Oct. 11, 1932. W. A. TROTH 1,882,343

BALING RECEPTACLE

Filed Sept. 8, 1930 3 Sheets-Sheet 1

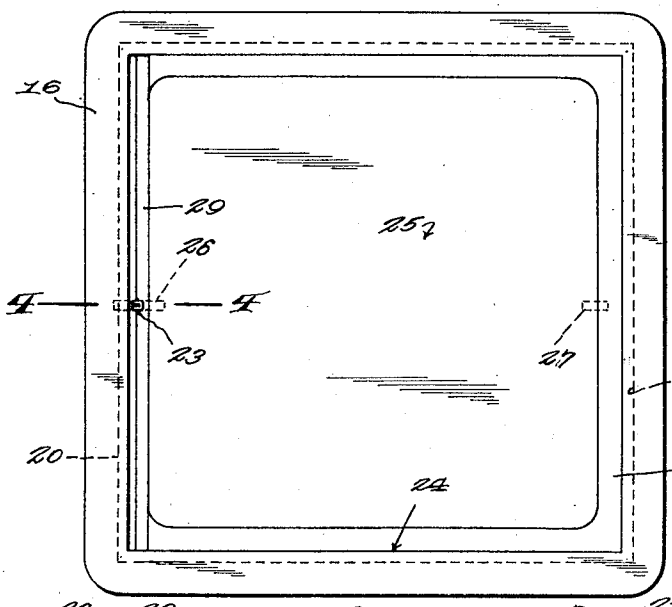


Fig. 1.

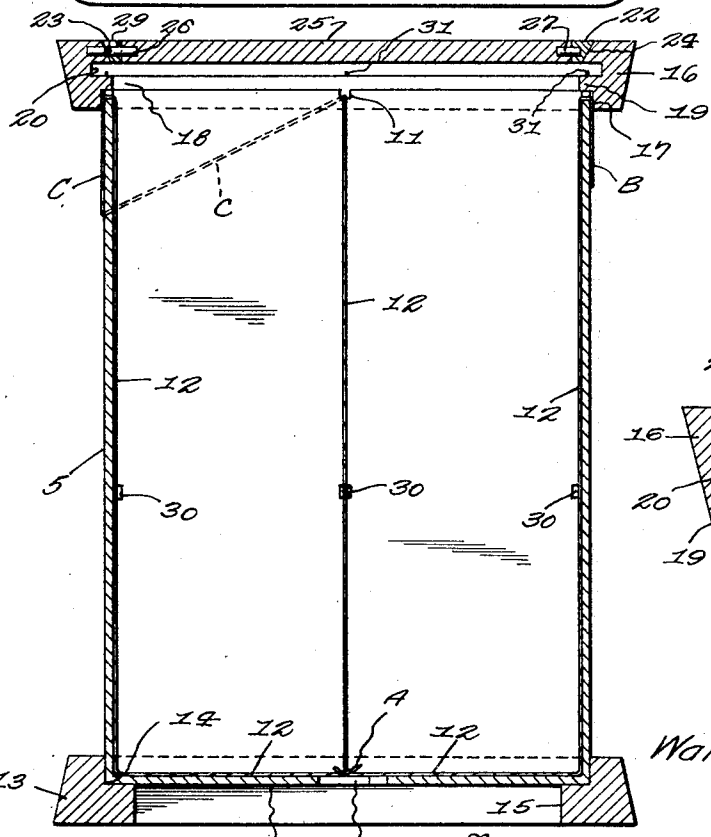


Fig. 2.

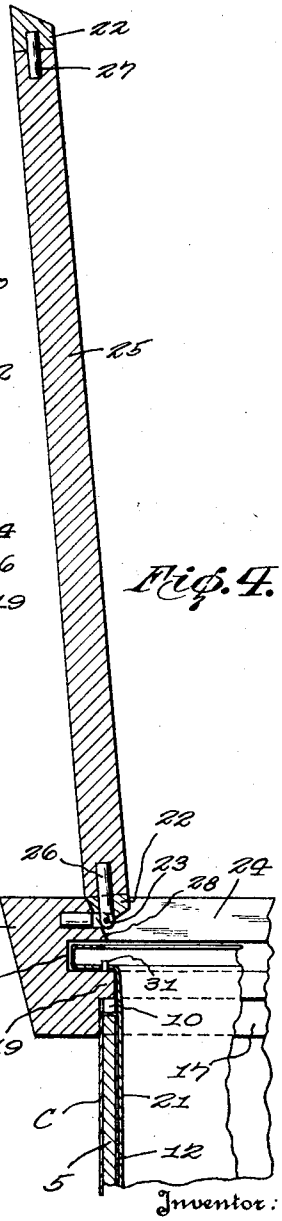


Fig. 4.

Inventor:
Walter A. Troth.

By
F. V. Winters.
Attorney

Oct. 11, 1932. W. A. TROTH 1,882,343

BALING RECEPTACLE

Filed Sept. 8, 1930 3 Sheets-Sheet 2

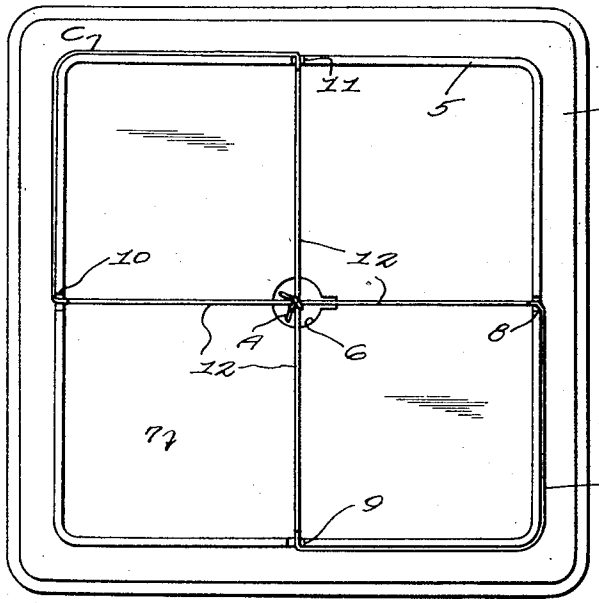


Fig. 3.

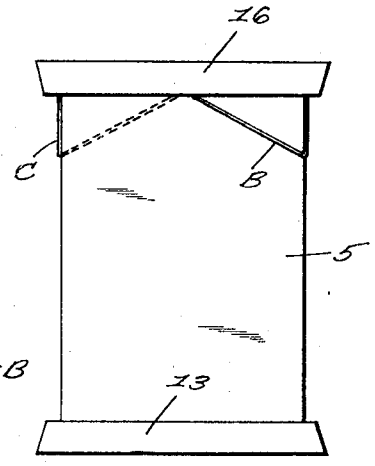


Fig. 6.

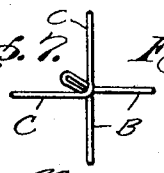


Fig. 7.

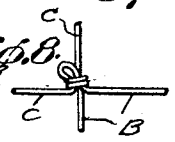


Fig. 8.

Fig. 5.

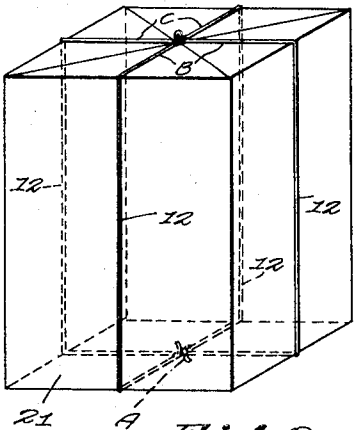


Fig. 9.

Inventor:
Walter A. Troth.

By F. V. Winters.
Attorney

Oct. 11, 1932. W. A. TROTH 1,882,343

BALING RECEPTACLE

Filed Sept. 8, 1930 3 Sheets-Sheet 3

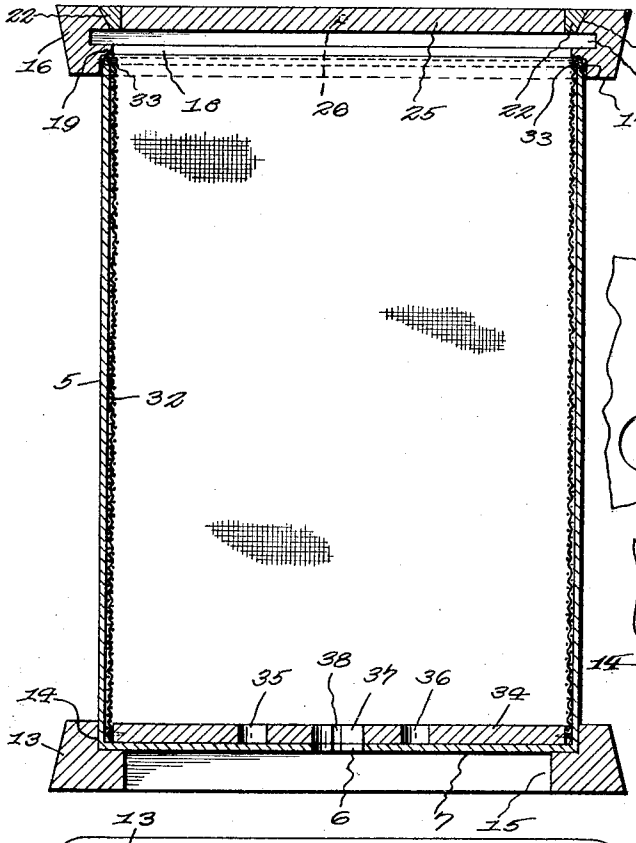


Fig. 10.

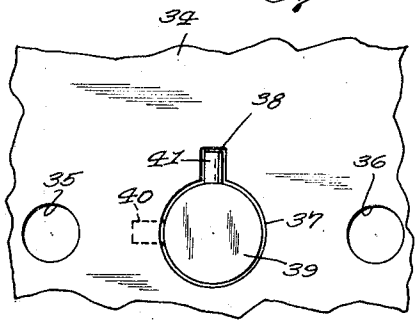


Fig. 12.

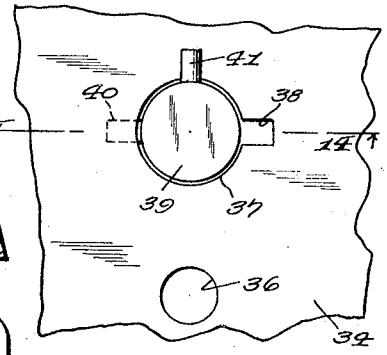


Fig. 13.

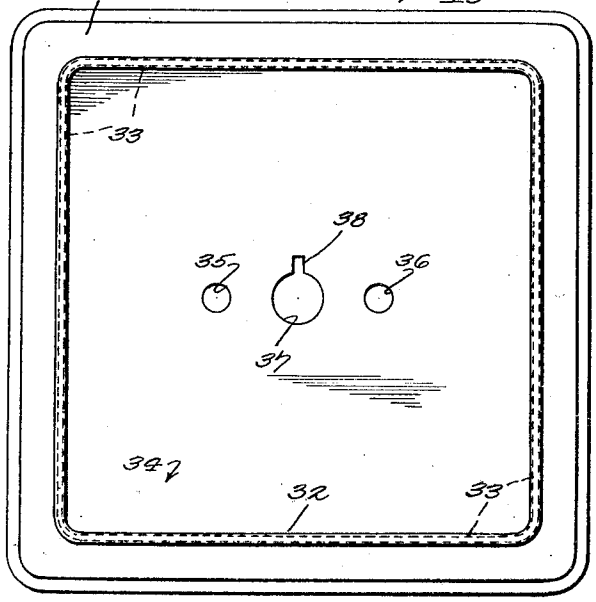


Fig. 11.

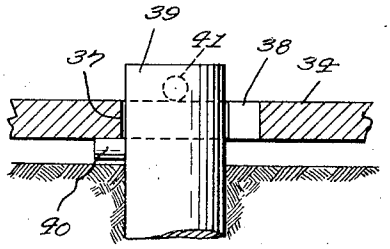


Fig. 14.

Inventor:
Walter A. Troth.

By F. V. Winters.
Attorney

Patented Oct. 11, 1932

1,882,343

UNITED STATES PATENT OFFICE

WALTER A. TROTH, OF BROOKLYN, NEW YORK

BALING RECEPTACLE

Application filed September 8, 1930. Serial No. 480,589.

This invention relates generally to receptacles and the improvements are directed to a novel form of baling device adapted for the reception and disposition of household and office refuse, such as waste paper, garbage, ashes, or the like.

Primarily, the object of the present invention resides in the provision of the device of the above-mentioned character which is adapted to receive waste materials and to bale the same in convenient packages, or the like, to facilitate their removal by the proper authorities.

A further object is to provide means for the placement of a secondary receptacle within the device whereby waste materials may be deposited without danger of displacing said receptacle.

Another object of the invention is to provide a receptacle with means for securing a tying element in position and for maintaining the same in proper relation to facilitate the packaging of the waste materials within a secondary receptacle when the latter is filled.

Still another object is to provide a novel closure member, said member being hingedly borne by a top frame member and adapted to be opened or closed as desired.

Another feature of the invention resides in the provision of a swinging door, said door being trunnioned to said closure member and adapted to be operated when placing waste materials in said receptacle.

A further object is to provide novel means for swingingly supporting said door with relation to said closure member.

As will presently appear the invention is featured by the provision of a receptacle adapted to receive a textile secondary receptacle, said receptacle being made in various sizes, as desired and adapted to be positioned within the article during the placement of waste materials therein.

A further aim of the invention is to provide a novel textile receptacle, having a rigid bottom portion, the latter being provided with means to afford a convenient hand-hold when the contents thereof are discharged.

A still further object of the invention resides in the provision of novel and unique means whereby said receptacle may be anchored or locked at any desired location, such as adjacent a sidewalk or alley, in order to discourage pilfering or petty thievery.

Still another object is to provide a receptacle which is exceedingly simple in construction, and which is attractive in appearance and built along sturdy lines to give lasting and satisfactory service.

The invention consists, furthermore, in the novel arrangements and combinations of the parts of the construction, as well as in the details of the same, all of which will be more fully described in the following specification, and then finally embodied in the clauses of the claims, which are appended to this specification and which form an essential part of the same.

In the drawings:

Figure 1 is a plan view of my invention.

Fig. 2 is a central vertical longitudinal sectional view showing the tying element in position, but with the auxiliary receptacle removed.

Fig. 3 is a view like unto Fig. 1, but with the closure member removed to show the association existing between the body portion of the article and the tying element.

Fig. 4 is a fragmentary sectional view of one corner of the device, slightly enlarged, and showing the hinged frame in open position, said section taken on the line 4—4 of Fig. 1.

Fig. 5 is a sectional view similar to Fig. 2, but showing the auxiliary receptacle in position within the body portion and with the door swung open on its trunnions.

Fig. 6 is an elevation of the baling receptacle, slightly reduced in scale, and showing

the portions of the tying elements extending downwardly and around opposite corners of the body portion.

Fig. 7 is a detail showing the first step in uniting the said portions of the tying elements after removal from the corners of the body portion.

Fig. 8 is a similar view but showing the portions tied.

Fig. 9 is a perspective view of an auxiliary receptacle which has been previously filled with waste materials, secured by the tying element and removed from the device.

Fig. 10 is a central vertical longitudinal sectional view of the invention with a flexible auxiliary receptacle mounted therein.

Fig. 11 is a plan view of the same with the closure member removed to show the hoop-like member of the flexible receptacle supported on the upper edge of the body portion.

Fig. 12 is a fragmentary view of the rigid bottom of the flexible receptacle showing certain hand-holds, said bottom being inserted over a post prior to securing said post and bottom.

Fig. 13 is a similar view, but showing the bottom twisted or oscillated to secure said bottom to the post.

Fig. 14 is a sectional view taken on the line 14—14 of Fig. 13.

Referring now more in detail to the accompanying drawings, wherein like characters of reference denote similar parts throughout the several views, let 5 indicate the body portion of my novel and improved article, the same having a key-hole opening 6 in its bottom 7 and presenting an open top, as shown in Fig. 2. Said body portion may be made from any suitable material, such as light-gauge metal, fiber-board, or the like, and as shown in Fig. 3, the upper edges of the side walls thereof will be provided with notches 8, 9, 10 and 11 for the reception of the tying element 12, as will be presently explained in detail. Said body portion is supported by a frame member 13, the top surface of the latter being recessed, as indicated at 14, for the reception of the lower part of said body portion as indicated in Fig. 2. The cooperation between said recess and the body portion will be of a nature whereby they will be united by a force-fit to prevent the displacement of said body portion. Said frame member 13 is also provided with an opening 15.

The closure member 16 is adapted to be supported by said body portion 5, and to this end the bottom surface of said member is rabbeted, as indicated at 17, for the reception of the extreme upper portions of the side walls of said body portion, as shown in Fig. 2. An opening 18 is provided just above said rabbeted portion, said opening being dimensioned so that a ledge 19 is formed which slightly overhangs the open mouth of said body portion, the top edge of the latter abutting the lower surface of said ledge, as indicated in Figs. 2 and 4. Just above said ledge, I provide a continuous internal groove 20, into which is tucked the upper portions of an auxiliary receptacle 21, as shown in Figs. 4 and 5. Said closure member 16 also includes a frame 22, which is hingedly supported, as indicated at 23, (Figs. 2 and 4) and adapted to be swung into and out of the opening 24 in said closure member. It will also be observed that said hinged frame 22 supports a swinging door 25, oppositely disposed trunnions 26 and 27 being suitably associated with the respective parts whereby said door may be swung from the closed position shown in Fig. 2 to the extreme opened position shown in Fig. 5. Obviously, this swinging door is used when waste materials are placed in the receptacle, while the hinged frame 22, carrying said door 25 is swung to the position indicated in Fig. 4 when the filled receptacle is to be removed from the body portion of the device. It will be noted that the side walls of the opening 24 are bevelled inwardly, as shown at 28, to prevent the hinged frame and door from falling therethrough and further it will be observed that one edge of said frame 22, adjacent the hinged connection 23 is also bevelled, as indicated at 29, (see Figs. 1 and 2), said bevelled portion encountering the adjacent bevelled side wall of opening 24 to limit the opened position or erect position of said hinged frame and door, as shown in Fig. 4.

From the foregoing it is manifest that I have provided a device including a body portion, suitably supported by a bottom frame member, and also a closure member fitting over said body portion and having included therewith a hinged frame member, the latter supporting a swinging door. Further, said body portion has associated therewith a tying element and an auxiliary receptacle snugly fitting within said body portion.

When the article is to be placed in readiness for use, the tying element 12 is first placed in position and this naturally necessitates the removal of said closure member 16. Said member 16 having been removed the tying element 12 is arranged in the position indicated in Figs. 2 and 3, wherein it will be noted that said element crosses the bottom 7 of the body portion 5, then it extends upwardly along the side walls of the latter and through the notches in the upper edges of said side walls to extend downwardly and around two opposite corners of said body portion. Obviously, a pre-formed tying element is necessary, which will now be explained in detail. However, at this time, it is pointed out that the purpose of the auxiliary receptacle 21 is to provide a depository for waste materials and as the receptacle is filled the

top portion thereof will be folded on top of the material and the tying element employed to neatly package the material and to permit the removal of said receptacle from the body portion in a tied condition.

Ordinarily, when tying a package, a piece of cord or string is wrapped around the sides of the package, across the bottom and the tying of the free ends occurs at the top of the package. This procedure is not practical in my arrangement since the package or receptacle is tied before its removal from the body portion of the device and hence a specially formed tying element is required. Knowing the dimensions of the filled receptacle 21, the required length of tying element may be readily determined, though, of course, these dimensions will vary just as the sizes of my baling receptacles will vary. However, having determined the size of a filled receptacle, the required length of the tying element will be equal to four times the height of the filled receptacle and four times the width and depth thereof. Said length of tying element is knotted at its free ends, whereupon it is stretched across the bottom of the body portion 5 as shown in Fig. 3, the knot A being centrally disposed as shown. Said tying element is now brought upwardly along the four inner walls of the body portion and inserted into the notches in the upper edges of said walls. In its present condition the tying element has two loops extending outside the body portion 5 where said loops are draped downwardly against the outer surfaces of said body portion, that is, the side walls thereof. Thus, as shown in Fig. 3, one loop extends between the notches 8 and 9, and the other loop is at the opposite diagonal corner between the notches 10 and 11. Upon inspection of Figs. 2, 3 and 5, the above arrangement will be clearly understood. If desired, suitable fasteners 30 may be provided to position the tying element along the inner surfaces of the side walls of said body portion. The tying element having now been suitably placed in position, said closure member 16 is replaced over the body portion as shown in Fig. 2.

Next, the auxiliary receptacle or bag 21 is fitted within said body portion over said tying element 12. As said receptacle is to be thrown away with its contents, it will be made from cheap material, such as paper, or the like, and will be sold in quantities with the baling receptacle. The frame member 22 and its door 25 are swung open to the position indicated in Fig. 4 and the auxiliary receptacle 21 placed within the body portion. The marginal portion of said receptacle, adjacent the open end thereof, is tucked into the groove 20 and slightly wedged therein as shown in Fig. 5. If desired, pins 31 may be provided to firmly anchor said receptacle in position, said pins being arranged in the manner noted in Fig. 2. The hinged frame and its door are now closed to the position indicated in Fig. 2 and as the waste materials are placed in the auxiliary receptacle it is only necessary to tilt the door 25, as shown in Fig. 5, said door being closed after each operation. When said receptacle is filled, the closure member 16 is removed and the loops between the notches 8—9 and 10—11 are brought over the folded top portion of the receptacle and secured together. The package or receptacle can now be removed from the body portion and as it is in the condition shown in Fig. 9, it may be conveniently disposed of without loss to the material contained therein. The method of securing the loops will be clearly understood upon inspection of Figs. 7 and 8, wherein I have designated the loops as B and C, and it will be noted that the medial portion of said loop B is tucked beneath loop C, then brought over the latter and tied, as shown in Fig. 8, the original knot A being at the bottom of the package as shown in Fig. 9. A new tying element and auxiliary receptacle are now associated with the baling receptacle by the method hereinbefore described and the waste materials are placed therein until the next packaging procedure is followed.

Figures 10 to 14 of the drawings illustrate a slightly different form of auxiliary or secondary receptacle 32 in that the side walls thereof are made of fabric or textile material, having a hoop-like member 33 arranged at its upper end to maintain said receptacle in an open position. The bottom 34 is formed with a pair of openings 35 and 36 which serve as hand-holds when said receptacle is inverted, and as shown in Fig. 11 said bottom is also provided with opening 37 having a recess 38 communicating therewith. Said bottom may be formed from wood, or other substantial and rigid material, and the bottom portions of the textile material may be secured to its edges by any approved means. The bottom frame member 13, the body portion 5 and the closure member 16 are similar to the device hereinbefore described in detail. However, in this form no tying element is used since the secondary receptacle 32 is adapted to be removed from the device and placed at the curbstone, or other point, for collection of its contents by the proper authorities. In mounting the secondary or auxiliary receptacle 32 within the body portion 5, said closure member 16 is removed from the body portion and then said receptacle 32 is inserted within said body portion with its hoop-like member 33 resting on the upper edges of the side walls of said body portion. The closure member 16 is now replaced and the upper edges of the receptacle 32 are clamped beneath the ledge 19. In this instance the waste material is placed within the receptacle 32 by swinging the door

25 to open position. When the receptacle is full of waste material, the closure member 16 is removed and said receptacle is lifted from the body portion 5 and conveyed to a point of collection.

As pointed out hereinbefore, said receptacle 32 is intended for repeated use, and since it is placed near a curbstone, or adjacent an alley, it is desirable that some means be provided to prevent intentional removal or theft of the receptacle. To this end I propose to provide means whereby said receptacle may be secured at a selected location without danger of its removal. As shown in Fig. 14, I have adopted an arrangement in the form of a post 39, which is embedded in the earth, or concrete, as shown, that portion of the post projecting from the earth being provided with a pin 40 and another pin 41 positioned above the latter and substantially at right angles thereto, as shown in Figs. 12 and 13. From the foregoing it is obvious that when the opening 37 in said bottom 34 is placed over said post 39, said bottom may be slightly oscillated until said recess 38 and pin 41 are in registration, as shown in Fig. 12, whereupon said pin and post passes through the opening 37 and recess 38 until the lower surface of the bottom contacts the pin 40. This having been done, the receptacle is twisted until said pin 41 and recess 38 are out of registration and in the position indicated in Figs. 13 and 14, and in this condition the bottom of the receptacle is secured between pins 40 and 41, thus preventing removal thereof by anyone unfamiliar with the arrangement of the parts just described. Naturally the collectors of waste material will be familiar with the arrangement and upon twisting the receptacle the same may be conveniently removed. After the receptacle has been removed from the post 39 the same is inverted to empty out its contents and in view of the openings 35—36 convenient hand-holes for gripping said receptacle are provided. Said receptacles may be made in various sizes and may be high enough so that the collector may reach the same with his hands without dismounting from the collection cart or truck.

Having thus fully described this invention, I hereby reserve the benefit of all changes in form, arrangement, order, or use of parts, as it is evident that many minor changes may be made therein without departing from the spirit of this invention or the scope of the following claims:

I claim:

1. A baler comprising a body portion, a closure member supported by said body portion and a flexible receptacle positioned within said body portion, said receptacle having a rigid hoop-like upper portion adapted to seat between the upper edges of said body portion and the lower face of said closure member.

2. A baler comprising a body portion, a closure member supported by said body portion, said member having its bottom surface rabbeted to define a ledge overhanging the open mouth of said body portion and a flexible receptacle positioned within said body portion, said receptacle having a rigid hoop-like upper portion adapted to seat in the rabbeted bottom surface of said closure and on the upper edges of said body portion.

In testimony whereof I affix my signature.

WALTER A. TROTH.