Dec. 9, 1947. H. J. SMITH 2,432,455

COMBINED DISPLAY RACK, OIL SAVER, AND WASTE CAN RECEPTACLE

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Fig. 1.

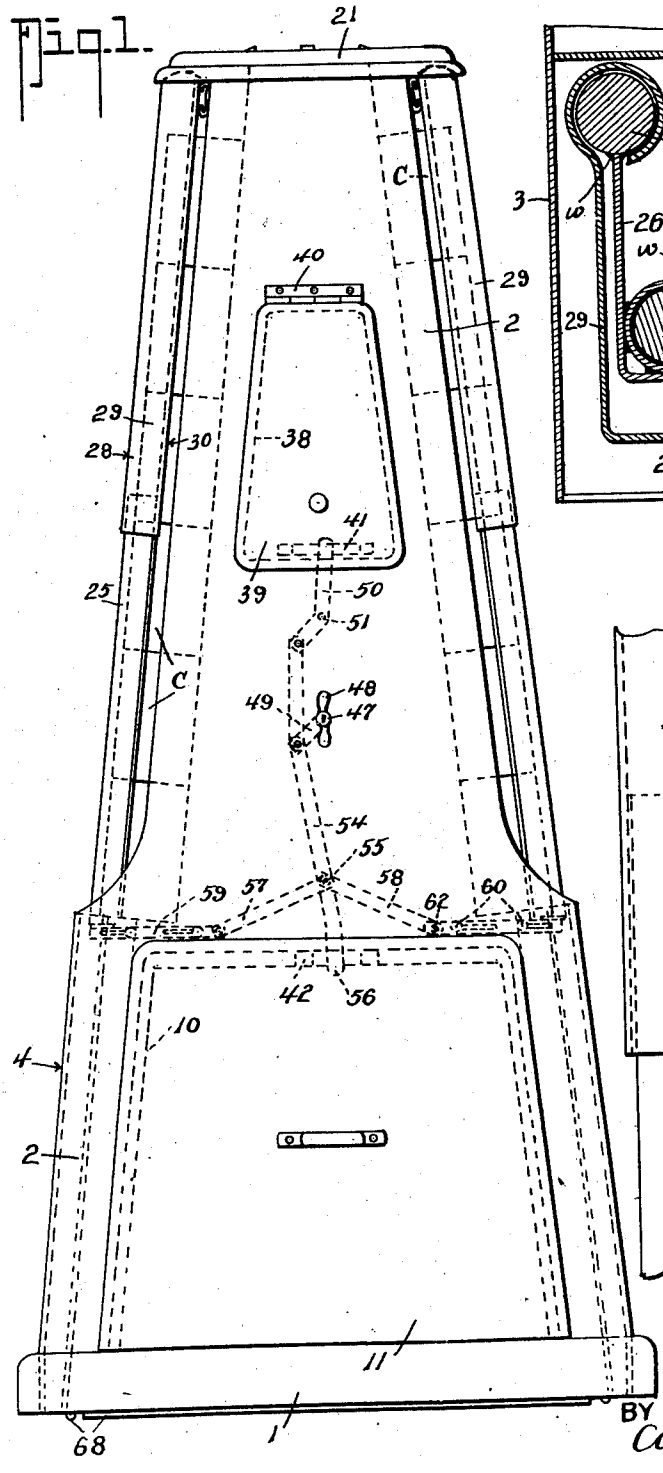

Fig. 7.

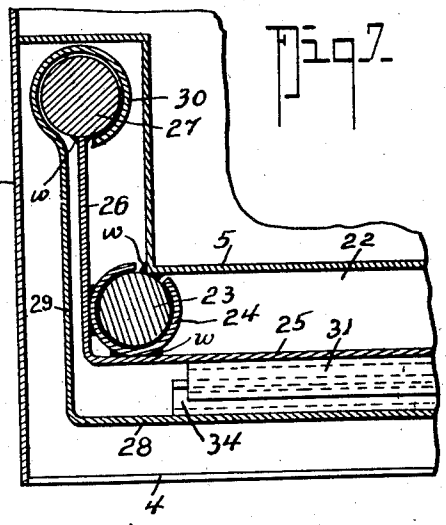

Fig. 8.

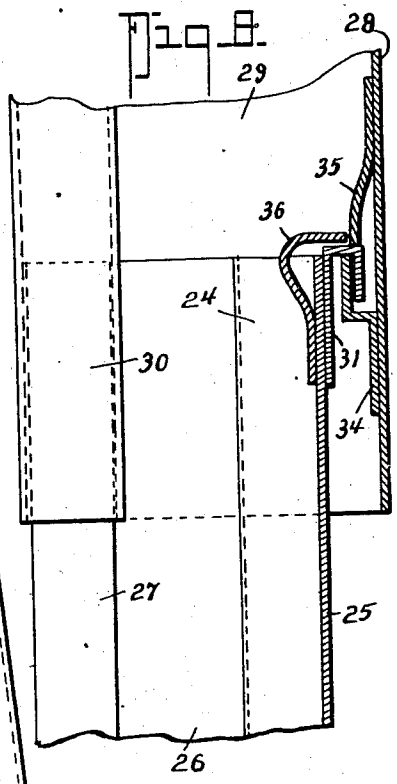

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Fig. 3.

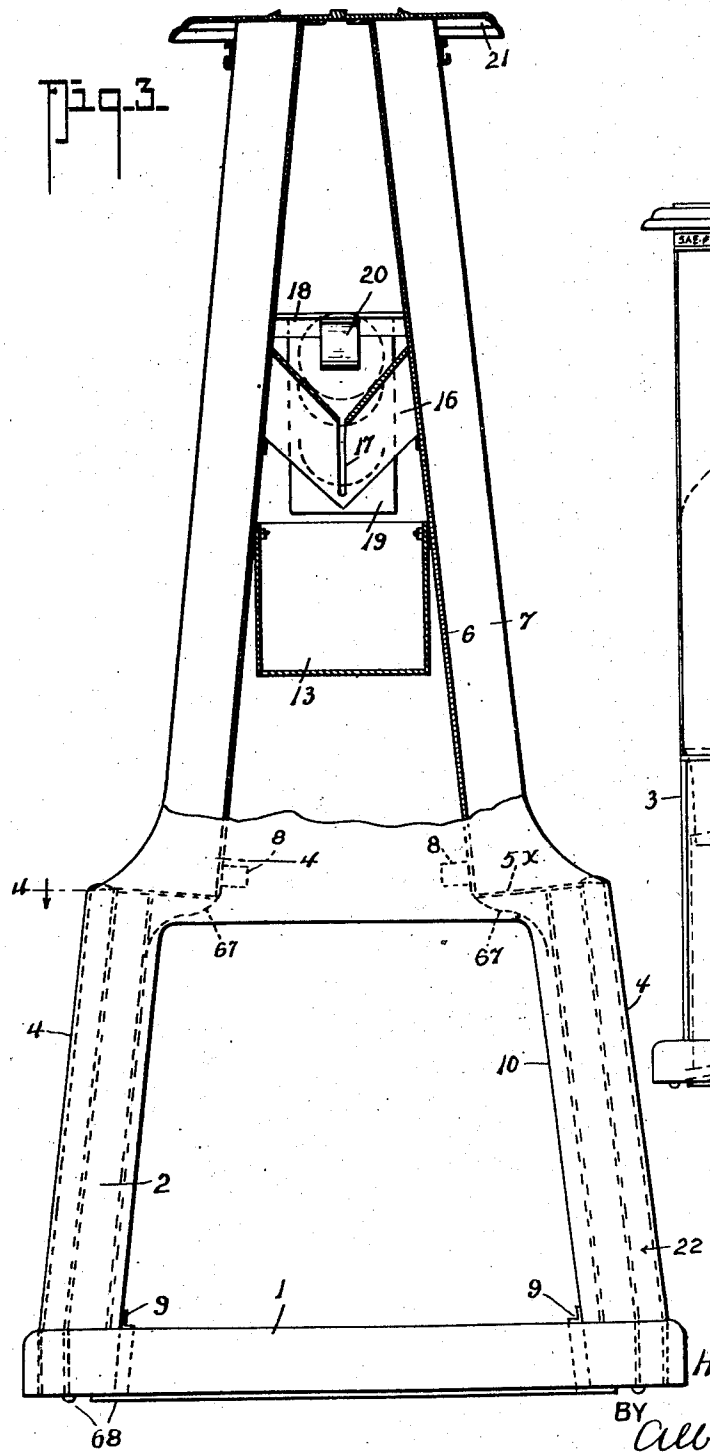
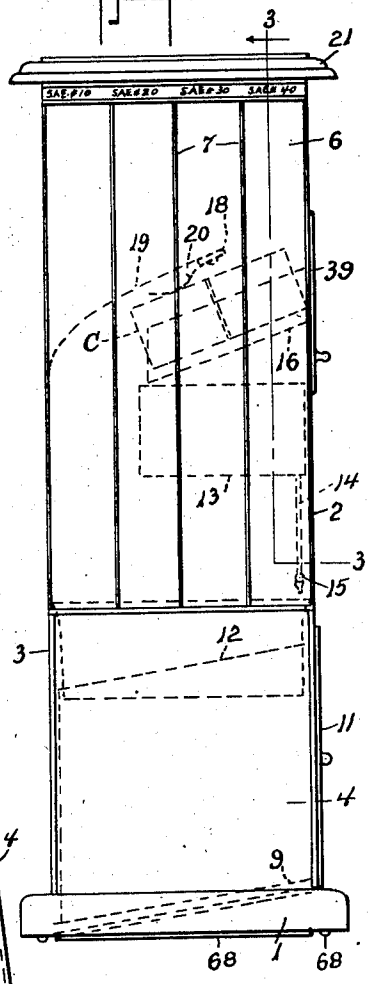


Fig. 2.



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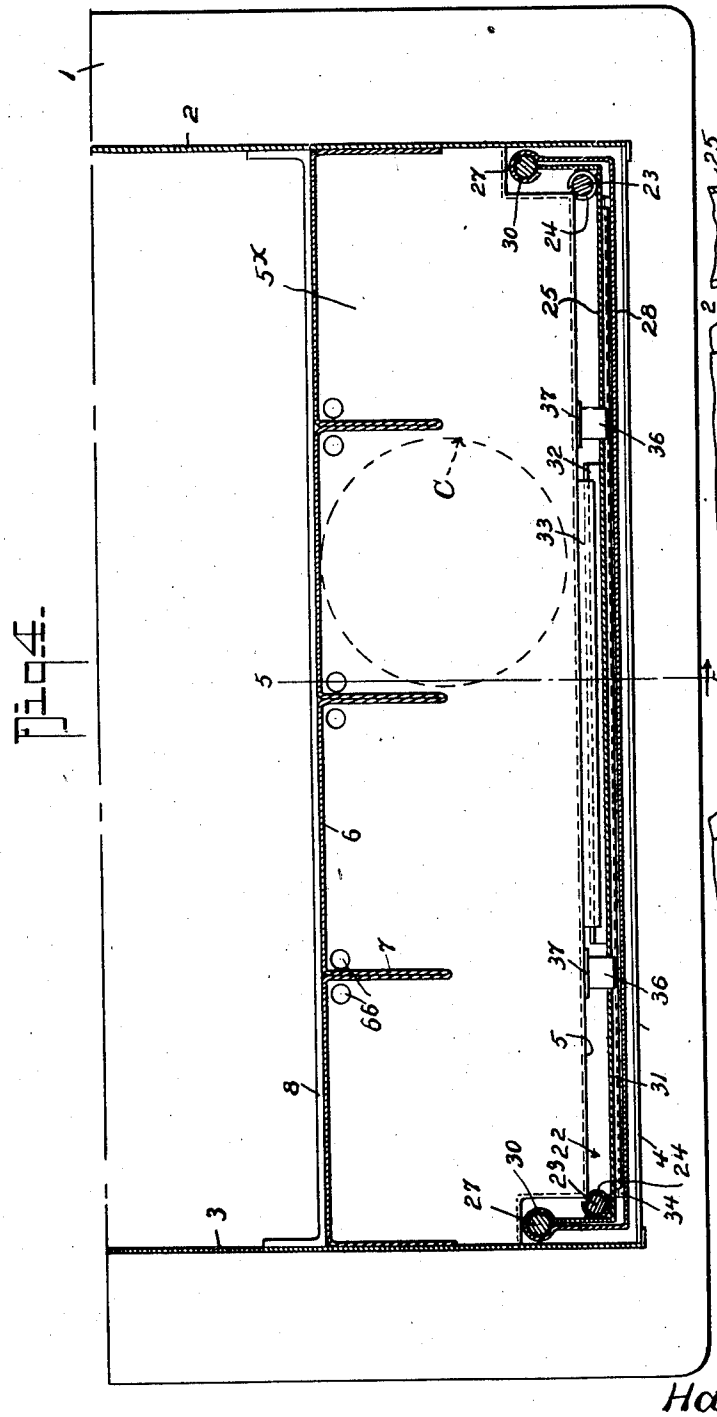

Fig. 4.

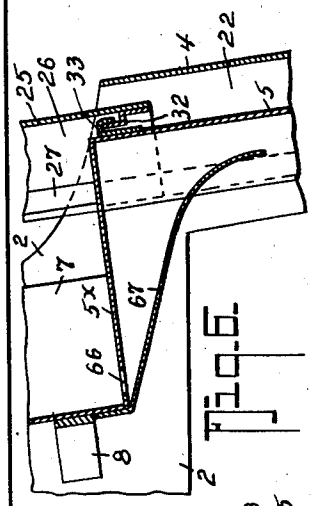

Fig. 6.

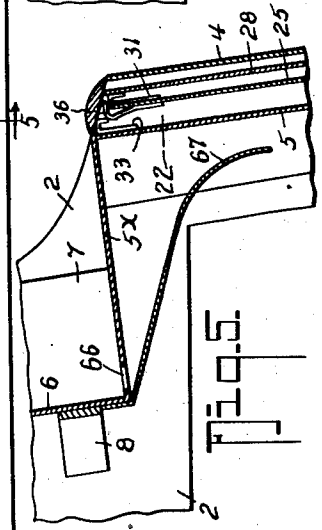

Fig. 5.

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Fig. 9.

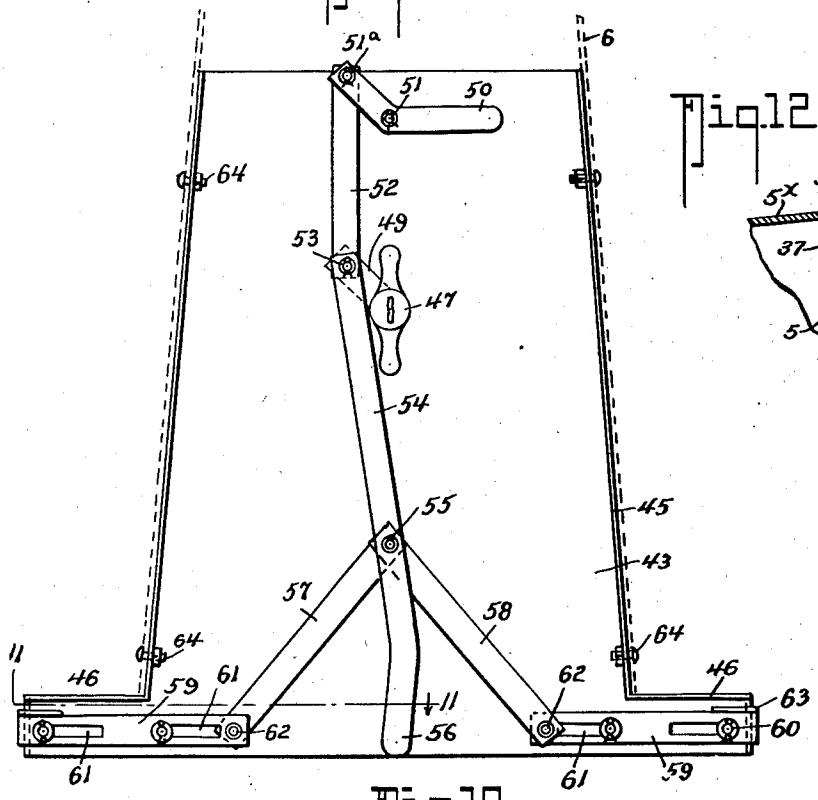


Fig. 12.

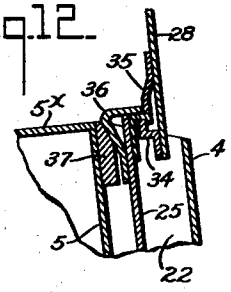


Fig. 10.

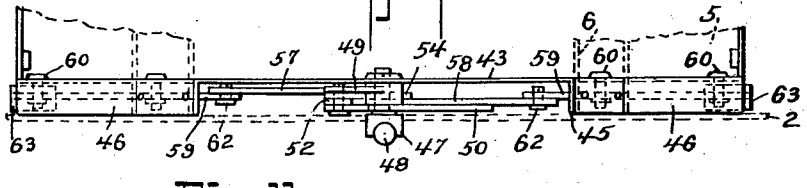
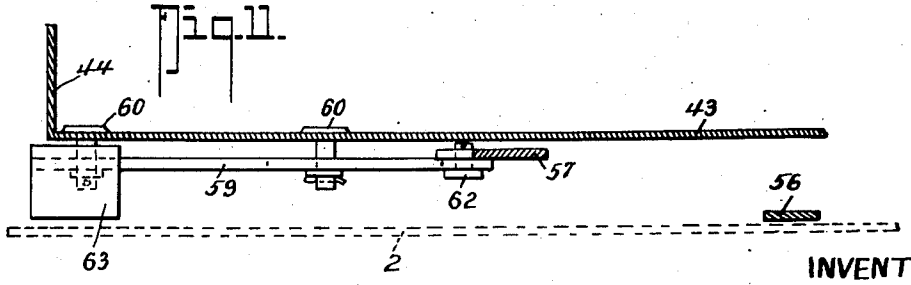


Fig. 11.



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Patented Dec. 9, 1947 2,432,455

UNITED STATES PATENT OFFICE

2,432,455

COMBINED DISPLAY RACK, OIL SAVER, AND WASTE CAN RECEPTACLE

Harvey J. Smith, Danville, Va., assignor to Nona B. Smith, Danville, Va.

Application November 19, 1945, Serial No. 629,521

8 Claims. (Cl. 312—193)

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My invention relates to racks of the kind disclosed in and covered by my Letters Patent #2,320,159 issued May 25, 1943 and #2,343,248 issued March 7, 1944.

The present invention has for its objects to provide the rack with telescoping doors or closures to cover the cans of oil on display in the rack when desired and to provide a single locking means to secure all doors in their closed positions as when oil is not being sold, in order to prevent theft of full cans.

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

To the attainment of the aforesaid objects and ends, the invention further resides in those novel details of construction, combinations and arrangements of parts all of which will first be described in detail and then be specifically pointed out in the appended claims, reference being had to the accompanying drawings in which:

Fig. 1 is a front elevation of my improved rack, with the doors closed and locked.

Fig. 2 is a side elevation of the same on a smaller scale than Fig. 1.

Fig. 3 is an enlarged detail section on the line 3—3 of Fig. 2, the can-collecting drawer being removed and the doors withdrawn into their wells.

Fig. 4 is an enlarged detail horizontal section on about the line 4—4 of Fig. 3.

Fig. 5 is a detail vertical section on the line 5—5 of Fig. 4, with the telescoping doors in their well.

Fig. 6 is a view similar to Fig. 5 with the doors out of the well.

Fig. 7 is an enlarged detail horizontal section on the line 4—4 of Fig. 3.

Fig. 8 is an enlarged vertical cross section of the lower portion of the outer telescoping door and the upper portion of the inner telescoping door showing their interlocking means.

Fig. 9 is a face view of the door locking unit.

Fig. 10 is a top plan view of the unit.

Fig. 11 is a detail enlarged horizontal section on the line 11—11 of Fig. 9.

Fig. 12 is a detail vertical section of a portion of my apparatus hereinafter referred to.

In the drawings in which like numerals and letters of reference indicate like parts in all the figures, 1 represents the base of the rack, 2 the front wall, 3 the back wall and 4 and 5 the side walls of the wells.

The side walls 6 of the display part of the rack have partitions 7 as shown and are suitably braced as at 8, Figs. 4, 5, and 6. A can-collection

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drawer 12 is mounted on downwardly-rearwardly inclined tracks 9 and is withdrawable through an opening 10 in the front wall 2. The drawer has a front 11 which has an inside strap 42 for a purpose presently to appear. The oil reservoir 13 in the present case is fixed in the rack and has a drain pipe 14 and drain cock 15 (see Fig. 2). The can slide 16 has an oil discharge opening 17.

18 is a cross bar to which a can retarding spring 20 and a can deflecting plate 19 are attached.

21 designates the top of the rack under which the telescoping outer doors 28 project when the rack is closed.

At each side of the rack is a well 22 for the reception and storage of the telescoping doors. Solid rods 23 are welded to the corners of the wall 5 at the wells. The inner doors 25 have tubular guides 24 to ride loosely on the rods 23 and they also have side walls 26 welded to guide rods 27 for the outer doors. The outer doors 28 have side walls 29 terminating in tubular portions 30 to ride loosely on rods 27.

Beginning at the bottom of each side wall 6 is a transversely disposed plate 5^x from the outer edge of which a side wall 5 extends downwardly to constitute the back wall of the door well 22. On each wall 5 near its upper end are two striker plates 37 (see Figs. 4 and 12) the purpose of which will presently appear.

The inner doors 25 have upper hooks 31 and lower hooks 32 while the inner walls 5 have hooks 33 along their upper edges. The doors 28 have lower hooks 34 which, when the doors 25, 28 are in their extended or closed position hook under the hooks 31 (see Fig. 8). 35 are stiff latch springs which are secured to the doors 28 and snap over the hooks 31 when the doors are extended (Fig. 8), while 36 designates latch-releasing spring fingers carried by the doors 25 which cooperate with striker plates 37, secured to the walls 5, at suitable locations, as the doors are lowered into the wells to free the latches 35 so they may pass the hooks 31.

The front of the rack has an opening 38 through which cams C are entered. This opening is closable by a door 39 hinged at 4 and provided with an inner loop 41. The loops 41 and 42 cooperate with the latches 50 and 54.

The latching mechanism is built as a separate unit and includes a supporting plate 43 having ears 44, side walls 45 and horizontal walls 46. The plate 43 is secured to the walls 6 by bolts and nuts 64 which pass through the side walls 45.

The ears 44 extend from the sides of the plate 43 and are of right-angle form in plan view.

A lock 47 similar to the ignition locks on automobiles is mounted on the plate 43. A turn knob 48, controlled by said lock, has an arm 49 to which is pivoted at 53, the latch 54 and the connecting rod 52, the latter being also pivoted at 51ª to the latch 50. Pivoted together to the latch 54, at 55, are two links 57, 58 which connect pivotally at 62 to slidable latches 59.

Each latch 59 comprises a slotted bar whose slots 61 receive the studs 60 that are fixed to plate 43. Platforms 63 are secured to the latches so as to fit beneath the lower ends of the inner doors 25 when the doors are closed.

The latch unit is bolted or otherwise secured to the walls 6.

When all doors, 11, 39, 25, 28 are closed, handle 47 is turned to horizontal position to project the free end of latch 50 into loop 41 and the free end 56 of latch 54 into loop 42. At the same time latches 59 are projected so that their platforms 63 come beneath the telescopic doors 25 and thus hold the doors closed. So long as no key is in lock 47, the doors remain locked.

The doors 25, 28 are raised manually, hooks 34 picking up door 25 by engaging hooks 31. As hooks 34 enter hooks 31 spring fingers or latches 35 will snap over hooks 31 and latch the doors together. As soon as the doors 25, 28 shall have been fully raised the latches 59 are projected by turning knob 48 and platforms 63 come beneath the doors 25, which doors now rest on such platforms.

After latches 59 are withdrawn, doors 25, 28 are lowered and as release springs 36 engage the striker plates 37 they will push off the latches 35 and permit the outer doors 28 to drop into the wells. The outer doors 28 have caps 65 to close the wells 22.

Drain holes 66 and baffles 67 deflect water from the surfaces 5ˣ to and through the bottom of the rack and out through the open bottom of the rack. The bottom is slightly elevated from the ground by cleats 68 on the bottom of the rack.

From the foregoing description taken in connection with the accompanying drawings it is thought the construction, operation and advantages of my invention will be clear to those skilled in the art.

What I claim is:

1. In apparatus of the class described wherein is provided a hollow body having front, back and side walls, there being outwardly opening compartments on the side walls for stacked oil cans, the hollow body having a can receiving opening in its front wall, a can-collecting drawer in said body below said can receiving opening and a door for covering said can-receiving opening, the improvement which includes: nested doors having inwardly turned ends for covering said outwardly opening compartments and the cans therein, mechanism for latching said doors and said drawer in closed position, and a single means for operating all said latching mechanism.

2. In apparatus of the class described wherein is provided a hollow body having front, back and side walls, there being outwardly opening compartments on the side walls for stacked oil cans, the hollow body having a can receiving opening in its front wall, a can collecting drawer in said body below said can receiving opening and a door for covering said can receiving opening, the

improvement which includes: nested closures having inwardly turned ends for covering said outwardly opening compartments and the cans therein, latches for securing said closures, said door and said drawer in their closed positions, and means for simultaneously operating said latches to latch or to release said closures, said door and said drawer, accordingly as said means is in one position or another.

3. In apparatus of the class described wherein is provided a hollow body having front, back and side walls, there being outwardly opening racks for cans on the side walls of said hollow body, a waste-can drawer within said body, a can chute within said body and above said drawer and extending inwardly from an opening in the front of said body, a door for the opening to said chute, the improvement which includes: a latching unit that includes; a supporting plate; a door latch mounted on said plate; a turn-knob mounted on said plate and having an arm; a connecting link between said arm and said door latch; closure latches mounted on said plate; a drawer latch operatively connected to said arm; links connecting said closure latches with said drawer latch; means for mounting said supporting plate in said chambered body in cooperative relation to said door, said drawer and said closures; said door, said drawer and said closures having elements cooperating with said latches for holding the same closed.

4. In apparatus of the class described wherein is provided a hollow body having front, back and side walls, there being outwardly opening racks for cans on the side walls of said hollow body, a waste-can drawer within said body, a can chute within said body and above said drawer and extending inwardly from an opening in the front of said body, a door for the opening to said chute, the improvement which includes: a latching unit that includes; a supporting plate; a door latch mounted on said plate; a turn-knob mounted on said plate and having an arm; a connecting link between said arm and said door latch; closure latches mounted on said plate; a drawer latch operatively connected to said arm; links connecting said closure latches with said drawer latch; means for mounting said supporting plate in said chambered body in cooperative relation to said door, said drawer and said closures; said door, said drawer and said closures having elements cooperating with said latches for holding the same closed; and means cooperative with said turn-knob for locking the same in a closed position.

5. In apparatus of the class described wherein is provided a chambered body having a front, a back and side walls and having a base and including an upper portion and a lower portion, the upper portion having outwardly opening compartments on its side walls to provide rows of can stacking spaces, the improvement which includes wells in the sides of said lower portion; doors each composed of nesting parts having inwardly turned ends, said doors being normally held in said wells and adapted to be raised over the stacks of cans in said can stacking spaces; means to hold said doors extended to cover said stacks of cans; said door parts each including an outer door and an inner door, said inner door having an upper hook, said outer door having a lower hook to engage said upper hook when the doors are extended, said outer door having a latch to cooperate with said hook to hold said doors extended, and means automatically to re-

lease said latch as said doors are lowered into their wells.

6. In apparatus of the class described wherein is provided a chambered body having a front, a back and side walls and having a base and including an upper portion and a lower portion, the upper portion having outwardly opening compartments on its side walls to provide rows of can stacking spaces, the improvement which includes wells in the sides of said lower portion; doors each composed of nesting parts having inwardly turned ends, said doors being normally held in said wells and adapted to be raised over the stacks of cans in said can stacking spaces; means to hold said doors extended to cover said stacks of cans; said door parts each including an outer door and an inner door, said inner door having an upper hook, said outer door having a lower hook to engage said upper hook when the doors are extended, said outer door having a latch to cooperate with said hook to hold said doors extended, and means automatically to release said latch as said doors are lowered into their wells, said last named means including latch pushers carried by said inner door and fixed striker plates operatively located on said body and adapted to actuate said latch pushers as said doors are lowered into the wells.

7. In apparatus of the class described wherein is provided a chambered body having a front, a back and side walls and having a base and including an upper portion and a lower portion, the upper portion having outwardly opening compartments on its side walls to provide rows of can stacking spaces, the improvement which includes wells in the sides of said lower portion; doors each composed of nesting parts having inwardly turned ends, said doors being normally held in said wells and adapted to be raised over the stacks of cans in said can stacking spaces; means to hold said doors extended to cover said stacks of cans; said door parts each including

an outer door and an inner door, said inner door having an upper hook, said outer door having a lower hook to engage said upper hook when the doors are extended, said outer door having a latch to cooperate with said hook to hold said doors extended, means automatically to release said latch as said doors are lowered into their wells, fixed guide rods in said wells, tubular sleeves carried by said inner doors to ride said rods, guide rods carried by said inner doors, and tubular sleeves carried by said outer doors to ride said last named rods.

8. In apparatus of the class described wherein is provided a chambered body having a base, a front, a back and side walls and including a lower portion and an upper portion, the upper portion having vertical partitions forming with the body outwardly opening compartments for stacks of cans, the improvement which includes wells in the sides of said lower portion; nesting doors having inwardly turned ends and being normally held in said wells and being adapted to be raised over the stacks of cans; means to hold said doors extended to cover said stacks of cans; said body having drain holes for said compartments at the bottom of the same; a can collecting drawer in said body below said drain holes, and baffles operatively located in said body for effecting drainage from said drain holes over the sides of said drawer.

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