

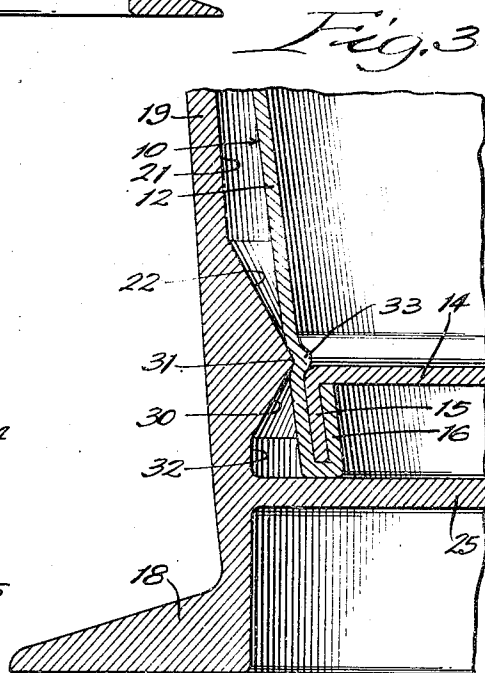
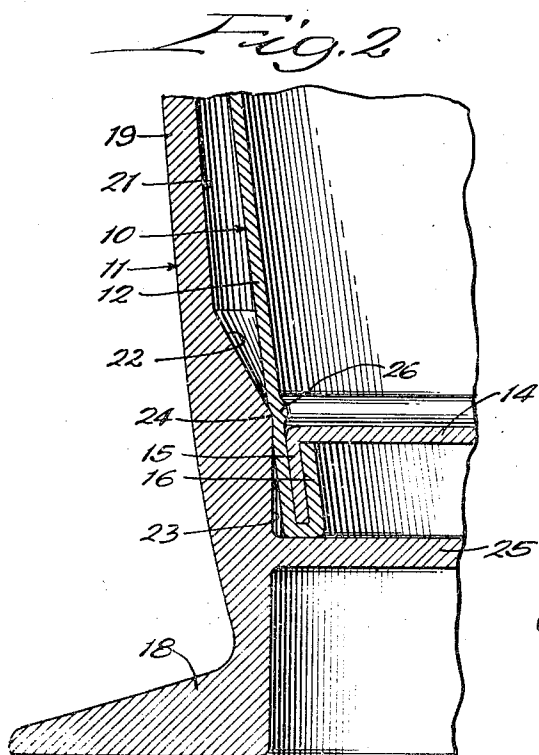
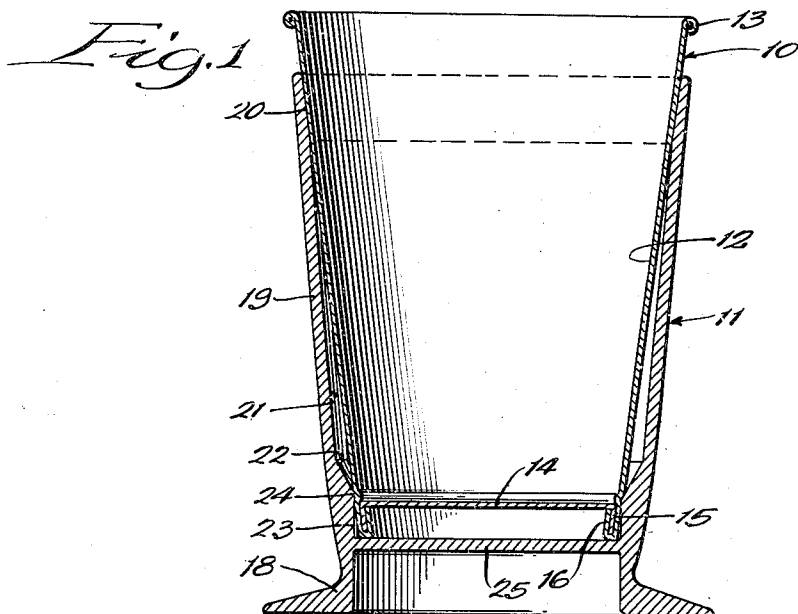
Sept. 27, 1949.

W. E. AMBERG

2,483,168

HOLDER FOR PAPER CONTAINERS

Filed Oct. 11, 1945



Inventor:
Walter E. Amberg,

By Dawson, Broth & Spengenberg,
Attorneys.

UNITED STATES PATENT OFFICE

2,483,168

HOLDER FOR PAPER CONTAINERS

Walter E. Amberg, Beverly Shores, Ind., assignor,
by mesne assignments, to Lily-Tulip Cup Cor-
poration, New York, N. Y., a corporation of
Delaware

Application October 11, 1945, Serial No. 621,793

6 Claims. (Cl. 65-61)

1

This invention relates to holders for paper containers and more particularly to holders for paper containers or cups having tapered side walls, a bottom and a bottom joint between the side walls and the bottom.

The principal object of this invention is to provide an improved holder of this type which readily receives the paper container, which is not critical to variations in the relative dimensions of the holder and paper container, and which provides a gripping action on the paper container. These features provide the advantage of firmly holding the paper container in the holder regardless of slight variations in the relative dimensions of the holder and paper container. They also provide the advantage of being able to place the holder over the top container of a group of inverted nested containers and to lift off from the inverted nested containers the top container in the holder.

In carrying out this principal object of this invention, the holder is provided with a base and side walls for receiving the paper container, and the side walls have an upper tapered portion to receive the tapered side walls of the container and a lower shoulder portion to receive and grip the tapered side walls of the container adjacent the bottom joint thereof. Adjacent the bottom thereof, the holder may also be provided with a transverse support to be engaged by the bottom of the container to support the container.

Other objects and advantages will become apparent to those skilled in the art upon reference to the accompanying specification, claims and drawing in which—

Figure 1 is a vertical sectional view of the holder and paper container;

Figure 2 is an enlarged sectional view of the lower left hand portion of Figure 1;

Figure 3 is an enlarged sectional view similar to Figure 2 but illustrating a modified arrangement.

The paper container of usual construction is generally designated at 10, and the holder for the paper container is generally designated at 11.

The paper container or cup includes tapered side walls 12 which are rolled at their upper extremities into a rim or flange 13. The bottom of the paper container or cup is illustrated at 14 and is provided with a flange 15 which is encompassed by the side walls 12 and a return flange 16 forming an extension thereof. The flanges 15 and 16 form a bottom joint for the container or cup to unite the two parts thereof, and because of the construction of this bottom joint, the paper container or cup is relatively rigid at this point.

2

The holder 11 for the container or cup may be made of plastic or other suitable material and includes a base 18 and side walls 19. The upper portion of the side walls 19 is tapered at 20, and this taper corresponds to the taper of the side walls of the container. At an intermediate portion of the holder, a taper 21 is provided, and this taper is less than the taper of the side walls of the container for the purpose of providing a space between the holder and the tapered side walls of the container. A further taper 22 is provided near the lower portion of the holder 11, and this taper is greater than the taper of the side walls of the container. At the bottom of the side walls of the container 11 there is a relatively straight section 23 which merges with the taper 22 to form a shoulder 24. The holder 11 is also provided with a transverse support 25 which merges with the relatively straight section 23 to be engaged by the bottom of the container for the purpose of supporting the container.

When the paper container 10 is inserted in the holder 11, the shoulder 24 engages the tapered side walls 12 of the container at a point adjacent the bottom joint of the container, and this shoulder causes the side walls of the container to be indented, as shown at 26 in Figure 2. The shoulder 24 cooperating with this indentation 26 operates to grip the container 10 in the holder 11. The upper portion of the container 10 is engaged by and guided by the taper 20 of the holder so that the container is firmly held within the holder. The transverse support 25 is also engaged by the bottom of the container and operates to support the container within the holder.

It will be seen that adjacent the intermediate portions of the side walls of the holder a space is provided between the side walls of the container and holder. Thus, the side walls of the holder do not engage, throughout their length, the tapered side walls of the container and therefore no binding action appears if the container is a little oversize with respect to the holder. In other words, a tight fit, which would make removal of the container from the holder difficult, is prevented.

Because of the engaging and guiding action of the taper 20, the spacing between the container and holder at 21 and 22 and the gripping action at the shoulder 24, the container is firmly held within the holder 11 regardless of slight variations in the relative dimensions of the holder and container. By this same token it is possible to place the holder over the top container of a group of inverted nested containers and to lift off from

the inverted, nested containers the top container in the holder.

The modified arrangement of Figure 3 is substantially the same and functions in substantially the same way as the arrangement of Figure 2. The essential difference between the two arrangements is that the relatively straight section 23 of Figure 2 becomes a reverse taper 30 in Figure 3. By reason of this reverse taper, the shoulder 31 becomes more pronounced in Figure 3 than in Figure 2 and operates to provide a slightly better gripping action. The reverse taper 30 merges into the transverse support 25 as at 32.

The gripping action of the shoulders 24 and 31 in Figures 2 and 3 is greatly enhanced by the relatively rigid construction of the paper container at the bottom joint of the container. Because of this relatively rigid construction, the container is held in good gripping relation with the shoulders 24 and 31, as shown at 26 and 33 respectively.

While for purposes of illustration two forms of this invention have been disclosed, other forms thereof may become apparent to those skilled in the art upon reference to this disclosure, and, therefore, this invention is to be limited only by the scope of the appended claims and prior art.

I claim as my invention:

1. A holder for a paper container having tapered side walls, a bottom and a bottom joint between the side walls and the bottom, said holder comprising a base, side walls having a first taper at the upper portion corresponding to the taper of the side walls of the container and adapted to receive the tapered side walls of the container, a second taper at the intermediate portion less than the first taper and adapted to provide a space between the holder and the tapered side walls of the container, a third taper near the lower portion greater than the first taper and a relatively straight section at the lower portion merging with the third taper to provide a shoulder adapted to receive and grip the tapered side walls of the container adjacent the bottom joint thereof, and a transverse support merging with the relatively straight section and adapted to be engaged by the bottom of the container.

2. A holder for a paper container having tapered side walls, a bottom and a bottom joint between the side walls and the bottom, said holder comprising a base, side walls having a first taper at the upper portion corresponding to the taper of the side walls of the container and adapted to receive the tapered side walls of the container, a second taper at the intermediate portion less than the first taper and adapted to provide a space between the holder and the tapered side walls of the container, a third taper near the lower portion greater than the first taper and a fourth reverse taper at the lower portion merging with the third taper to provide a shoulder adapted to receive and grip the tapered side walls of the container adjacent the bottom joint thereof, and a transverse support merging with the fourth reverse taper and adapted to be engaged by the bottom of the container.

3. A holder for a paper container having tapered side walls, a bottom and a bottom joint between the side walls and the bottom, said holder comprising a base, side walls having a first taper at the upper portion corresponding to the taper of the side walls of the container and adapted to receive the tapered side walls of the container, a second taper at the intermediate portion less than the first taper and adapted to provide a

space between the holder and the tapered side walls of the container, a third taper near the lower portion greater than the first taper and terminating in an annular edge adapted to receive and grip the tapered side walls of the container adjacent the bottom joint thereof, said annular edge formed by said third taper and a wall surface extending therebelow, and a transverse support adapted to be engaged by the bottom of the container.

4. In combination, a paper container having tapered side walls, a bottom and a bottom joint between the side walls and the bottom, and a holder for the paper container having a base and side walls, the side walls of the holder having a first taper at the upper portion corresponding to the taper of the side walls of the container to receive the tapered side walls of the container, a second taper at the intermediate portion less than the taper of the side walls of the container to provide a space between the holder and the tapered side walls of the container, a third taper near the lower portion greater than the taper of the side walls of the container and terminating in an annular edge to receive and grip the tapered side walls of the container adjacent the bottom joint thereof, said annular edge formed by said third taper and a wall surface extending therebelow, and a transverse support to be engaged by the bottom of the container.

5. In combination, a paper container having tapered side walls, a bottom and a bottom joint between the side walls and the bottom, and a holder for the paper container having a base and side walls, the side walls of the holder having a first taper at the upper portion corresponding to the taper of the side walls of the container to receive the tapered side walls of the container, a second taper at the intermediate portion less than the taper of the side walls of the container to provide a space between the holder and the tapered side walls of the container, a third taper near the lower portion greater than the taper of the side walls of the container, a relatively straight section at the lower portion merging with the third taper to provide a shoulder to receive and grip the tapered side walls of the container adjacent the bottom joint thereof, and a transverse support merging with the relatively straight section to be engaged by the bottom of the container.

6. In combination, a paper container having tapered side walls, a bottom and a bottom joint between the side walls and the bottom, and a holder for the paper container having a base and side walls, the side walls of the holder having a first taper at the upper portion corresponding to the taper of the side walls of the container to receive the tapered side walls of the container, a second taper at the intermediate portion less than the taper of the side walls of the container to provide a space between the holder and the tapered side walls of the container, and a third taper near the lower portion greater than the taper of the side walls of the container, and a fourth reverse taper at the lower portion merging with the third taper to provide a shoulder to receive and grip the tapered side walls of the container adjacent the bottom joint thereof, and a transverse support merging with the fourth reverse taper to be engaged by the bottom of the container.

WALTER E. AMBERG.

(References on following page)

5

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
125,003	Barrie -----	Mar. 26, 1872
166,350	Dodge -----	Aug. 3, 1875
181,532	Melbert -----	Aug. 29, 1876
365,560	Adwen -----	June 28, 1887
395,409	Waters -----	Jan. 1, 1889
809,567	Henckel -----	Jan. 9, 1905
1,139,580	Rike et al. -----	May 18, 1915
1,164,962	Sayford -----	Dec. 21, 1915
1,189,024	White -----	June 27, 1916

Number
1,239,277
1,389,594
1,489,698
5 1,750,568
1,924,011
2,094,257
2,101,401
2,323,356

Number
9,676
294,810

6

Name	Date
Klin -----	Sept. 4, 1917
Moore -----	Sept. 6, 1921
Curtin -----	Apr. 8, 1924
Carew -----	Mar. 11, 1930
Willmott -----	Aug. 22, 1933
Luck et al. -----	Sept. 28, 1937
Leppke -----	Dec. 7, 1937
Rosay -----	July 6, 1943

FOREIGN PATENTS

Country	Date
Great Britain -----	Apr. 29, 1903
Germany -----	Oct. 26, 1916