Jan. 8, 1946. C. MALLORY 2,392,604

RECEPTACLE FOR LOOSE DISCARDED MATERIALS

Filed March 4, 1944

Fig. 1

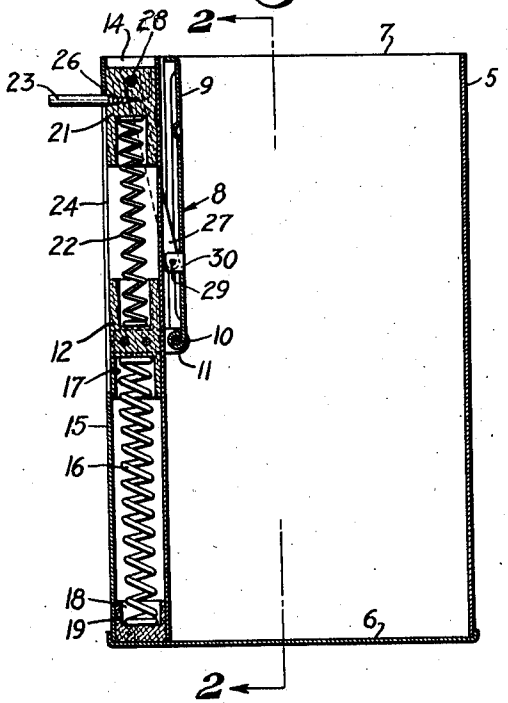


Fig. 4

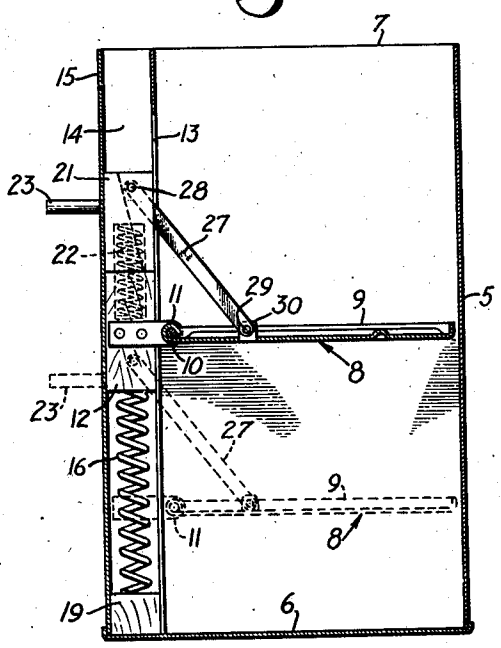


Fig. 2

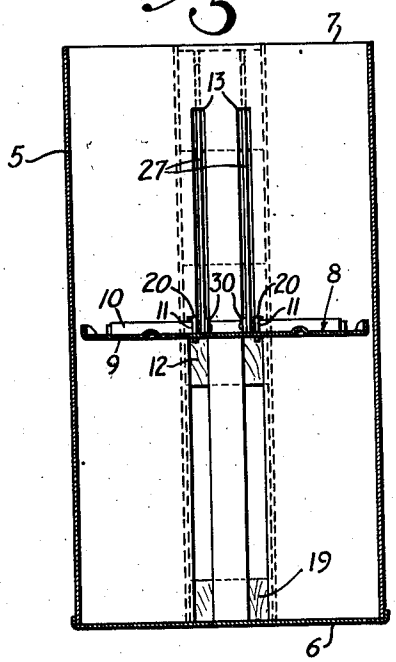
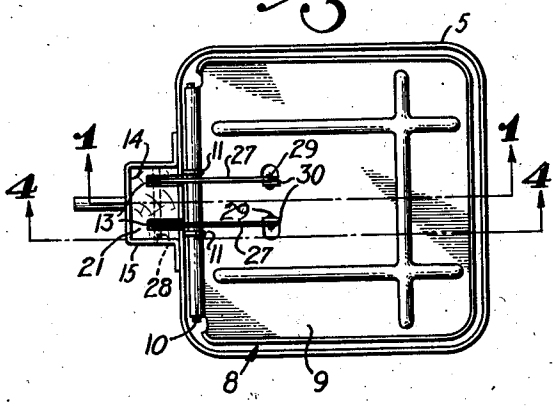


Fig. 3



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RECEPTACLE FOR LOOSE DISCARDED MATERIALS

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10 Claims. (Cl. 220—93)

This invention relates to a trash receiver; and particularly to one adapted to receive light, loose and crumpled or fluffy sheet material, which after placement in the receiver tends to expand to increased space requirements and spill from the container.

It is an object of this invention to provide a trash can, box, container or the like wherein a member is provided which is available to compress or pack the scrap material in the container, to prevent the material expanding so as to spill over the sides of the container, as well as to make it possible to get more of such material into the container.

Such a trash receiver is especially useful in connection with discarded paper towels. Paper towels are in general use, and as is well known are commonly in the form of rectangular pieces of absorbent paper, which are wrinkled and loosely crumpled as an incident to their use and are discarded in this condition. When so crumpled, each towel occupies many times the space which it would require if tightly crumpled or closely folded and compressed, and this condition is aggravated by the tendency of such a towel, even if discarded in a tightly folded and crumpled condition, to expand and unfold so as to occupy a greatly increased amount of space. Thus, a container in order to hold a reasonable quantity of such discarded towels must be of quite large size, and even if it is of relatively large size, it is not satisfactory since a comparatively few towels suffice to fill it, and the springy, fluffy nature of the discarded towels and the tendency of the towels to unfold and require increased space, causes them to spill over the edge of the container. It is accordingly another object of this invention to provide a container having means for packing and crushing the contents to reduce its space requirements and thus counteract the tendency of the contents to overflow the container.

In discarding such towels after use, they are usually given a toss in the direction of the used towel receptacle as people ordinarily are too impatient to open a spring closed closure member on the receptacle such as is sometimes provided. Even when the receptacle is open people are reluctant to insert their hand into the container in discarding the towels, with the result that a comparatively small quantity of the light fluffy towels suffices to fill the receptacle to overflowing, so that any additional towels which are discarded and thrown to the container fall from the container to the floor, resulting in an unsightly appearance and requiring additional labor to gather them up. Even the attendants whose duty it is to look after such receptacles find difficulty in compressing such discarded material so that the normal capacity of the receptacle can be utilized to reasonable advantage, since a tool, implement or the like for pressing the material downward in the receptacle is generally not available. Thus, it is another object of this invention to provide such a receptacle which has a large opening, normally unrestricted for the reception of discarded towels, or the like, which has means for pressing the discarded material downwardly into the receptacle from the opening or mouth thereof.

It is still another object of this invention to provide a receiver for discarded material with a normally open cover-like member which may be moved to closed position and is optionally additionally movable to pack and compress the discarded material in the receiver.

It is still another object of this invention to provide a receiver for discarded material having a normally open cover or pressure member which may be moved optionally to a position for confining and compressing such material, a continuation of such movement causing the member to compress the material further.

This invention possesses many other advantages and has other objects which may be made more easily apparent from a consideration of one embodiment of the invention. For this purpose there is shown a form in the drawing accompanying and forming part of the present specification. This form will now be described in detail, illustrating the general principles of the invention; but it is to be understood that this detailed description is not to be taken in a limiting sense, since the scope of the invention is best defined by the appended claims.

In the drawing:

Figure 1 is a vertical section through a trash receiver incorporating the invention, and taken on line 1—1 of Figure 3 but showing the cover member open;

Figure 2 is a vertical section taken at right angles to Figure 1, as indicated by line 2—2 of Figure 1;

Figure 3 is a top plan view of the receiver; and

Figure 4 is a view similar to Figure 1, taken on line 4—4 of Figure 3, but illustrating different operating positions of the movable elements.

The trash receiver comprises a vertically disposed container or receptacle 5, which by way of example is shown as square in cross section with rounded corners as shown in Figure 3, and formed

of sheet metal or other suitable material. The lower end of the container 5 is closed by a bottom member 6 secured to the container; the upper end 7 of the container is open, and the interior of the container is normally entirely free to receive the discarded material.

Means 8 are provided which include a pressure member 9 which may be in the form of a cover optionally movable to extend across the container 5 so as to move the material therein downwardly away from the opening and additionally movable to compress the material against the bottom 6.

As clearly shown in the drawing, the pressure member 9, which may be formed of sheet metal or other suitable material fabricated to give it the required stiffness, is pivotally mounted at one edge 10 to a pair of projections or ears 11 formed on a member or block 12, and projecting through the slots 13 in a side of the container 5. The block 12 is guided for vertical movement as by being formed of a rectangular cross section and confined in a guideway 14 having a corresponding cross section and defined by a guide member 15 secured on one side of the container 5. The block 12 is supported in the guideway 14 by a compression spring 16 which is appropriately positioned in the guideway by having its upper end accommodated in a recess 17 in the block 12, and its lower end accommodated in a similar recess 18 formed in a member 19 resting on the bottom 6. The spring 16 urges the block 12 upwardly at all times, such upward movement being limited by the ears 11 engaging stops or shoulders 20 formed in slots 13 (see Fig. 2).

Slidable in the guide 14 above the block 12 is another block or operating member 21. Operating member 21 is continuously urged upwardly from the block 12 by a compression spring 22 which is preferably substantially lighter than the spring 16. An operating handle 23 extends from the member 21 through a slot 24 in the guide member 15, the upper end 26 of the slot limiting upward movement of the member 21 in response to the spring 22. The operating member 21 is connected to the member 9 by a pair of links 27 having their upper ends pivoted to the block 21 as at 28 and their lower ends pivoted as at 29 to upstruck ears 30 formed on the member 9.

The open end 7 of the container 5 is entirely unobstructed when the member 9 is in its raised or normal position, and particularly since this member does not extend above the top of the container as shown in Figure 1, thus the desired waste material can be readily placed in the container. When it is desired to compress the material in the container, or urge it downwardly away from the openings, the handle 23 and the block 21 are moved downwardly against the force of the spring 22, such movement by means of links 27, causing the member 9 to swing outwardly and downwardly as indicated in Figure 4. This movement serves to confine and press the material downwardly from the opening 7. If it is desired to compress the material further, additional pressure is exerted on the handle 23 to cause the block 12 to move downwardly against the force of the spring 16 causing the member 9 to assume a position such as indicated by the broken lines of Figure 4.

I claim:

1. In a trash receiver, means forming an open container, a pressure member, means pivotally mounting said member for movement to a position where it extends across the container, operating means for moving said member about its pivot, means resiliently supporting said mounting means for translatory movement to cause translatory movement of the member within the container, and means whereby actuation of the member operating means causes translatory movement of said mounting means.

2. In a trash receiver, means forming an open container, a pressure member, means pivotally mounting said member for movement to a position where it extends across the container, operating means for moving said member about its pivot to said position, means resiliently opposing said movement of the member, means supporting said mounting means for translatory movement to cause translatory movement of the member in the container, said operating means serving to move said mounting means after movement of the member to said position.

3. In a trash receiver, means forming an open container, a pressure member, means pivotally mounting said member for movement to a position where it extends across the container, operating means for moving said member about its pivot, means resiliently opposing said movement of the member, means forming a resilient support for said mounting means, whereby said mounting means is movable to cause translatory movement of the member with respect to the container, and means whereby actuation of the member operating means causes movement of said support.

4. In a trash receiver, means forming an open container, a pressure member, means pivotally mounting said member for movement to a position where it extends across the container, operating means for moving said member about its pivot, means interposed between said mounting means and said operating means resiliently opposing such movement of the member, and means resiliently supporting said mounting means whereby said mounting means is movable to cause translatory movement of the member with respect to the container in response to actuation of said operating means.

5. In a trash receiver, an open container, a pressure member for the container, a member slidably mounted on said container for movement toward and away from the open end of the container and pivotally supporting the pressure member for movement to a position where it extends across the container, a pressure member operating member slidable on said container and positioned above the first mentioned member, spring means interposed between said members for resiliently maintaining the pressure member in a position such that the opening of the container is unobstructed thereby, and spring means supporting said first mentioned member, actuation of said operating member serving to position the pressure member to extend across the container, as well as to cause downward movement of said first mentioned member and the pressure member with respect to the container.

6. In a trash receiver, means forming an open container, a pressure member, means pivotally mounting said member for movement to a position wherein it extends across the container, operating means movable rectilinearly for moving said member about its pivot, means resiliently supporting said mounting means for movement to cause translatory movement of the member within the container, and means whereby actuation of the member operating means causes movement of said mounting means.

7. In a trash receiver, means forming an open container, a pressure member, means pivotally

mounting said member for movement to a position where it extends across the container, resilient means normally maintaining said member in a retracted position within said container, operating means for moving said member about its pivot, means supporting said mounting means for movement to cause translatory movement of the member in the container, and means whereby actuation of the operating means causes translatory movement of said mounting means.

8. In a trash receiver, means forming a container having an open end, a pressure member, means mounting said member for pivotal movement from a retracted position adjacent a wall of the container to a position where it extends across the container, said member being pivotally connected to said mounting means adjacent an end of said member, said end being remote from the open end of the container when the member is in retracted position, operating means for moving said member about its pivot, means supporting said mounting means for movement to cause translatory movement of the member in the container, and means whereby actuation of the operating means causes movement of said mounting means.

9. In a trash receiver, means forming an open container, a pressure member, means pivotally mounting said member for movement from a retracted position to a position where it extends across the container, operating means for moving said member about its pivot, said member and said operating means being mounted and guided for rectilinear movement in the same direction and being spaced apart in said direction, whereby continued actuation of said operating means, following pivotal movement of said member to extended position, causes said operating means to engage the mounting means and impart rectilinear movement to said mounting means and the member.

10. In a trash receiver, means forming a container, having an open end, a pressure member in said container, means mounting said member for pivotal swinging movement downwardly from a retracted position adjacent a wall of the container to a position where it extends across the container, said member being pivotally connected to said mounting means adjacent an end of said member, said end being remote from the open end of the container when the member is in retracted position, operating means for moving said member about its pivot, and resilient means normally maintaining said member in retracted position within said container.

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