

A. MOORE.
PAPER CONTAINER.
APPLICATION FILED AUG. 16, 1920.

1,432,718.

Patented Oct. 17, 1922.

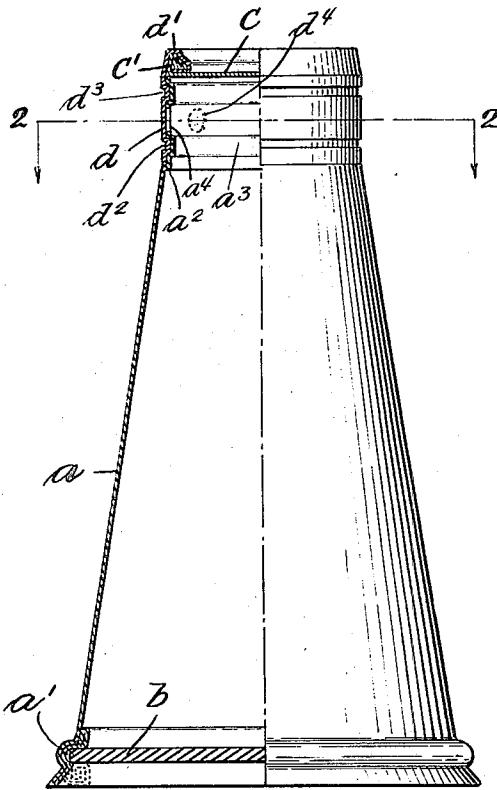


Fig. 1.

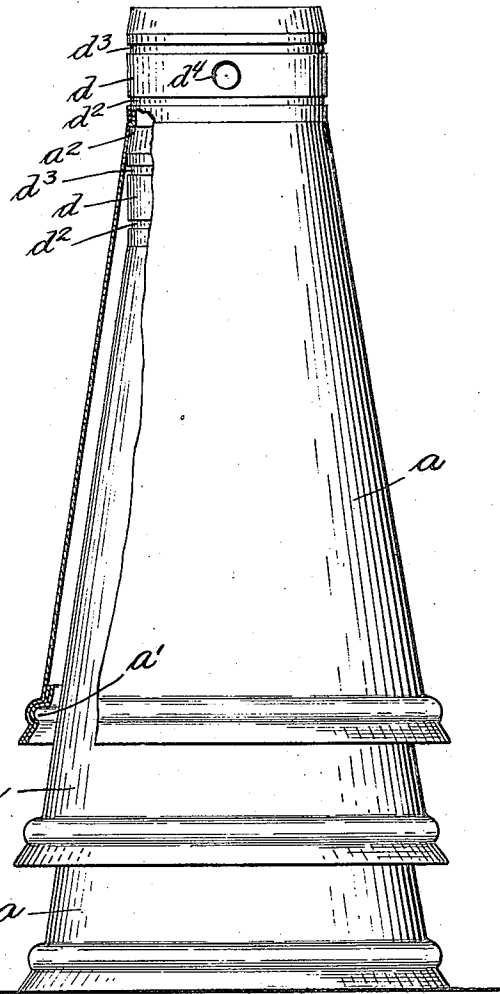


Fig. 3.

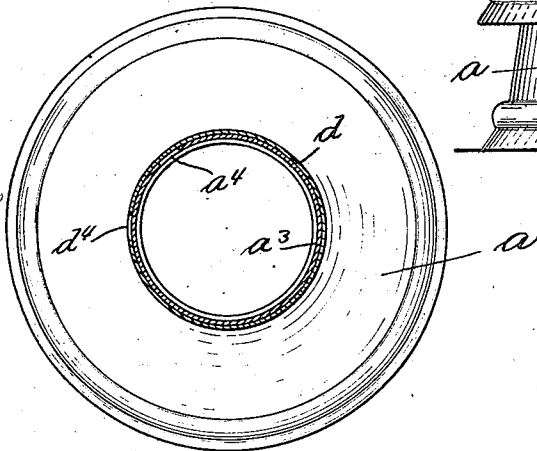


Fig. 2.

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UNITED STATES PATENT OFFICE.

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PAPER CONTAINER.

Application filed August 16, 1920. Serial No. 403,773.

To all whom it may concern:

Be it known that I, ARLINGTON MOORE, a citizen of the United States, and a resident of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Paper Containers, of which the following is a specification.

The present invention relates to paper containers, or containers made of suitable fibrous material, which will usually be coated with a water-proof material, or have such material incorporated therein, so that the container will hold liquids indefinitely.

More specifically the present invention relates to a form of container, which may be provided with a practically permanently connected closure, at its top, which is adapted to be moved rotatably, to bring a port therein into register with a discharge port in the side wall, or neck of the container, so that the liquid therein may be poured from the container, and which, when in a position in which the ports are out of register, will entirely prevent the escape of liquid from the container, past the cap.

In a container of this character, as the cap is preferably permanently connected during the process of manufacture, the container is filled through the bottom and, after filling, the bottom is pressed into place and sealed, and a feature of the present invention is to provide a form of container, having the above described characteristics, which will permit a plurality of containers of like form to be nested, so that a large number may be packed in a comparatively small space.

One of the chief difficulties in nesting articles of this character, especially if they are waterproofed with substances like paraffin or wax, is that they are liable to adhere, so that they are difficult to separate when they are to be used, and are frequently seriously damaged, and in this connection, one of the features of the present invention consists in providing a construction which not only embodies the feature above referred to, but is also constructed so that, when a plurality thereof are nested, they may always be readily separated, and, in case of adhesion at points of contact, the adhesion may be readily broken without damage to the container. To this end the cap of the container may be provided with a reenforcing rib or bead, which is arranged to seat against a shoulder

or ledge in a manner to prevent contact at other portions.

For a more complete understanding of the invention reference is made to the accompanying drawings in which:—

Fig. 1 is partially a side elevation and partially a central vertical section of a paper container, or bottle embodying my invention.

Fig. 2 is a transverse section, at line 2—2, of Fig. 1,

Fig. 3 is a similar view showing the manner in which the receptacles are nested:

According to the present invention the main body *a*, of the container is of conical form and its side-wall end-portion, at its base or large end, is bent inward on itself and moulded to form an annular internal groove *a'*, into which a stiff bottom *b* is adapted to be sprung, and which is sealed by bending in the flange beyond the groove, this operation being performed after the can has been filled.

A ledge, or shoulder *a²* is formed in the side wall of the can at its smaller end, from which point the wall is extended cylindrically, to form a neck *a³*, and a closure for this end of the can is provided, which comprises a disc *c* and a cylindrical tubular flange portion *d*, one end portion of the latter being folded over or convoluted with an edge flange *c'*, formed on the disc, said convoluted portions being pressed together against the disc to form a reenforcing bead or rib *d'*, and a tight connection between two portions of the closure. This construction is more specifically described and claimed in my application, Serial #401,414. The portion *d* is telescoped with the neck of the container, so that its ledge seats against the outer side of the shoulder *a²*, and the inner side of the disc portion *c* of the closure seats against the edge or rim of the neck. A permanent connection is formed between the closure and the neck of the container, while the closure is in this position thereon, by indenting a pair of annular grooves *d²*, *d³* and corresponding ribs, therein, the material being pressed inwardly into a suitably grooved mandrel in the manner disclosed in my application Serial #401,413.

The connection thus formed permits the rotation, but not the removal of the closure, and, to enable the contents of the container

to be removed, the flange portion of the closure and the neck of the container are respectively provided with apertures d^4 and a^4 midway between the grooves, arranged to be brought into register by rotation of the closure. When the closure is in such a position that the apertures are out of register, the escape of liquid between the neck of the container and the flange of the closure is prevented by the close engagement of the flange with the neck, at the indented portions, and the seating of the edge of the flange on the shoulder a^2 and of the disc portion on the edge of the neck. The upper groove d^3 increases the frictional engagement of the closure with the container, thereby preventing liability of accidental movement of the closure thereon, and as it is formed in proximity to the rim of the container, it also substantially strengthens the edge portion thereof.

As shown in the drawing, the outer side of the connecting rib d' is tapered to correspond to the taper of the side wall of the container, so that, when several containers are to be nested, the top surface of the rib of one will seat against the shoulder a^2 of the other, and the side of the rib on the one will seat against the adjacent inner surface of the other, as shown in Fig. 2.

In this position, no portion of the outer side of one container will be engaged with the inner surface of the other container, except at the rib d' , unless it tilts sidewise slightly, in which case it will engage the intumed rib a' of the other container. A looseness is thus permitted which enables any adhesion, due to nesting, to be readily broken. Also, as the full weight of one against the other is borne by the engagement of the rib d' with the shoulder a^2 , injury due to nesting is practically avoided.

I claim:

1. A paper container having a conical side-wall and a cylindrical neck extending from the smaller end thereof and arranged to form an internal shoulder at the inner end of the neck, a closure for said neck comprising a disk having a flange fitting the exterior of said neck, and a reenforcing connecting rib at the junction of said disk and flange adapted to seat against the internal shoulder and the adjacent interior surface of a similar container, when nested therein.

2. A paper container having a tapering side wall and a neck of uniform diameter extending from the smaller end thereof, a closure for said neck, comprising a disk and a flange fitting the exterior of said neck and having an interlocking connection with said disk forming a bead at the edge and top side of the disk, the outer surface of the bead being continuous with the outer surface of the flange and tapering correspondingly to the side wall of the container to permit the bead to seat against the interior surface of a similar container adjacent its neck.

3. A paper container having a tapering side wall and a neck of uniform diameter extending from the smaller end thereof, a closure for said neck, comprising an end cap and a side wall having adjacent portions thereof folded together to form a bead on the outside of the cap at its edge, the side of said bead being continuous with the outer surface of the side wall of the closure and adapted to seat against the interior surface of a similar container, with which it is nested.

In testimony whereof, I have signed my name to this specification.

ARLINGTON MOORE.