Dec. 6, 1955 W. E. MEISSNER 2,726,035

CONTAINER

Filed Feb. 23, 1952

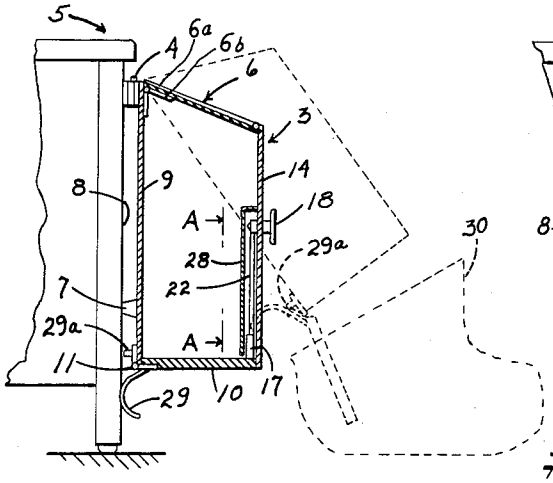


Fig. 1

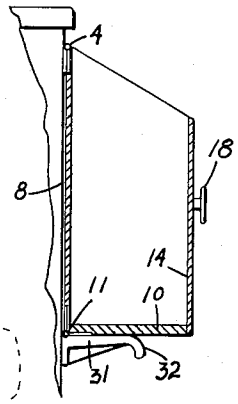


Fig. 3

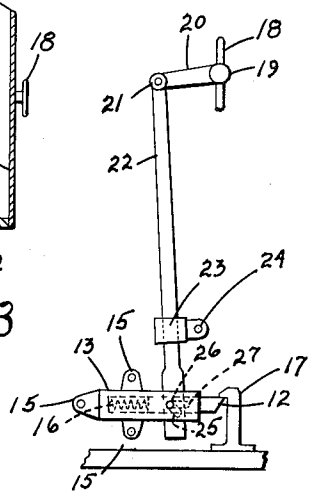


Fig. 2

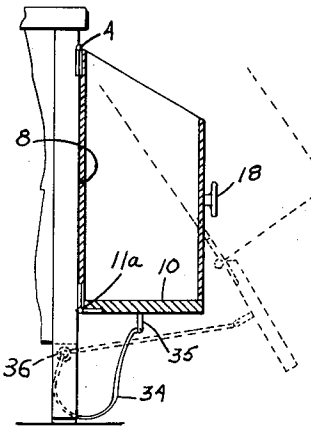


Fig. 4

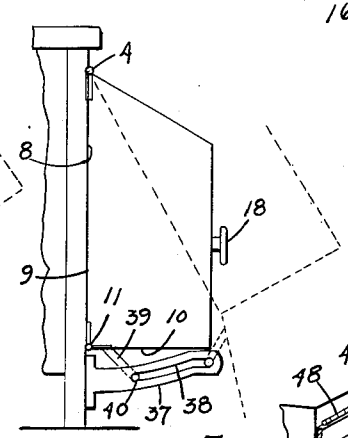


Fig. 5

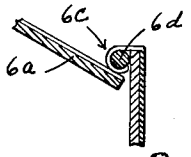


Fig. 8

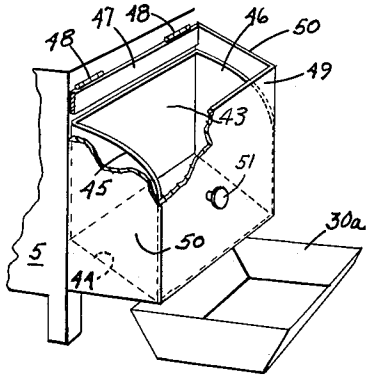


Fig. 7

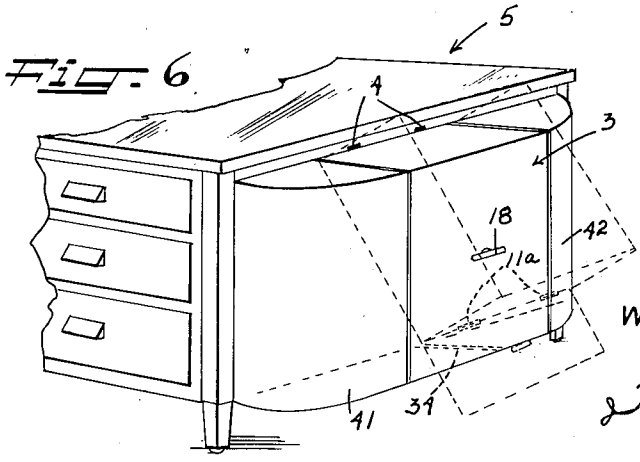


Fig. 6

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CONTAINER

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Application February 23, 1952, Serial No. 272,955

1 Claim. (Cl. 232—43.1)

This invention relates to containers and particularly to such as are suitable to be used as wastebaskets, laundry hampers, or for the storage of any other materials. It is particularly concerned with a container or receptacle which is adapted to be supported on a wall, such as the vertical side wall of a desk or the vertical wall of a room or door, or cart, ambulatory device on wheels, such as are used in hospitals, etc.

It is an object of the present invention to provide a storage container or receptable adapted to receive waste materials, laundry, or any other material intended to be temporarily stored which is mounted off the floor so that it will at all times have a definitely known location.

Another object is to provide such a receptacle which is handily located and easily accessible for filling or receipt of deposits.

Another object is to provide such a receptacle which is easily emptied and cannot be dislocated by the person who is charged with the emptying thereof. It is another object to provide an "off the floor" container permitting full freedom and accessibility for cleaning the floor directly under it without touching or moving the container at any time. These objects are particularly important in respect to wastepaper baskets which are conventionally disposed loosely on the floor so that the janitor charged with the emptying thereof is free to place it, after emptying, any place in the room frequently including locations which are relatively inaccessible to the person for whose use the basket is intended.

Another object is to provide a hinged receptacle in a fixed location which may be emptied by swinging it out and up with one hand; thereby automatically, or manually, opening the bottom door to eject the contents and at the same time, in so doing, raise the discharge opening of the container a sufficiently added height (considerably higher than the position of the discharge opening of the container when in its normal hanging position—see drawings) to permit the contents to fall into a gathering receptacle on the floor—the normal height of the container discharge opening not being sufficient in many cases to permit this operation. In other words, this swinging action permits this novel container to be emptied from a greater height and in a satisfactory manner into another receptacle without disengaging it from its fixed location.

Another object of the invention is to provide a receptacle which can be permanently attached to a vertical wall and can be made to blend integrally with adjoining portions of a piece of furniture, such as a desk, or cabinets on a wall or door of a room to produce a pleasing and decorative or architectural effect.

Other objects and advantages will be apparent from the drawing and the description thereof hereinafter.

As illustrated in the drawing,

Figure 1 is a side elevation, in section, of one embodiment,

Figure 2 is a view taken in the direction of arrows

A—A in Figure 1 of the latch mechanism with the guard plate therefor removed,

Figure 3 is a vertical section through a portion of a modification,

Figure 4 is a vertical section through another modification,

Figure 5 is a side elevation of still another modification,

Figure 6 is a perspective view of a desk provided with a receptacle of the invention,

Figure 7 is a perspective view of a modification, and

Figure 8 is a section of a detail.

In Figures 1 and 2, which show a manually operated lower door, the receptacle at **3** is hingedly mounted such as on the pintle **4** upon the vertical end wall of a desk generally indicated at **5**. Similar mounting may be effected upon the side, front, or back wall of any other piece of furniture or even on one of the walls of the room. In all embodiments, the receptacle **3** may be open at the top **6** or it may be provided with a cover **6***a* spring hinged at **6***b*, the hinges normally urging the cover upwardly into the closed position shown. While the top may be horizontal, it is preferably sloped, particularly when a hinged cover is used since the sloped arrangement requires less downward swinging to gain access to the container to deposit waste material therein. Fig. 8 shows how an inner bead **6***c* on the upper end of the walls of the container, such as wall **14**, serves as a detent for the lid or cover **6***a*. This bead may be formed by the turning inward of an edge of the container wall when it is made of metal or other material such as cardboard, or by a wire **6***d* which may be covered along with the wall by a material, such as artificial leather, fabrikoid, etc. A bumper, such as a rubber knot **7** may be provided between the vertical wall **8** and the back wall **9** of the receptacle. This bumper **7** may be secured to either the wall **8** or, preferably, to the wall **9**, as shown. This bumper serves to locate the wall **9** properly with respect to the wall **8** so that the receptacle **3** may at all times of normal repose be suspended in proper vertical relationship.

The receptacle **3** is provided with a bottom door or closure **10** which is hinged to the back wall **9** by the hinge **11**. Latch means is provided for holding the door **10** in closed relationship to the remainder of the receptacle and for releasing the door **10** so that by its own weight it will open when the receptacle **3** is swung outwardly on its hinge **4** from the position of rest shown in solid lines in Figure 1. This latch means comprises a latch **12** reciprocably mounted in a small casing **13** secured to the inside front wall **14** of the receptacle **3** such as by screws **15**. A spring **16** normally urges the latch into latching position shown in Figure 2 where it engages the hook or catch **17** secured to the door **10**. A handle **18** is pivotally mounted on the front wall **14** of the receptacle and there is fixedly attached to the shank or shaft **19** of the handle an arm **20** which is pivotally connected at **21** to a link **22** which passes through a guiding member **23** pivotally secured at **24** to the inside of the front wall **14** of the receptacle. The lower end of the link **22** is provided with a slot **25** into which a pin **26** extends. This pin **26** is fixed to the latch **12** and extends through a horizontal slot **27** in casing **13**. A guard plate **28** may be fixed to the inside of the front wall of casing **3** to prevent any of the contents of the receptacle from interfering with the operation of the latch system.

Means is provided on the door **10** for swinging the door **10** into closed position as the receptacle **3** is moved into its normal position of repose shown in solid lines in Figure 1. This means comprises the arcuate arm **29** fixedly secured to the door and extending backwardly

so that it bears against the vertical wall 8. In effect, the arm 29 serves as a cam lever for swinging the door 10 closed as the receptacle 3 is moved from its outer dumping position shown in dotted lines in Figure 1 toward its normal position of repose.

In operation, the receptacle is normally disposed in the solid line position where it is adapted to receive any materials desired to be disposed of. The person, such as the janitor, who desires to remove the contents merely grasps the handle 18 and swings the receptacle 3 outwardly into the dotted line position shown in Figure 1, where the receptacle 3 is disposed above his collecting bag or the like indicated in dotted lines at 30. As the receptacle obtains the position shown, the operator turns the handle 18 to release the door 10 which swings into the dotted line position, allowing the contents to be dumped out into the bag 30. Detent or stop 29*a* is engaged by arm 29 to limit its swing. After the complete discharge of the contents, the operator merely returns the receptacle 3 to its normal position of repose allowing handle 18 to turn freely during the last part of this motion. As the receptacle 3 approaches the vertical wall 8, the curved arm 29 engages the wall 8 and gradually swings the door 10 into closed position until the catch 17 is engaged by the latch 12 in the locking position shown in Figure 2.

Figure 3 shows a modification with an automatically operated lower door in which the arcuate cam arm 29 is omitted and the latch mechanism as well as the plate 28 is omitted. In this embodiment, a fixed shelf 31 is secured to the vertical wall 8 so that it is in contact with the bottom surface of the door 10 when the receptacle 3 is in the normal position of repose and holds the door 10 in the closed position. In this embodiment, the handle 18 may freely rotate on the wall 14 of the receptacle 3 or it may be fixed thereto in non-rotatable fashion. When the handle is grasped and the receptacle pulled outwardly from the wall 8, the door 10 swings downwardly into the open position about its hinge 11 by its own weight. After discharge of the contents, the swinging of the receptacle 3 back into its normal position of repose brings the door 10 into contact with the outer portion 32 of the shelf 31. Preferably this outer portion 32 is curved to cause the door 10 to swing gradually upwardly as the hinge 11 passes back over the shelf 31. When the receptacle 3 is swung clear back against the wall 8 as far as the bumper 7 will permit, the door 10 is completely closed and adequately supported by the shelf 31 so that regardless of the loading of the door 10 by the contents of the receptacle 3, there is no tendency for the door to be opened.

Figure 4 shows another modification in which the door 10 is hinged at 11 but it is supported in closed position by spring means, such as by providing conventional spring hinges at 11*a*. In this embodiment, a flexible connection, such as a cord, rubber band or chain 34 is connected at one end either to the door 10 itself at a location spaced from the hinge axis or to a projection 35 secured to the door 10. The other end of the flexible connection 34 is secured either to the wall 8 or to any suitable projection or fastening such as indicated at 36 rigidly secured to the wall. Preferably, the connection at 36 is spaced along the wall 8 at some point adjacent the lower portion of the receptacle 3 so that when the flexible connection 34 first reaches an extended condition during the outward swing of the receptacle 3, it will take a straight line position which is spaced below the axis of hinge 11*a* in that position of the receptacle.

When the operator swings the receptacle 3, as mounted in Figure 4, outwardly for dumping purposes, the door remains closed during the initial part of the swing until the flexible connection 34 is extended into a taut condition. Motion beyond this position pulls the door down into its open position against the action of the spring hinges. After dumping, returning of the receptacle into its normal position of repose allows the spring to close the door and finally relaxes the flexible connection 34 into the condition of free suspension as shown in solid lines in Figure 4.

Figure 5 shows another embodiment having an automatically operated lower door in which the receptacle 3 is hingedly mounted at its upper end along its back wall as at 4 as in all of the other embodiments. In this embodiment, the door 10 is secured to the back wall 9 of the receptacle 3 by hinges 11 which may or may not be spring hinges. One or more slotted brackets 37 are secured to the wall 8 and project outwardly therefrom, such as at a position below the receptacle 3. Each arm 37 is provided with a slot 38 and the door 10 has fixedly secured thereto an arm 39 having a laterally projecting pin 40 extending into the slot 38. If desired, a similar set of arms 37 and 39 may be disposed adjacent each side of the receptacle 10. The portion of the slot 38 adjacent the wall 8 is preferably an arc having its center on the axis of hinge 4 so that as the receptacle 3 is swung outwardly into dumping position, the first part of this motion does not change the relationship of the door to the receptacle, thereby keeping it closed. The outer portion of the slot 38, i. e. the portion away from wall 8, is inclined out of the arc or curved downwardly so that upon continued swing of the receptacle beyond the first arcuate portion of the slot, pin 40 when traveling along slot 38 opens the door 10. This is a positive opening action and during the return swing of the receptacle into its normal position of repose, a similar but opposite positive closing action is exerted upon the door 10.

In Figure 6, the receptacle 3 is pivotally mounted at 4 on the desk 5 as in the other embodiments. However, flanking sections 41 and 42 may be fixedly mounted on the desk wall adjacent the receptacle and have upper and outer panels flush with the top and front of the receptacle 3 to provide a pleasing, streamlined appearance.

In Figure 7, the receptacle comprises a stationary open-faced inner retainer or pouch having a back panel 43 fixed to the wall of the desk 5, a sloped bottom panel 44 and two side panels 45 and 46. The several panels are preferably rigidly connected together. The inner retainer cooperates with an outer retainer which may comprise an upper horizontal strip 47 and is hinged to the desk wall at 48. The outer retainer also comprises a front panel 49, which extends down to the outer edge of the sloped bottom 44, and side panels 50 of rectangular shape when the top of the receptacle is horizontal or of trapezoidal shape when the receptacle has a sloped top. The panels 50 rigidly interconnect the strip 47 and the front panel 49, and the width of the panel 49 is slightly greater than the width of the bottom 44 so that side panels 50 of the outer retainer snugly slide over the side panels 45 and 46 of the inner retainer. A spring-hinged top cover may be provided as in the embodiment of Fig. 1 and the front edges of the panels 45 and 46 may correspond in shape to the adjacent edges of side panels 50 or they may be curved as shown. The bottom edges of outer panels 50 may take any contour desired from the slope of panel 44 to a horizontal as shown. In operation, the outer retainer is swung up and out by the knob 51, the relative movement between the inner and outer retainers in effect providing a discharge opening or bottom door therebetween, the slope of the panel 44 causing the contents of the receptacle to be discharged outwardly from the desk into a container 30*a*.

All of the embodiments of the inventoin are characterized by simplicity and facility of operation. It is particularly noteworthy that the person charged with removing the contents of the receptacle needs only one hand for simultaneously swinging the receptacle into dumping position and in effect opening a door at the bottom for dumping. With the other hand, the operator is free to adjust the collecting bag or other container or to assist the discharge of the contents into the collection receptacle resting upon the floor. The receptacle

knows
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where it is and need not look in a lower panel
of the room before getting ...nts drop out and
addition, the several modifica... the receiving recep-
or door serving as a chute ...ously, to this end, in
are guided by the panel or... first raised up over the
tacle; the door opening ...er and then, as the hinged
a delayed action so that ... door suddenly opens wide
edge of the receiving ... the lip into the receiving recep-
container is swung ... by fast action, dro...us manner at an angle with the
tacle in an adva...ately 60 to 45 degrees. At this point
vertical of appro... the same plane as the back wall of
the door ma...nd acts as a chute for the contents of
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It is t... understood that changes and variations may be ma... without departing from the spirit and scope of the in...ention as defined in the appended claim.

I claim:

In combination, a receptacle having a front wall and a back wall rigidly secured together and having a receiving opening extending between the upper ends of the front and back walls, a support having an approximately vertical wall surface extending substantially below said receptacle, hinge means secured to the upper end of the back wall of the receptacle for pivotally mounting the receptacle about a horizontal axis on said wall surface, a closure for the bottom of the receptacle hingedly mounted at the lower terminus of the back wall thereof and extending between the front and back walls thereof, spring means for urging the closure into closed position with respect to the receptacle, and means for opening the closure when the receptacle is swung outwardly from said wall surface comprising a flexible connection between said wall surface and said closure.

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