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C. A. REGELE

2,442,377

BAG HOLDER

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FIG. 1

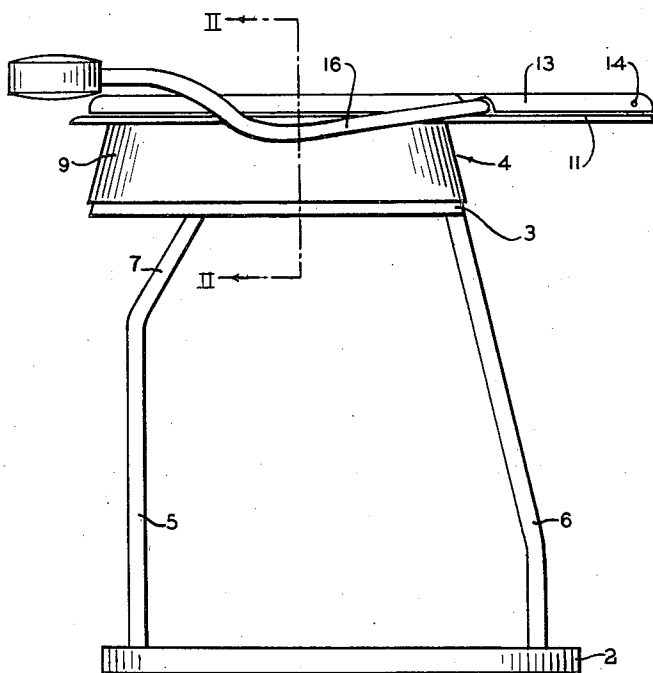


FIG. 2

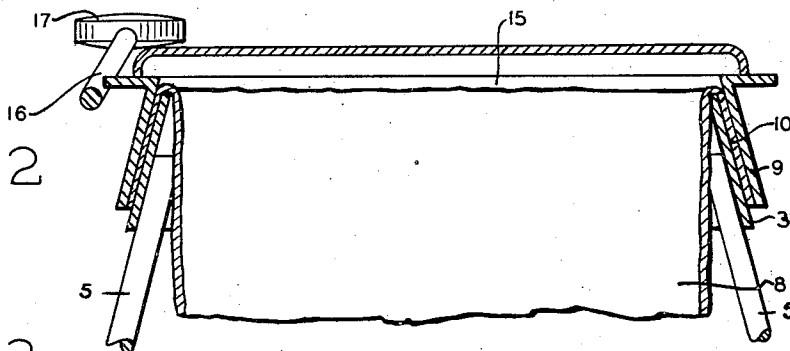
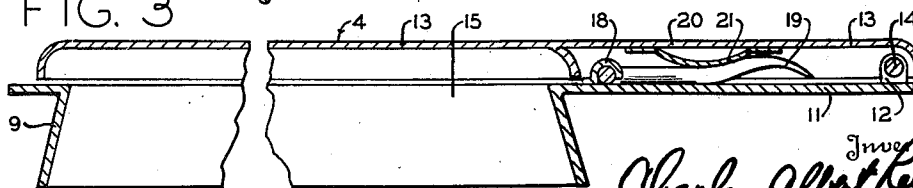


FIG. 3



Inventor
Charles Albert Regele

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BAG HOLDER

Charles Albert Regele, Manheim Township,
Lancaster County, Pa.

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My invention relates to receptacles, and more particularly to a receptacle which may be placed on a work surface in the home, such as in the kitchen, for the reception of refuse, garbage, or the like. The invention will also find usefulness in hospital operating rooms and elsewhere where a small sanitary receptacle is desired for the reception of refuse, which may be placed close at hand and may be conveniently used and cleaned or sterilized.

It is an object of my invention to provide a receptacle which except for the receptor may be formed substantially wholly from lightweight sheet metal stampings or, advantageously, of plastics.

Another object is to provide a receptacle of the disposable receptor type provided with an arrangement for protecting the receptor at the portion which would normally be engaged by the fingers in removing the same from the support from carelessly deposited refuse, making the receptacle convenient for use and at the same time sanitary.

Another object of my invention is to provide a receptacle having a receptor clamping arrangement, a hinged lid, and a lid actuator in which the parts are so constructed and arranged that the clamping mechanism, the lid, and the lid actuating mechanism may be handled as a unit for purposes of removal and assembly. Thus, the non-rigid receptor is free for ready removal and the clamp and lid assembly may be readily cleaned by immersion in a dish-pan or the like.

A further object of my invention is to provide a receptacle having a hinged lid and actuating mechanism for raising and lowering the lid with the hinge and lid actuating mechanism disposed remotely from the opening through which refuse is deposited into the receptor. This avoids any possibility of defective operation of the lid or lid actuating mechanism which might result from careless refuse disposal.

Another object of my invention is to provide a receptacle for garbage and refuse of a similar nature, difficult to handle when moist and contained in a non-rigid receptor, such as a high wet strength paper bag, in which the receptor may be removed from the receptacle by lateral displacement with respect to the receptacle and without the necessity of lifting the receptor through an opening in the receptacle as required by most garbage disposal receptacles. Thereby, the danger and nuisance occasioned by an attempt to lift a relatively heavy mass of

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moist or wet refuse in a thin paper bag, through a confined opening is avoided.

Other objects of my invention will become apparent upon a consideration of the following detailed description.

In order that my invention may be more readily understood, I will describe the same in connection with the attached drawing in which:

Figure 1 is a side elevation of the receptacle of my invention with the non-rigid receptor removed for convenience of proper illustration;

Figure 2 is a sectional view taken along the line II—II of Figure 1; and

Figure 3 is a detailed sectional view showing one type of lid elevating arrangement.

Referring first to Figure 1, I have illustrated a preferred embodiment of my invention in which the receptacle is formed substantially wholly of metal. It will be understood, of course, that all or certain of the parts may be formed of plastic materials such as "Bakelite," polystyrene or other plastic materials of a similar nature.

The receptacle comprises essentially a base 2 which is preferably formed as a metal stamping, a receptor supporting ring 3 and a unitary clamp ring, lid assembly, and lid actuator generally designated 4.

The clamp ring 3 is supported above the base 2 by a pair of front frame members or legs 5 and a rear frame member or leg 6. The length of the legs 5 and 6 and their disposition on the base will be determined by the size of the receptor to be used. The legs are secured to the supporting ring 3 and the base 2 preferably by spot welding. In order to insure good face to face contact between the legs 5 and the supporting ring 3, the legs are inclined as indicated in 7 so that they lie in a plane parallel with the plane of the inner surface of the ring 3 at the line of joining.

By reference to Figure 2, it will be noted that the supporting ring 3 is of frusto-conical formation and the outer surface thereof is inclined at an angle of about 15° with respect to the vertical axis thereof.

In Figure 2, a non-rigid receptor 8 is shown in position within the receptacle. This receptor is preferably formed of high wet strength paper in the form of an open-topped bag. In place of such a paper receptor it may be formed of Cellophane, regular kraft paper, or the like. A high wet strength bag is preferred where the receptacle is for sink top use and wet or moist material will be deposited in it.

It will be noted from a careful examination of

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Figures 1 and 2 that the receptor 8 is positioned when in use in such manner that it is disposed inside the legs 5 and 6 and that upon removal of the clamp ring and lid assembly 4 the receptor may be removed from the receptacle by lateral movement to draw the same between the legs 5 and 6. This is an important feature of this invention for it makes possible the use of relatively light-weight containers. In removal of the bag it may be supported by the hands and there is little likelihood of rupture due to excessive weight or penetration of moisture into the bag which might reduce its strength. It is not necessary to lift the bag through the supporting ring 3 which would bring the full weight of the bag contents onto the bottom thereof.

The clamp ring and lid assembly 4 is formed unitarily so that the same may be conveniently removed by the housewife or hospital attendant and may be conveniently cleaned by a complete immersion in water.

This arrangement is best illustrated in Figures 1 and 3. It consists of a clamp ring 9 which is of an internal diameter corresponding with the external diameter of the supporting ring 3; the inner surface of the clamp ring 9 is inclined at approximately the same angle as the outer surface of the supporting ring 3 so that the receptor 8 will be firmly clamped therebetween when the parts are assembled. It will be noted by reference to Figure 2 that the receptor 8 when in use has its open end 10 folded over at least a portion of the outer surface of the supporting ring 3 and that the portion 10 is engaged by the clamp ring 9 and thus protected from contact with garbage carelessly deposited.

It is only necessary with my structure to merely assemble the parts with ordinary hand pressure, for the frictional engagement between the clamping surfaces 3 and 9 will be great and insure proper positioning of the parts for use.

The clamp ring 9 is provided with a radial extension 11 which is in turn provided with a pair of vertical ears 12 (Figure 3) forming a part of a pin hinge for lid 13. The lid 13 is hinged to the radial extension 11 of the clamp ring 9 and is free to rotate about a pin 14 which secures the parts in assembled relationship so that the lid may be elevated for the deposit of refuse and closed thereafter.

It will be noted that the hinge mechanism is positioned remotely from the opening 15 in the clamp ring 9 through which the material to be disposed of passes into the receptor 8. This is desirable since it avoids the necessity of any care in depositing the material in the receptor. This is of considerable importance in hospital operating rooms where speedy disposal is essential.

While the lid may be elevated by many different mechanisms, I prefer to provide a lever type lift. This type lift is preferred by the housewife, because of its easy and positive action. Any type of lift which may be secured to the lid assembly so as to be removable with it as a unit may be used. Those lifts which are pivoted to the base do not permit such removal and consequently the receptacles are difficult to clean or sterilize.

In the embodiment shown in the drawing, a lever type lift is incorporated and includes a lever arm 16 and an operating button 17 positioned at the front of the receptacle where it may be conveniently pressed by the housewife. The lever 16 is received within a bearing 18, best shown in Figure 3. The lever 16 is provided adjacent its one end with a cam 19 which is formed by contouring

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the rod which constitutes the lever 16. The upper wall 20 of the lid 13 is provided with a cam surface 21 against which cam 19 of the lever 16 operates. The arrangement is such that upon downward movement of the operating button 17 an upward rotary motion in a clockwise direction, as viewed in Figure 1, is imparted to the lid 13 about the pin 14, thus raising the lid and making available the receptor 8 into which the refuse may be deposited.

The particular form and construction of the lid elevating mechanism is not important and may be varied so long as it is so arranged that actuating mechanism is disposed at a point remote from the opening through which the refuse is deposited, and provided, of course, it is so constructed that it does not interfere with the removal of the clamp ring, cover, and actuating arrangement as a unit.

The convenience of my receptacle will be apparent from the foregoing description. Its simplicity, ease of cleaning, and easy removal and positioning of the non-rigid receptor are important features to the housewife, the hospital attendant and others using the same. In assembly, after the lid assembly 4 is removed, the non-rigid receptor 8 is slipped in from the top and the open end 10 folded over the clamp ring 3. The lid assembly 4 is then brought down into position, clamping the end 10 of receptor 8 between the surfaces 3 and 9. When it is desired to discharge the contents, the lid assembly 4 is removed and the end 10 of the receptor raised and crimped or folded in toward the center. The end 10 has been protected against contact with the refuse deposited in the receptacle and the operator therefore does not have to handle any portion of the bag which has come into contact with the garbage or other refuse. One of the housewife's greatest objections to the use of non-rigid receptors is thus overcome. It is more than likely that the bag will be filled with wet or moist soggy materials and some of the strength of the bag will have been lost. It is desirable, therefore, to avoid placing the whole weight of the refuse on the bag bottom lest it rupture and scatter the contents. Prior structures which required that the bag be lifted out of the receptacle through the top were objectionable from that standpoint. With my receptacle, the bag may be laterally displaced between the legs 5 and 6 while supported by one or both hands and no excessive strain will be applied to the bag.

While I have illustrated and described a preferred embodiment of my invention, it will be understood that the same is not limited thereto but may be otherwise embodied and practiced within the scope of the following claims.

I claim:

1. In a receptacle unit of the non-rigid receptor type, a receptor support and clamping arrangement comprising a supporting band, a clamp band, a lid hinged to the clamp band, said clamp band and hinged lid being receivable upon and demountable from said supporting band as a unit, and complementary inclined clamping surfaces on the supporting band and clamp band for the clamping of a non-rigid receptor therebetween.

2. A receptacle of the non-rigid receptor type comprising a base, a supporting ring, a clamp ring, a radial extension on the clamp ring, a lid hinged to the extension, lid actuating means attached to the clamp ring, said supporting ring, lid, and lid actuating means being demountable

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from said supporting ring as a unit, inclined clamping surfaces on said rings, a non-rigid receptor therebetween, and legs securing said supporting ring above said base and being spaced to permit lateral movement of the receptor in removing the same from the receptacle.

3. A receptacle of the non-rigid receptor type comprising a base, a supporting ring secured to the base and disposed thereabove, said supporting ring having a frusto-conical outer surface, a non-rigid receptor disposed through said supporting ring with its open end folded over the outer surface of the ring, a clamp ring having a surface complementary to the clamping surface of the supporting ring to clamp the end of the receptor between said surfaces and protect the same from contact with refuse deposited in the receptor, an extension on said ring, and a lid hinged to said extension, said clamping ring and lid being demountable from said supporting ring as a unit.

4. In a receptacle unit of the non-rigid receptor type, a receptor support and clamping arrangement comprising a base, a supporting band secured to the base and disposed thereabove, a clamp band, inclined clamping surface on said bands to clamp a non-rigid receptor disposed between said surfaces, a radial extension on the clamp band, a lid, and hinge means securing said lid to said extension with the hinge located remotely from the opening of said clamp band, means for actuating said lid to cause the same to move on said hinge, the clamp band, lid, and lid actuating means being demountable as a unit.

5. In a receptacle unit of the non-rigid re-

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ceptor type, a receptor support and clamping arrangement comprising a base, a supporting band, a clamp band, a radial extension on the clamp band, a lid hinged to the extension, said clamp band and lid being demountable from said supporting band as a unit, inclined complementary clamping surfaces on said bands to receive and clamp a non-rigid receptor therebetween and protect the end of the receptor from contact with refuse deposited in the receptor, and a support securing said supporting band above said base and being spaced to permit lateral movement of the receptor in removing the same from the receptacle.

CHARLES ALBERT REGELE.

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