the cabinet containing the conveyor so that the dropped cans may fall through this space and roll down the inclined bottom of the cabinet and be withdrawn from a lower opening in the cabinet. The conveyor is also equipped with a belt tightener so that it will move only under pressure of the operator pushing the cans and hooks down when adding a can to the line. The conveyor is so tightened as to prevent the cans themselves from pushing the conveyor down. The inversion of the hooks as they round the lower roller also serves to drain the oil from the conveyor and the hooks.

Other objects and advantages of the draining device will be apparent from the following description and the accompanying drawing forming a part thereof and in which:

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Figure 1 is a vertical side sectional view through the machine.

Figure 2 is a top plan view of the machine with the cover removed.

Figure 3 is a vertical sectional view taken on line 3—3 of Figure 1.

In the drawings similar numerals refer to similar parts throughout the several views.

The cabinet 1 has rear legs 2 and short forward legs 3 and a cover 4 which may be hinged as shown. Likewise it has a front lower door 5 hinged as shown for the removal of empty cans.

An endless conveyor belt 6 preferably of canvas has riveted thereon several horizontal rows of hooks 7. Vertically these hooks are staggered in their respective rows as shown in Figure 3 so that the cans will not interfere with one another in their positioning upon the hooks and also so that the oil will not drain immediately from an upper can upon a lower can.

The belt 6 is mounted on lower rear roll 8 and upper forward roll 9 in the cabinet. As cans are placed on the hooks 7 at the top, successively the hooks through movement of the conveyor are moved down until they round the lower roll 8 and with the inversion of the hooks and cans, the cans fall and are kicked off the hooks by the tripper bar 10, from which they fall to the lower forwardly downwardly sloping bottom of the cabinet and they may be removed from the cabinet through the door 5.

The oil from the cans and belt drains through the screen 11 to the tray 12 mounted on slides 13 on the inner sides of the cabinet. Channels 14 are on each side, inside, of the cabinet and they support the screw headed sliding socket plates 15 which may be pulled vertically by nuts 16, the roll 9 being mounted on the sliding socket plates 15 so that tightening of the nuts 16 tightens the belt and slows down the movement of the belt around the rolls 8 and 9.

From this detailed description it will be apparent that a most simple draining device for draining adhering oil from cans has been produced on which the cans remain for a long enough period to drain all the oil from them and which oil may be cleaned and salvaged through means of the screen 11 and drawer 12. Since the draining device is enclosed in the cabinet there will be no embarrassment to the garage or service station management for saving this oil and the amount saved will be considerable in a day's operation.

It will be apparent that many changes may be made in the draining device above described in detail without departing from the invention of the following claims.

What is claimed as new and is desired to be secured by Letters Patent is:

1. A cabinet having a forwardly sloping bottom

and a horizontally extending tray spaced from the bottom, a drain for oil cans comprising a pair of vertically spaced horizontally positioned pivoted rolls, the upper roll being forward of the lower, an endless belt around said rolls adapted to be moved therearound, spaced longitudinally positioned hooks on both runs of said belt, the hooks being positioned to present upwardly projecting free ends on the rear rearwardly sloping run of the belt surface in all positions of movement of the belt around the rolls, cans being adapted to be turned with their open ends down and hung over said hooks to drain into the tray, the tray being spaced from the rear end of the cabinet to allow cans to pass thereby upon falling from the hooks upon the inversion of the hooks as they pass around the lower roll, and to slide to the front of the cabinet.

2. A drain for oil cans comprising a pair of vertically spaced horizontally positioned pivoted rolls, the upper roll being forward of the lower, an endless belt around said rolls adapted to be moved therearound, spaced longitudinally positioned hooks on both runs of said belt, the hooks being positioned to present upwardly projecting free ends on the rearwardly sloping run of the belt surface in all positions of movement of the belt around the rolls, cans being adapted to be turned with their open ends down and hung over said hooks, to drain, a tray beneath the drain to catch the oil from the inverted cans, and a strainer above the tray, to withhold impurities from the tray, the hooks being turned upside down as they round the lower roll, thereby dropping the cans therefrom, and the inverted hooks draining oil retained on them and the belt and lower roll into the tray.

3. A drain for oil cans comprising a pair of vertically spaced horizontally positioned pivoted rolls, the upper roll being forward of the lower roll, an endless belt around said rolls adapted to be moved therearound, horizontally spaced longitudinally positioned hooks on both runs of said belt, the hooks being positioned to present upwardly projecting free ends on the rear rearwardly sloping run of the belt surface in all positions of movement of the belt around the rolls, the hooks in adjacent horizontal rows being vertically staggered to receive inverted cans thereover without interference with cans on adjacent horizontal rows, and means to regulate the tension on the belt to restrain the movement of the belt, such movement being adapted to be imparted by the impact of the cans on the hooks upon their insertion thereover after being inverted.

EDWARD FRANCIS McGEADY.

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