

March 26, 1957

C. E. THURSTON
CABINET EQUIPMENT

2,786,730

Filed Sept. 20, 1955

2 Sheets-Sheet 1

FIG. 1.

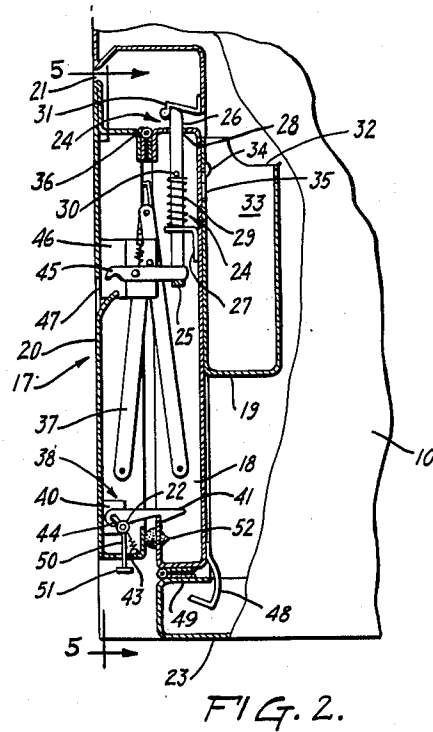
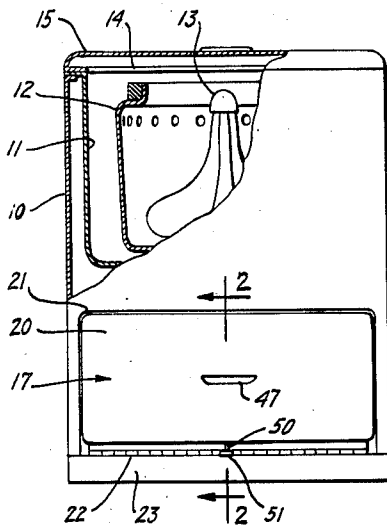


FIG. 2.

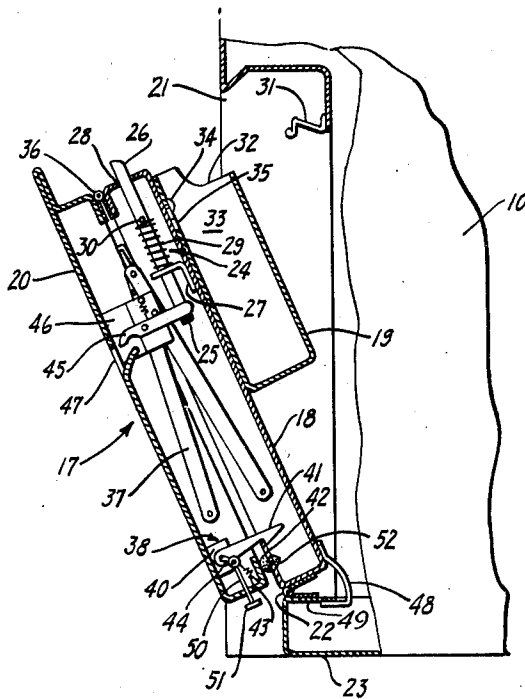


FIG. 3.

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FIG. 5.

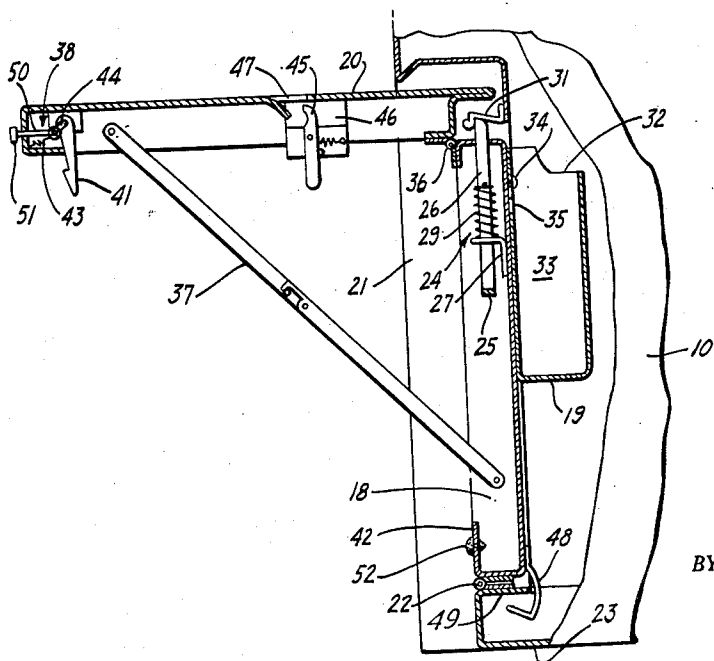
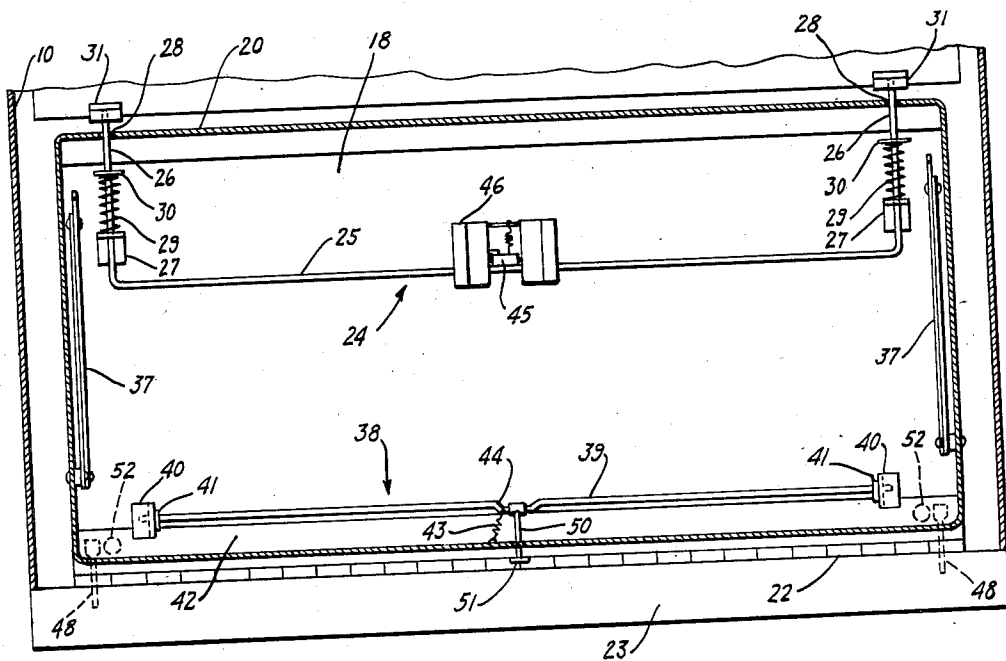


FIG. 4.

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2,786,730

CABINET EQUIPMENT

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11 Claims. (Cl. 312—315)

The present invention relates to cabinets for household utility equipment. While of broader applicability, the invention is particularly concerned with improvements in cabinet construction for washing machines of the type customarily used in homes.

In order that clothes may be washed satisfactorily, it is common practice to add a washing-aid material, such as soap or detergent, to the water in the washing machine, and the keeping of boxes or containers of washing-aid material available in a conveniently accessible place near the washing machine is often a problem. Also, it is the practice of most housewives to transfer clothes to be washed from a basket or similar container to the machine and, after washing, to transfer the washed clothes from the machine back to the basket. In the majority of instances, this transfer of clothes becomes a source of inconvenience because of the lack of a readily accessible place where the basket can be supported at proper height with respect to the opening through which clothes are placed in the machine.

It is an object of the present invention to overcome these, and similar problems and inconveniences, by means of a novel cabinet construction in which provision is made for the convenient storage of articles and materials, as well as for adequately supporting a basket or the like.

It is also an object of the invention to provide a washing machine cabinet with improved and novel means to serve both as a hidden storage compartment and as a disappearing support shelf.

Briefly stated, a cabinet constructed in accordance with a broader aspect of the invention comprises a wall portion which is movable to one position for giving access to a storage compartment and which is also movable to another position to constitute a shelf extending upwardly and horizontally of the machine cabinet. According to a preferred embodiment, the movable wall portion includes cooperatively associated parts which are pivoted either for movement as a unit to expose the storage compartment, or for movement one with respect to the other to provide a supporting shelf.

The nature of the invention and the manner in which the above noted and other objects and features of the invention are achieved will be fully understood from the following description taken in conjunction with the accompanying drawings in which:

Figure 1 is a front elevational view of one form of domestic clothes-washing machine incorporating the invention;

Figure 2 is an enlarged sectional fragmentary view taken substantially along line 2—2 of Figure 1 and showing a movable wall portion constructed in accordance with the invention and associated with the machine cabinet;

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Figures 3 and 4 are views similar to Figure 2 illustrating the dual functions and purposes of the movable wall portion; and

Figure 5 is a sectional fragmentary view looking in the general direction of arrows 5—5 of Figure 2.

With more particular reference to the drawings Figure 1 illustrates, by way of example, a domestic clothes-washing machine of well-known variety. In general, the machine includes an outer casing or cabinet 10 housing a fixed tub 11 which encircles a rotatable washing tub 12. The cabinet has an open top portion 14 which is provided with a cover 15 to give access to said washing tub. In using machines of this type, a washing-aid material is added to the water within the washing tub 15 and the clothes are then placed therein to be washed, rinsed and spin-dried. The clothes are washed by action of a bladed agitator 16, and are spin-dried by accelerated rotation of the basket.

In particular accordance with the invention, the cabinet 10 is provided with a movable front wall portion, generally indicated at 17. As illustrated in Figures 2, 3 and 4, this wall portion essentially includes a frame 18, a receptacle 19 and a panel 20.

The frame 18 is of generally rectangular configuration to occupy a vertical position within a correspondingly shaped opening 21 in the front side of the cabinet, and is adapted to swing in a generally downward direction outwardly of said front opening. For that purpose, the lower portion of the frame is pivoted as by means of a hinge 22 to a convenient portion of the cabinet, such as a base portion 23. The frame is provided with a latching mechanism 24 to retain said frame in its vertical position within said front opening 21.

As clearly seen in Figure 5, the latching mechanism 25 consists of an elongated bar 25 having right-angularly bent end portions 26 slidable in guides 27 and extending through apertures 28 in the top side of the frame 18. Coil springs 29, encircling the bent end portions 26 and disposed between said guides 27 and suitable abutments 30 on said end portions, serve to support the latch bar and yieldably urge said end portions into engagement with keeper means 31.

The receptacle 19 is disposed on the inner side of the frame 18 and is advantageously made in the form of a rectangular box having an open end 32 and defining a storage space 33. For convenient cleaning of said box-like receptacle the latter is removably mounted on the frame member, as by means of interengageable headed pins 34 and keyhole slots 35.

The panel 20, which is also rectangular in shape, is disposed on the outer side of the frame 18 to cover the same and normally provide a closure for the opening 21 in the front wall of the cabinet. As shown, the panel is adapted to swing with respect to the frame and cabinet, from a position overlying said frame to a position at substantially right angles thereto and extending outwardly of the cabinet to provide a horizontal shelf. For that purpose, a suitable hinge 36 pivotally connects the upper edge of the panel with the upper edge of the frame, and articulated braces 37 are conveniently anchored to said panel and frame so that said braces fold up when said panel and frame lie parallel to each other, and so that said braces straighten when said panel and frame are at right angles to each other. In this manner, the braces 37 limit the upward pivotal movement of the panel and constitute rigid supports for said panel when moved to its horizontal position.

A releasable locking device 38 is used to effect reten-

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tion of the panel in overlying position with respect to the frame, said locking device being advantageously provided by means of an elongated rod 39 (Fig. 5) rotatably supported in bearings 40 on said panel and having locking fingers 41 engageable with keeper means 42 on said frame. These locking fingers are normally urged into locking engagement with said keeper means 42 by action of a spring 43 which is connected to a crank portion 44 formed in the rod 39 and adapted to cooperate with said spring to move said fingers in the direction of their engagement with said keeper portions.

From the foregoing description, it will be understood that the associated frame 18, receptacle 19 and panel 20 are fixedly held, as a unitary assemblage, in the vertical position shown in Figure 2 by reason of latching mechanism 24. It will further be understood that upon release of said latching mechanism, the above-mentioned associated frame, receptacle and panel is movable as a unit, to the position shown in Fig. 3 to give access to the storage space 33 defined by the receptacle 19, so that boxes or containers of washing-aid material may be conveniently placed in and removed from said space.

In order to release the latching mechanism 24, there is provided a manually operable lever 45 arranged in engagement with the latch bar 25 to depress the same and cause retraction of the latching end portions 26 thereof from the keeper means 31. The lever 45 is conveniently pivoted in a bracket device 46 carried by the panel 20 and located adjacent an opening 47 in said panel so that said lever can be operated through said opening by the fingers of the user's hand. This arrangement has the advantage that said latching mechanism and movable wall portion assembly can be simultaneously manipulated, with the use of one hand only, to effect movement of said assembly from the vertical position shown in Fig. 2 to the tilted outward position shown in Fig. 3. Stop members 48 located at opposite end portions of the frame 18 and engageable with a flange 49 on the cabinet base, advantageously serve to limit the outward pivotal movement of the movable wall assembly and to retain it in its outward tilted position.

As hereinbefore indicated, the locking device 38 normally secures the panel 20 and prevents its movement with respect to the frame 18. However, by releasing said locking device, the panel 20 can be swung from the vertical position shown in Fig. 2 to the horizontal position shown in Fig. 4. In order to release said locking device, there is provided a leverage system including the aforementioned crank portion 44 and a manually operable plunger 50 connected to said crank portion and projecting outwardly through the lower side surface of said panel 20. The projected outer end of said plunger terminates in a button 51 so that said plunger may be conveniently operated by the hand of the user in grasping the panel to lift it to its horizontal position. This arrangement again has the advantage that the locking device 38 and the panel 20 can be simultaneously manipulated with one hand to effect release and movement of said panel to said horizontal position. In this position, the panel provides a shelf on which a clothes-basket or like container is placed to be supported at a convenient height off the floor so that the clothes can be picked up and transferred from the basket to the washing machine or from the machine to the basket.

To prevent rattling of the panel 20 when lying over the frame 18, buttons 52 of rubber or like soft material are provided on a lower portion of said frame and are disposed to contact a corresponding portion of said panel.

While the receptacle 19 has been described as a convenient storage means for boxes or other containers, it is apparent that said receptacle can well serve as a bin into which washing aid material, for example, can be stored in bulk. Also, although the arrangement provided by the invention has been shown and described as applied

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to a clothes-washing machine, it will be recognized that said arrangement would have applicability to various types of cabinets and could, for example, be employed with dish-washing machines. In this case, the receptacle 19 would still provide for storage of washing-aid material, and the panel 20 (when in horizontal position) would serve as a shelf for the convenient stacking of dishes before and after they are washed in the machine.

What I claim is:

1. In cabinet structure, a wall portion arranged on a side of the cabinet, a storage means disposed rearwardly of said wall portion, and means movably mounting said wall portion for movement in one direction and placement in an outer position to expose said storage means, and for movement in another direction and placement in another outer position to provide a shelf extending outwardly from said side of said cabinet.

2. Cabinet structure as set forth in claim 1, in which the means movably mounting the mentioned wall portion comprises hinging instrumentalities arranged to provide for pivotal movement of said wall portion in a downward direction to place it in said one position, and to provide for pivotal movement of said wall portion in an upward direction to place it in said other position.

3. Cabinet structure as set forth in claim 1, in which the mentioned side of the cabinet has an opening, and the mentioned wall portion is positioned to occupy said opening.

4. Cabinet structure as set forth in claim 1, in which the mentioned side of the cabinet has a vertically disposed opening, the mentioned wall portion is mounted in said opening, and latching means releasably retains said wall portion in a vertical position within said opening.

5. Cabinet structure as set forth in claim 1, in which latching mechanism is provided to retain the mentioned wall portion in an inner position with respect to said side of the cabinet, said mechanism including a lever adapted for manipulation to release said wall portion and handle means provided on said wall portion for manipulation thereof, said lever and said handle means being disposed in adjacency to provide for simultaneous manipulation of said lever and wall portion.

6. In combination, a cabinet, a frame arranged on a vertical side of said cabinet, said frame having an inner side and an outer side, said inner side of said frame facing inwardly of said cabinet, said outer side of said frame facing outwardly of said cabinet, a receptacle disposed on said inner side of said frame, a panel positioned to overlie said outer side of said frame, means movably mounting said frame for movement thereof with said receptacle and panel to expose said receptacle, and means movably mounting said panel for movement with respect to said frame to provide a horizontal shelf extending outwardly of said cabinet.

7. The combination as set forth in claim 6, in which the mentioned side of the cabinet has an opening, and the mentioned frame and associated receptacle and panel occupy said opening, said panel constituting a closure for said opening.

8. The combination as set forth in claim 6, in which latching mechanism releasably retains the mentioned frame and associated receptacle and panel on the mentioned vertical side of the cabinet, and in which a locking device releasably retains said panel in position to overlie said frame.

9. The combination as set forth in claim 8, in which the mentioned latching mechanism includes a lever adapted for manipulation to release said mechanism, and in which the panel is provided with handling means for manipulation of said panel, said lever and handling means being disposed adjacent each other to provide for simultaneous manipulation of said lever and handle.

10. The combination as set forth in claim 6, in which the mentioned means movably mounting the frame is in the form of a hinged connection between said frame and

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the cabinet and provides for downward pivotal movement of said frame with the receptacle and panel to a tilted position with respect to said cabinet, and in which the mentioned means movably mounting the panel is in the form of a hinged connection between said panel and frame and provides for upward pivotal movement of said panel to a horizontal position with respect to said frame and cabinet.

11. The combination as set forth in claim 10, in which

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interengageable means provided on the frame and cabinet limits the downward movement of said frame and associated receptacle and panel and retains the same in tilted position, and in which articulated bracing means connected with said frame and panel limits the upward movement of said panel and maintains it in horizontal position.

No references cited.