

Aug. 31, 1965

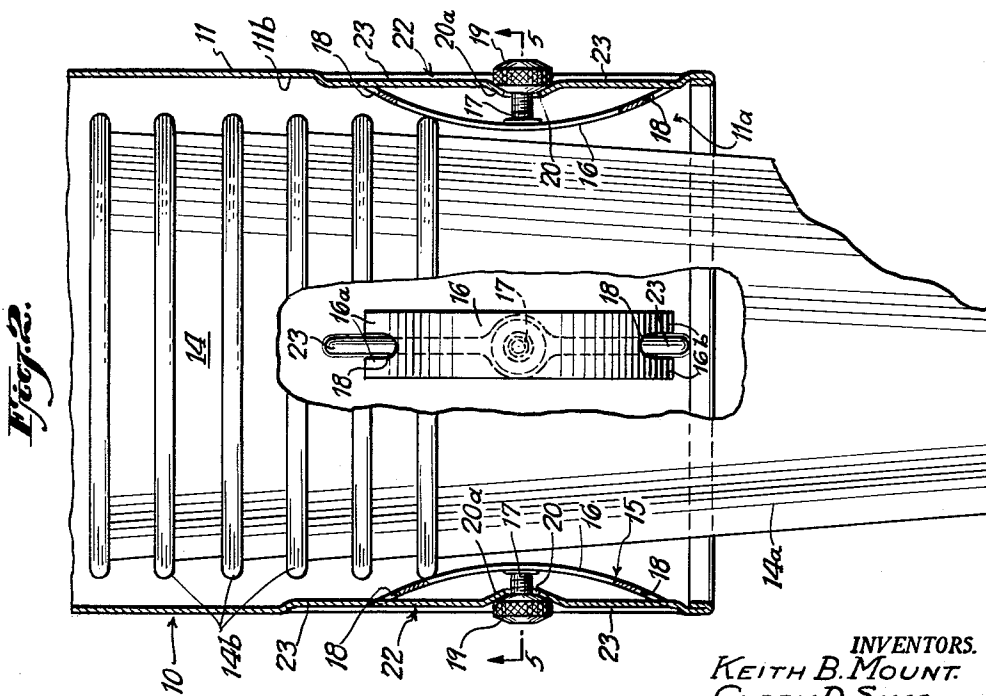
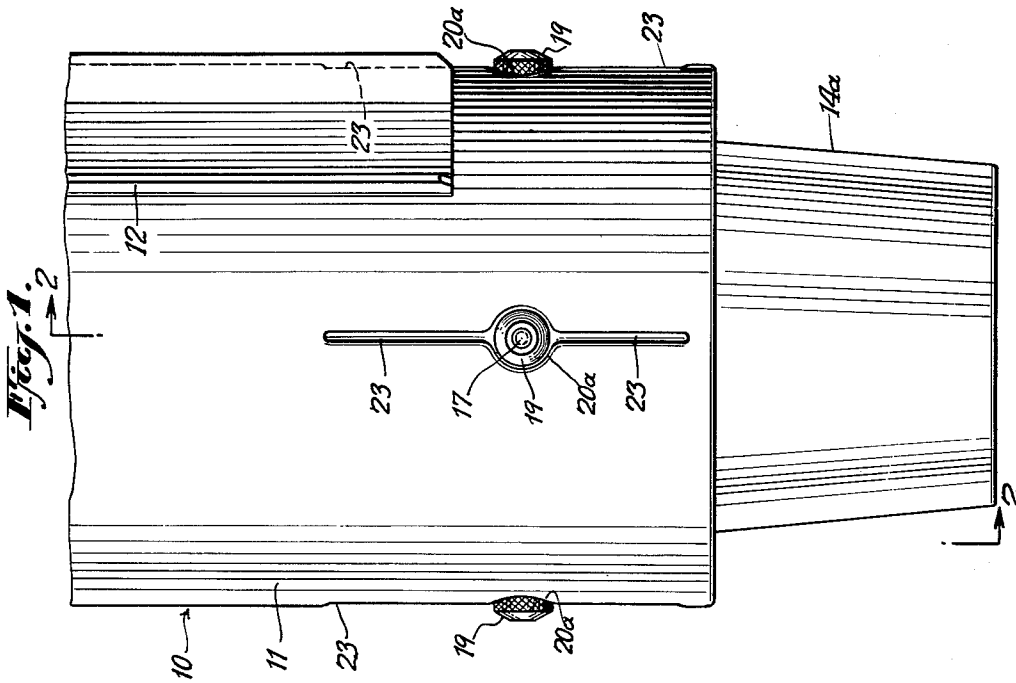
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3,203,587

UNIVERSAL RECEPTACLE DISPENSER

Filed Dec. 17, 1962

5 Sheets-Sheet 1



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5 Sheets-Sheet 2

Fig. 3.

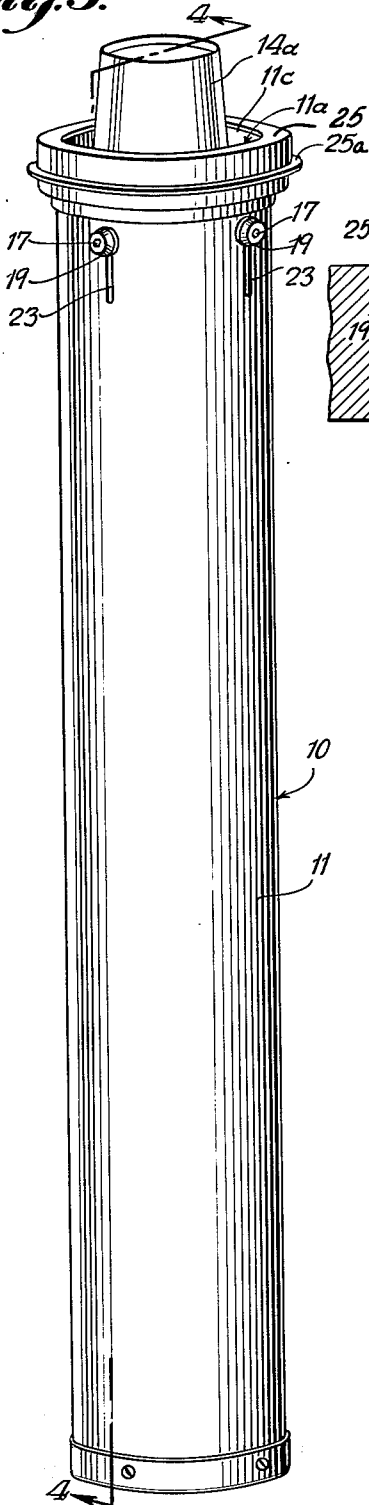
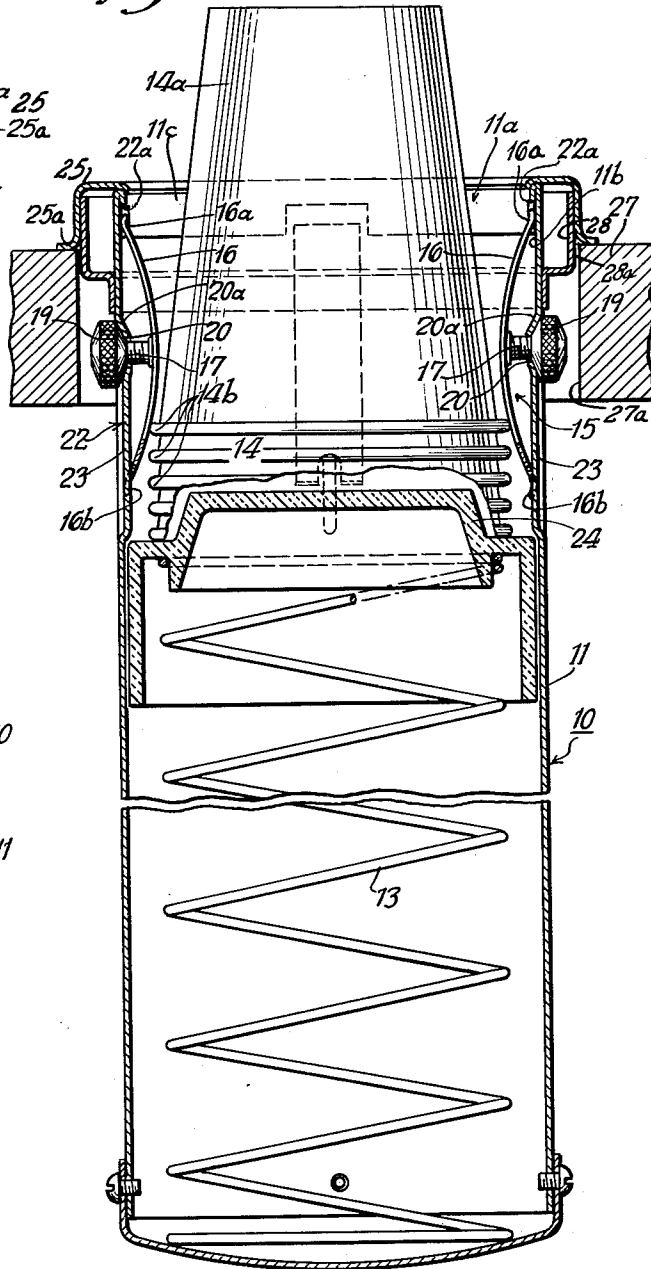


Fig. 4.



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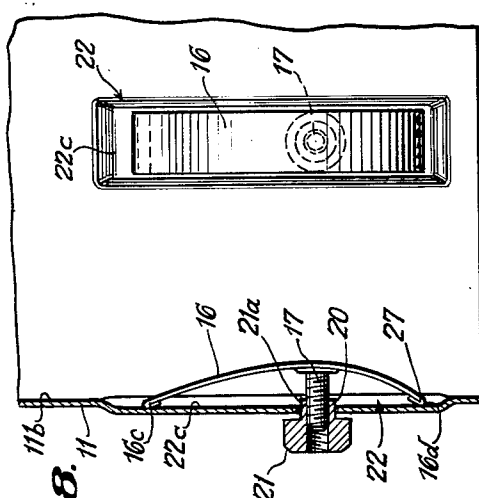


Fig. 8.

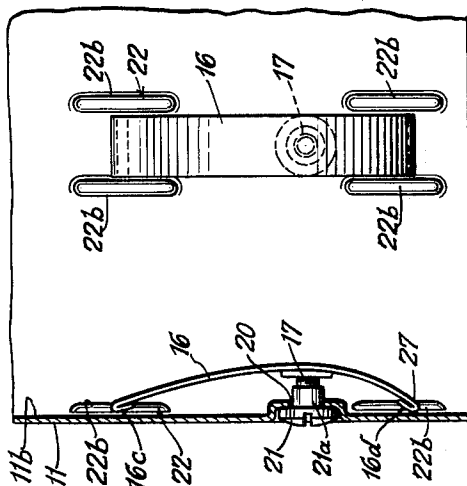


Fig. 7.

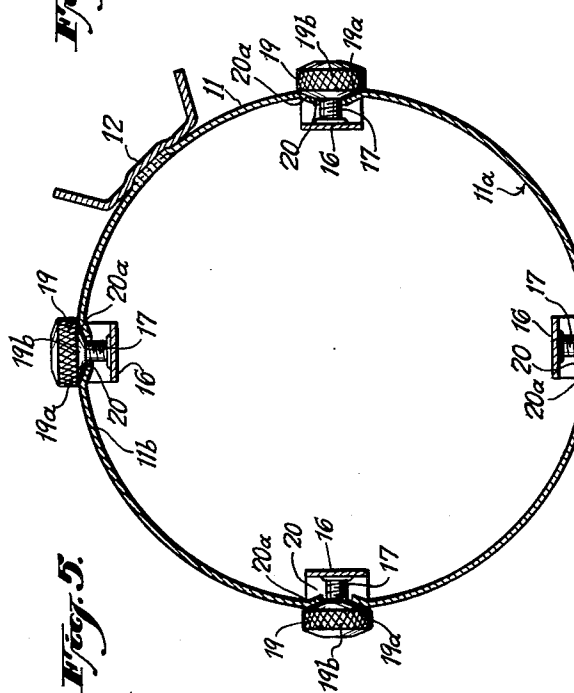


Fig. 5.

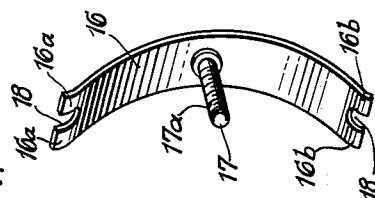


Fig. 6.

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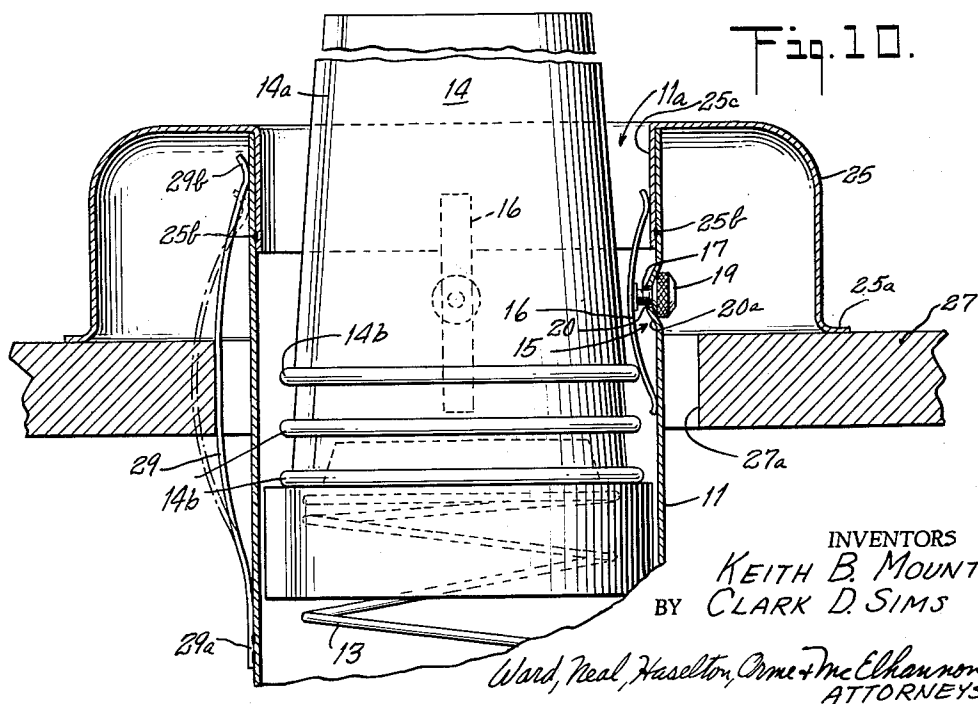
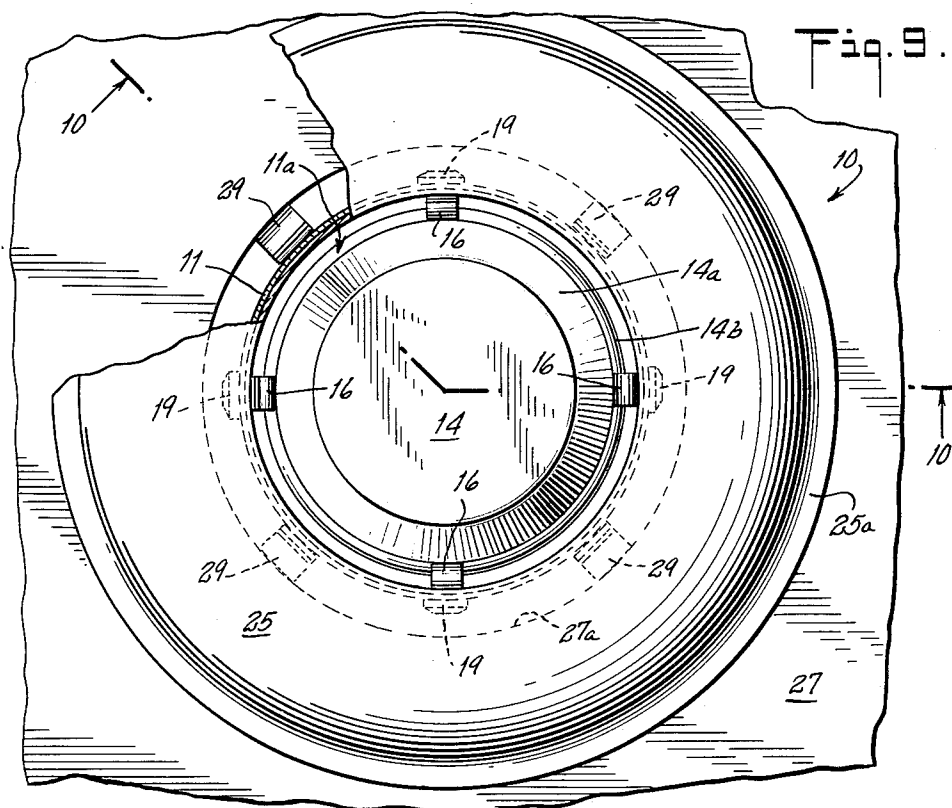
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UNIVERSAL RECEPTACLE DISPENSER

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UNIVERSAL RECEPTACLE DISPENSER

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5 Sheets-Sheet 5

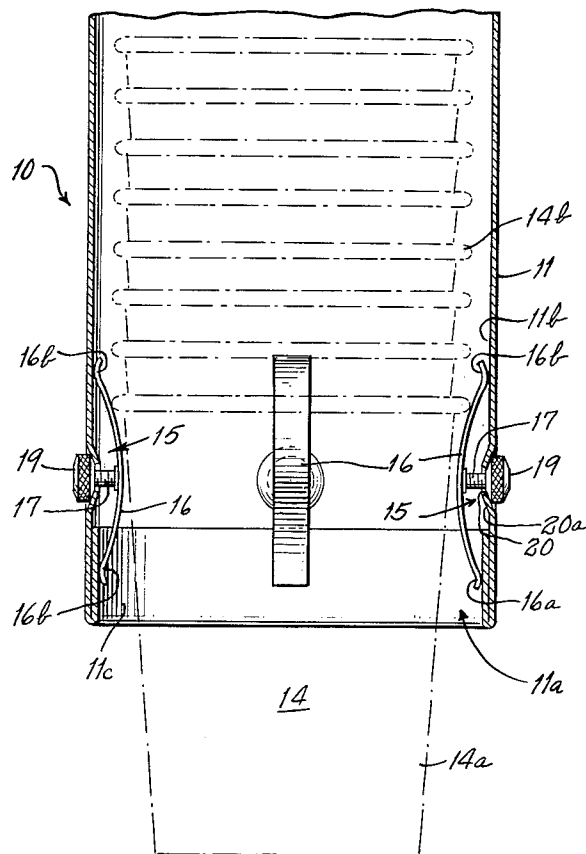


Fig. 11.

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UNIVERSAL RECEPTACLE DISPENSER

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13 Claims. (Cl. 221-63)

This invention relates generally to so-called pull type dispenser devices for holding and dispensing receptacles, and more particularly to the construction and arrangement of such devices. The invention is particularly adapted for use in dispensing paper drinking cups and therefore will be described in connection with such use.

This application is a continuation-in-part of our co-pending application Serial No. 90,759, filed February 21, 1961, now abandoned.

Inasmuch as paper drinking cups are available in a considerable variety of sizes, as regards diameter, thickness of material, bead size, and height, and since there are generally two accepted modes of operation of pull type dispensers, these being herein referred to as the gravity feed type and the elevator type dispensing operations, it is desirable that a single dispenser device incorporate features which cause it to be universally adaptable to accommodate a wide range of cup sizes and to utilize either of the common modes of operation. It is also important that the cup retention and stripping elements have relatively simple and durable construction. Incorporating such features, the single dispenser device can then be accepted as a standard, and large numbers thereof can be economically produced with only incidental regard to the particular minor modified form of the standard device which may be preferred for any specific application.

Previously known dispensers have not incorporated all of these desirable features and, where certain features have been incorporated, they have not been entirely satisfactory for one or more reasons. For example, adjustable type dispensing devices have been contrived wherein relatively complicated mechanisms are required to adjust the dispenser to receive cups of varying size, which mechanisms, in many cases, are not conveniently accessible from the exterior of the dispenser, or are subject to breakdown. More often, the size-adjustment mechanisms in dispensers of this type occupy considerable space, causing the entire device to be overly large or unacceptable in appearance.

Other known pull type dispensers have incorporated a so-called "automatic" adjustability feature, wherein no manual adjustment to the throat size of the device is necessary, but which feature is not entirely satisfactory either to provide a wide range of capacity with respect to cup size as the feature is intended, or to provide reliable sensitivity of the dispenser with respect to the stripping of the cups therefrom only one at a time. These difficulties are thought to inherently result from the requirement in such automatically adjustable dispensers that the flexible stripping elements distort primarily in the direction of the throat circumference when accommodating cups of varying size. The bias pressure in the cup retention and stripping elements therefore becomes grossly non-uniform over any significant range of cup sizes and causes undesirable results such as, for example, crushing of at least the last cup in a nested stack of relatively large size cups as they are dispensed from the device.

Whether or not the previously known dispensers incorporate either automatic or manual cup-size adjustment features, they are not always adaptable for use both as a gravity feed type dispenser and as an elevator type dispenser. The problems to be overcome when designing

throat sections of elevator type dispensers, which include spring means to urge the cups upwardly and against the weight of the cups, differ from those involved in the design of gravity feed type dispensers wherein the cups feed towards the throat in the direction of gravitational forces. These differences may stem, for example, from differences in the manner of loading the dispenser with cups, elevator type dispensers being loaded through the dispensing throat and gravity type dispensers being loaded from the rear of the throat.

Elevator type dispensers are sometimes mounted in counters or serving tables or the like, the body of the dispenser being concealed underneath the counter top and the counter area surrounding the throat of the dispenser through which the inverted stack of individual cups are dispensed. More often, the dispenser has been mounted having its dispensing throat opening flush with the counter top and spilled liquids on the counter sometimes flow into the dispenser to wet and contaminate or otherwise render the cups therein unusable. Additionally, in prior devices the arrangement and construction of the cup stripping and abutment elements of the dispenser is such that any apertures of the dispenser body through which portions of the abutment elements project are ultimately situated below the level of the counter top so that the referred to liquids, even though not entering the dispensing throat, flow from the counter down along the exterior of the dispenser body to either deposit on the exposed portions of the abutment elements or enter the dispenser through the referred to apertures. Moreover, in many instances the exteriorly projecting portions of the cup abutment elements require that an irregularly shaped aperture be formed in the counter top to accommodate or allow passage of the same. In these and other instances it has been found difficult to either seat the dispenser firmly but removably in place, or to avoid the use of screws or other semi-permanent attachment means for the purpose. It will therefore be understood that it has not been apparent that a counter top mounted elevator type dispenser can include highly satisfactory cup stripping and abutment elements which are adapted to accommodate a wide range of cup sizes, yet further include a dispenser mounting arrangement which eliminates spoilage of cups or contamination of the cup engaging elements by entry or depositing of liquids from the counter and also provides firm, removable seating attachment to the counter.

Accordingly, it is intended by the present invention to provide a pull type receptacle dispenser which is conveniently adjustable for accommodating receptacles within a comparatively wide range of sizes; which will not cause unacceptable distortion of receptacles of different thickness and sizes; which is adaptable for use either as a gravity feed or elevator type device; which is simple and durable of construction by incorporating relatively few, and not complex receptacle retention and stripping elements; which will provide easy removal of the receptacles only one at a time; and which is economical to manufacture.

In addition, it is intended by the present invention to provide in a pull type dispenser a construction and arrangement of the cup stripping and abutment elements such that the latter are subject to adjustment to the individual touch of the user as regards whether a light, medium, or rather stiff pull of the cup is desired in the dispensing action. It has not heretofore been apparent how such selective sensitivity may be conveniently and economically incorporated into cup dispensers of the type.

Further, the invention provides a counter top mounted, elevator type dispenser which will be firmly but removably mounted within a simple circular opening of the counter area, and will prevent spoilage of cups or contamination of the cup abutment elements of the dispenser

as otherwise would normally occur upon seepage of spilled liquids and the like from the counter.

Briefly and generally describing the invention, there is provided a receptacle dispenser having a hollow body for receiving a stack of nested cups to be dispensed, or stripped therefrom one at a time. The body has a dispensing throat portion, from whence the cups will be taken for use, which incorporates cup retention and stripping means which are radially adjustable to accommodate and dispense cups of a variety of sizes, and which can be utilized whether the mode of operation of the dispenser be of either the gravity feed or elevator types. These means comprise a plurality of annularly spaced cup abutment elements which are radially adjustable with respect to the extent of their respective inward projections relative to the body. Such adjustment is made by manual manipulation of associated adjustment means which are accessible from the exterior of the body. More specifically, and referring to a preferred embodiment, the cup abutment elements are themselves flexible, being in the form of longitudinally disposed semi-elliptical segments, and are mounted for radially yieldable movement by their associated means for adjusting their respective extents of projection inwardly of the body of the dispenser. In one form of the invention, the respective ends of the cup abutment elements are guided in their longitudinal movement by the interior curvature of the dispenser body, their longitudinal movement occurring during adjustment of their extents of radial projection. In another form, means including guideways on the dispenser body may be provided for slidably engaging one or both ends of each abutment element to retain the longitudinal alignment thereof, and to absorb its length of distortion upon flexure in longitudinal direction.

In a preferred embodiment of an elevator type dispenser in accordance with the invention, a channel ring is attached to and surrounds the dispenser throat, and a plurality of grip springs are attached to the exterior of the dispenser essentially below the channel ring. The channel ring effectively shields the exteriorly projecting portions of the cup abutment elements by causing them to be located at an elevated position with respect to the counter top within which the dispenser is mounted, and by deterring the seepage of spilled liquids and the like from the counter top into the counter top opening through which the dispenser projects. The grip springs provide firm but conveniently removable mounting of the dispenser within the counter top opening.

These and other objects, features and advantages of the invention will become more fully apparent from the following detailed description thereof, wherein reference will be made to the accompanying drawings, in which:

FIGURE 1 is an elevational view of the invention as embodied in a gravity feed type dispenser and showing a cup therein in position to be dispensed therefrom;

FIGURE 2 is a longitudinal sectional view taken along the line 2—2 of FIGURE 1;

FIGURE 3 is a perspective view of the invention as embodied in an elevator type dispenser and showing a cup therein in position to be dispensed;

FIGURE 4 is a longitudinal sectional view taken along the line 4—4 of FIGURE 3;

FIGURE 5 is a transverse sectional view as seen from line 5—5 in FIGURE 2;

FIGURE 6 is a perspective view showing a cup abutment element of the present invention in greater detail;

FIGURE 7 is a fragmentary longitudinal sectional view similar to FIGURE 2, but illustrating a modified form of the invention;

FIGURE 8 is a longitudinal sectional view similar to FIGURE 2, but illustrating still another modification of the invention;

FIGURE 9 is a top plan view of an elevator type dis-

penser which embodies the invention in another modified form, the view showing certain portions broken away;

FIGURE 10 is a longitudinal sectional view taken along lines 10—10 of FIGURE 9; and

FIGURE 11 is a longitudinal sectional view showing still another modified form of the invention.

Referring now to the drawings, and more particularly to FIGURES 1 through 4 thereof, there is shown a pull type dispenser generally indicated by the numeral 10 and having a hollow cylindrical body 11 which may be conveniently made of metal. The body 11 includes a portion generally referred to in the trade as the throat portion 11a. One or more suitable brackets 12 (FIGURE 5) are attached to body 11 so as to enable the dispenser to be attached to a wall or other surface in a well-known manner.

A stack of telescopically nested paper cups 14 is supported in the body of the dispenser to be dispensed one at a time therefrom by stripping off the cup at the end of the stack which will normally protrude from the throat portion 11a. In gravity feed type dispensers as shown by FIGURES 1, 2, and 11, the stack of cups 14 will be biased by gravity into engagement with the cup retention and stripping means indicated by reference numeral 15, whereas in elevator type dispensers are shown by FIGURES 3, 4 and 10, the stack of cups 14 is biased upwardly by means such as spring 13 against the cup retention and stripping means 15. In either case, the biasing pressure due to either the weight of the stack 14 or the tension of spring 13 is only so much as will always urge the cups successively into contact engagement with, but not beyond, the cup retention and stripping means 15 as each preceding cup 14a in the stack is stripped from the dispenser in the manner which is well understood in the art.

The throat portion 11a of the body is provided with a plurality of cup abutment elements 16, four such elements being preferred as indicated by the drawings, which elements form that part of the cup retention and stripping means 15 with which each of the cups 14a will successively be in actual contact engagement when in position to be stripped from the dispenser 10. The elements 16 are disposed annularly and in spaced apart relation to each other about the interior of the throat portion 11a so as to project in radial direction inwardly of body 11. They are elongated, arcuate-shaped elements, in the present embodiment being resilient and resembling semi-elliptical leaf springs, and are mounted in a manner as will be described so that their arcuate shape extends in longitudinal direction (the direction in which the cups will feed towards the throat) within body 11. The elements 16 are formed of spring steel, or resilient molded synthetic material such as nylon, or similar material.

Referring particularly to FIGURE 6, it will be seen that at the concave side of each arcuate shaped abutment element 16 there is attached a perpendicularly projecting stud 17 which in the preferred embodiment is threaded as at 17a. The studs 17 may be at the midpoint of the arcuate curve of element 16, as in FIGURES 2, 6, 10 and 11, or displaced toward the end thereof adjacent the throat 11a, as in FIGURES 7 and 8. In the latter case the arcuate shape is irregular, as shown, which shape lessens the bias pressure on cup 14a at the interior end of element 16. It will also be noted that one or both of the ends of elements 16 are bent, as at 16a, 16b, in a direction opposite to that of projection of the stud 17, so as to provide integrally formed slide surfaces of the element for a purpose as will be described. Moreover, one or both ends of the element 16 are notched to provide guide elements at their midpoints, as at 18, the notch or notches each extending a distance in longitudinal direction which is generally equal to that of the curved portions 16a, 16b.

Each of the elements 16 are mounted within the throat portion 11a of the body by threaded engagement of a binding screw or nut 19 with the threaded stud 17. In the illustrated embodiments of FIGURES 1—5, 10 and 11,

the studs 17 at all phases of radial adjustment will normally project completely through throat portion apertures or holes 20 which are enlarged for freely slidable passage of the studs. Of course, equivalent variations of the manner of mounting will occur to those familiar with the same, which variations might include arrangements wherein the studs 17 may at times project only partially through holes 20.

The nuts 19 may be chamfered, as at 19a, and knurled, as at 19b, for ease in turning when making the adjustments for the dispenser to accommodate cups of a different size as will be later more fully explained. Moreover, for proper seating so as to avoid looseness and undesirable lateral movement, the nuts 19 engage and reside within the detent aperture 20a which are formed in the throat portion 11a, projecting inwardly and disposed concentrically with respect to each hole 20, as shown in the drawings. When operatively positioned, the slide surfaces 16a, 16b of the abutment elements 16 are held in contact engagement against the inner wall 11b of the body 11 by the engagement of the respective nuts 19 with the studs 17. The abutment elements are outwardly yieldable in radial direction with respect to the body 11, such yieldability in the illustrated embodiments being provided by the resiliency of the elongated leaf spring elements 16, as indicated in FIGURE 2.

As shown by FIGURES 7 and 8 for example, it will be understood that nuts 19 may be in the form of equivalent binding screws, indicated by reference numeral 21, which have a sleeve portion 21a which projects through, and is slidable within holes 20, the sleeve portion 21a being internally threaded for engagement with stud 17. Such construction may be preferred where appreciable exterior projection of the nut 19 is undesirable, or where tampering with the throat diameter adjustment is to be made inconvenient.

Thus the principal features of the connection means for mounting the cup abutment elements 16 in proper general relationship and association with the body 11 have been disclosed. It will be observed that each cup abutment element 16 may be adjusted with respect to the extent of its projection in radial direction towards the interior of the body 11 by twisting of the associated binding screw or nut 19 so as to thread more or less of the stud 17 thereinto. The amount of such adjustment will be determined by the diameter of the cup to be dispensed, including the extent of projection of the bead 14b on the cup, the distance between oppositely disposed abutment elements 16 being substantially equal to the cup diameter but in any event slightly less than the cup bead diameter.

To positively insure continued longitudinal alignment of each abutment element 16 within body 11, such as times when the elements might be jarred by rough handling or when the stack of cups 14 is being loaded into the dispenser 10, positive guide means, generally indicated by reference numeral 22, may be provided between each abutment element 16 and the body 11. In a preferred embodiment of such positive guide means as shown by FIGURES 1 and 2, a single, elongated and longitudinally disposed guide bead 23 is attached to project inwardly from the interior surface 11b of the body at each end of the abutment element to be guided. As illustrated, the guide bead 23 is conveniently formed by a depression recess of the body 11. It has width corresponding to the width of the notch 18 at the end of the element 16 which slidably engages the same, and length at least equal to the anticipated maximum distance of longitudinal distortion of the semi-elliptical element 16 when adjusted to accommodate any cup size within the extremes of the range thereof and when flexing upon any cup being stripped from the dispenser. Where positive guide means are included, it is preferable that both ends 16a, 16b of each abutment element be guided, and it will be apparent that both ends may be guided in the manner thus far described, and as shown in FIGURES 1 and 2, by inclusion of the

centrally located longitudinal bead 23 within body 11 at both top and bottom of hole 20. However, the extreme periphery of the throat portion 11a of the body is preferably formed by an inwardly lapped edge 11c of the body metal, as shown in FIGURE 4, and it has been found that positive guidance of the end 16a nearest the throat periphery may be conveniently effected by notching the inward lapped portion 11c of the body metal, as shown in FIGURE 4 at 22a, to effectively provide a guide portion thereof between the side edges of which the end of the abutment element 16 will always be contained. Such would, of course, eliminate necessity for a notch 18 at the end 16a of the abutment element.

Referring now to FIGURES 7 and 8, it is seen that where such positive guide means are employed, the guide means 22 may have other forms which are more or less convenient, and either of which would also eliminate the necessity for forming a notch 18 at either end of the abutment element. In FIGURE 7 it is seen that a plurality of guide beads 22b may be disposed in pairs straddling each end of the abutment element 16. In FIGURE 8, a generally rectangular shaped recess 22c of the body 11, having length and width appropriately to slidably accommodate the abutment element 16 throughout the range of its longitudinal distortion as aforesaid, is longitudinally disposed across each of the holes 20. In this embodiment, the binding screw or nut 19 may, or may not (as shown), reside within a depressed recess such as is shown at 20a in other figures of the drawings. In addition, one or both ends 16a, 16b of the abutment element may be folded under, as at 16c and 16d, rather than outwardly as shown in the other embodiments, to provide a smooth guide surface.

However, it has been found that in instances where the throat diameter 11a of the dispenser 10 is small such as would accommodate drinking cups of conventional size for example, or where the spring tension in contact engagement of the cup abutment element 16 is sufficiently great, the arc of curvature of the dispenser body 11 is sufficiently acute to retain the ends 16a, 16b of the cup abutment elements 16 in their referred to longitudinal disposition. Referring to FIGURE 11, a gravity type dispenser 10 is shown wherein the periphery of the throat portion 11a of the dispenser body 11 includes an inwardly lapped edge 11c of the body metal. The respective ends 16a and 16b of the cup abutment elements 16 are bent upwardly as shown, and are in sliding contact with the interior surface of the dispenser body. The cup abutment elements 16 themselves are arcuately shaped in longitudinal direction but, in the embodiment shown, they are flat in the direction of their widths so that the extreme corner portions (not numbered) at the respective ends of these elements are in contact with the dispenser body. Thus, the respective corner portions of end 16a of each element 16 rest on the interior surface provided by inwardly lapped edge 11c of the body, and the respective corner portions of end 16b of each element 16 rest on the interior surface 11b of the dispenser body, as shown. It has been found that the referred to longitudinal movement of the cup abutment elements, as occurs when the cup retention and stripping means 15 is adjusted to accommodate different sized cups, will be adequately guided by the fairly acute arc as is provided by the curvature of the dispenser body.

It will now be apparent that, in any of the embodiments, the stock of cups 14 will be retained within the dispenser 10 by the contact engagement of the cup retention and stripping means 15, and that a cup 14a may be withdrawn from the dispenser for use by manually stripping the cup therefrom, as by grasping the cup bottom portion which protrudes from the throat portion 11a and pulling thereon.

The cup abutment elements 16 will retain their respective positions during the cup dispensing action, so that each cup bead 14b in turn will distort slightly at respec-

tive locations adjacent each of the cup retention and stripping means and will thereby pass the same as the cup is dispensed. Although each is flexible for throat size adjustment as aforesaid, the relative rigidity of each of the cup abutment elements 16 is effective to hold back the remaining cups in the stack 14 so that multiple cup dispensing is prevented. Of course, the intrinsic resiliency of the cup itself will cause its return to normal, annular shape after it has been removed from the dispenser. Thus, the cup retention and stripping means as are provided by the present invention are relatively fixed during the dispensing action, yet are adapted for convenient adjustment so that the dispenser 10 will accommodate and dispense cups of various sizes.

Adjustment of the dispenser throat size is accomplished by simply rotating the binding screws or nuts 19, each a substantially equal amount, in direction either to draw the studs 17 radially outward which would effect a widening of the diametrical distance between the opposed abutment elements 16 or to move the studs 17 inwardly which would effect a narrowing of the same diametrical distance. In the latter instance, each of the abutment elements 16 will "bow" in response to its semi-elliptical shape and its resiliency to retain its ends 16a, 16b in slidable contact with body 11. It should be noted that the studs 17 should be fabricated having appropriate length for the purpose. As the throat size is altered, the nuts 16a, 16b of each abutment element will slide longitudinally, guided by their respective guide means 22 or 23 where included, a distance commensurate with the radial distance of radial movement of the stud 17, and each of the abutment elements 16 will flex and distort a short distance in longitudinal direction.

It will also be noted that each of the cup retention and stripping means 15 is easily and completely removable for thorough cleaning, as is required for sanitary reasons. Removal of each is effected simply by threading the nut 19 out of engagement with its stud 17, whereupon the abutment element 16, stud 17, and nut 19 may each be thoroughly cleaned of any dirt or foodstuff deposits and, with equal convenience, the body 11 of the dispenser may be thoroughly cleaned. Thus, normal maintenance of dispensers of the type is greatly facilitated by the present invention.

Referring now to the gravity feed type dispenser shown by FIGURES 1, 2 and 11, it will be understood that the stack of cups 14 are maintained in contact engagement with the cup retention and stripping means 15 by the force of gravity due to the weight of the stack. In the elevator type dispenser, as shown by FIGURES 3, 4 and 10, the stack of cups is urged into contact with the cup retention and stripping means 15 by the bias pressure of a compression spring 13 and its associated cup supporting platform 24.

Either type dispenser is vertically mounted, the throat opening facing downwardly in the case of a gravity feed type dispenser, or upwardly in the case of the elevator type. Gravity type dispensers are usually mounted on walls, or on the vertical sides of overhead cabinets, etc., and for such mounting a support 12 (FIGURES 1 and 5) is attached to the dispenser body exterior. The support 12 engages a channel element (not shown) which is attached to the wall or cabinet. The longitudinal side edges of both the wall mounted channel element and the support 12 may be correspondingly tapered inwardly, towards the throat end of the dispenser, to conveniently hold their engagement. It will be understood that two such supports 12 and wall mounted channels may be provided, each of relatively short length and disposed at the respective upper and lower ends of the dispenser.

Elevator type dispensers are usually installed having their throat openings generally at the level of the surface of service counters and therefore usually incorporate means, such as the exterior, annular channel ring 25, which rests on the surface of the counter top 27 as illustrated in FIGURES 4 and 10, for example.

Referring to FIGURE 4, it is seen that the annular channel ring 25 provides the support for the dispenser on the upper surface of the counter top 27, and that there is, further, an annular flange 23 which is attached to the dispenser body 11 so as to provide an annular surface 23a, immediately below the outwardly turned lower edge at 2 of the channel ring 25. The annular surface 23a generally corresponds in diameter to that of the counter top opening 27a in which the dispenser rests, and assures centering of the dispenser 10 within the counter top opening 27a. The surface 23a projects radially to an extent which is greater than the extent of radial projection of nuts 19 exterior of the dispenser body so that annular flange 23 also spaces the nuts 19 from the edge of the counter top opening 27a, thereby to reduce to some extent the possibility for spilled liquids from the counter top to either enter the dispenser interior through the throat apertures 20 or deposit on the nuts 19, studs 17, etc.

However, an improved form of mounting for the elevator type dispenser is illustrated in FIGURES 9 and 10. Referring to these figures, it is seen that the exterior, annular channel ring 25 is elongated in longitudinal direction so that its outwardly turned lower edge 25a is at a relative elevation which is below that of the studs 17 and nuts 19, thereby effectively elevating the latter above the level of the counter top, so as to eliminate the possibility for spilled liquids from the counter to deposit on these latter elements, or to enter the interior of the dispenser through throat apertures 20. Moreover, the outer diameter of channel ring 25 is considerably enlarged with respect to the diameter of counter top opening 27a so as to minimize the extent to which spilled liquids will flow along the counter top under the channel ring 25 and towards counter top opening 27a.

For firmly seating and centering the dispenser within the counter top opening 27a, four externally located leaf springs 29 are attached, at only one of their ends 29a, to the dispenser body 11, their other ends 29b being outwardly turned as shown and in slidable engagement with the dispenser body 11. Each of the arcuately shaped leaf springs 29 is normally bowed to an extent as is shown by the dot-dash lines in FIGURE 10, so that they will flex to their illustrated solid line positions in flexure engagement with the edge of the counter top opening 27a when the dispenser is mounted therein. Thus, the leaf springs 29 serve to both center the dispenser within the counter top opening 27a and firmly support the same therein so as to prevent rotational or other movement thereof during use of the dispenser. The spring tension of leaf springs 29 is such that a dispenser may be easily removed by a firm upward pull on the dispenser, and it will be noted that the size of channel ring 25 is such that it may be easily grasped by the hand for the purpose. The channel ring 25 and dispenser body 11 are preferably made of metal so that a spot welded attachment 25b may be effected therebetween at the inwardly turned lapping edge 25c of the channel ring, the latter providing an inwardly lapped edge of the dispenser throat portion for purposes as previously described in connection with other embodiments.

Thus, a universal, pull type receptacle dispenser has been described, together with certain modified forms thereof, which accomplishes all of the objects of the invention.

What is claimed is:

1. A pull-type dispenser for holding receptacles or the like and for dispensing the receptacles one at a time comprising a hollow cylindrical body having a throat portion at one end thereof through which said receptacles are normally to be dispensed, a plurality of annularly spaced apart and radially inward projecting receptacle abutment elements within said throat portion, each said abutment element extending in longitudinal direction and including a pair of opposite free ends in longitudinally slidable en-

gagement with the interior surface of said throat portion, each said abutment element being resilient and having arcuate shape between its said ends, a stud projecting radially outward from a central location between said opposite ends of each said abutment element, aperture means in said cylindrical body within said throat portion and associated with each said stud, each stud projecting and being radially slidable through its said associated aperture means, and nut means exterior of said throat portion and engaging each said stud, each said stud and its associated nut means biasing said opposite ends of the abutment element from which the stud projects into engagement with said throat portion interior, and each said nut means being adjustable on its said associated stud to vary the extent of said radially inward projection of the abutment element from which the stud projects.

2. A pull-type dispenser according to claim 1 wherein said throat portion includes an inwardly lapped edge of said one end of the body, one of said ends of each of said abutment elements being in said slidable engagement with the throat portion interior surface provided by said inwardly lapped end edge of the body.

3. A pull-type dispenser according to claim 1 wherein said throat portion includes guide means for guiding each said abutment element in its said longitudinally slidable movement, said guide means in respect of each said abutment element comprising at least one longitudinally extending and radially inward projecting detent of said throat portion, at least one of said opposite free ends of each respective abutment element being in slidable engagement with its said associated throat portion detent.

4. A pull-type dispenser according to claim 3 wherein each said guide means further comprises a notched portion at said one end of each abutment element, said notched portions of said abutment element ends being in slidable engagement with said throat portion detents, respectively.

5. A pull-type dispenser according to claim 1 wherein said throat portion includes guide means for guiding each said abutment element in its said longitudinally slidable movement, said guide means in respect of each said abutment element comprising a longitudinally extending and outwardly projecting detent of said throat portion, each said detent having length greater than the projected length of its said associated abutment element and width substantially equal to the respective widths of said abutment element opposite free ends, both of said abutment element opposite free ends being in slidable engagement with said associated throat portion detent.

6. A pull-type dispenser according to claim 1 wherein said throat portion includes guide means for guiding each said abutment element in its said longitudinally slidable movement, said guide means comprising an inwardly lapped edge of said one end of the body, said lapped end edge including a plurality of longitudinally extending notched portions, each said notched portion being associated with one of said abutment elements, at least one of said opposite free ends of each of said abutment elements being in slidable engagement with the respective of said associated notched portions.

7. A pull-type dispenser for holding receptacles or the like and for dispensing the receptacles one at a time comprising a hollow cylindrical body having a throat portion through which said receptacles are normally to be dispensed, a plurality of annularly spaced apart and radially inward projecting receptacle abutment elements within said throat portion, each abutment element having generally semielliptical and elongated shape and resilient for flexible movement in longitudinal direction with respect to said throat portion and further having a threaded stud projecting radially outward from a central location therealong, aperture means of said throat portion associated with each said stud, each stud projecting and radially slidable through its said associated aperture means, a nut threadedly engaging each said stud at the exterior of said

throat portion, guide means of said throat portion associated with each said abutment element for guiding said flexible movement thereof, said guide means disposed at each end of each abutment element, both ends of each abutment element slidably engaging said guide means, said guide means comprising longitudinally extending detents of said throat portion associated respectively with one end of each abutment element, and an inwardly lapped end edge of said throat portion having longitudinally extending notched portions associated respectively with the other end of each abutment element, said other end of each abutment element slidable within the notch provided by its associated notched portion of said lapped end edge of the throat portion.

8. A pull-type dispenser for holding receptacles or the like and for dispensing the receptacles one at a time comprising a hollow cylindrical body having a throat portion through which said receptacles are normally to be dispensed, a plurality of annularly spaced apart and radially inward projecting receptacle abutment elements within said throat portion, each abutment element having generally semielliptical and elongated shape and resilient for flexible movement in longitudinal direction with respect to said throat portion and further having a threaded stud projecting radially outward from a central location therealong, aperture means of said throat portion associated with each said stud, each stud projecting and radially slidable through its said associated aperture means, a nut threadedly engaging each said stud at the exterior of said throat portion, guide means of said throat portion associated with each said abutment element for guiding said flexible movement thereof, said guide means disposed at each end of each abutment element, both ends of each abutment element slidably engaging said guide means, and spring bias means arranged and constructed within said hollow body for biasing said stack of receptacles in direction to be dispensed through said throat portion.

9. In a pull-type dispenser for holding receptacles or the like and for dispensing the receptacles one at a time and having a hollow cylindrical body including a throat portion at one end thereof through which said receptacles are normally to be dispensed, the improvement comprising a plurality of annularly spaced apart and radially inward projecting receptacle retention and stripping means within said throat portion, said retention and stripping means including adjustment means projecting exteriorly of said body for adjusting the extent of said radially inward projection of the retention and stripping means, an exterior channel ring attached to and surrounding said throat portion at said one end of the body, said channel ring having a lower edge and a diameter at said lower edge which is greater than an imaginary diameter determined by the extent of said exterior projection of said adjusting means, and an annular flange attached to and surrounding said throat portion at said one end of the body, said annular flange having an exposed annular surface which is close to, but longitudinally displaced from said lower edge of the channel ring, said annular surface having diameter which is less than said diameter of the channel ring and greater than said imaginary diameter.

10. In a pull-type dispenser for holding receptacles or the like and for dispensing the receptacles one at a time and having a hollow cylindrical body including a throat portion at one end thereof through which said receptacles are normally to be dispensed, the improvement comprising a plurality of annularly spaced apart and radially inward projecting receptacle retention and stripping means within said throat portion, said retention and stripping means including adjustment means projecting exteriorly of said body for adjusting the extent of said radially inward projection of the retention and stripping means, an exterior channel ring attached to and surrounding said throat portion at said one end of the body, said channel ring having a lower edge and a diameter at said lower edge which is greater than an imaginary diameter determined

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by the extent of said exterior projection of said adjustment means, and a plurality of annularly spaced apart and longitudinally extending leaf springs exterior of said throat portion, each of said leaf springs being of resilient material and having arcuate shape and further having a pair of opposite ends one of which is attached to said body and the other of which is substantially in slidable engagement with said body, the respective of substantially the middle-length locations between said opposite ends of said leaf springs being exposed and being located close to, but longitudinally spaced from said lower edge of the channel ring.

11. A pull-type dispenser according to claim 10 wherein said channel ring has length which is greater than the distance between said one end of the body and the location of said adjustment means away from said one end of the body, whereby said projecting adjustment means are disposed within said diameter and length of said channel ring, and wherein said slidable end of each said leaf spring is also disposed within said diameter and length of said channel ring.

12. A pull-type dispenser according to claim 1, said dispenser further comprising an exterior channel ring attached to and surrounding said throat portion at said one end of the body, said channel ring having a lower edge and a diameter at said lower edge which is greater than an imaginary diameter determined by the extent of exterior projection of said studs and nut means and length which is greater than the distance between said one end of the body and the location of said studs and nut means away from said one end of the body, whereby the exterior projections of all of said studs and said nut means are disposed within said diameter and length of said channel ring.

13. In a pull-type dispenser for holding receptacles or the like and for dispensing the receptacles one at a time and having a hollow cylindrical body including a throat

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portion at one end thereof through which said receptacles are normally to be dispensed, the improvement comprising a plurality of annularly spaced apart and radially inward projecting receptacle retention and stripping means within said throat portion, said retention and stripping means including adjustment means projecting exteriorly of said body for adjusting the extent of said radially inward projection of the retention and stripping means, and an exterior channel ring attached to and surrounding said throat portion at said one end of the body, said channel ring having a lower edge and a diameter at said lower edge which is greater than an imaginary diameter determined by the extent of said exterior projection of said adjustment means and length which is greater than the distance between said one end of the body and the location of said adjustment means away from said one end of the body, whereby said projecting adjustment means are disposed within said diameter and length of said channel ring, said channel ring including an inwardly turned lapping edge which is folded over said one end of the body to provide at least a portion of the interior surface of said throat portion, said retention and stripping means being in slidable engagement with said lapping edge of the channel ring.

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