Jan. 26, 1960 H. BERNHARDT 2,922,176

PAINT TRAY AND LINER THEREFOR

Filed June 4, 1958 2 Sheets-Sheet 1

FIG. 1

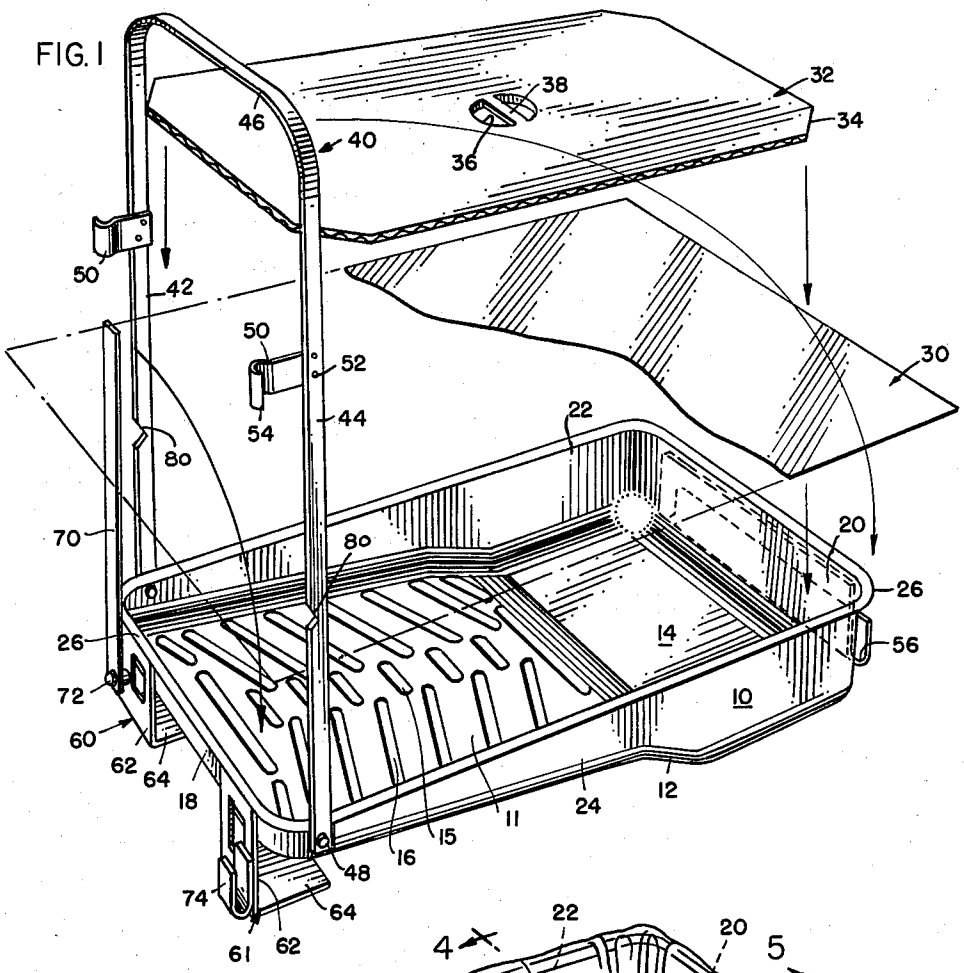
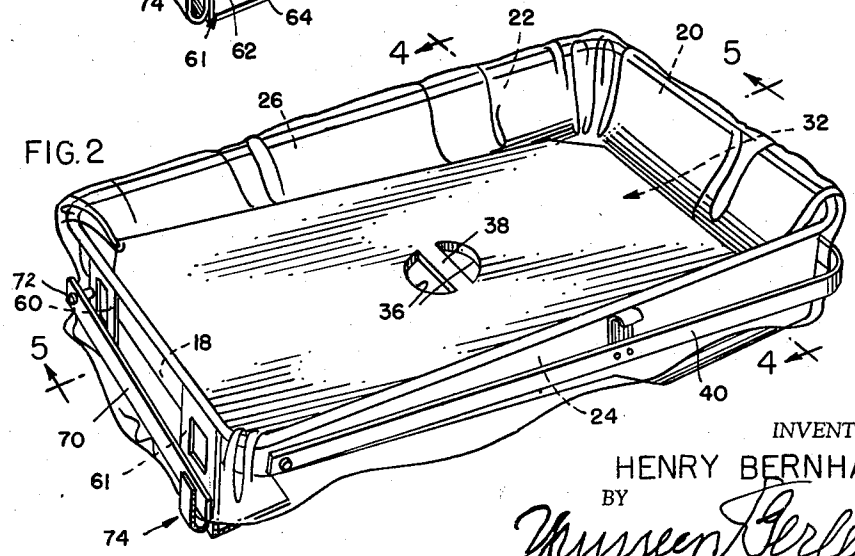


FIG. 2



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Jan. 26, 1960 H. BERNHARDT 2,922,176

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Filed June 4, 1958 2 Sheets-Sheet 2

FIG. 3

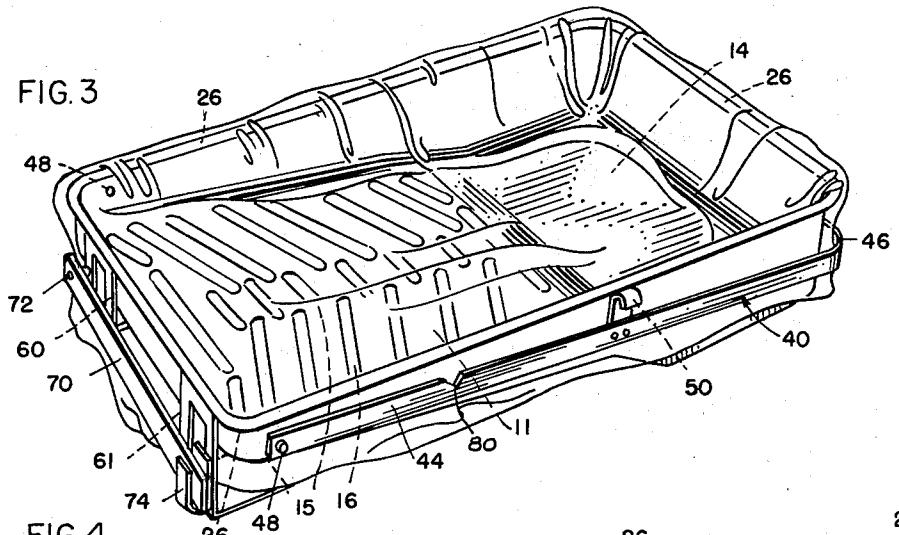


FIG. 4

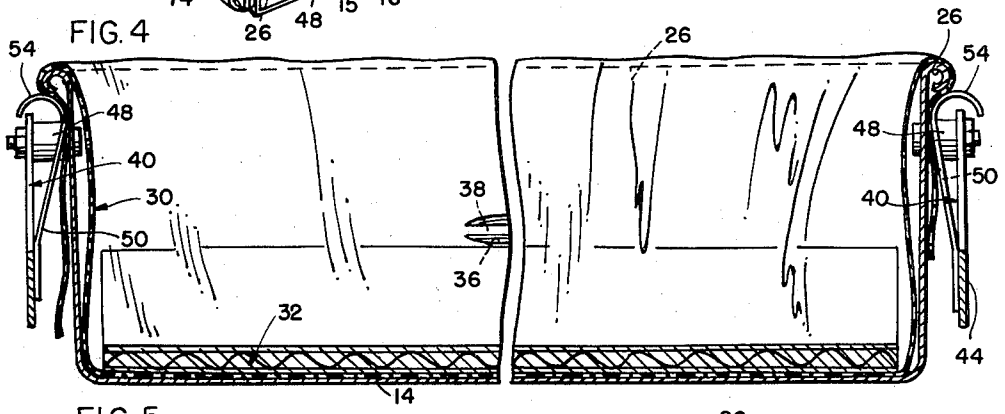
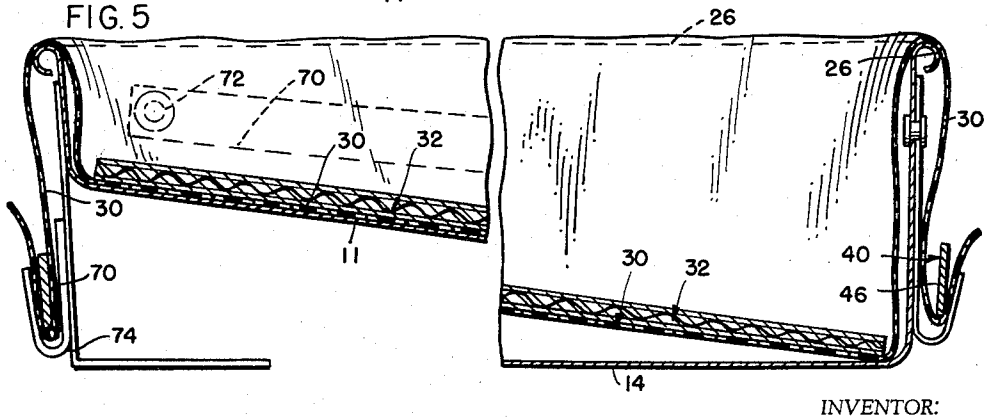


FIG. 5



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PAINT TRAY AND LINER THEREFOR

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3 Claims. (Cl. 15—121.3)

The present invention relates to paint trays of the type which are adapted for use in connection with a roller-type paint applicator. In utilizing a roller-type paint applicator, it is essential to employ a paint receptacle by means of which paint may be applied to the roller evenly in order that the latter may, in turn, apply a uniform coating of paint to the surface undergoing painting. Paint trays of this character must therefore have a wide area bottom capable of supporting a shallow pool of the paint with the width of the bottom being at least as great as the longitudinal extent of the roller and with the length of the bottom being such as to permit the roller to move tractionally along the bottom during several complete turns of the rollers so that the paint may be evenly forced into the porous roller. Ordinarily, paint trays of this general character are constructed of sheet aluminum or of tin plated sheet iron, some trays being made of flat pieces of material joined at the edges and corners and others being formed as sheet metal stampings with gently curved corners and wall junctures. In either event, the trays, if they are to be reused, must be thoroughly cleaned after each use thereof, the cleaning operation involving the use of turpentine or other solvent which, for effective cleaning, must be used in considerable quantity, especially where initial scrubbing operations followed by a rinsing procedure is involved. The inconvenience involved in connection with such cleaning operations depends largely upon the shape of the container, containers which have curved surfaces being generally easier to clean than those which have relatively deep and sharp corners.

The present invention is designed to overcome the abovenoted limitation which is attendant upon the use of conventional paint trays of this character and, toward this end, it contemplates the provision of a paint tray assembly which can be reused indefinitely without necessitating cleaning thereof. Accordingly, the invention provides a sheet metal paint tray container which does not deviate in shape appreciably from the shape of conventional paint trays and which therefore is possessed of all the advantageous features associated with such paint trays, and which container has associated therewith a removable combined liner and covering which, when in operative position on the container not only lines the bottom and side walls of the container but also effects a covering for the outside of the container so that during painting operations the pool of paint is maintained out of contact with any portion of the container, while at the same time the outside of the container is shielded from contact with stray paint particles such as splattered paint, paint drippings and the like.

The provision of a paint tray of the character briefly outlined above being among the principal objects of the invention, a further object is to provide such a paint tray and liner, together with novel means whereby the liner may be easily applied to and removed from the tray and which, when applied to the latter, is securely held thereon in a substantially completely covering relationship without

requiring the use of special fastening means such as friction tape, clamping screws, spring clamping clips or the like.

It is a further object of the invention, in a paint tray of this character to provide a novel supporting means whereby the tray may be fixedly attached to a supporting surface such as a table edge or the step of a step ladder or the like during use of the tray, with the supporting means also constituting an element of the liner-retaining device associated with the tray.

Yet another object of the invention is to provide a paint tray of this sort wherein the liner-retaining means is permanently associated with the paint tray container and held against dislodgement, thus avoiding the possibility of misplacing or losing of the parts associated with the same.

The provision of a paint tray of this general character which is extremely simple in its construction and which therefore is unlikely to get out of order; one which is comprised of a minimum number of parts and which therefore may be manufactured at a relatively low cost; one in which the parts thereof may be formed of light sheet metal stampings, thereby further reducing the cost of manufacture; one in which the liner clamping means associated therewith, when in operative position on the liner, assumes an out-of-the-way position where it does not interfere with application of the paint roller to the tray; one which is rugged and durable and which therefore is possessed of a relatively long life, and one which otherwise is well adapted to perform the services required of it, are further desirable features which have been borne in mind in the production and development of the present invention.

In the accompanying two sheets of drawings forming a part of this specification, a preferred embodiment of the invention has been illustrated.

In these drawings:

Fig. 1 is an exploded perspective view of a paint tray assembly constructed in accordance with the principles of the present invention;

Fig. 2 is a perspective view of the assembled paint tray showing the manner in which a liner element associated with the same is pressed into position within the tray;

Fig. 3 is a perspective view similar to Fig. 2 showing the tray in a position of use with the liner-pressing element removed;

Fig. 4 is an enlarged sectional view taken substantially along the vertical plane indicated by the line 4—4 of Fig. 2; and

Fig. 5 is an enlarged sectional view taken substantially along the vertical plane indicated by the line 5—5 of Fig. 2.

Referring now to the drawings in detail, a paint receptacle or container has been designated in its entirety at **10** and, insofar as its general overall shape and configuration is concerned, it is of more or less conventional design. The container is provided with a bottom wall including a sloping portion **11** which merges with a relatively steep drop-off portion **12** which in turn merges with a lower portion **14** which, in combination with the container side walls, establishes a shallow well for a pool of paint. The sloping portion **11** of the bottom wall may be provided with a series of parallel, spaced, transversely extending, short ribs **15** and with a series of parallel spaced, inclined ribs **16** on opposite sides of the series of ribs **15**. The ribs **15** may serve the purpose of frictionally engaging the roller of the paint applicator (not shown) to retain the roller in the shallow portion of the tray and out of the pool of paint when the roller is not in use, while the inclined rib **16** serves the purpose of pressing excess paint from the roller applicator after the roller has been dipped in the pool of paint existing in

the relatively deep well portion of the tray. The tray is further provided with a relatively shallow front wall **18**, a relatively deep rear wall **20** and, generally triangular shaped side walls **22** and **24** respectively which are shaped conformably to the irregular shaped bottom wall **11, 12, 14**. The edges of juncture between each of the side and end walls and the bottom wall **14** are generally curved as are the edges of juncture between the adjacent side walls themselves. The upper open end of the container **10** is provided with a rolled bead **26** which performs several functions in the assembly including that of reinforcing and strengthening the tray as a whole, of preventing cutting of the fingers during handling of the tray, of avoiding denting of the tray edges, and of operating as a latching means for purposes that will be made clear presently.

While it is possible to use the above described paint tray container **10** in the usual manner by pouring a small quantity of paint directly into the well portion **14** of the container, according to the present invention, and in order to prevent contamination of any portion of the tray by contact with the paint, a sheet or liner **30** is adapted to be placed over the bottom wall of the container and to extend upwardly along the various sides thereof, over the bead or rim **26** and downwardly along the outside of the vertical walls of the container with the liner closely following the surface contour of the container so that the paint may be poured into the container through the open rim thereof so that it will come in contact only with the liner, while at the same time the functional advantages of the paint tray are preserved. As best seen in Fig. 1, the liner **30** may be in the form of a rectangular sheet of transparent plastic material as for example cellophane or other cellulose ester type of material, although other materials, transparent, translucent or opaque such as aluminum foil or the like are contemplated. The sheet **30** is of a length and width slightly greater than the length and width respectively of the container so that when it is in its operative position as shown in Fig. 2 on the container it will line the bottom and walls of the container and also cover the outside surfaces of the container side walls **18, 20, 22** and **24**. In applying the sheet **30** to the container **10** the same is loosely spread over the upper rim of the container and thereafter the sheet may be forced into the container by means of a presser plate **32** which may be in the form of a flat sheet of rigid material such as metal or reinforced cardboard. The plate **32** conforms generally in configuration to the rectangular configuration of the container **10** and has its corner regions truncated as at **34** to accommodate the regions of juncture or corners of the container **10**. The central region of the plate **32** may be relieved as at **36** to provide a transverse handle **38** by means of which the plate may be inserted into and removed from the container **10**. Although the plate **32** is planar so that it does not conform exactly to the contour of the bottom wall of the container **10**, it nevertheless is capable of penetration into the interior of the tray to a sufficient depth that the material of the sheet **30** will be pressed into approximate position as a liner within the container so that when the paint is poured onto the surface of the liner within the container the weight of the paint will force the liner into intimate contact with the well portion **14** while the roller applicator may be employed to force the liner downwardly against the inclined or sloping portion **11** of the bottom wall of the container.

According to the present invention, clamping means are provided whereby the sheet **30** may have its marginal regions folded around the bead or rim **26** and into intimate contact with the outer faces of the container side walls **18, 20, 22** and **24**. Accordingly, a generally rectilinear, U-shaped bail **40** having parallel arms **42** and **44**, and a connecting bight portion **46**, has its free ends pivoted as at **48** in any suitable manner as for example by rivets or the like, to the side walls **22** and **24** adjacent the shallow end of the container **10** in the vicinity of the end wall **18**. The spread of the bail **40** is such that it may be moved from a vertical elevated position such as has been shown in Fig. 1 to a generally horizontal lowered position such as has been shown in Fig. 2 wherein the arms **42** and **44** closely hug the side walls **22** and **24** respectively, with the bight portion **46** closely hugging the end wall **20**. It will be seen therefore that with the rectangular liner **30** spread over the upper rim of the container as previously outlined with its marginal regions overhanging the rim **26** of the container, when the bail **40** is moved to its lower position it will engage the marginal regions of the liner **30** and force the same to the approximate position wherein they are illustrated in Fig. 2 with the presser plate **32** maintaining the central regions of the liner in close proximity to the bottom wall of the container **10**. In order to maintain the bail **40** in its operative lower generally horizontal position, a pair of spring clips or fingers **50** are riveted or otherwise secured as at **52** to the medial regions of the arms **42** and **44** respectively and have curved outer extremities **54** which are adapted to effectively engage the underneath portion of the rim or bead **26** so that the bail **40** may be snapped into position below the rim **26** of the container **10** as shown in Fig. 2. In order to receive the connecting base portion **46** of the U-shaped bail **40** a U-shaped cradle strip **56** is secured to the rear wall **20** and extends substantially the full length of the wall.

As best seen in Figs. 1 and 5, a pair of supporting feet in the form of L-shaped brackets **60** and **61** each having a vertical flange **62** and a horizontal flange **64** have the vertical flange portions thereof secured to the front wall **18** of the container **10** and projects downwardly below the level of the inclined bottom wall **11** so that when the container **10** is disposed on a flat supporting surface such as a table or the like, the container will find a three point support on the surface with the bottom wall of the trough portion **14** extending substantially horizontally in face-to-face engagement with the supporting surface. The horizontal flange portion **64** of the supporting feet or brackets **60** and **61** extend beneath the inclined bottom wall portion **11** and constitute, in effect, hook portions by means of which the shallow end of the container **10** may be hooked over an edge of a supporting member such as the step of a step ladder or the like.

In order to retain the marginal region of the sheet or liner **30** at the shallow end of the container structure **10** in its folded position against the outside face of the wall **18**, a retaining arm or bar **70** is pivoted on a stud **72** to the vertical flange **62** of the bracket **60** and is capable of swinging movement from the vertical position shown in Fig. 1 to the horizontal position shown in Fig. 2 wherein the distal end region thereof is engaged in the bight portion of a U-shaped cradle clip **74** suitably secured to the outside face of the vertical flange **62** of the foot or bracket **61**.

From the above description it is thought that the construction, use, and many advantages of the herein described paint tray will be apparent. It will be understood of course that after the retaining bail **40** and bar **72** have been moved to their home positions with the liner or sheet **30** folded around the upper rim or bead **26** of the container **10** in the manner previously described, the presser plate **32** will be removed and the deformed liner or sheet **30** will retain its dished configuration in conformity with the shape of the inside of the container **10**. The placement of a quantity of paint within the well portion of the container above the bottom wall **14**, and the use of the applicator roller which is drawn across the inclined bottom wall portion **11** of the container will serve to completely deform the sheet or liner **30** and bring the same into intimate face-to-face contact with the inner surfaces of the container **10**. After a particular painting operation has been completed, it is merely necessary to elevate the bail **40** and the bar **70** to the position wherein they are

illustrated in Fig. 1, whereupon the marginal regions of the liner **30** may be gathered together so as to form a bag, so to speak, and any unused quantity of paint remaining within the container **10** may be withdrawn with the liner **30** and discarded. The container **10** will remain clean for a subsequent use inasmuch as no paint will come into contact therewith when the liner is operatively positioned thereon.

Although it is contemplated that as a marketable article of manufacture a number of the sheets or liners **30** will be cut to size and furnished as a part of the packaged equipment, such liners may be cut to size from stock by the consumer. To facilitate measurement of the liners **30** for cutting purposes, a pair of notches **80** or other indicia may be applied to the bail arms **40** as best seen in Figs. 1 and 2 so that when the bail is swung outwardly away from the container proper and into the general plane of the latter, the distance from the notches and the remote end of the container will be the proper measured longitudinal distance for sheet cutting purposes.

The invention is not to be limited to the exact arrangement of parts shown in the accompanying drawings or described in this specification since various changes in the details of construction may be resorted to without departing from the spirit of the invention. Only insofar as the invention has been particularly pointed out in the accompanying claims is the same to be limited.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent is:

1. A paint tray designed for use with a roller applicator and comprising in combination a shallow container formed of sheet metal and having a generally rectangular bottom wall, opposed pairs of upstanding side and end walls respectively, and an open rim lying in and defining a plane, a bead coextensive with said rim, a removable lining for the inside surfaces of said bottom, side and end walls, as well as for the outside surfaces of said side and end walls, said lining comprising a thin sheet of flexible deformable material of a width at least as great as the width of said bottom plus twice the height of each of said side walls and of a length at least as great as the length of said bottom plus twice the height of each of said end walls, said lining being positionable in centered relationship over said container so that portions thereof closely hug said inside and outside surfaces in face-to-face contact therewith, means for releasably clamping the liner to the outside surfaces respectively of the side walls and one end wall, said means comprising a U-shaped bail having straight parallel side arms and a straight connecting bight portion, the distal ends of said arms being pivoted to said side walls respectively at adjacent ends thereof, the length of the bail side arms being approximately equal to the length of said side walls and the length of said bight portion being approximately equal to the length of one of said end walls whereby the bail is movable between an elevated position of liner release and a lowered clamping position wherein the bail surrounds said side walls and one of said end walls with the liner interposed between the bail and such walls, and means for releasably clamping the liner to the outside surface of the other end wall, said latter means comprising a clamping bar of a length substantially equal to the length of said latter end wall, said latter end wall being provided with a pair of depending foot portions at opposite ends thereof, said clamping bar having one end pivoted to one of said foot portions and being movable between an elevated position of liner release and a lowered clamping position wherein the bar has its distal end in close proximity to said other foot portion with the liner interposed between said distal end and latter foot portion and clamped therebetween.

2. A paint tray as set forth in claim 1 including, additionally, a spring finger fixedly secured to each of said bail arms medially thereof and engageable with said liner when the bail is in its lowered clamping position for exerting pressure against the upstanding side walls to which the bail arms are pivoted and frictionally retaining the bail in its clamping position.

3. A paint tray designed for use with a roller applicator and comprising in combination a shallow container formed of sheet metal and having a generally rectangular bottom wall, opposed pairs of upstanding side and end walls respectively, and an open rim lying in and defining a plane, a removable lining for the inside surfaces of said bottom, side and end walls, as well as for the outside surfaces of said side and end walls, said lining comprising a thin sheet of flexible deformable material of a width at least as great as the width of said bottom plus twice the height of each of said side walls and of a length at least as great as the length of said bottom plus twice the height of each of said end walls, said lining being positionable in centered relationship over said container so that portions thereof closely hug said inside and outside surfaces in face-to-face contact therewith, and means for releasably clamping such portions of the liner as closely hug the opposing surfaces of at least three of said upstanding walls to said latter walls, said means comprising a U-shaped bail having straight parallel arms and a straight connecting bight section, the distal ends of said arms being pivoted to one pair of opposed upstanding walls substantially at the adjacent ends thereof respectively, the length of the bail arms being approximately equal to the length of the upstanding walls to which they are respectively pivoted and the length of said bight section being approximately equal to the length of the upstanding wall remote from the pivotal connections for said bail arms whereby the bail is movable between a clamping position wherein it underlies the rim of the container with said liner interposed between the bail and said three upstanding walls and a position of release wherein the bail substantially overlies said rim of the container, one of said bail arms being provided with an indicia mark thereon, the distance between said indicia mark and the axis of pivotal connection of the bail to the upstanding walls plus the overall longitudinal extent of the container being substantially equal to the longitudinal extent of the container plus twice the height of each of said end walls.

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