May 15, 1934. H. CRASKE 1,959,263

RECEPTACLE FOR DUST OR REFUSE

Filed May 21, 1931

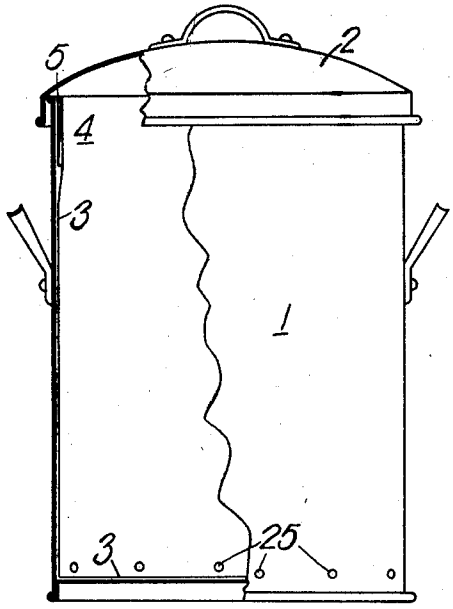


FIG. 1.

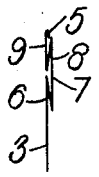


FIG. 2.

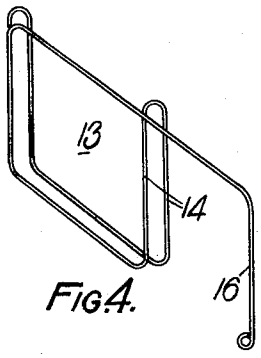


FIG. 4.

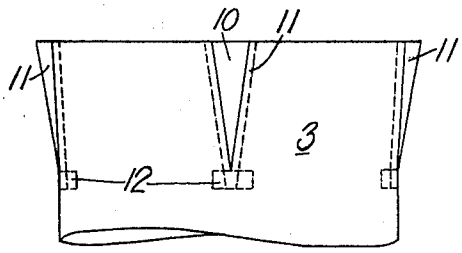


FIG. 3.

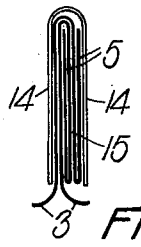


FIG. 5.

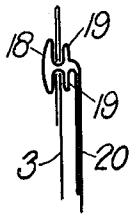


FIG. 6.

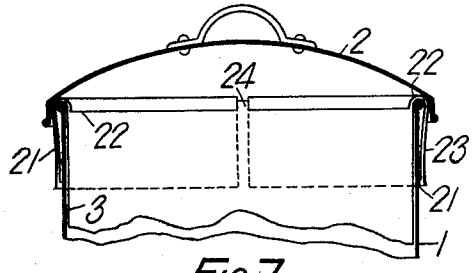


FIG. 7.

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RECEPTACLE FOR DUST OR REFUSE

Harold Craske, London, England

Application May 21, 1931, Serial No. 539,061
In Great Britain May 28, 1930

3 Claims. (Cl. 220—65)

This invention relates to sanitary receptacles for dust and refuse and particularly to paper and/or fabric bags adapted to be inserted in such receptacles to receive the dust and refuse and subsequently to be removed from the receptacles whilst closed upon their contents, and the invention has for its object to provide improved forms of bags for the purpose.

According to the present invention the improved bag which is adapted to be inserted as a lining in a domestic metal or other refuse receptacle or "dustbin" is formed, as a manufactured article ready for insertion into the "dustbin", with a bottom adapted to rest upon the bottom of the "dustbin" or upon a false bottom therein, with a tubular portion of substantially uniform cross-section and of length not greater than the internal height of the "dustbin" and essentially with a further tubular portion preferably at the upper end of the bag which portion is doubled-back or pleated or otherwise folded such that the upper edge of the bag will not normally project above the "dustbin" and will not be liable to damage, and such that the bag can be readily extended upwards or lengthened to permit the closure and the sealing of the bag even if the "dustbin" be substantially completely full of dust or refuse.

In a modified form of bag which is otherwise the same as that above set forth, the extensibility is provided by the further portion being slit downwards in several places and reinforcing patches being provided at the lower ends of the slits to prevent them extending, such slit portion either being folded as above set forth or being left so that it can be folded outwardly downwards over the edge of the "dustbin" after insertion of the bag therein. In the latter case the fold may be protected from damage by means of a ring such as of metal which is adapted to be fitted upon the top of the "dustbin."

The bag preferably consists of paper and/or fabric of one or more thicknesses impregnated so as to be waterproof or otherwise rendered substantially waterproof and preferably also impregnated with disinfectant if the waterproofing material is not a disinfectant. No claim is herein made per se to waterproofing the bag or to impregnating it with a disinfectant.

The doubling back or pleating or folding of the upper portion of the bag to provide the extensibility may be of the accordian type but preferably comprises a fold outwards and downwards followed by a fold upwards, or a fold outwards and downwards, a longer fold upwards, a further fold inwards and downwards and finally a fold upwards. Alternatively the bag may be formed with a single and relatively long fold inwards or outwards, and downwards.

The bag may be made of flaring shape at the mouth to permit the doubling back or pleating or folding aforesaid. Such flaring may be produced for example by forming one or more slits and gumming, stitching, or otherwise applying insertions.

The invention also comprises the combination with a manufactured bag as above set forth of one or more fasteners secured in or near the upper end thereof whereby when the bag is extended it may be readily and quickly sealed by the dustman. Such a fastener may assume a variety of forms. In one form the fastener may be a spring or resilient clip or several spring clips secured to the edge of the bag and adapted to close the latter when extended and the upper end folded over; such clip may be similar to the well known paper clip such as that sometimes known as a "slider" or the pronged type adapted to perforate the paper and be bent over. The clip may be secured to the bag by means of a pivot or rivet. Such clip or clips may be so formed or arranged that they serve for supporting the bag within the dustbin such as by hooking over its edge, and also if desired for assisting in extending the upper end of the bag prior to closing it by means of said clips.

Alternatively the upper edge of the extensible portion of the bag may be eyeletted and threaded with a string or wire or cord which may first be pulled for extending or lengthening the bag and then by further pulling used to bunch and close or seal the bag.

When a protecting ring is used as aforesaid it may have a relatively narrow flange portion adapted to fit upon the top edge of the dustbin, and a skirt portion extending downwardly inside or outside for instance a distance corresponding to the extensible portion of the bag. Such protecting ring may be split at one place or otherwise constructed so that it can be readily applied to the dustbin.

To enable the invention to be clearly understood and carried into effect it will be described with reference to the accompanying drawing in which—

Fig. 1 is a sectional elevation of a dustbin showing therein one form of a bag in accordance with the invention.

Fig. 2 is a sectional elevation of one of the

upper edges of another form of bag in accordance with the invention, and

Fig. 3 is an elevation of the upper end of a bag illustrating how it may be flared to facilitate folding,

Fig. 4 is a perspective view of one form of clip which may be secured to the upper edge of the bag to be subsequently used for closing the bag upon its contents, and Fig. 5 is a sectional view through the edge of a bag closed by the clip, shown in Fig. 4.

Fig. 6 is a sectional elevation of the upper edge of a bag having secured thereto another form of fastening and

Fig. 7 is a sectional elevation of a dustbin having a bag therein folded outwards over the edge of the dustbin and protected against damage.

Referring to Fig. 1 of the drawing, 1 is the main portion of the dustbin and 2 the lid, and 3 is the bag or liner which may be formed of material such as hereinbefore set forth and which is provided at its upper edge as indicated at 4 with a double fold arranged so that normally the upper edge of the bag does not project at the upper edge of the dustbin, but permits the bag to be extended beyond the edge of the dustbin and closed upon the contents of the bag in any convenient manner, such for example as by the means hereinafter described.

It will be understood that instead of there being a double fold, as shown at 4 in Fig. 1, there may be only a single fold, extending upon the outside of the bag such a distance as will permit the bag to be closed upon its contents after being extended. The extreme edge of the bag is preferably permanently folded, as indicated at 5, and gummed or stitched or stapled.

In the modification shown at Fig. 2 the upper edge of the bag is rendered extensible by being folded first outwards and downwards as indicated at 6, then upwards as indicated at 7, next inwards and downwards as indicated at 8, and then upwards as indicated at 9.

The refuse bag as above described may be manufactured by forming from a paper and/or fabric band of appropriate width, a substantially cylindrical tube or a tube of rectangular section, by securing the edges of said band with a substantially waterproof adhesive and/or with stitches or staples or other fastenings of wire or thread or the like, said tube towards its upper end being flared to permit of the provision of the aforesaid pleating or folding essentially necessary to enable the bag to be sufficiently protected against damage by the insertion into the bin of refuse and the replacement of the lid of the bin, whilst permitting the bag to be subsequently elongated sufficiently to be properly closed on its contents. Thus a machine for making such bags may be of a generally known kind comprising in combination means for feeding from a roll of paper and/or fabric of appropriate width to an approximately cylindrical or rectangular former or guide which however is expanded or flared slightly at the delivery end for the purpose above mentioned, with known means for mechanically gumming the adjacent edges to form the tube, and means for cutting off lengths of tube sufficient to provide for the formation firstly of the bottom of the bag and secondly of the pleating or folding of the upper end to permit the extension thereof as aforesaid.

The closing of the bottom of the bag may be effected by forming slits and/or folds of appropriate length and shape at the one end of the paper and/or fabric and then applying gum, cement or other adhesive and finally folding over against a mandrel so as to form the substantially flat bottom to the bag, stitches of thread or wire or staples being used if necessary.

The pleating or folding of the top of the bag may be effected by a hand operation such as by the use of a suitable jig as permitted by the flaring of the end of the paper cylinder. The necessary pleating or folding may be effected when the paper and/or fabric coming from the roll is still in the flat or plane state, namely, by means of appropriately mutually moving folding or pleating members after which the paper is preferably subjected to a pressing or creasing operation such as between the feeding rollers or by other pressing means.

In the alternative method illustrated by Fig. 3 the flaring of the upper end of the bag 3 may be effected by providing a plurality of longitudinal slits 10, for instance four slits and then flaring the bag, as clearly shown, by applying insertions 11 by gumming, stitching or otherwise. The invention also includes a bag having slits such as 10 (Fig. 3) without the insertions 11, provided the ends of the slits are prevented as shown in Fig. 3 from extending by tearing by means of reinforcing patches 12 of paper, fabric, canvas, or other convenient material, which may be applied by gumming, stitching or stapling for example.

I propose creosote as a convenient material for both waterproofing and disinfecting the paper but I do not limit myself to the use of creosote for the purpose.

Referring next to Figs. 4 and 5 of the accompanying drawing, one convenient form of clip 13 for closing the bag upon its contents after extension may comprise a wire 13 bent to the shape shown in Fig. 4, having downwardly extending clip portions 14 adapted to slide over the folded upper edge of the bag as indicated at 15 in Fig. 5. The wire has extension 16 bent downwardly and terminating in an eye 17 which may be secured to the edge of the bag by means of an eyelet or rivet, so as to permit the wire clip 13 being turned upwards and then downwards again to secure the folded edge of the bag. The clip 13 may be engaged upon the edge of the dustbin to support the bag thereon.

Instead of the slider type of clip shown in Figs. 4 and 5, a clip of the pronged paper fastener type may be used, adapted to perforate the material of the bag and then be bent or spread outwards. Such arrangement is illustrated at Fig. 6, wherein the fastening clip comprises a strip of metal with pointed ends and bent to the shape clearly shown so as to have a head portion 18, retaining portions 19 and prong portions 20, the latter being bent as shown sideways until required for fastening the bag, when they may be bent outwards at right angles to the head 18, forced through the opposite side of the bag and bent outwards oppositely to seal the bag.

Referring finally to Fig. 7, the upper end of the bag 3 may be formed as previously herein described, with simple longitudinal slits and then when inserted in the dustbin said edges may be bent outwards around the upper edge of the

bin, as shown at 21 in Fig. 7. The fold of the bag and the portion 21 thereof may be protected against damage by means of a protecting ring 22 comprising a portion adapted to fit upon the top edge of the dustbin and an external skirt portion 23 adapted to lie outside the dustbin. The ring 22 and outer portion 23 may be split as indicated at 24 to permit the ring to be readily applied to the dustbin, the ring being advantageously made resilient. In some cases, if desired, the ring 22 may be provided with an upstanding tongue (not shown) or the equivalent which may be used in a manner otherwise well known to permit the dustbin lid being tilted about said tongue or the equivalent, which acts as a fulcrum. In cases where the extensible portion of the bag is formed to be disposed within the bin, the skirt portion 23 of the ring may be arranged to extend inside the bin to protect said extensible portion. Instead of the above described ring, a plurality of clips may be used distributed around the rim of the bin.

It will be understood that various modifications may be made without departing from the scope of the invention. Thus for example the bag may be constructed in the form of a tube and a separate bottom applied thereto and gummed and/or stitched or stapled in position. Or the bottom of the bag may be made of usual form, then blocked to the required shape on a mandrel or former, whilst gum or stitches or staples may be added if desired.

In order to prevent the bag being retained by suction in the bin, the latter may be formed with a plurality of holes such as indicated at 25 in Fig. 1, or alternatively, holes may be similarly provided in the bag itself.

An alternative way of closing the bag upon its contents may be by applying staples by means of a hand-operated stapling device which may be carried by the dustman.

I claim:—

1. As a manufactured article ready to be inserted for the purpose set forth in a domestic dustbin, a bag formed of flexible sheet material and comprising a bottom portion adapted to rest upon a floor of the dustbin, a tubular main portion of uniform cross-section and of length not greater than the internal height of the dustbin, and a further tubular portion permanently plurally pleated all around and folded back and forth along circumferential creases around the upper part of the main portion of the bag so as not normally to project above the dustbin whilst permitting the bag to be readily lengthened to allow its closure, substantially as described.

2. As a manufactured article ready to be inserted for the purpose set forth in a domestic dustbin, a bag formed of flexible sheet material and comprising a bottom portion adapted to rest upon a floor of the dustbin, a tubular main portion of uniform cross-section and of length not greater than the internal height of the dustbin, and a further tubular portion permanently flared and permanently pleated all around, said further portion being folded back and forth along circumferential creases with the folds thereof normally snugly surrounding externally the upper end of the main bag portion, said further portion being capable of being pulled upwards to lengthen the bag, substantially as described.

3. As a manufactured article ready to be inserted for the purpose set forth in a domestic dustbin, a bag formed of flexible sheet material and comprising a bottom portion adapted to rest upon a floor of the dustbin, a tubular main portion of uniform cross-section and of length not greater than the internal height of the dustbin, and a further tubular portion which is permanently flared by slitting and adding insertions and is permanently pleated all around, which further portion normally surrounds externally the upper end of the main bag portion but can be pulled upwards so as to lengthen the bag, substantially as described.

HAROLD CRASKE.