United States Patent [19]

Meeh

[11] **3,771,752**

[45] **Nov. 13, 1973**

[54] **REFUSE BAG HOLDER**

[76] Inventor: **Robert F. Meeh,** 7424 Whitehaven, St. Louis, Mo. 63123

[22] Filed: **Dec. 20, 1971**

[21] Appl. No.: **209,784**

[52] **U.S. Cl.** **248/98,** 248/99, 248/101, 248/163

[51] **Int. Cl.** **B65b 67/12**

[58] **Field of Search** 248/98, 99, 95, 100, 248/101, 97, 163

[56] **References Cited**

UNITED STATES PATENTS

754,580	3/1904	Madden et al.	248/97
2,470,977	5/1949	Chidsey	248/97
3,633,859	1/1972	Vosbikian	248/97
2,503,118	4/1950	Mannix	248/100
422,274	2/1890	Wilkinson	248/98
3,614,041	10/1971	Koger	248/101
362,807	5/1887	Wing	248/98
134,637	1/1873	Brown	248/99
2,763,377	9/1956	Martin	211/73

FOREIGN PATENTS OR APPLICATIONS

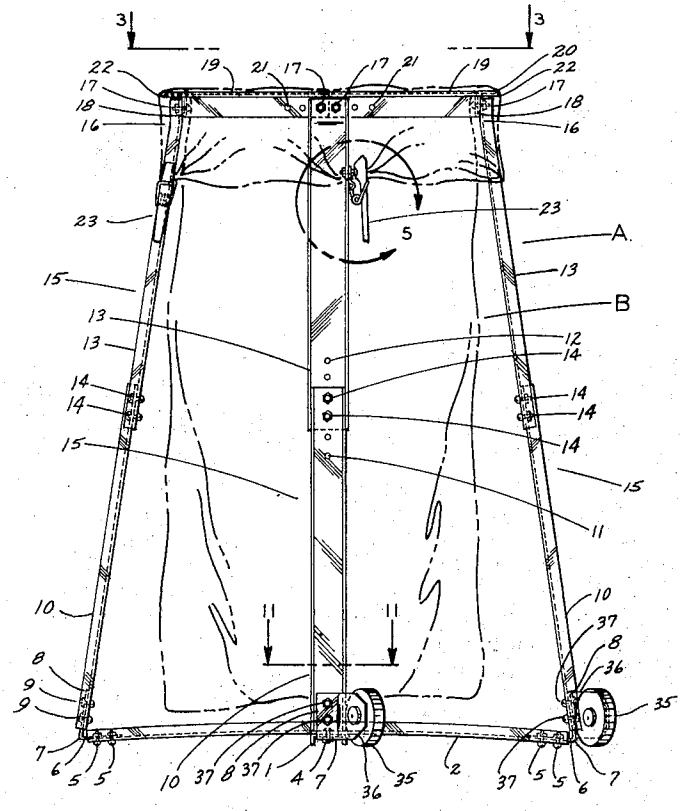
162,256	2/1949	Austria	248/99

Primary Examiner—Roy D. Frazier
Assistant Examiner—Rodney H. Bonck
Attorney—Ralph W. Kalish

[57] **ABSTRACT**

A refuse bag holder comprising a base formed of intersecting members, selectedly extensible legs extending upwardly from said base for converging at their upper ends and a support ring secured to the upper ends of said legs. Clasp members are provided on said legs for engaging portions of the bag to be filled. Said support ring is formed of a plurality of components adapted for mutual contraction and expansion for accommodating bags of varying diameter. The components of holder A are designed for assembly and disassembly.

5 Claims, 12 Drawing Figures



PATENTED NOV 13 1973

3,771,752

SHEET 1 OF 3

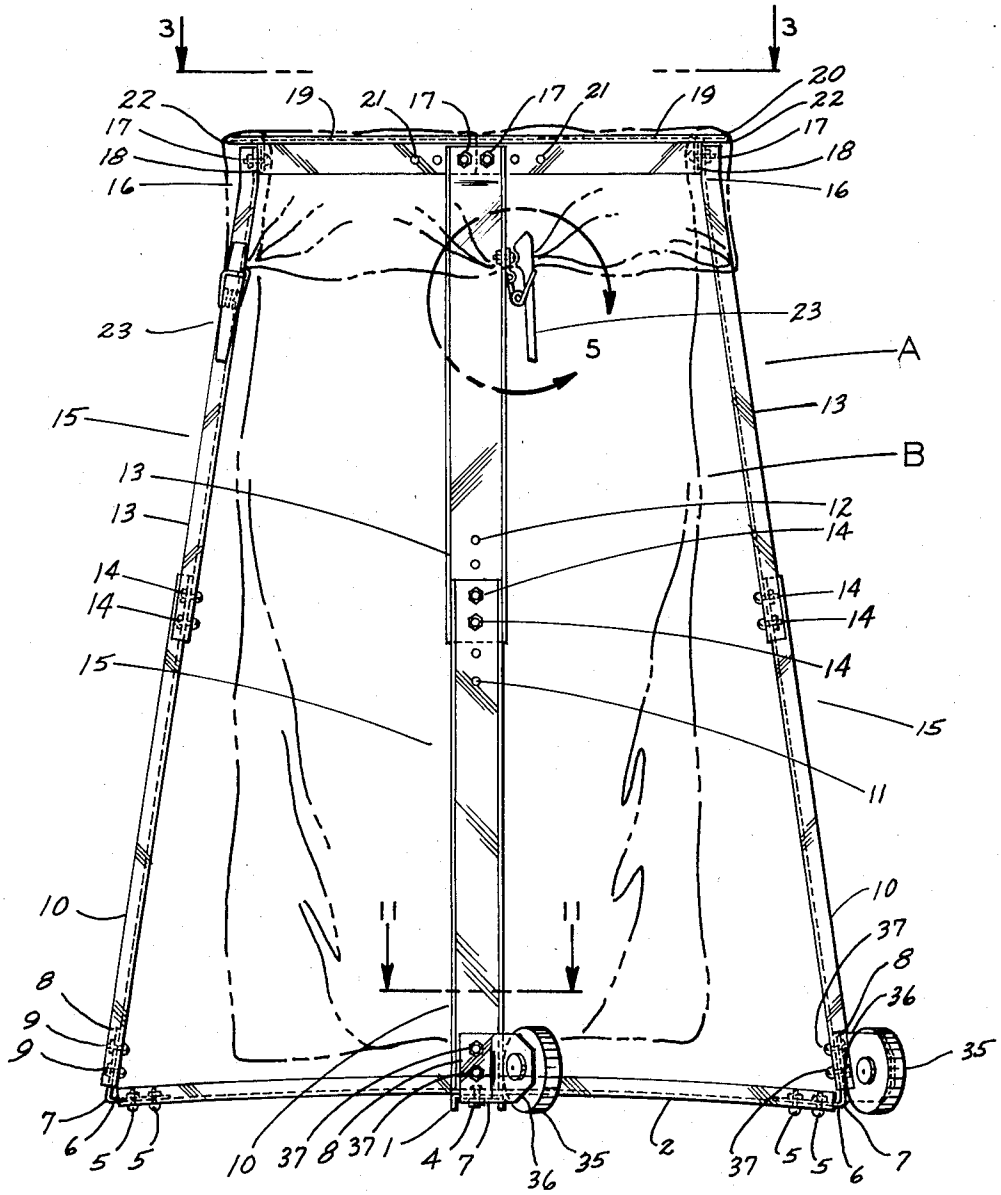


FIG. 1

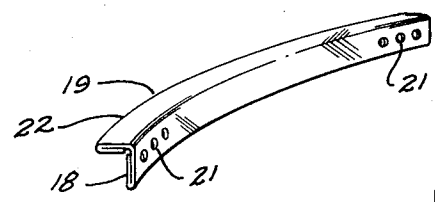


FIG. 2

INVENTOR
ROBERT F. MEEH

BY Ralph M. Kalish

ATTORNEY

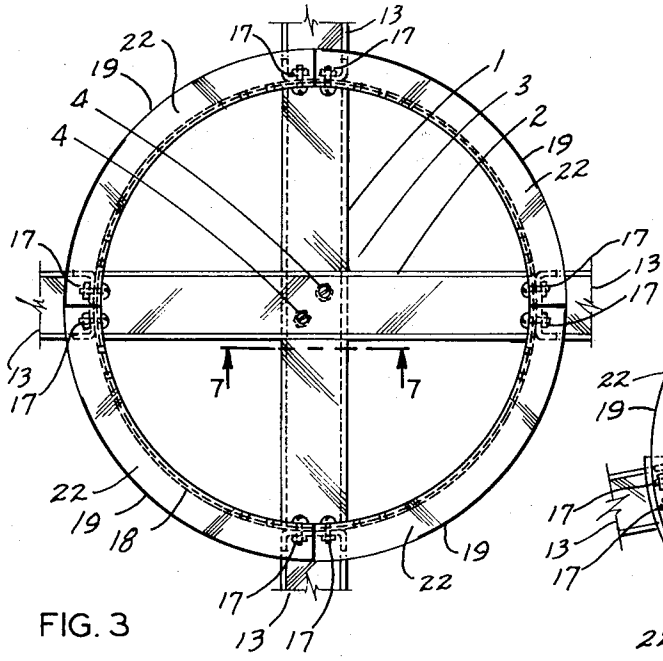


FIG. 3

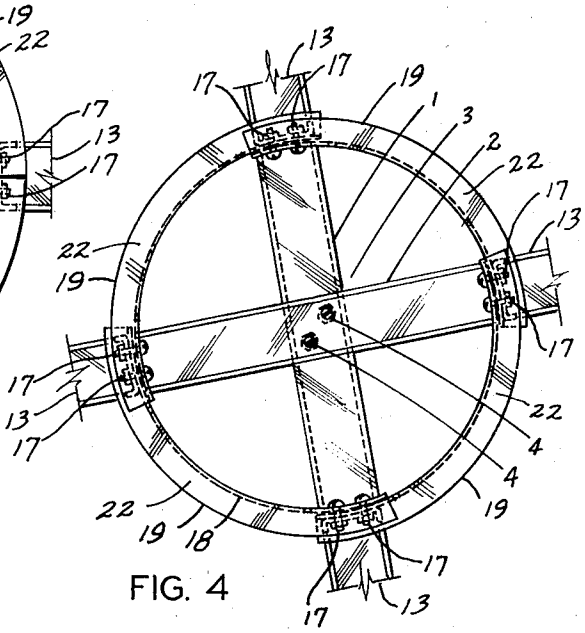


FIG. 4

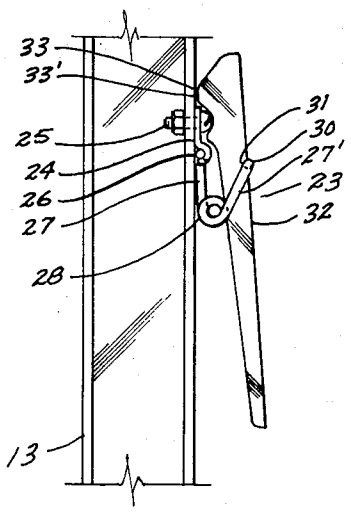


FIG. 5

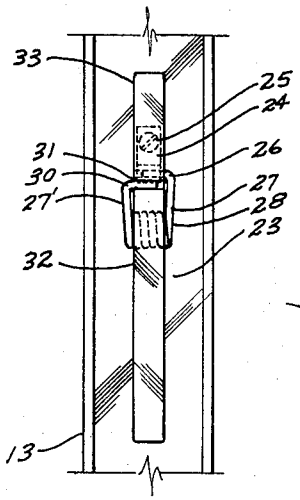


FIG. 6

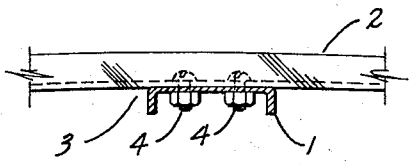


FIG. 7

INVENTOR
ROBERT F. MEEH

BY Ralph W. Kalish

ATTORNEY

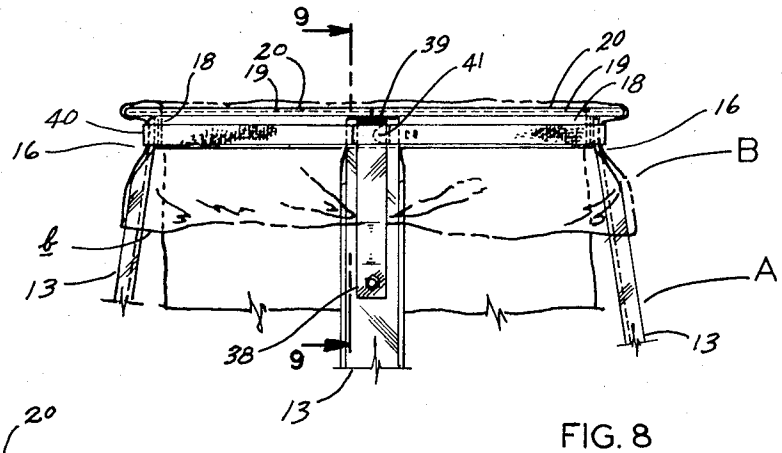


FIG. 8

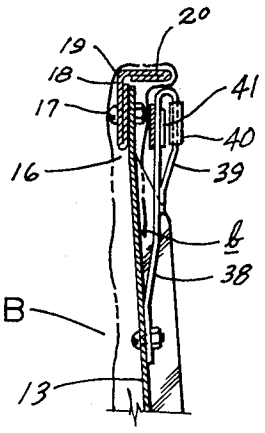


FIG. 9

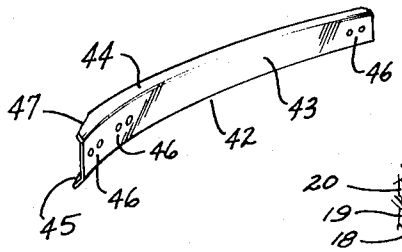


FIG. 12

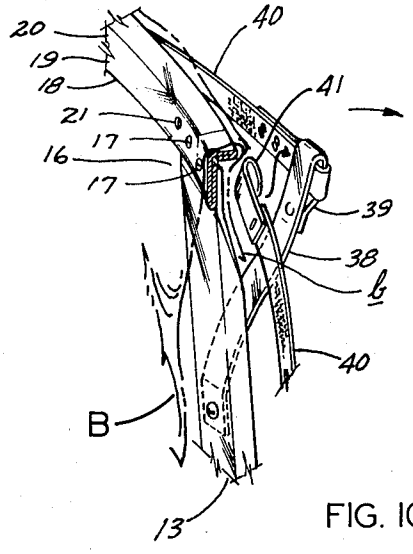


FIG. 10

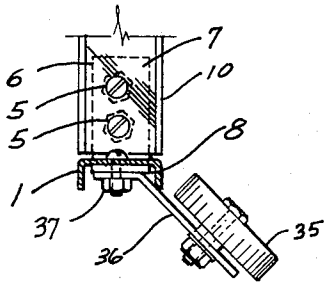


FIG. 11

INVENTOR
ROBERT F. MEEH

BY Ralph W. Kalish

ATTORNEY

REFUSE BAG HOLDER

BACKGROUND AND SUMMARY OF THE INVENTION

This invention relates in general to refuse or waste containers and more particularly to a holder for such containers during filling.

Heretofore various expedients have been contrived for holding flexible containers to facilitate filling of the same, such containers being of the sack or bag character. However, currently known structures have proved relatively complex and heavy as well as being especially designed for some specific type of container wherein intricate supporting means are embodied and wherein mechanical elements are incorporated for effecting an automatic closure of the filled bag.

Therefore, it is an object of the present invention to provide a refuse holder which is of extremely simple construction being comprised of sturdy, yet light-weight components adapted for assembly and disassembly by the average home owner.

It is another object of the present invention to provide a holder of the character stated having its constituent elements so interrelated as to provide easily accomplished adjustment so that bags of varying length and width are accommodated with facility.

It is another object of the present invention to provide a holder of the character stated which although particularly suited for home use in the collection of leaves, grass, and refuse also is equally amenable for industrial purposes for the filling of preparations normally marketed in flexible bags such as, for instance, fertilizers and the like.

It is a still further object of the present invention to provide a holder of the character stated which may be most economically manufactured, being suitable for high volume low cost production; which is resistant to breakdown; and which is reliable and durable in usage.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side elevational view of a refuse bag holder constructed in accordance with and embodying the present invention illustrating same in operative position.

FIG. 2 is a perspective view of a section of the support ring.

FIG. 3 is a top plan view of the support ring in expanded position as viewed along the line 3—3 of FIG. 1.

FIG. 4 is a top plan view of the support ring in contracted condition.

FIG. 5 is a fragmentary enlarged side view of the portion indicated by a circular arrow in FIG. 1.

FIG. 6 is a fragmentary enlarged front view of the clasp shown in FIG. 5.

FIG. 7 is a transverse vertical sectional view taken on the line 7—7 of FIG. 3.

FIG. 8 is a fragmentary side elevational view of the upper portion of the refuse bag holder having another form of bag engaging means thereon, constructed in accordance with and embodying the present invention.

FIG. 9 is a vertical transverse sectional view taken on the line 9—9 of FIG. 8.

FIG. 10 is a perspective view of the bag engaging means.

FIG. 11 is a top plan view taken on the line 11—11 of FIG. 1.

FIG. 12 is a perspective view of a section of another form of support ring constructed in accordance with and embodying the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now by reference numerals to the drawings, A designates a holder for refuse bags as indicated in phantom lines in FIG. 1 at B; said holder A being adapted to maintain such bags, as of paper, plastic, and the like, for facilitating filling thereof, as with leaves, grass or refuse and the ultimate handling of such filler bags. Holder A constitutes an open framework constituted of sturdy, light-weight components which are constructed for easy assembly and disassembly so as to allow for storage or transport of the same in minimal space when in disuse.

Holder A comprises a pair of base members 1, 2 constituted of elongated, preferably, channel stock which are arranged in intersecting, axially normal relationship, as at 3. As may be seen in FIG. 7 upper base member 2 may be slightly arched in the overlapping zone in order that the ends thereof will be coplanar with the ends of the companion base member 1. However, the material of construction may be 24 gauge metal and is relatively light in weight so that the arching does not require any difficulty in fabrication. Said members 1, 2 are interengaged as by bolts 4 in such overlapping zone 3, and are optionally of the same length; being secured at their ends, as by bolts 5, to the bottom flanges 6 of angle brackets 7 having upstanding arms 8, the planes of which are at an angle of slightly less than 90 degrees to the respective bottom flanges 6. Secured, as by bolts 9, to each arm 8 is the lower end of an upwardly extending base leg section 10 which is desirably of channel stock for rigidifying purposes. Each of said base leg sections 10 is provided at its upper end with a plurality of openings 11 for selected alignment with like openings 12 formed in the lower end of a companion upper leg section 13 for receiving bolts 14 to join said leg sections 10,13 into composite legs, indicated broadly 15. Upper leg sections 13 are also of channel stock but dimensioned for telescopic relationship with the related base leg section 10 so that the same may be mutually positioned for controlling the overall length of the resulting composite legs 15. By virtue of the angularity of brackets 7 the composite legs 15 are thus inclined being presented for extending upwardly and inwardly from their lower ends, convergingly toward their upper ends. In their upper extreme portions upper leg sections 13 are bent, as at 16, into vertical, axially parallel relationship for engagement by bolts 17 to the depending flanges 18 of the components 19 of a support ring 20; there being a plurality of openings 21 in the end portions of said components 19 for extension therethrough of said bolts 17. As may best be seen in FIGS. 2–4, said ring components 19 are of quadrant extent and incorporate an upper horizontal flange 22. It is, of course, apparent that said ring components 19 may be of less or greater extent than 90 degrees, if desired, but for purposes of simplicity and sturdiness and in view of the utilization of four legs 15, quadrant form has been shape of choice. Said ring components 19 are readily adapted for overlapping or telescopic relationship, as the case may be, with the associated openings 21 being positioned for selected registration with like openings in the immediately adjacent components 19 whereby

ring **20** may be relatively expanded (as shown in FIG. 3) or relatively contracted (as illustrated in FIG. 4) for purposes presently appearing.

Mounted on upper leg sections **13**, proximate the upper ends thereof are clasps **23**, each of which comprises a bracket **24** mounted on the related leg section **13**, as by a bolt **25**, which bracket tightly engages the inturned end extremity **26** of extension **27** of a coil spring **28**. In its opposite portion coil spring **28** incorporates an extension **27'** having a perpendicularly bent end extremity **30** received within a transversely arcuated recess **31** formed in a clasp arm **32** for urging the head **33** thereof toward the adjacent or confronting portion of leg section **13** which latter serves as a fixed jaw for cooperation with the head **33** or moveable jaw of clasp **23**. Said clasps **23** are shown in the drawings as being mounted upon the outer faces of flanges of the channel stock from which leg sections **13** are formed. It is apparent that the same may be readily disposed on other locations with equal effectiveness.

From the foregoing it will be observed that the various elements of holder A are uniquely constructed for integration into assembled condition (see FIG. **1**) wherein the same form a stable open framework; being resistant to tipping or unauthorized displacement by reason of the particular configuration wherein a substantially relatively widened base is provided. The upward inclination of legs **15** serve to relatively lower the filler of gravity and thereby conducing to enhanced stability. Leg sections **10** and **13** may be adjusted so as to alter the effective height of holder A and ring components **19** may be also adjusted for controlling the effective diameter of support ring **20**. Thus, by the adjustability of holder A, bags B of varying height and diameter may be accommodated with equal facility.

Also by forming holder A of a multiplicity of simply constructed, but strong constituents said holder may be easily "knocked-down" or disassembled with the elements being readily stored in minimum space or compactly packaged for promoting ease of transport. The collapsible character of holder A obviates the need for maintaining same in assembled condition during extensive periods of non-use wherein the same, if stored out of doors, would be subjected to undue weather wear, or if maintained in doors,would usurp considerable state.

In use, with holder A in assembled condition, the user merely inserts a bag downwardly through support ring **20**, turning back the upper marginal portion of the bag opening and draping same about support ring **20** for dependency therefrom. The turned back portion need be of no greater extent than as may be necessary to present the edge portion for engagement between clasp head **33** and the cooperating portion of leg section **13**. It may be observed that head **33** is rounded, as at **33'**, so as to prevent the likelihood of any damage, as by tearing, to the bag. Any number of clasps **23** may be utilized, but it has been found that one on each leg **15** is adequate to maintain the bag against premature vertical downward displacement during the filling operation.

With bag B thus held by clasps **23** and with the body of the bag disposed within the open framework at holder A, the mouth thereof is retained in fully opened condition for facilitating filling of the bag as with leaves, grass, and the like or with refuse of any character. When the filling operation is completed the user will release clasps **23** to free the erstwhile engaged portions of said bag and turn same upwardly as for tying. The full bag B may then be easily withdrawn between adjacent legs **15**.

In view of the foregoing it will be seen that support ring **20** is so adjusted that its diameter will be slightly greater that that of the bag being filled and the overall dimensional relationships of the components of said holder A are determined to permit withdrawal of a filled bag between adjacent legs so that the user is spared the need to lift or otherwise manipulate bag B which when full is normally relatively unwieldy.

Referring now to FIGS. **1** and **11**, it will be seen that wheels or casters **35** may be provided at the lower ends of legs **15** as by means of angulated brackets **36** secured to the web of the related base leg section **10** as by bolts **37**. As shown in FIG. **1** wheels **35** may be mounted on but two adjacent legs **15** so that holder A may be rendered mobile by merely tilting same for supported disposition upon said wheels **35**. Thus, the transportability of holder A is greatly enhanced by the facile rollability of the same through provision of wheels **35**.

Referring now to FIGS. **8**, **9**, and **10** another means of maintaining a bag B in supported disposition upon holder A is shown with the same being utilized in lieu of clasps **23** above described. A metal band **38** of spring steel is secured at its lower end upon one of said leg sections **13** downwardly of support ring **20** and extends upwardly to a point aligned with flange **18** of support ring components **19**; there being a loop as at **39** formed at its upper end. Extending through loop **39** is an elongated elastic member **40** as formed of suitable elastomeric material and having a width compatible with the vertical extent of flange **18** being through its inherent resiliency as well as the bias of metal band **38** urged snugly against said flange **18**. One end of said member **40** is firstly engaged through the loop **39** of metal band **38** while the other end of said member **40** is provided with a hook member **41** for engaging said loop **39** when said band **40** is in operative position.

It will be seen that with a bag B disposed upon holder A, and with member **40** being open (see FIG. **10**) and with the upper portion of said bag being turned downwardly about support ring **20**, said member **40** may then be secured as by engaging hook **41** within loop **39**. By such engagement member **40** will be snugly urged against flange **18** for gripping the intervening portion of said bag end as at b. Obviously, when bag B is filled, the same may be easily removed by disengagement of member **40** from metal band **38**.

Thus, the aforesaid means for retaining bag B in position for filling is easily accomplished, requiring the exercise of but limited force and with the components being inexpensive but highly durable in usage.

As indicated above, holder A may be fabricated of sturdy light-weight material for conducing to an overall minimum weight conducive to ease of handling.

Holder A is useful with all types of refuse receptacles, but as shown above, is particularly suited for bag-type receptacles such as the present day popular type formed of polyethylene.

Referring now to FIG. **12**, another form of ring component or section **42** is shown for developing support ring **20**. Ring **42** comprises a vertical web **43** with upper and lower outturned flanges **44,45** for developing a channel to facilitate relative slidable movement therein of cooperating ring components for facilitating expan-

sion and contraction of ring **20** in accordance with the particular requirements. Each ring component **42** is provided in the end portions of its web **43** with a multiplicity of openings **46** for selected registration with like openings in adjacent components **42** for reception of screws (not shown) by which the components **42** may be maintained in selected relationship. At their ends flanges **44,45** are cut away or tapered, as at **47**, to eliminate any sharp edge that might have a damaging effect upon the engaged bag.

Having thus described my invention, what I claim and desire to obtain by Letters Patent is:

1. A holder for a flexible refuse bag comprising a frame comprising an annular support having a vertical web portion, a plurality of uprights having upper and lower ends, the upper ends of said uprights being engaged to said annular support at spaced-apart points thereon, a vertically disposed band engaged at its lower end upon one of said uprights downwardly of said annular support, said band having a loop at its upper end, an annular resilient member disposed encirclingly of said vertical web portion and being urged thereagainst through its resiliency, said resilient member passing through said loop at the upper end of said band.

2. A holder for a flexible refuse bag as defined in claim **1** and further characterized by said band being made of metallic spring stock, and said annular resilient member being formed of elastomeric material.

3. A holder for a flexible refuse bag as defined in claim **2** and further characterized by said resilient member having a height substantially coextensive with the height of said vertical web portion to provide relatively extensive cooperating surfaces for engaging the intervening portions of a refuse bag.

4. A holder for a flexible refuse bag as defined in claim **1** and further characterized by said annular support being comprised of four equal segmental members, and means for interengaging said segmental members in their adjacent end portions.

5. A holder for a flexible refuse bag comprising a frame comprising an annular support having a vertical web portion, first and second pairs of uprights having upper and lower ends, the upper ends of said first pair of uprights being engaged to said annular support at diametrally opposed points thereon, the upper ends of said pair of uprights being engaged to said annular support at diametrally opposed points which latter points are distant through an arc of 90° to the upper ends of the adjacent first pair of uprights, a first base member interengaging the lower ends of said first pair of uprights, a second base member interengaging the lower ends of said second pair of uprights, said first and second base members being in registering relationship in their central zones and means securing said first and second base members in said registering central zones, a vertically disposed band made of metallic spring stock engaged at its lower end upon one of said uprights downwardly of said other support, an annular resilient member disposed encirclingly of said annular support and being urged thereagainst through its resiliency, said annular resilient member being formed of elastomeric material, said band having a loop at its upper end, and said resilient member passing through said loop, said resilient member having a height substantially coextensive with the height of said vertical web portion to provide relatively extensive cooperating surfaces for engaging the intervening portions of the refuse bag.

* * * * *