Feb. 5, 1929. 1,701,035

S. J. GRAHAM

CUP DISPENSER

Filed July 23, 1924 2 Sheets-Sheet 1

Fig. 1.

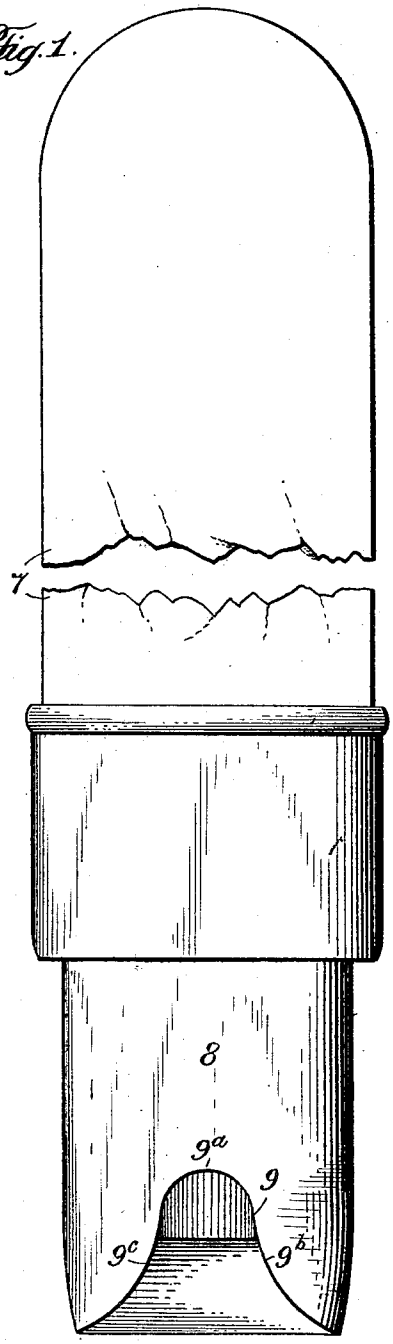
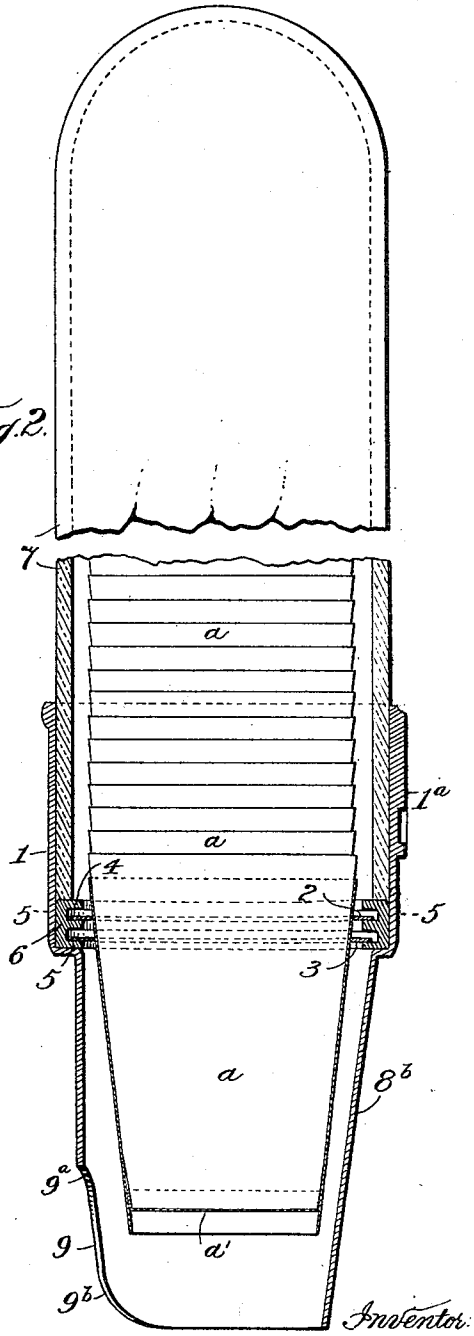


Fig. 2.



Witness:
Jas. E. Hutchinson

Inventor.
By Samuel J. Graham,
Milans & Milans Attorneys.

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Fig. 3.

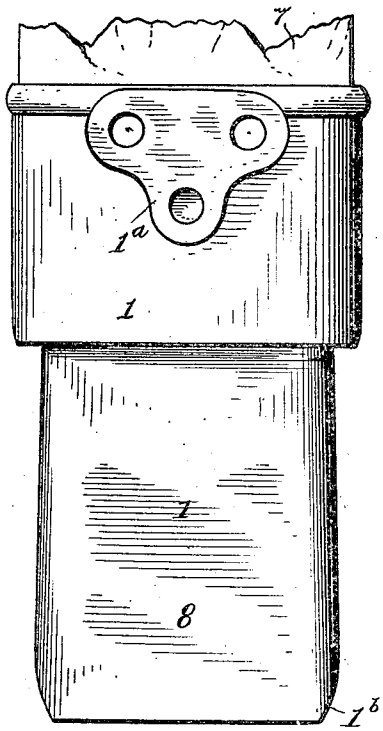


Fig. 8.

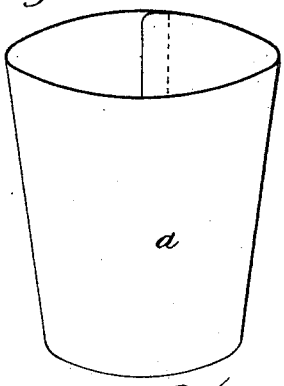


Fig. 9.

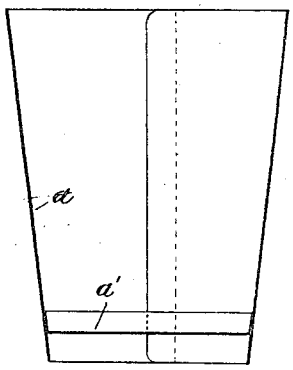


Fig. 4.

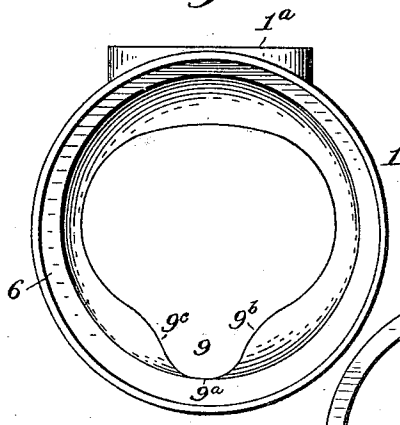


Fig. 5.

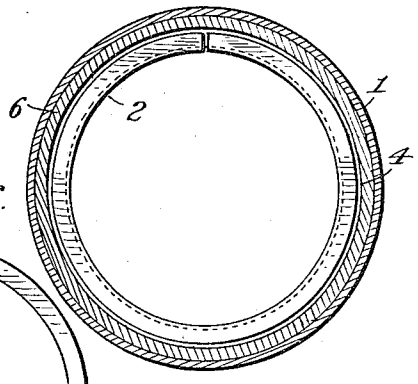


Fig. 6.

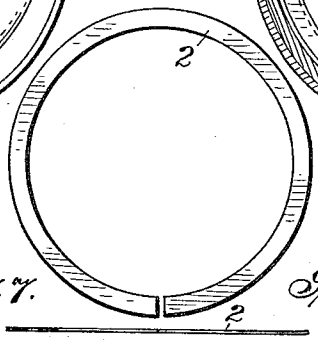


Fig. 7.

Witness:

Jas. E. Hutchinson.

Inventor:

Samuel J. Graham,

By

Milans & Milans

Attorneys.

Patented Feb. 5, 1929. 1,701,035

UNITED STATES PATENT OFFICE.

SAMUEL J. GRAHAM, OF NEW YORK, N. Y., ASSIGNOR TO INDIVIDUAL DRINKING CUP COMPANY, INC., OF EASTON, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

CUP DISPENSER.

Application filed July 23, 1924. Serial No. 727,795.

This invention relates to improvements in devices for dispensing paper drinking cups and the like, and more particularly has to do with cup dispensers of that type comprising a magazine for a stack of nested cups with means for retaining the cups and from which the cups are disengaged by exerting a downward pull upon the lowermost of the stack of cups.

In cup dispensers of the type referred to, the major or a substantial portion of the lowermost cups of the stack project beyond the lower end of the device, and the tendency of the user in withdrawing a cup is to grasp the body of the cup by the hand, and in order to obtain a sufficient hold on the cup body to exert the necessary downward pull to release the cup from the retaining means, the body of the cup is often squeezed to such an extent as to seriously distort or crush the same, which, as will be appreciated, results in a material loss.

The object of the present invention is to provide an improved cup dispenser of the type mentioned that will provide for the more satisfactory withdrawal of the cups while preventing the objectionable grasping of the cup body by the hand above the bottom thereof with the injury to the cup and loss incidental thereto.

A further object of the invention is to provide an improved device of the character referred to that will prevent the user from grasping the body of the cup above the bottom thereof, and will indicate to the user a certain portion of the cup to be gripped by the fingers to withdraw the cups.

Another object of the invention is to provide improved cup retaining means of a simple efficient nature.

The invention, with other objects and advantages thereof, and the particular construction, combination, and arrangement of parts, comprising the same will be understood from the hereinafter contained detail description, when considered in connection with the accompanying drawings, forming part hereof, and illustrating one embodiment of the invention.

In the drawings:

Figure 1 is a front elevation of a cup dispenser constructed in accordance with the present invention.

Fig. 2 is in part a vertical section and part side elevation.

Fig. 3 is a rear elevation of a lower portion of the device.

Fig. 4 is a top plan view with the magazine removed.

Fig. 5 is a horizontal section on the line 5—5 Figure 2.

Fig. 6 is a detail top plan view of one of the split ring members of the cup retaining means.

Fig. 7 is a detail edge view of one of the split ring members of the cup retaining means.

Figs. 8 and 9 are perspective and vertical sectional views respectively of a paper cup construction which the device is capable of dispensing.

The invention comprehends a cup dispenser comprising a magazine or container for a stack of nested cups provided with cup retaining means and having a skirt portion constructed and arranged to extend about the lowermost of the stack of cups held by the retaining means and to allow only a portion of the lowermost cup of the stack to be grasped in disengaging the cups from the retaining means. More particularly the invention contemplates a skirt portion extending about and to the lower end of the lowermost of the stack of cups and provided at the side with an opening or slot extending inwardly from its lower marginal edge, said opening exposing to view a lower side portion of the cup and being of a size and shape to permit the ready insertion of a thumb and finger to grip a lower side edge portion of the cup.

While a specific embodiment of the invention is illustrated in the drawings, it will of course be understood that changes and variations may be made in the particular construction shown, and the invention may be embodied in other forms, as will appeal to those skilled in the art and falling within the scope of the appended claims without departing from the spirit of the invention.

Referring to a detail description of the particular embodiment of the invention illustrated in the drawings, 1 designates a casing, preferably of metal, which forms a support for the magazine or container for the cups and the cup retaining means. The casing 1, which is shown cylindrical in form,

and with a flat attaching part 1^a at the rear thereof, adapted to be secured by screws or equivalent fastening means (not shown), to any suitable support, has an inwardly extending portion 1^b.

The special cup retaining means shown in the drawings comprises a resilient spring like member loosely supported on the casing 1 for free expansion, said member being of an interior diameter slightly less than the greatest diameter of the cups and adapted to engage the side wall of the lowermost cup and support the stack of cups, and to expand sufficiently to permit the withdrawal of the cups singly when a downward pull is exerted upon the lowermost cup. The invention comprehends the use of a single split ring member or a series of such members, two being shown in the present instance designated 2, 3. When more than one split ring member is employed the interior diameter of the respective members, preferably, vary slightly in size, in the construction shown the interior diameter of the upper resilient split ring member 2 being slightly greater than that of the lower split ring member 3. In the particular construction illustrated, the split ring members 2, 3, are mounted in annular recesses or grooves 4, 5, in an annular carrier 6, which fits within the casing 1 and rests upon the inwardly extending flange or portion 1^b thereof. 7 designates the magazine, preferably of glass, detachably seated in the casing 1 with its lower end resting upon the annular carrier member 6.

Referring particularly to Figures 1 and 2 of the drawings, 8 designates the skirt portion constructed and arranged to extend around the lowermost cups and prevent the grasping of the body of the cups above the bottom thereof by the hand and to expose to view and allow only a portion of the lowermost cup in the region of the bottom thereof to be grasped in disengaging the cups from the retaining means. The skirt portion 8, as shown, preferably extends below the lower end of the lowermost cups held by the retaining means, and is provided in its side with an opening or slot 9 extending inwardly thereof from its lower end, said slot exposing to view a lower side portion of the lowermost cup of the stack and being of a size and shape to permit of the ready insertion of a thumb and finger laterally within the skirt portion to grip the lower marginal side edge portion of the lowermost cup projecting therewithin. The opening or slot 9 is shown located at the front of the skirt portion and of tapered form, widest at the lower end of the skirt and bounded by an upper curved edge 9^a and curved side edges 9^b, 9^c.

The skirt portion 8 which is shown slightly tapering at its lower part, may be, and preferably is, as shown, slightly contracted or of a diameter approximately equal to the greatest diameter of the cups so that in the withdrawal of the cups, said contracted mouth or lower portion of the skirt will serve to support the cup by slight frictional engagement therewith should the cup be only partially widthdrawn from the skirt after its disengagement from the cup retaining means. The skirt portion 8 may also, as shown, have its rear wall 8^b inclined inwardly as shown so as to guide or present the cups, after their disengagement from the cup retaining means at a slight forward inclination.

In Figures 8 and 9 of the drawings is illustrated a paper cup *a* of frusto-conical form, the bottom *a'* of the cup is slightly above the lower end thereof, upper marginal portions of the cup being spaced, as shown, when the cups are nested. The cup construction shown is formed of relatively light or thin material, and a notable characteristic of this construction over the conventional form of cups of this type is the absence of the usual reinforcing bead or curled edge portion at the mouth thereof.

It will be noted that by the special construction and arrangement of parts hereinbefore described, a cup dispenser of a simple efficient nature is afforded that provides for a more satisfactory and easy withdrawal of the cups from the retaining means thereof and entirely prevents the objectionable grasping of the cup body above the bottom of the cup and the attendant injury and loss, the construction being such as to expose to view only a certain portion of the lowermost cup and to indicate to the user the proper way to withdraw the cups. Furthermore, the device is capable of dispensing and makes it possible to use a lighter, cheaper cup construction unreinforced by the usual bead or curl at the mouth.

What I claim is:

1. A cup dispenser comprising a magazine adapted to receive a stack of nested cups and having associated therewith cup retaining means including an annular chamber and a resilient split ring member within said chamber, the chamber being of a diameter greater than the normal diameter of the split ring member providing for the expansion of the latter.

2. A cup dispenser comprising a magazine adapted to receive a stack of nested cups and having associated therewith cup retaining means including an annular chamber and a plurality of resilient split ring members, said chamber being of greater diameter than the diameter of the split ring members providing for the free expansion of the latter.

3. A cup dispenser comprising a magazine part, cup retaining means, and a depending tubular skirt portion to extend about the lowermost cup held by the retaining means, said skirt portion being of sufficent length to extend to the region of the bottom of the lower-

most cup and completely surround that part of the lowermost cup extending downwardly from the retaining means except a lower marginal portion thereof in the region of the bottom of the cup to be gripped in disengaging the cup from the cup retaining means.

4. A cup dispenser comprising a magazine adapted to receive a stack of nested cups and having associated therewith cup retaining means comprising a resilient split ring member and means for supporting said split ring member providing for expansion of the same and disengagement of cups therefrom.

5. A cup dispenser comprising a magazine part, cup retaining means providing for the release of a cup therefrom by a downward pull upon a lower portion of the cup, and a skirt portion extending about the lowermost cup held by the retaining means to allow only a portion of the lowermost cup in the region of the bottom thereof to be grasped in disengaging the cup from the cup retaining means, said skirt portion being of sufficient length to extend substantially to the lower end of the lowermost cup held by the cup retaining means and being provided with a slot extending inwardly thereof from its lower marginal edge of a size and shape to permit a lower marginal portion of the lowermost cup held by said cup retaining means to be grasped to disengage the same from the cup retaining means.

6. A cup dispenser comprising a magazine part, cup retaining means providing for the release of a cup therefrom by a downward pull upon a lower portion of the cup, and a skirt portion to extend about the lowermost cup held by the retaining means, said skirt portion being of sufficient length to extend substantially to the lower end of the lowermost cup held by the cup retaining means and being provided with a slot extending inwardly thereof from its lower marginal edge of a size and shape to permit a lower marginal side edge portion of the lowermost cup held by said cup retaining means to be grasped in disengaging the same from the cup retaining means, said slot being of general semi-circular shape.

7. A cup dispenser comprising a magazine part, cup retaining means providing for the release of a cup therefrom by a downward pull upon a lower portion of the cup, and a skirt portion to extend about the lowermost cup held by the retaining means, said skirt portion being of sufficient length to extend substantially to the lower end of the lowermost cup held by the cup retaining means and being provided with a slot extending inwardly thereof from its lower marginal edge of a size and shape to permit a lower marginal side edge portion of the lowermost cup held by the cup retaining means to be grasped to disengage the same from the cup retaining means, the marginal edge of the skirt portion bounding the upper end of the slot being curved.

8. A cup dispenser comprising a magazine part, cup retaining means providing for the release of a cup therefrom by a downward pull upon a lower portion of the cup, and a skirt portion to extend about the lowermost cup held by the retaining means, said skirt portion being of sufficient length to extend substantially to the lower end of the lowermost cup held by the cup retaining means and being provided with a slot extending inwardly thereof from its lower marginal edge of a size and shape to permit a lower marginal side edge portion of the lowermost cup to be grasped to disengage the same from the cup retaining means, said slot being wider at its lower part at the lower end of the skirt portion than at its upper part.

9. A cup dispenser comprising a tubular holder member adapted to have detachably seated within the same a magazine member, and cup retaining means providing for the release of a cup therefrom by a downward pull upon a lower portion of the cup, said holder member being provided with a depending skirt portion to extend about the lowermost cup held by the cup retaining means, said skirt portion being of sufficient length to extend substantially to the lower end of the lowermost cup held by the cup retaining means and being provided with a slot extending inwardly thereof from its lower marginal edge of a size and shape to permit a lower marginal side edge portion of the lowermost cup held by said retaining means to be grasped to disengage the same from the cup retaining means.

In testimony whereof I hereunto affix my signature.

SAMUEL J. GRAHAM.