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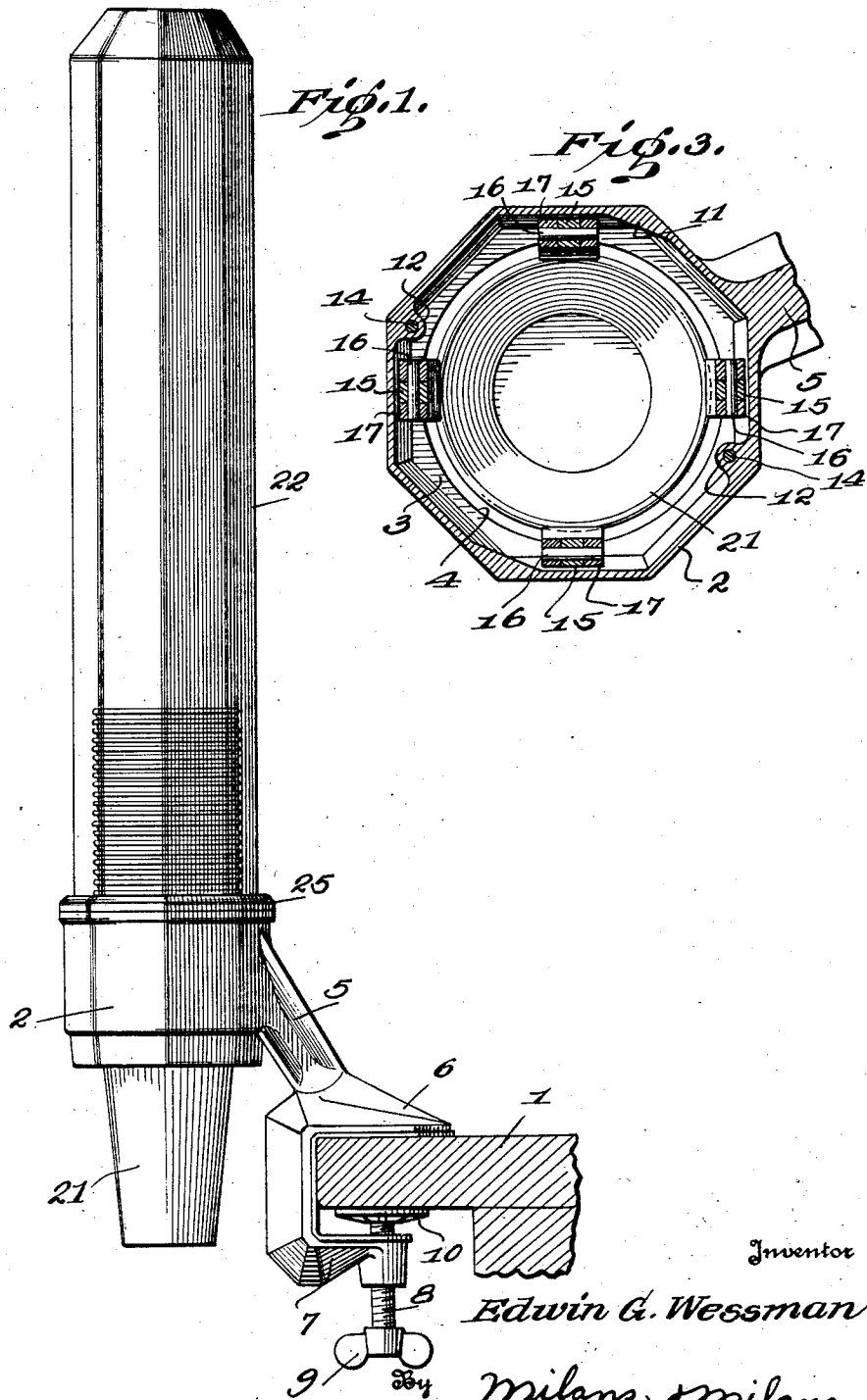
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1,940,067

DISPENSER

Filed June 13, 1930

3 Sheets-Sheet 1



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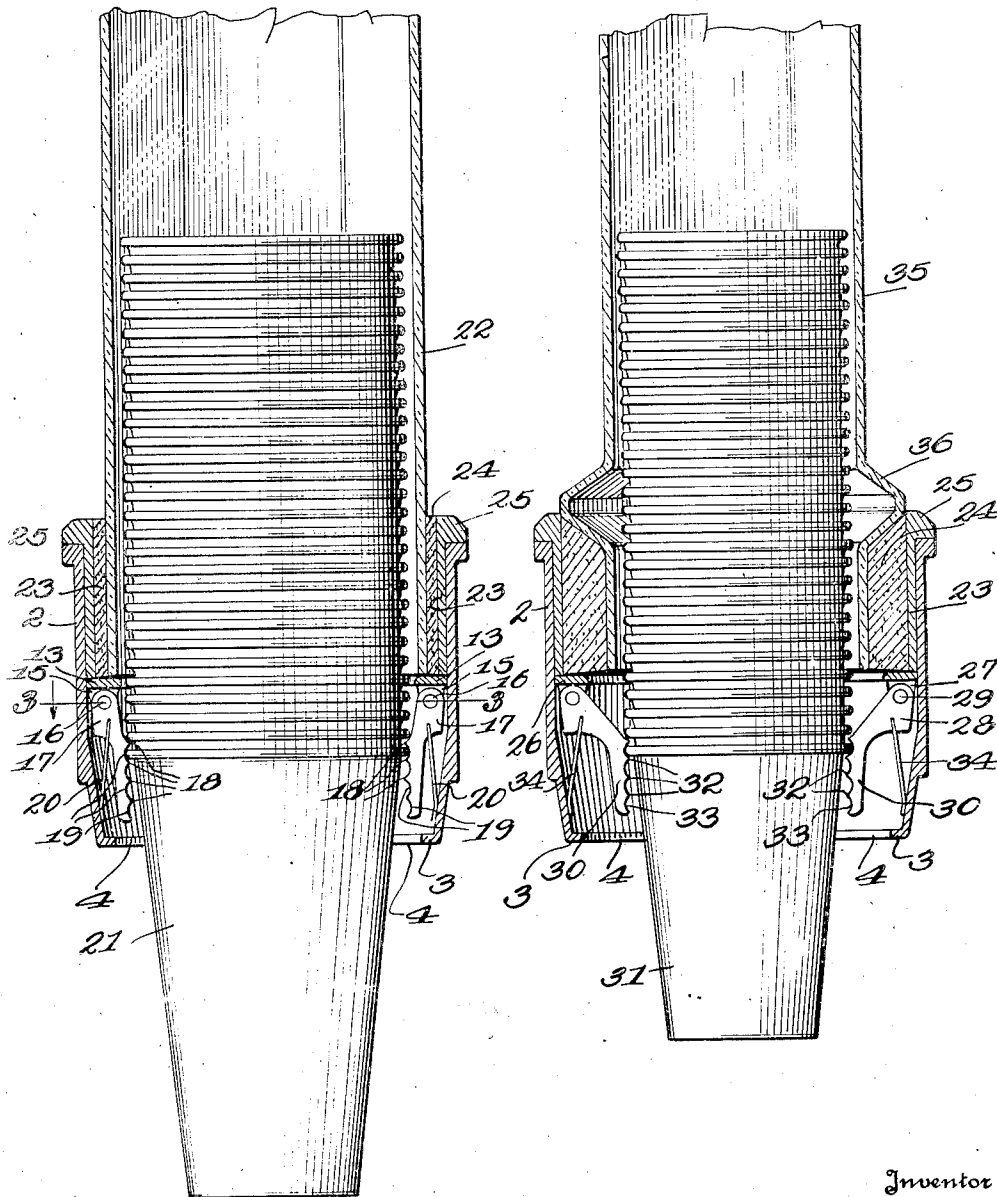
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Fig. 2.

Fig. 7.



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Fig. 4.

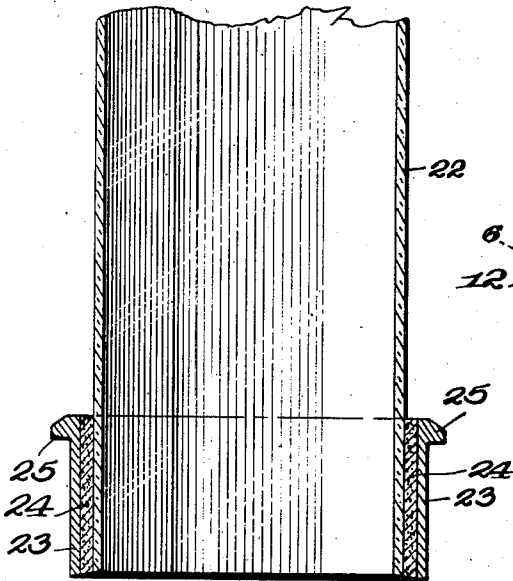


Fig. 5.

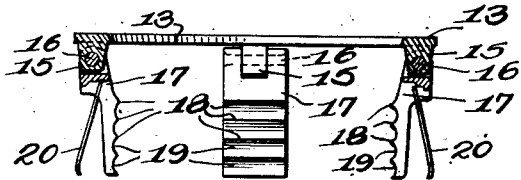
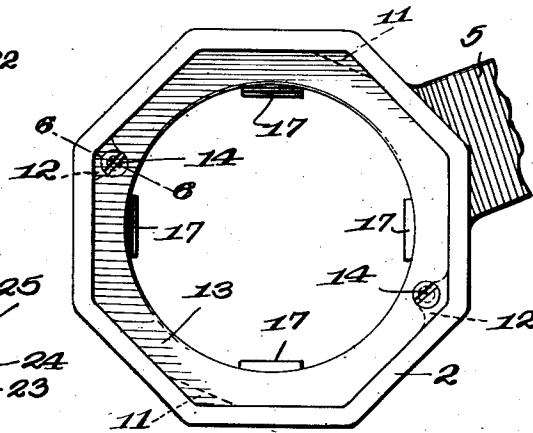
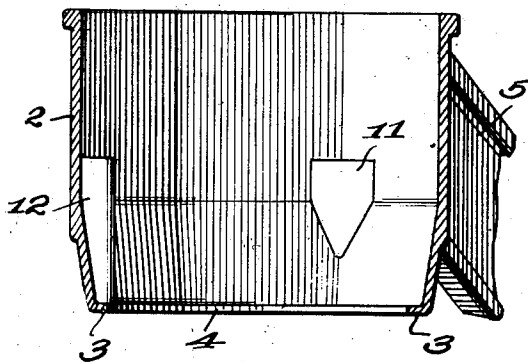
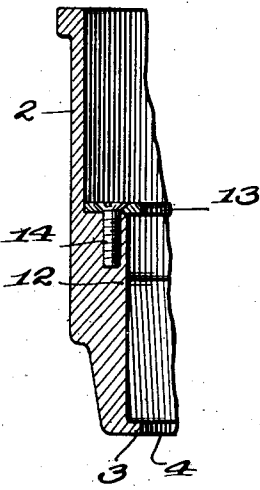


Fig. 6.



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UNITED STATES PATENT OFFICE

1,940,067

DISPENSER

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Application June 13, 1930. Serial No. 460,899

2 Claims. (Cl. 312—43)

My invention relates to new and useful improvements in dispensing apparatus and more particularly to an apparatus for dispensing receptacles such as paper cups or the like and the principal object of the invention resides in the provision of means whereby a base or support of a single size may be used for dispensing receptacles of different sizes and for supporting domes or housings of varying sizes, the receptacles being supported in nested stack formation and positioned so that the terminal receptacle may be withdrawn when grasped by the hand and pulled away from the stack for use.

Another object of the invention consists in the provision of a removable ring adapted to be positioned and supported in the base or support, said ring carrying spring pressed pawls which support the stack of receptacles and allow ready removal of the terminal receptacle.

A further object of the invention resides in the provision of a dome or housing for enclosing and protecting the stack of receptacles, said dome or housing having a ring member secured at its lower end and adapted to snugly fit within the base or support, the ring-like member being secured to the dome or housing in such a manner that domes or housings of varying diameters may be used therewith.

With the above and other objects in view, which will appear as the description proceeds, my invention consists in the novel details of construction and arrangement of parts described in the following specification and illustrated in the accompanying drawings, and while I have illustrated and described the preferred embodiments of the invention, as they now appear to me, it will be understood that such changes may be made as will fall within the scope of the appended claims.

In the drawings:—

Fig. 1 is a side elevation.

Fig. 2 is a fragmental vertical section through the dome and base or support with parts shown in elevation.

Fig. 3 is a horizontal section on the line 3—3 of Fig. 2 looking in the direction of the arrows.

Fig. 4 is an assembly view showing the dome or housing removed from the base and the ring carrying the supporting pawls removed from the base.

Fig. 5 is a top plan of the base.

Fig. 6 is a fragmental detail showing a section on the line 6—6 of Fig. 5; and

Fig. 7 is a view similar to Fig. 2 showing the dispenser adapted for supporting and dispensing

receptacles of a smaller size than those shown in Fig. 2.

In dispensing receptacles such as paper cups or the like it has previously been the custom to provide different dispensers for dispensing receptacles of different or varying sizes and this has necessarily involved considerable expense in maintaining a stock to provide the customer with that particular dispenser for use with the size cups that he may desire. In carrying out my invention I provide means whereby a base or supporting member of uniform size may be used for dispensing receptacles of any size and to accomplish this I provide what may be termed a removable "adapter" ring which is to be positioned within the base or support, the adapter ring carrying a plurality of pawls which engage the terminal receptacle for supporting the entire stack but allowing ready removal of the terminal receptacle. The pawls carried by the adapter ring will be of varying configurations so that they may properly engage receptacles of different diameters and by placing a ring carrying the desired shaped pawls within the base or support, as previously stated, different sized receptacles may be dispensed. In Fig. 2 of the drawings I have illustrated the adapter ring as provided with pawls of a shape to support and dispense receptacles of a relatively large size whereas in Fig. 7 of the drawings I have illustrated the adapter ring as carrying pawls of a shape to project nearer the center of the base or support and to be adapted for supporting and dispensing receptacles of a relatively small size. It will be understood that by changing the shapes or sizes of the pawls that they could readily be adapted for supporting receptacles of any or varying sizes within the limitations of the size of the base or support itself. In Figs. 2 and 7 of the drawings I have also illustrated domes or housings of different sizes to be used in connection with the receptacles adapted to be dispensed. This is necessary so that the proper guide or positioning of the receptacles is provided for.

My improved form of dispenser is adapted to be supported by a counter, table, or the like within convenient reach for use. In the drawings 1 indicates such a support to which the dispenser is clamped as shown. The dispenser includes the base or support 2 of ring-like formation the lower end of which is somewhat restricted as shown more particularly in Figs. 2, 4 and 7 and provided with the inwardly directed flange 3 forming an opening 4 through which the receptacles are removed. Formed as a part of the base or support 2, or secured thereto in any suitable manner, is an

arm 5 having the jaws 6 and 7 adapted to be positioned to extend parallel with opposite faces of the edge of the counter, table or other support, the jaw 7 being provided with a threaded opening in which operates a screw 8 having on its outer end a finger engaging portion 9 and on its inner end a head 10 adapted to engage the face of the support 1 as shown more particularly in Fig. 1.

Interiorly the base or support 2 is provided with the oppositely disposed projections 11 and the oppositely disposed projections 12, the projections 12 being interiorly threaded for a purpose which will be later described. As shown more particularly in Figs. 4 and 6 of the drawings the upper edges of the projections 11 and 12 are on the same horizontal plane and positioned about mid-way the depth or height of the base or support to receive and support the ring 13 which I term an "adapter" ring in view of the fact that such ring, and the pawls carried thereby, to be later described, adapt the base or support for receptacles of varying sizes. The ring 13 is removably secured to the projections 12 by means of the screws 14 or other suitable fastenings. The adapter ring 13 is provided with the circumferentially spaced depending lugs 15, as shown four in number, to which are pivotally connected, by means of the pins 16, the pawls 17 which are formed on their inner vertical faces with the transversely extending vertical spaced projections 18 forming therebetween the curved recesses 19. Secured to each of the pawls 17, and extending rearwardly therefrom, is a leaf spring 20 adapted to engage the inner face of the base or support 2 as shown more particularly in Fig. 2 of the drawings for urging the pawls inwardly to engage the upper edge of a terminal receptacle 21 to support a stack of such receptacles but to allow ready removal of the terminal receptacle when desired. In removing the terminal receptacle the pawls will yield sufficiently to allow the same to be removed and to allow the next receptacle in the stack to be engaged and supported. By providing a plurality of the projections 18 on each pawl I provide for properly engaging the receptacles should they assume a position other than straight or should that receptacle next to the terminal receptacle drop beyond the uppermost projection in the removal of the terminal receptacle.

At 22 I have shown a dome or housing for the stack of receptacles this dome or housing being closed at the top and open at the bottom, the bottom opening communicating with the opening in the ring 13. The dome or housing may be formed of any suitable material but is preferably of glass so that the contents of the stack may be observed therethrough. A band or ring 23 is secured to the lower end of the dome or housing 22, exteriorly thereof, by plaster-of-Paris or other suitable material 24, the ring being thus carried with the dome or housing as a part thereof. The ring 23 is of such a diameter as to snugly fit within the base or support 2, as shown more particularly in Fig. 2 of the drawings, and at its upper end is provided with an outwardly directed horizontal flange 25 adapted to overlie the upper end of the base or support. As shown the dome or housing is of a diameter to receive the receptacles of the desired size and will form a guide therefor to position them in a vertical stack and prevent disarrangement or tilting of the stack. In the construction shown in Figs. 1 to 6 inclusive of the drawings the dome or housing is straight throughout its length.

Whereas in Figs. 1 to 6 inclusive of the draw-

ings I have illustrated my dispenser as adapted for dispensing the relatively larger size of receptacles, in Fig. 7 of the drawings I have illustrated the dispenser adapted for relatively small receptacles. In the illustration of Fig. 7 the parts are all of the same construction as that disclosed in the other figures of the drawings with the exception that the pawls carried by the adapter ring are of a slightly different shape and the dome or housing is also of a slightly different formation and of less diameter. In the illustration of Fig. 7 the adapter ring is shown at 26 and has the depending lugs 27 to which the pawls 28 are pivotally connected by means of the pins 29. The pawls 28 are of slightly different shape than the pawls 17 of the illustration in Figs. 2, 3 and 4 of the drawings in that the vertically extending portions 30 thereof are more greatly offset from the pins 29 so as to project a greater distance towards the center of the base or support 2 to engage the top edges of the receptacles 31 which are of less size and diameter than the receptacles 21. The vertically extending portions 30 of the pawls are provided on their inner faces with the vertically spaced, transversely extending projections 32 forming curved recesses 33 therebetween to receive the edge of the cup as shown. A leaf spring 34 is secured to each of the pawls and positioned so that their lower ends will engage the inner face of the base or support 2 to normally hold the pawls projecting inwardly to engage the receptacles but to allow them to be moved rearwardly as the terminal receptacle is withdrawn and the next receptacle drops into place to be engaged by the pawls. In the illustration of Fig. 7 the dome or housing is illustrated at 35 and is secured to the ring or band 23 by the plaster of Paris 24 a greater amount of plaster of Paris being used than illustrated in Figs. 2 and 4 so as to fill the greater space between the ring or band and the end of the dome or housing. In order to form a neat appearance the dome or housing is formed with the outwardly flared portion 36 which overlies the plaster of Paris filling.

From the above detail description it is thought that the construction of my improved form of dispenser as well as the manner in which it is adapted for dispensing receptacles of varying sizes will be clearly understood. It will be seen that the base or support 2 is of the same size and construction no matter what sized receptacles are to be dispensed and when it is desired to change to support receptacles of a greater or less size it is only necessary to remove the adapter ring, with its associated pawls, and substitute another adapter ring with pawls of different configuration and of a size to properly engage the receptacles. At the same time it is desirable to have a housing or dome of a diameter to enclose that size of receptacles being used and to form a guide therefor. The same size ring or band 23 is used in all instances, to snugly fit the interior diameter of the base or support and the desired size or diameter of dome or housing is secured to the ring or band 23 by means of the plaster of Paris or other suitable material. In Fig. 2 of the drawings the pawls 17, carried by the adapter ring 13, have their vertically extending portions offset only a slight distance from the pivot pins 16 so that a relatively large opening is provided between the inner surfaces of the pawls to engage the upper edges of receptacles of relatively large size and to allow ready removal of the terminal receptacle from the stack. In Fig. 7 of the drawings the vertically extending portions of the pawls

are offset a greater distance from the center of the pivot pins 29 so that a smaller opening is provided between the inner faces of the pawls to engage the upper edges of relatively smaller receptacles to support the stack but to allow ready withdrawal of the terminal receptacle from the stack. The adapter rings are removably secured to the projections 12 by the screws 14 or other suitable fastenings and when it is desired to interchange or replace the rings the screws are removed and the ring is then readily removable from the base or support. When the desired ring is replaced it will be supported by the projections 11 and 12 and the screws 14 will again be inserted to hold the ring against accidental displacement. When it is desired to replenish the receptacles in the stack the dome or housing is removed by withdrawing the ring or band 23 from the base or support 2. As shown the inner end of the dome as well as the inner edge of the ring or band 23 normally rests upon the adapter ring and the outwardly directed flange 25 also acts to support the dome or housing and to limit the inward movement thereof. The terminal receptacle is removed by grasping the same with the hand and pulling downwardly. The series of projections and recesses are formed on the inner faces of the pawls to allow the proper contact with the receptacles as they are withdrawn and to engage the edge of the receptacle if the same is depending straight from the stack or where the same is pulled at an angle, when withdrawing. If arranged at an angle the upper edge of the cup would not extend on a true horizontal position but at an angle and one side of the top edge would be engaged in one of the recesses with the opposite side engaged in a recess on a different vertical plane. The pawls are normally urged towards the center of the base or support by means of the springs connected thereto but these springs will allow yielding of the pawls for withdrawal of the terminal receptacle and to allow the next receptacle to drop into position to be engaged thereby. With a construc-

tion such as I have provided it is only necessary for the manufacturer to provide a base or support of a given or uniform size and adapter rings with pawls of various shapes may be kept in stock to be secured within the base or support to adapt the dispenser for receptacles of different sizes. Rings or bands 23 of uniform size are also provided and may be secured to domes or housings of varying diameters. It will thus be seen that a great saving is provided as it is not necessary to provide bases or supports of different sizes for dispensing receptacles of varying sizes.

Having fully described my invention what I claim as new and desire to secure by Letters Patent is:

1. A dispenser including a base or support, a ring removably mounted within the base or support, and members pivotally connected to the ring, each of said members having a vertically extending depending portion inwardly offset from the pivot point and provided with vertically spaced transversely extending recesses, the offset portions supporting a stack of the articles to be dispensed and permitting withdrawal of the terminal article.

2. A device of the character described formed and adapted for dispensing from a base or support of uniform size articles of varying sizes and diameter including a base or support, a readily removable and interchangeable ring mounted within the base or support, members pivotally connected to the ring and removable therewith, each of said members having a vertically extending depending portion inwardly offset from the pivot point, the degree of offset depending upon the diameter of the articles to be supported and the offset portions supporting a stack of the articles to be dispensed and permitting withdrawal of the terminal article, and means for normally urging the vertically extending portions of the members inwardly towards the vertical center of the base or support.

EDWIN G. WESSMAN.