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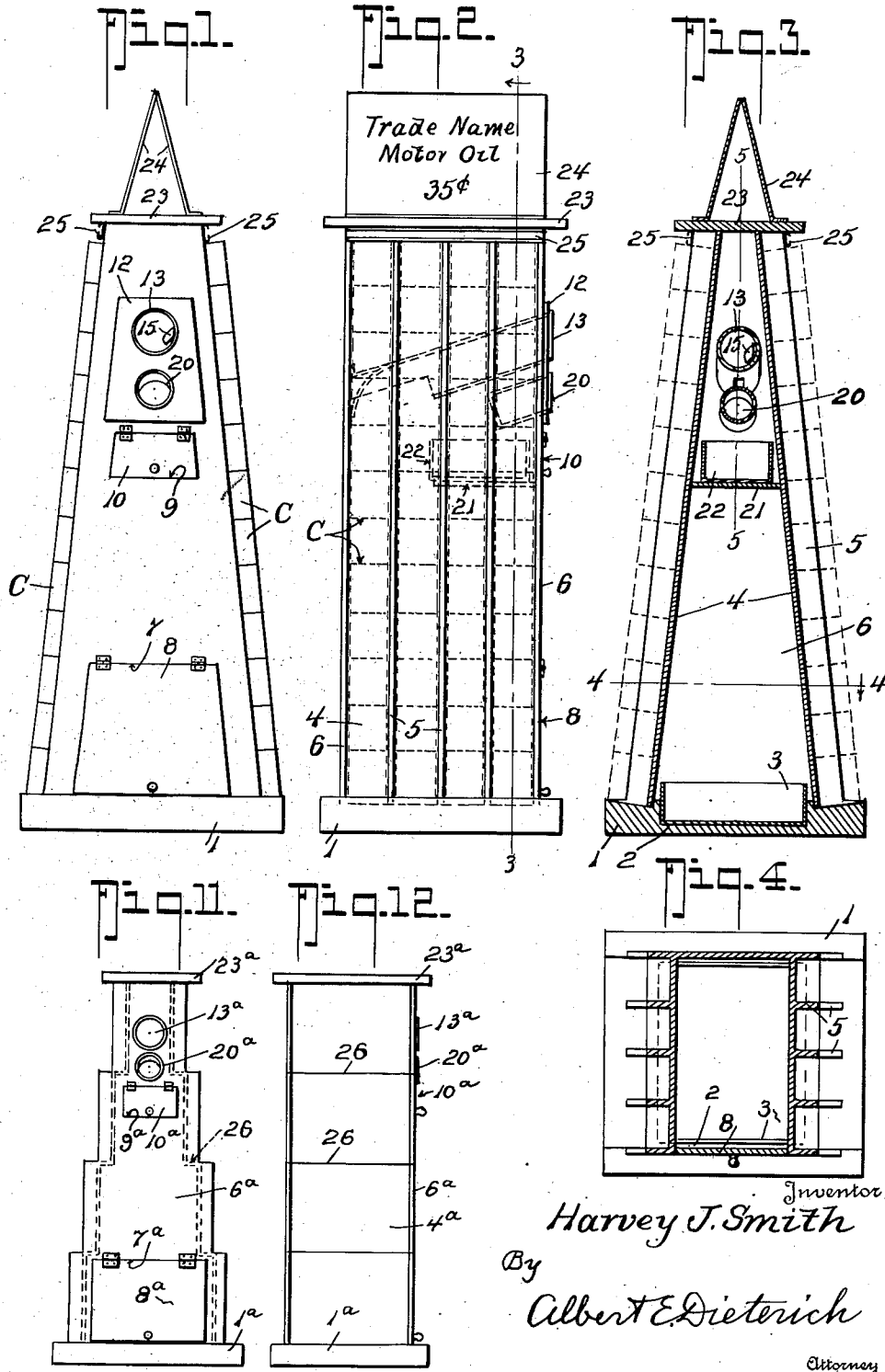
H. J. SMITH.

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COMBINED DISPLAY RACK, OIL SAVER AND WASTE CAN RECEPTACLE

Filed Sept. 19, 1940

2 Sheets-Sheet 1



Inventor
Harvey J. Smith
By
Albert E. Dieterich
Attorney

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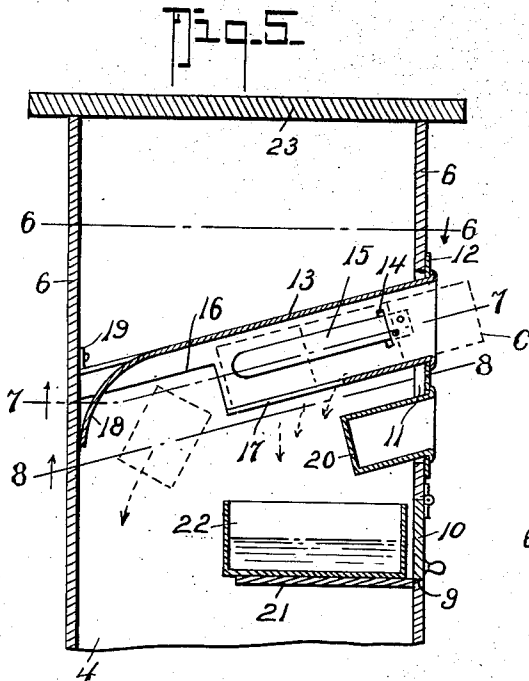
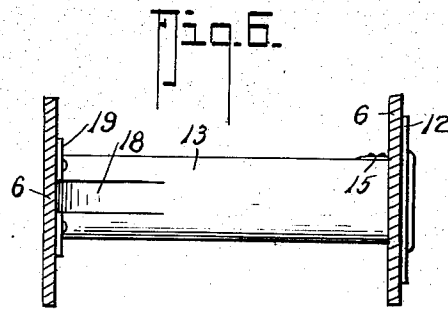
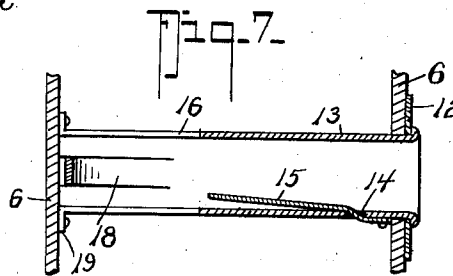
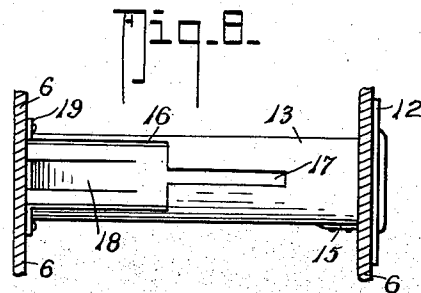
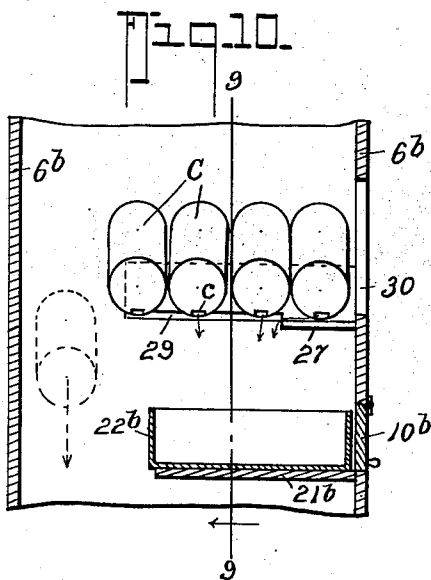
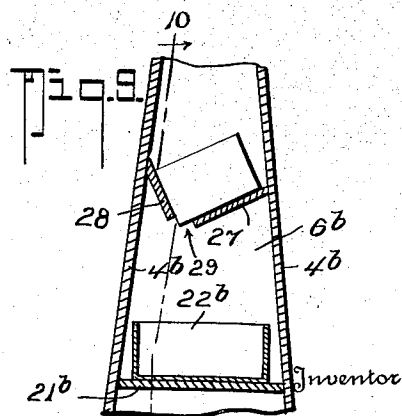
H. J. SMITH

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COMBINED DISPLAY RACK, OIL SAVER AND WASTE CAN RECEPTACLE

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Harvey J. Smith

By *Albert E. Dieterich*
Attorney

UNITED STATES PATENT OFFICE

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COMBINED DISPLAY RACK, OIL SAVER, AND
WASTE CAN RECEPTACLEHarvey J. Smith, Danville, Va., assignor to
W. Ira Barker, Danville, Va.

Application September 19, 1940, Serial No. 357,475

8 Claims. (Cl. 221-69)

My invention relates to racks for displaying oil cans at garages, filling stations etc.

Heretofore inclined boards have been set together in inverted V formation and provided with shelf like supports on which, in parallel rows, cans of oil have been stacked for display purposes. My invention seeks to improve such display racks and at the same time provide therein means whereby oil from "empty" cans can be recovered or saved.

The invention also has for an object to provide a more attractive display of the oil cans and to provide for their arrangement in orderly fashion according to the respective S. A. E. rating of their contents, and to provide means whereby the weights of oil can be easily seen.

Further, it is an object to provide an attractive waste receptacle for disposal of empty cans.

Again, it is an object to provide a means for draining the "empty" cans of oil as the cans are placed in the receptacle.

Another object is to provide a definite place for the can opener (usually a detachable can penetrating spout device), where it can be placed by the attendant almost automatically after he removes it from the can prior to placing the can in the receptacle.

Other objects will in part be obvious and in part be pointed out hereinafter.

To the attainment of the aforesaid objects and ends the invention still further resides in the novel details of construction, combination and arrangement of parts, all of which will be first fully described in the following detailed description, and then be particularly pointed out in the appended claims, reference being had to the accompanying drawings, in which:

Fig. 1 is a side elevation of a combined display rack, waste can receptacle and oil saver, embodying my invention.

Fig. 2 is a front elevation of the same, the displayed cans being indicated in dotted lines in this figure.

Fig. 3 is a vertical section on the line 3-3 of Fig. 2.

Fig. 4 is a horizontal section on the line 4-4 of Fig. 3.

Fig. 5 is an enlarged detail vertical section on the line 5-5 of Fig. 3.

Figs. 6, 7 and 8 are detail sections on approximately the lines 6-6, 7-7 and 8-8 respectively of Fig. 5 looking in the direction of the arrows.

Fig. 9 is a section on the line 9-9 of Fig. 10, of a modified form.

Fig. 10 is a section on the line 10-10 of Fig. 9.

Fig. 11 is an end elevation of a slight modification of the receptacle of Fig. 1.

Fig. 12 is a front elevation of the same.

In the drawings in which like numbers and letters of reference indicate like parts in all the figures, 1 is a base to which is suitably secured the upwardly inclined front and back walls 4, forming an inverted V, and the end walls 6. The base 1, walls 4 and 6 and the top or cap 23 enclose a chamber which houses the oil saver instrumentalities and serves as a receptacle for waste cans.

The walls 4 are preferably provided with ribs or partitions 5 and the end walls project beyond the walls 4, to provide a plurality of vertical grooves in which cans C are stacked for display purposes, all cans in a given stack containing oil of the same rating or weight as S. A. E. 20, or S. A. E. 30, etc., and at the top of the stacks below the cap 23, I locate grooved members 25 into which a strip, (not shown) containing the numbers corresponding to the ratings of the oil in the cans of the several stacks, is placed for convenient reference.

At the bottom an end wall 6 has an opening 7 closed by a door 8 through which a waste pan 3, in which waste cans are received, may be inserted and removed.

The end wall also has an intermediate opening 9, also closed by a door 10, through which an oil collecting pan 22 may be inserted and removed, a shelf 21 being provided for the pan 20 to sit on. Above the opening 9 is another opening 11 over which a face plate 12, which carries the can chute 13 and the can opener receiving cup 20, is suitably secured.

Referring now more particularly to Figs. 5 to 3 inclusive, it will be seen that the chute 13 is made (preferably) of a tube which has a flange 19 for securing to the opposite end wall 6. The tube is downwardly inclined from the entrant end and the lower portion is cut away as at 16 to provide a discharge opening or outlet for the drained cans. The tube 13 also has an oil drainage slot 17 through which the oil drops into the oil pan 20.

Further, the tube 13 is slit to provide a tongue 18 which is curved downwardly and serves as a deflector to ensure that the cans will drop down properly when they are passed to the discharge opening at 16.

In order that the cans may not gravitate toward the discharge opening at 16, a suitable restraining device is provided. This device may be a friction device, and as shown in Figs. 5 and 7 preferably consists of a leaf spring 15 secured

to the outside of the tube 13 and passed through a slot 14 in its wall into the tube so as to engage the cans sidewise. As will be seen by reference to Fig. 5, the inside diameter of the chute 13 is greater than the outside diameter of the cans to be drained. The spring finger 15, it will be observed, is secured in the chute adjacent the entrant end thereof, while the free end of the finger is remote from the entrance to the chute. By virtue of this construction the finger 15 will push the forward can (when two cans are in the chute) to one side sufficiently to prevent axial alignment of the two cans and thus prevent the first can acting as a cover or lid for the second can, which would prevent proper drainage of the second can while the two cans are in the chute.

On the cap 23 may be placed suitable display signs 24 bearing the trade names or marks or the oils and the prices of the same, or any other desired matter. Since these signs also are inclined upwardly toward each other, they are substantially symmetrical with the walls 4.

In using embodiment of the invention shown in Figs. 1 to 8 inclusive, the used cans are placed in the tube 13 end to end with their openings at the lowest level. As a second can is inserted, it pushes the one ahead down the chute until finally a can reaches the discharge opening at 16 where it drops down into pan 22. In the meantime, while the cans are in the chute, the oil drains from them and drops through slot 17 into oil pan 22 and is saved.

The number of cans that may be retained in the chute 13 is optional, and will depend on the size the apparatus is built.

In Figs. 11 and 12 is shown a slight modification of the form of the display rack portion of the invention. In this form, all parts which correspond to like parts in Figs. 1 to 8 bear the same reference number plus the index letter *a*, and further description thereof is not necessary here.

In this form, the front and back walls 4^a are stepped as at 26 and the partitions are omitted. The cans (not shown) are stacked on the several steps in parallel vertical rows as before.

In Figs. 9 and 10 is shown another embodiment of the invention. In this form, a rollway or slideway 27 is provided extending inwardly from one end wall 6^b toward the other for a sufficient distance to hold two or more cans side by side. This shelf is inclined downwardly from a back wall 4^b to where it meets a downwardly inclined can and engaging plate or board 28, there being a slot 29 provided between the slideway 27 and plate 28 for oil drainage.

In this form of the invention, the cans are inserted through an opening 30 and placed side by side with their opening *c* at the lowest point. As a can is pushed to the end of the slideway, it drops down into the waste pan (not shown) beneath.

In Figs. 9 and 10 those parts which correspond to like parts in the preceding figures bear the same reference number plus the index letter *b*, so a repetition of the description thereof is thought to be unnecessary here.

While I have shown several embodiments of my invention, I wish it understood that other modifications and changes can readily be made by those skilled in the art within the scope of the invention and the appended claims.

From the foregoing description taken with the accompanying drawing, it is thought the con-

struction, operation and advantages of my invention will be clear to those skilled in the art.

What I claim is:

1. In apparatus of the character described, a receptacle having front, back and side walls, a chute entering through one of said walls and extending toward the opposite wall for receiving and retaining, seriatim, at the same time, a plurality of empty oil cans to drain the same, and means to receive the oil drained from said cans.

2. In apparatus of the character described, a receptacle having front, back and side walls, means including a chute entering through one of said walls and extending toward the opposite wall for receiving and retaining, in succession, at the same time, a plurality of empty oil cans to drain the same, and means to receive the oil drained from said cans, means to retain the cans while draining in said chute, said receiving means and said retaining means being constructed to permit the cans to be moved through said chute by the insertion of a succeeding can against a preceding can, and the first can in the series being dischargeable in the same manner.

3. In apparatus of the character described, a receptacle having front, back and side walls, means entering through one of said walls and extending toward the opposite wall for receiving, seriatim, empty oil cans to drain the same, and means to receive the oil drained from said cans, said can receiving and draining means including a tubular chute into which the cans are inserted end to end, said chute having an oil discharge slot and a can discharge opening beyond the oil discharge slot, said chute being downwardly inclined from its entrant to its exit end, and means at said exit end to deflect the cans downwardly.

4. In apparatus of the class described, a receptacle having front, back and side walls and a base and enclosing a chamber, one of said walls having an opening, a tubular chute within said chamber, the outer end of which chute lies in said opening, means securing the inner end of said chute to the wall opposite that having the opening, said chute being inwardly-downwardly inclined and constructed to receive cans end to end seriatim, said chute having an oil discharge slot and having a can discharge opening, the latter being located between said slot and the extreme inner end of the chute, and an oil collection receptacle located beneath the slotted portion of said chute and spaced from said opposite wall to permit discharge cans from the chute to fall down past the receptacle.

5. In apparatus of the class described, a receptacle having front, back and side walls and a base and enclosing a chamber, one of said walls having an opening, a tubular chute within said chamber, the outer end of which chute lies in said opening, means securing the inner end of said chute to the wall opposite that having the opening, said chute being inwardly-downwardly inclined and constructed to receive cans end to end seriatim, said chute having an oil discharge slot and having a can discharge opening, the latter being located between said slot and the extreme inner end of the chute, and an oil collection receptacle located beneath the slotted portion of said chute and spaced from said opposite wall to permit discharged cans from the chute to fall down past the receptacle, said chute having a can deflecting element at its inner end.

6. In apparatus for draining cans, a receptacle

having two oppositely disposed upright walls, a tubular chute transversely disposed in the receptacle between said walls and having an entrance through an opening in one of said walls, said chute being of an internal diameter in excess of the external diameters of the cans to be drained, said chute being of a length to hold at least two cans end to end while draining, means in said chute for holding the cans out of axial alignment whereby a can will be offset with respect to the next following can in the chute, said chute having an oil discharge opening and a can discharge opening, and means separately to receive the drained oil and cans.

7. In apparatus for draining cans, a receptacle having two oppositely disposed upright walls, a tubular chute transversely disposed in the receptacle between said walls and having an entrance through an opening in one of said walls, said chute being of an internal diameter in excess of the external diameters of the cans to be drained, said chute being of a length to hold at least two cans end to end while draining, a spring finger secured in said chute and held with

its free active end remote from the entrance of the chute by virtue of which the forward can in the chute will be caused to be axially disaligned with the next succeeding can in the chute, said chute having oil and can outlets, and means separately to receive the oil and cans.

8. In apparatus of the character described, a receptacle including two opposed upright walls, a tubular chute transversely located between said walls and having an entrant end opening through one of said walls, said chute being of a greater cross section than that of the cans to be drained, said chute having a can discharge opening remote from its entrant end and having an oil draining opening, a spring finger mounted at one side of and within the chute, the free end of said finger being remote from the entrance of the chute by virtue of which when two cans are in the chute the forward can will be held out of axial alignment with the second can, and means separately to collect the oil and drained cans passed from the chute.

HARVEY J. SMITH.