

PATENT SPECIFICATION

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DRAWINGS ATTACHED

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(54) GARBAGE DISPOSAL

(71) We, GARBINS LIMITED, a British company, of Brent House, 214 Kenton Road, Kenton, Middlesex, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention is concerned with garbage disposal and particularly with the holders for paper and like sacks to receive domestic and like refuse.

There is known a holder for paper and like sacks in which the open end of the sack surrounds a rim having a flat rear side pivoted to a back plate and is gripped between this flat side and the back plate and secured in position on the rim by an extensible band connected at each end to the back plate. At least one end of this band is readily detachable to facilitate the application and removal of the sack from the holder. A lid is pivoted to the rear of the rim and covers the open end of the sack. Such a holder is hereinafter termed a "holder of the type referred to."

From one aspect, the present invention provides a holder of the type referred to in which the extensible band is of flat substantially rectangular section and is formed at one end for engagement with a keyhole slot in the back plate and carries at the other end a hook adapted to engage a hasp affixed to the back plate at the other side of the rim. The flat band may be of rubber or a suitable synthetic elastomer (hereinafter for convenience included in the term "rubber") or may comprise a portion of non-extensible material such as metal with a relatively short extensible portion at one or both ends. One end of the band may be turned over and secured as for example by a metal tag to form a thicker portion at the end of the band which will pass through the enlarged portion of the key-hole slot. The band with the turned over portion outermost can then be passed through a constricted neck portion into the rectangular portion of the key-hole slot and retained therein by the thicker

portion which is too large to pass therethrough. By having the turned over portion on the outer side of the band, the band is given a tendency when loose to fall away from the rim which prevents it being caught between the rim and the back plate. This tendency may be accentuated by sloping the inner surface of the side of the rectangular portion of the key-hole slot outwardly from the back to the front of the back plate. Alternatively, the end of the band may be provided with a metal tag bent round the band with its ends indented into the band to provide a substantially circular or semi-circular end of such diameter as to pass through the enlarged portion of the key-hole slot, but not to pass through the rectangular section.

The hook at the other end of the band may be of a rigid plastics and comprises a hook part extending from a base portion in which the band is held. This base portion is shaped so that the band engages the rim closely nearly up to the hasp when the hook is engaged. For this purpose, the base portion is in plan view substantially square with a corner cut off at the part which will lie nearest the rim when engaged.

The back-plate, rim and lid may be of plastics and the lid formed with a depending peripheral flange which overlies the rim. This flange extends downwardly around the periphery of the rim (other than along the flat rear portion) and is effective to prevent the ingress of flies to the paper sack and to prevent the emission of smells from the contents.

The holder may have a back-plate to which the rim and lid are pivoted by relatively short hinge pins at each end, these pins engaging in recesses in bosses on the back plate and extending through bosses on the flat side of the rim into blind holes formed in a projecting portion (or portions) on the lid. This makes it possible for the back plate and the rim to be moulded in plastics. The hitherto known method of using a hinge pin extending along the whole length of the back of the rim is not practicable with plastics because of the

difficulty in providing a long hole extending the whole length of the back of the rim.

It has been found that when the back plate, rim and lid are of plastics, the lid tends to fall to the closed position and it is necessary to hold the lid open when depositing garbage in the sack. To avoid this inconvenience, the bosses on the back plate into which the hinge pins are inserted are formed with a cam surface including a flat top portion which holds the lid in an open position.

Other parts of the invention are embodied in the preferred form which will now be described in some detail by way of example, with reference to the accompanying drawings in which:—

Fig. 1 is a plan view of the holder with parts cut away for clarity.

Fig. 2 is a plan view to an enlarged scale of part of the holder.

Fig. 3 is a section on the line III—III of Fig. 2.

Fig. 4 is a rear view of the part shown on Fig. 2.

Fig. 5 is a rear view of the other end of the holder.

Fig. 6 is a greatly enlarged section on line VI—VI of Fig. 5, with the band in position and

Fig. 7 is a section on line VII—VII of Fig. 1.

In this form, a back plate 1, moulded of rigid plastics, has a peripheral flange 2 and is reinforced at its rear by ribs 3. Pillars 4 at the rear of the plate are pierced with holes 5 through which screws may be passed to secure the plate to a wall or the like. A longitudinal rib 6 extends along the front of the plate and a longitudinal recess 7 of semi-circular section extends along the front of the plate and projects from the rear of the plate.

At each end of this recess, the back plate 1 is formed with a boss 8 projecting from the front of the plate. These bosses are formed at the rear with semi-circular recesses 9 coaxial with the recess 7 and closed at their outer ends.

The rim 10 is also moulded in plastics and has a flat rear portion 11 and a semi-circular front portion 12. Towards each end of the rear portion the rim is formed with a substantially cylindrical boss 13 having a hole 114 there-through parallel to the rear portion 11.

The lid 14 is also moulded in plastics and is substantially semi-circular, with a cylindrical portion 15 extending along the rear straight side 16. In each end of this portion 15 is formed a blind hole 17, these holes being coaxial and parallel to the straight side 16.

The back plate 1, rim 10 and lid 14 are assembled by arranging the cylindrical portion 15 of the lid between the two bosses 13 of the rim, and these bosses 13 between the bosses 8 on the back plate, with the portion 15 and bosses 13 within the semi-circular recess 7 and the holes 17 and 114 and recesses 9 in align-

ment. Short pins 18 are then passed from the recesses 9 through the holes 114 into the blind holes 17. These pins 18 are of plastics and are of such length as to extend from the holes 14 at each end and be retained in the blind holes 17 and recesses 9. They are sufficiently flexible to snap into position over the closed ends of the recesses 9.

The rim 10 has a longitudinal rib 19 along the rear of its straight side which abuts against the rib 6 on the plate 1 so that the wall of a paper sack surrounding the rim is gripped between them.

The lid 14 has a depending flange 20 around the semi-circular portion of its periphery which extends below the upper edge of the rim and provides an effective seal against flies, smells and other nuisances.

In order to retain the lid in the open position when required, a cam surface 21 is formed on each boss 8 of the back plate and has a flat horizontal portion 22 on its top. The rear edge of the lid contacts the surface 21 as it is lifted and when fully opened rests on the flat portion 22 and is thereby retained in the open position.

A key-hole slot 23 is formed in the back plate 1 closely adjacent one end of the straight part of the rim 10 and a hasp 24 is formed in the back plate at the other end of this straight part. The key-hole slot 23 comprises a circular portion 25 with a rectangular portion 26 extending downwardly therefrom, a constricted neck 27 of less width than the rectangular portion 26 being formed at the junction with the circular portion 25. The side 28 of the rectangular portion 26 nearest the rim 10 is sloped outwardly from back to front of the back plate as shown in Figs. 5 and 6.

An extensible band 29 extends around the semi-circular portion of the rim 10 from the key-hole slot 23 to the hasp 24 and, in use, grips the paper sack against the rim 10. This band is of rubber and has a rectangular section, the larger dimension of which lies against the rim. At one end, the band 29 is doubled over on itself and secured by a metal band 30, thereby forming an enlarged end 31 which will pass through the circular portion 25 of the key-hole slot but not through the rectangular portion 26. This end 31 is passed through the circular portion 25 of the key-hole slot and the flat portion of the band 29 is forced through the constricted neck into the rectangular portion with the extreme end to the outside of the back plate. The sloping side 28 directs the band outwardly from the rim 10 so that it is not liable to be trapped between the rim and the back plate when a paper sack is being placed in position. The extreme end of the band abuts against the other side of the key-hole slot.

The other end of the band 29 is attached to a plastics hook member 32 adapted to engage the hasp 24. This member 32 is shaped

so that when its hook 33 is engaged in the hasp 24, the rubber band 29 remains in contact with the rim 10 as close as possible to the hook. The member 32 comprises a hook 33 which engages the hasp, a relatively thin leg 34 which slopes sharply backwardly towards the rim and a base 35 of greater width in which the end of the band 29 is fixed. This base 35 extends outwardly from the bottom of the leg 34 and its face 36 nearest the end of the leg is cut away at 37 so as to lie closely adjacent the rim 10 so that the end of the band is also closely adjacent the rim. In plan view the base is substantially square with one corner of the part closest the rim cut away.

The rim 10 is formed with a rib 38 undercut on its top surface around its lower periphery which assists in gripping the paper sack and prevents downward movement of the rubber band 29.

WHAT WE CLAIM IS:—

1. A holder of the type referred to in which the extensible band is of flat substantially rectangular section and is formed at one end for engagement with a key-hole slot in the back plate and carries at the other end a hook adapted to engage a hasp affixed to the back plate at the other side of the rim.

2. A holder according to Claim 1 in which the extensible band is of rubber.

3. A holder according to either of the preceding claims in which the side of the rectangular portion of the key-hole slot nearest the rim slopes outwardly from the rear to the front of the back plate to direct the band outwardly away from the rim.

4. A holder according to any of the preceding claims in which one end of the rubber band is doubled over and secured by a metal tag to form an enlarged portion which will not

pass through the rectangular portion of the key-hole slot.

5. A holder according to any of the preceding claims in which the hook has a base portion shaped to allow the band to engage the rim closely nearly up to the hasp when the hook is engaged.

6. A holder according to Claim 5 in which the base portion is substantially square in plan view with a corner cut away to provide a surface abutting against the rim.

7. A holder according to any of the preceding claims in which the rim and lid are pivoted to the backplate by hinge pins at each end, which are relatively short compared to the width of the backplate, these pins engaging in recesses in bosses on the back plate and extending through bosses on the flat side of the rim into blind holes formed in a projecting portion (or portions) on the lid.

8. A holder according to Claim 7 having cam surfaces on the bosses on the back plate which are engaged by the lid and retain it in the open position.

9. A holder according to any of the preceding claims in which the lid is formed with a depending peripheral flange which overlies and extends downwardly around the periphery of the rim.

10. A holder according to any of the preceding claims in which the back plate rim and lid are of plastics.

11. A holder substantially as described with reference to the accompanying drawings.

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