

1,396,282.

Patented Nov. 8, 1921.

Fig. 1.

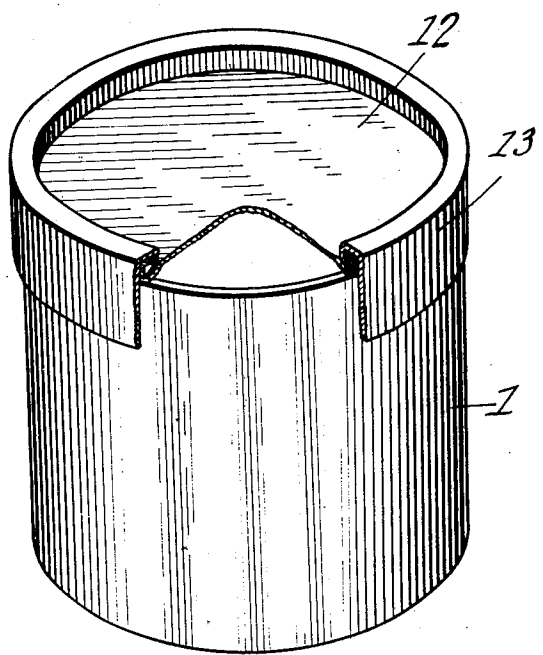


Fig. 2.

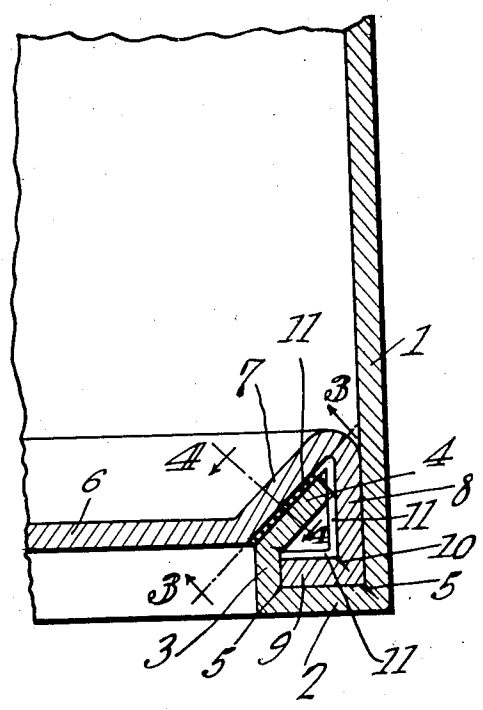


Fig. 3.

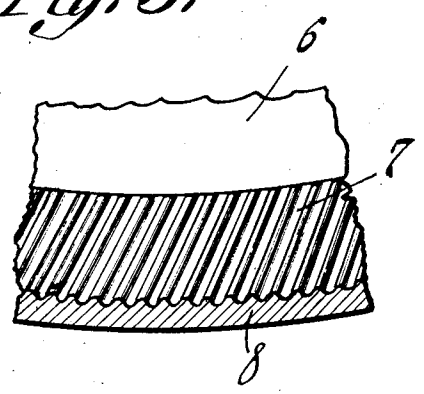
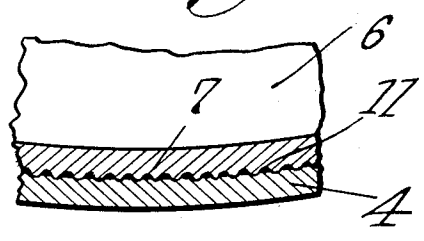


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE R. PENN, OF TAKOMA PARK, MARYLAND, ASSIGNOR TO NATIONAL PAPER CAN CORPORATION, OF WASHINGTON, DISTRICT OF COLUMBIA.

PAPER CONTAINER.

1,396,282.

Specification of Letters Patent.

Patented Nov. 8, 1921.

Application filed October 23, 1920. Serial No. 419,035.

To all whom it may concern:

Be it known that I, GEORGE R. PENN, a citizen of the United States, residing at Takoma Park, in the county of Montgomery and State of Maryland, have invented a new and useful Paper Container, of which the following is a specification.

This invention relates to paper containers of the cylindrical type having disks of paper constituting the heads of the containers.

Heretofore in devices of this character the disks have been connected to the walls of the container and cover in different ways but not only has the resultant container been unattractive, but it has also been found that where a container has been laid aside for some time prior to being used, the joints between the disks and walls have opened out, thus leaving the container leaky and unfit for use.

It has also been found that the weight of the contents of the container tends to open the seams between the disks and walls.

One of the objects of the present invention is to provide a paper container in which the interfitting flanges of the disks and body are scored to allow the formation of abrupt angles, the scoring of the material tending to maintain the flanges in the shapes to which they are bent so that they will not tend to become disengaged as where two flanges of a disk and body are curled into engagement with each other. Such curled or rounded interfitting flanges will become disengaged either wholly or partially in many instances where the containers are laid aside unused for a considerable period of time.

Another object is to provide a container in which the interfitting flanges of the disks and walls will cooperate to prevent disengagement of the parts.

A still further object is to provide the disks and walls with cooperating portions by means of which the seams or joints between the parts will be tightened in proportion to the weight to which they are subjected by the contents of the container.

A still further object is to reinforce the seams or joints by means of peculiarly arranged grooves pressed into the material and which also serve to frictionally engage the opposed surfaces of the joint or seam so as to resist relative movement of the disks and walls of the container and cover.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that, within the scope of what is claimed, changes in the precise embodiment of the invention shown can be made without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings—

Figure 1 is a perspective view of the container, a part thereof being shown in section.

Fig. 2 is an enlarged section through a portion of the bottom of the container.

Fig. 3 is a section on line 3—3, Fig. 2.

Fig. 4 is a section on line 4—4, Fig. 2.

Referring to the figures by characters of reference 1 designates the cylindrical wall of the container, the same being provided at its bottom edge with an inwardly bent portion 2 constituting a base and along the inner edge of which is provided an upwardly extended portion 3 from which projects an outwardly and upwardly inclined flange 4. In order to allow the paper stock to be bent abruptly so as to form right angles, the material of which the container is made is scored as shown at 5. Consequently after the shaping of the container the bottom thereof will have an annular flat face for engaging a table or other supporting surface and from this face the outer surface of the wall of the container and the inner portion 3 will extend perpendicularly.

The bottom of the container, indicated at 6, has its marginal portion offset as indicated at 7 so that the said bottom is in the form of a shallow cone frustum and from the outer edge of this inclined portion is extended an annular flange 8 the edge of which is extended inwardly to form a locking rib 9, this rib being extended at right angles to the flange 8 by reason of the formation of a score 10 within the stock of which the flange 8 is made. Before the bottom disk is shaped to provide the flange 8 and the rib 9 an annular series of substantially tangential grooves or depressions is formed within the disk, the same extending from the free edge of the blank inwardly to the inner margin of the inclined portion 7, the compression

of the stock due to the formation of these grooves resulting not only in the stiffening of the marginal portion of the disk blank but also in the formation of a roughened friction surface.

When the disk and wall blanks are assembled parts are scored at the proper points and returned by means of suitable machinery provided for that purpose so that the flange 8 will fit snugly against the inner surface of the wall of the container while the rib 9 will fit snugly upon the upper or inner surface of the inwardly projecting portion 2. The upwardly projecting portion 3 of the container will extend past the edge of the rib 9 while the inclined flange 4 will engage the roughened or grooved surface of the inclined portion 7 of the disk and will bite into the correspondingly roughened or grooved surface of the flange 8. This arrangement of the interfitting parts has been clearly illustrated in Fig. 2 and, obviously, will effect a tight sealing connection between the two parts. This sealing action will be still further insured by dipping the bottom of the container in paraffin or by treating the stock with paraffin before it is shaped and assembled.

As the inclined portion 7 of the bottom disk bears upon the inclined flange 4 it will be apparent that when the bottom is supporting the weight of the contents of the container said portion 7 will exert a wedging action upon the flange 4 and seal the joint with a pressure increasing in proportion to the weight of the contents of the container. Importance is attached to the reinforcement of the disk and its flange by the formation of the grooves therein and also to the particular form of joint which holds the parts properly assembled under all conditions.

While the bottom of the container has been described as assembled with the wall in the peculiar manner set forth it is to be understood that the disk 12 of the top of the container is assembled in a similar manner with the wall or flange of the top or cover which has been indicated at 13.

It will be noted that the inclined annular flange 4 forms a flared seat for supporting the inclined portion 7 of the disk so that said disk can thus wedge onto the seat when subjected to a weight.

What is claimed is:—

1. A paper container comprising a body having one end portion folded to constitute an annular rectangular base and an inclined annular flange carried by the base, and a bottom disk having an inclined annular portion seated on the inclined flange and an angular peripheral portion upon the disk and projecting into and interfitting with the

rectangular base, said disk having an annular series of stiffening depressions in the inclined and marginal portions thereof for engagement with the flange.

2. A paper container including a body having one end folded inwardly to form an annular rectangular base and an inwardly extending inclined flange upon the base, there being scores along the inner surface of the body at the folds, and a disk constituting the bottom of the container and having an angular marginal portion straddling the flange, there being an annular series of depressions within the marginal portion of the disk for stiffening said portion and frictionally engaging the flange.

3. A paper container including a body having one end portion folded inwardly upon annular score lines to present a rectangular annular base and an inclined annular flange extending inwardly from the base and toward the wall of the container, and a disk constituting the bottom of the container having an annular angular portion straddling the flange, there being depressions within one face of the marginal portion of the disk for roughening said face, said flange being engaged by the roughened face.

4. A paper container having inwardly extended folds at one end forming an annular base and an annular inwardly extending flange providing a flared seat, and a disk constituting the bottom of the container having an inclined portion engaging said seat and adapted to wedge thereon under the weight of the contents of the container, there being an annular series of depressions within the inclined portion of the disk to stiffen said portion and present a roughened surface for engagement with the seat.

5. A paper container having inwardly extended folds at one end forming an annular base and an annular inwardly extending flange providing a flared seat, and a disk constituting the bottom of the container and having an inclined portion engaging said seat and adapted to wedge thereon under the weight of the contents of the container, there being an annular series of depressions within the inclined portion of the disk to stiffen said portion and present a roughened surface for engagement with the seat, and an angular annular portion extending from the disk and interfitting with the folds of the body.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

GEORGE R. PENN.

Witnesses:

SAM A. LANDAU,
IVY E. SIMPSON.