

March 29, 1938.

M. C. MAISH

2,112,465

REFUSE RECEPTACLE

Filed Nov. 17, 1933

2 Sheets-Sheet 1

Fig. 1.

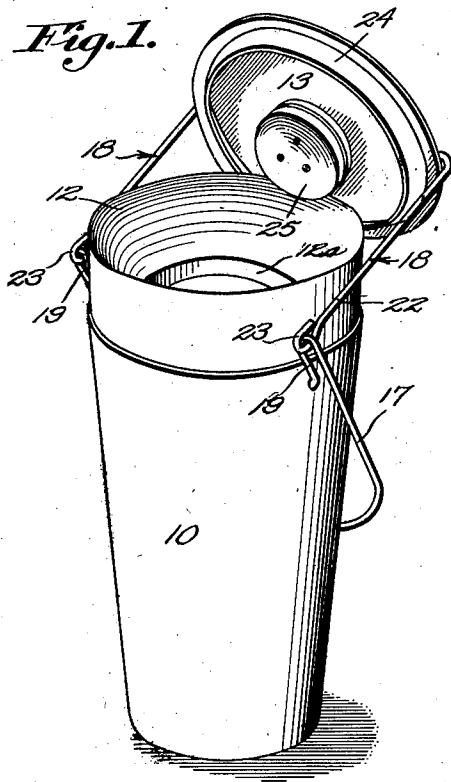


Fig. 2.

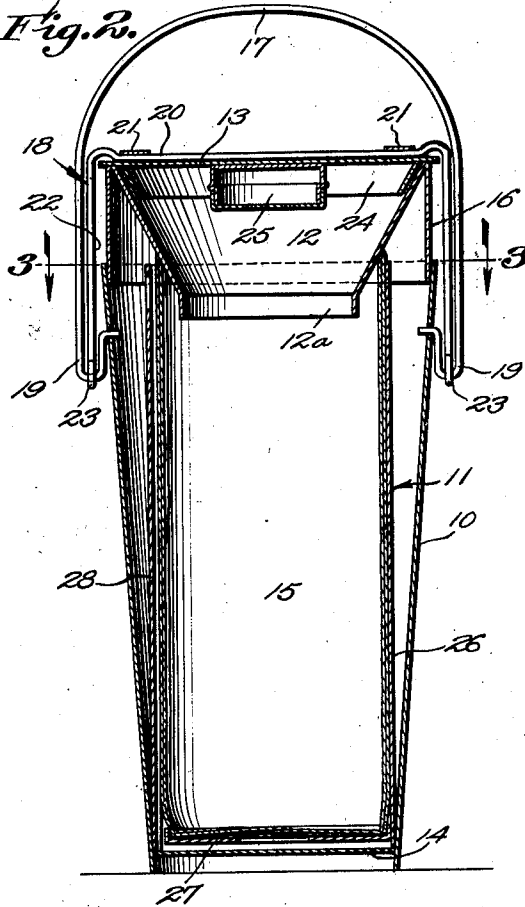


Fig. 3.

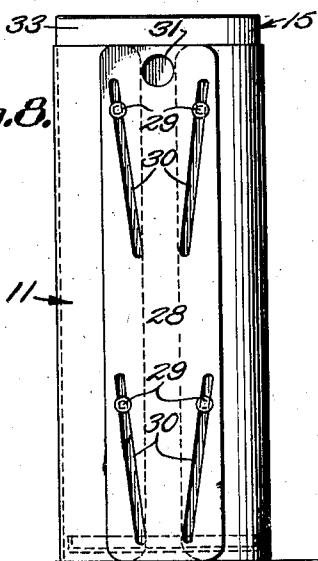
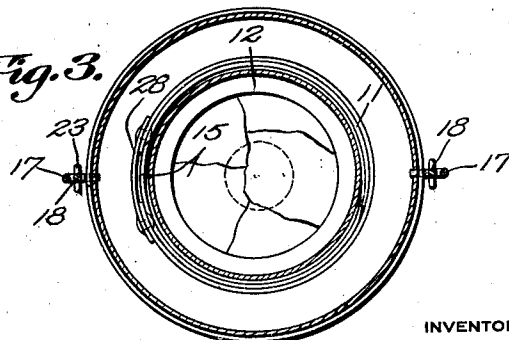


Fig. 4.



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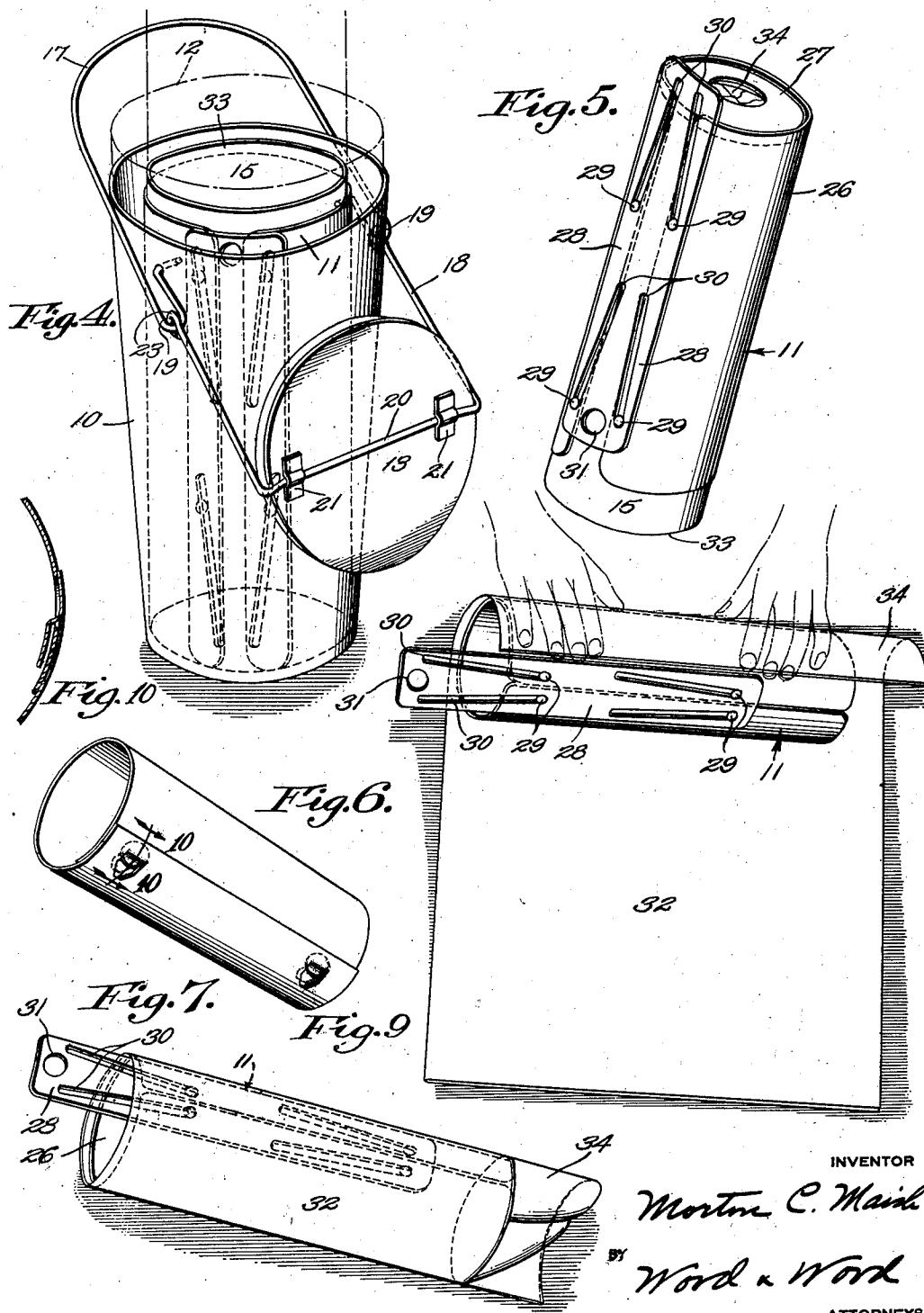
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REFUSE RECEPTACLE

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2 Sheets-Sheet 2



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REFUSE RECEPTACLE

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Application November 17, 1933, Serial No. 698,497

4 Claims. (Cl. 220-17)

This invention relates to the disposal of refuse and is particularly directed to improvements in refuse receptacles for home or office use.

It is obvious that the handling of refuse or garbage of any sort has always been an unpleasant task. The typical pail or bucket, for receiving refuse or garbage, functions quite well for receiving the garbage, but, when it becomes necessary to dispose of the contents of the pail, the task becomes extremely unpleasant. Often it is quite difficult to completely empty the bucket, and the interior of the bucket must be cleaned periodically. Since the cleaning of the pail is an obnoxious chore it is often neglected and an unhealthy and unsanitary condition exists.

Many of the cities require the wrapping of garbage before it will be collected. This adds to the duties of the housewife in disposing of the garbage. The wrapping is an awkward operation and is seldom done efficiently. The common procedure in taking care of these requirements for garbage collection is to wrap the garbage in newspapers. Unless this is neatly done, the packages are not effective and the garbage becomes scattered from the loosely and clumsily made package. This has a further disadvantage in that the packages as made are deposited in the garbage pail or receptacle and in a short time become water soaked and burst when handled for disposal.

Accordingly, in view of the foregoing, it is the object of this invention to provide an improved garbage or refuse bucket or pail which is inclusive of a device for forming a neat paper package for refuse. It is the purpose of this improvement that the garbage receptacle be readily and efficiently usable as a form for creating a uniform and sturdy package, which package fits neatly in the container and can be readily completed when filled and thereafter efficiently and pleasantly disposed of merely by pitching the package from the cylinder into the ultimate outside collection receptacle.

It is a further object of this invention to provide a garbage pail incorporating means by which a package can be efficiently and quickly formed from ordinary newspapers, the resulting package being substantial and of the proper size for receiving an average meal or day's garbage or refuse.

Other objects and further advantages will be more fully apparent from a description of the accompanying drawings, in which:

Figure 1 is a perspective view of the improved garbage receptacle of this invention.

Figure 2 is a vertical longitudinal sectional view of the receptacle disclosing the details thereof.

Figure 3 is a sectional view taken on line 3-3, Figure 2.

Figure 4 is a perspective view of the receptacle showing the lid and the hopper element removed.

Figure 5 is a perspective view of the garbage packaging cylinder, showing it in expanded condition for permitting discharge of the contents thereof.

Figure 6 is a perspective view illustrating the packaging container in collapsed position and the operation of rolling a paper cylinder thereon.

Figure 7 is a perspective view of the packaging container disclosing the paper cylinder formed thereabout and the lower end of the paper cylinder in the operation of being tucked in for forming the base thereof.

Figure 8 is a side view of the expanded container, showing the paper receptacle in place therein and ready for use in receiving garbage.

Figure 9 is a perspective view of a modified bag-holding tube structure.

Figure 10 is a sectional view taken on line 10-10, Figure 9, detailing a hook device of the modified tube.

The refuse receptacle, as disclosed, incorporates the following major parts: a pail or bucket 10 of the desirable size and an expansible cylindrical bag holder 11 mounted in the pail. A hopper 12 is mounted on the upper end of the pail and provides a hopper portion over the bag holder for directing the refuse into the bag. A readily removable lid 13 is secured in position on the hopper element.

The bucket 10 in this instance is tapered to provide a large upper end. Its internal diameter at the base is substantially the same as the outer diameter of the cylindrical bag holder 11 when the bag holder is adjusted to service diameter. Therefore, the bag holder cylinder is securely mounted against lateral shifting on the bottom 14 of the bucket. There is ample clearance, in the bucket, about the upper end of the bag holder to permit the housewife to grasp the bag holder for removal thereof.

A formed bag 15 is fitted into the holder for directly receiving the refuse. This bag 15 and its formation will be described in detail hereinafter. For the present understanding, it suffices to state that the open upper end of the bag projects slightly above the cylindrical bag holder. The hopper or funnel 12 includes a depending flange or rim 16 fitting into the upper enlarged end of

the bucket for mounting the funnel in position. The funnel or hopper portion 12^a of the element 12 projects into the upper end of the bag. For this purpose the lower end of the funnel is of smaller diameter than the upper end of the bag, whereby the hopper accurately directs the refuse into the bag.

A bail 17 is provided for the bucket. A lid-carrying, wire bracket 18 is connected to this bail for receiving movement therefrom and for locking the lid 13 in place. To this end the bail is formed to provide a leverage portion which consists of a reverse bend 19 adjacent each pivot of the bail. The loops thus formed extend downwardly when the bail is in upwardly swung position for carrying the bucket.

The lid bracket is of U-shape and has its cross bar 20 pivotally fixed across the top of the lid by means of clips 21. The ends of the arms 22 thereof are looped to provide eyelets 23, hooked about the reverse bend loops 19 of the bail. It will be apparent that when the bail is swung downwardly, the lower or looped ends thereof are raised, this raising the lid bracket and the lid. The lid includes a locating or centering flange 24 of tapered form fitting in the mouth of the hopper, the lid lying on the upper margin of the hopper. A fumigant or deodorant container 25 is secured on the under side of the lid.

The movement of the lid can be readily followed through the views of the drawings. For instance, Figure 2 illustrates the bail 17 disposed upwardly for carrying the bucket and the lid 13 drawn down in position of closure. In Figure 1 the bail has been lowered swinging its loops 19 upwardly and raising the lid, the lid falling sideways and over the upper edge of the hopper. With the lid down or suspended at the side of the bucket, the bail can then be raised for carrying the bucket with the lid displaced as shown in Figure 4.

The bag holder has a double utility. It not only functions to support or to sustain the bag within the bucket and serves as a carrier for the bag when it is necessary to dispense of the contents into the ultimate garbage container, but it has the added function of serving as a mold or form for making up the package. In its development for these two purposes, the holder has been made collapsible so that its diameter may be varied for the various operations and functions.

The holder is fabricated of a split tube or cylinder 26 and an apertured bottom 27 brazed to the inner, lower end of the tube around that half which is opposite to the split portion. The diameter of the tube is varied by means of a longitudinally shiftable plate 28 mounted along the split of the tube. In this instance, four studs 29 are provided as a part of the tube and are disposed along the edges of the tube adjacent the split, in pairs.

The holder controlling element is of the same length as the tube having pairs of longitudinally disposed slots 30 therein, the slots of each pair being angularly disposed relative to each other. The pins or studs of the holder are engaged in these slots and are headed to prevent displacement of the plate. These slots are close together at their lower ends or those ends disposed toward the bottom of the holder. The plate includes an aperture 31, in its upper end, for purposes of manipulation. Longitudinal, sliding movement of the plate accomplishes the change of diameter which is effective for converting the tube for its different uses.

Assuming that the bucket is about to be put in service, the first operation is to withdraw the bag holder cylinder from the bucket and collapse the cylinder to small diameter by pulling the plate 28 upwardly as far as it will go. Then, in accordance with Figure 6, the operator procures a newspaper 32 and rolls the newspaper about the cylinder. The bag holder is of a length slightly less than the width of the average newspaper sheet or it can be made of a length slightly less than the height of a newspaper sheet in case it is desirable to use a double sheet as in larger containers or half sheet size for smaller containers. In rolling the newspaper about the cylinder a portion of the margin of the newspaper is permitted to extend beyond the upper edge of the cylinder as at 33 and a portion 34 projects beyond the lower edge for tucking to form the bottom of the package as shown in Figure 7.

Now with the cylindrical package fully formed, the package is drawn off the bottom of the cylinder. The holder is then expanded by moving the plate the full extent of its movement downwardly (see Figure 5). The formed package is then placed in the cylinder, whereupon the latch is moved back or upwardly slightly to the position shown in Figure 4. The conversion from collapsed to expanded position effects a change of tube diameter, whereby the inner diameter of the expanded tube is equal to or slightly greater than the outside diameter of the contracted tube, and the paper bag fits within the container. When the final adjustment of the plate is made, the tube is slightly compressed or collapsed and thus fits snugly about the bag.

After the bag has been filled with refuse, the extended, upper end thereof is collapsed into the holder for closing the package. In the operation of dispensing the package from the cylinder, the cylinder is slightly expanded by moving the latch downwardly to the position shown in Figure 5. It is then feasible for the housewife to pitch the package from the holder into the ultimate container.

In the modification of Figure 9, the holder tube is of spring steel and is split as in the preceding form but includes overlapping edges or margins 40. One longitudinal, marginal portion has circular apertures 41 formed therein. The other portion, overlapping the apertured marginal portion, has a hook 42 adjacent each aperture. Those hooks are pressed or struck inwardly from the metal of the tube and project toward the edge of the marginal portion in which they are included. Specifically, the hooks or tangs 42 include off-set portions and arrow-shaped, circumferentially, projected portions which hook through the apertures.

The tube is normally expanded for receiving the formed paper tube. It is collapsed by pressure applied for forcing the edges into greater overlap and hooking the tangs into the apertures where the off-set portions engage the sides of the apertures and hold the tube against normal expansive force while the paper is being rolled thereon.

Having described my invention, I claim:

1. A refuse receptacle, comprising, a pail, a cylindrical bag holder mounted in said pail, a hopper element engaged in the top of said pail and projecting into the upper end of the holder, and a lid for said hopper, said holder of collapsible form for varying its diameter whereby a paper sheet can be rolled into a cylinder thereon when the holder diameter is reduced and inserted in

the holder when the holder diameter is increased.

2. In a device of the class described, a refuse receptacle, a container disposed in said receptacle, a hopper element mounted in the top of the receptacle and projecting into the container, said container device comprising a split collapsible tube and including means for varying the diameter of the tube, and a lid for said hopper.

3. In a refuse receptacle, a bag holder of split cylindrical form mounted in the receptacle, an adjustment plate disposed longitudinally of said holder over the split thereof, said holder and plate having pin and slot connections at each

side of the split, the adjacent slots on the respective sides of the split spaced apart a greater distance at their upper ends than at their lower ends, whereby movement of the plate lengthwise of the holder decreases or increases the diameter of the holder for package rolling and holding respectively.

4. In a device of the class described, a split cylindrical container having a bottom, said cylinder including an adjustment plate along the split for spreading or closing the same for changing the diameter of the container.

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