

Feb. 16, 1937.

G. ÖRSTRÖM

2,070,747

RECEPTACLE

Filed Jan. 26, 1934

2 Sheets-Sheet 1

FIG. 1

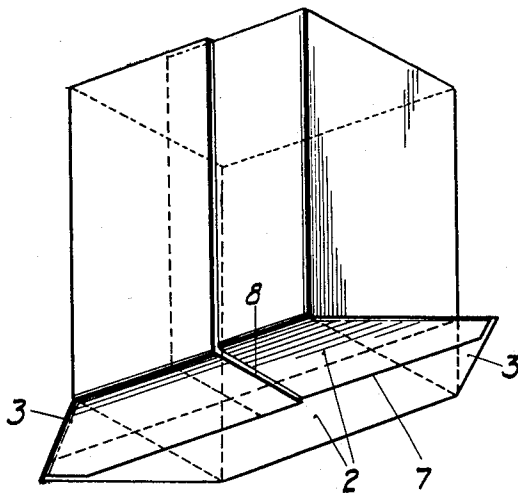


FIG. 3

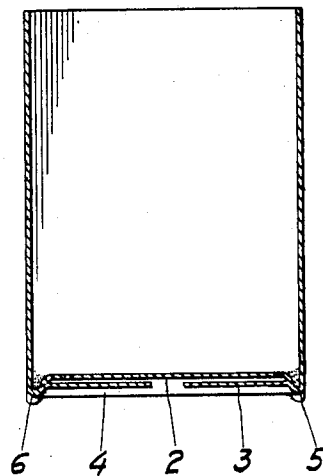
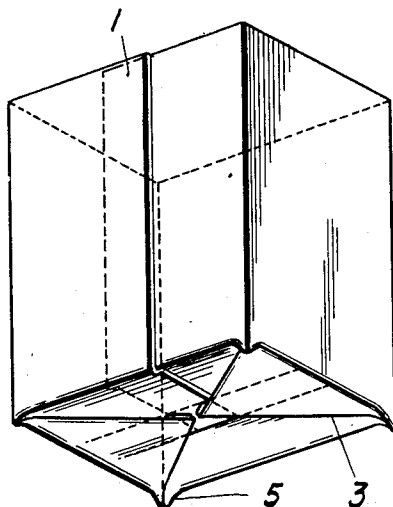


FIG. 2



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FIG. 4

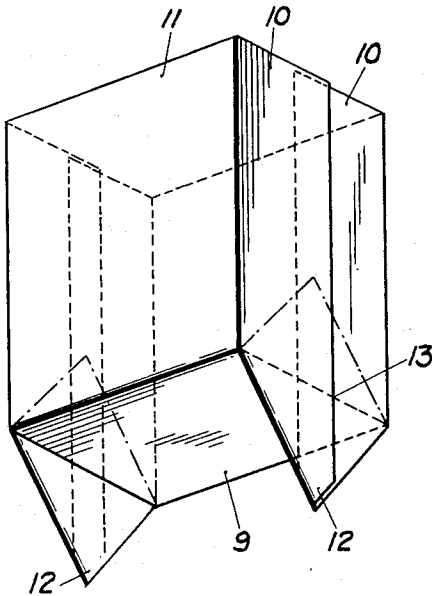


FIG. 6

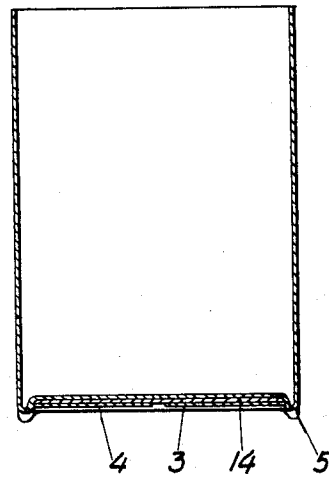


FIG. 5

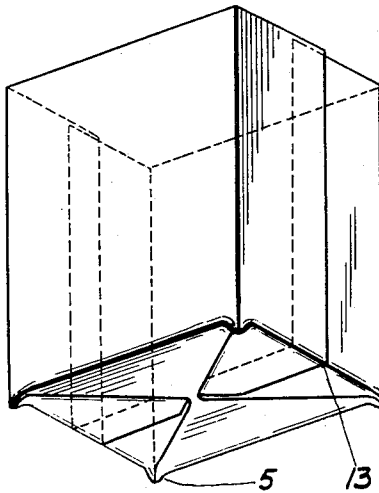
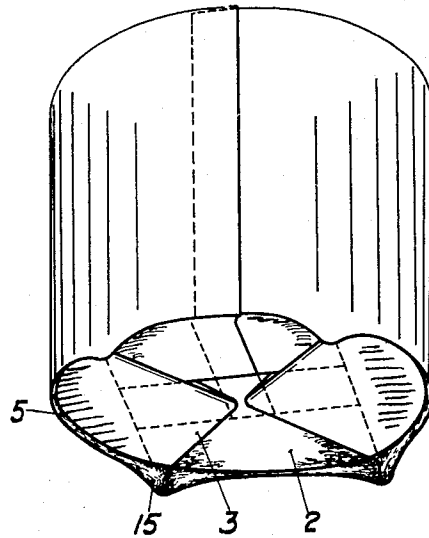


FIG. 7



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UNITED STATES PATENT OFFICE

2,070,747

RECEPTACLE

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Application January 26, 1934, Serial No. 768,481
In Sweden February 2, 1933

5 Claims. (Cl. 229—37)

This invention relates to an improved recep-
tacle and method of manufacturing same.

One object of my invention is to provide a re-
ceptacle particularly a paper receptacle for liquid
5 which is particularly inexpensive in construction
yet strong, tight and durable.

Another object of my invention is to provide a
receptacle of the indicated character to the end
10 that the receptacle will be reinforced and hermet-
ically sealed at the bottom which will be very
smooth.

A further object of my invention is to provide
a receptacle being made of a rectangular folded
15 blank to the end of obtaining an hermetically
sealed bottom which is strong and durable and
able to withstand, for instance, the shocks ordi-
narily received by a liquid bottle as well as inter-
nal liquid pressure.

Still a further object of my invention is to pro-
vide an inexpensive prismatic receptacle being
20 particularly well adapted for storage and hav-
ing an hermetically sealed bottom which is very
resistant against shocks or the like.

Still a further object of my invention is the
25 provision of an inexpensive rounded receptacle
and method for making same to the end of man-
ufacturing rounded receptacles of a single paper
blank which have a hermetically sealed bottom
which is very strong and durable and permits
30 the receptacle to stand steady upon surfaces of
practically any kind.

Still a further object of my invention is the
provision of a receptacle and method of making
same which possesses advantages in points of sim-
35 plicity and efficiency, and, at the same time proves
itself comparatively inexpensive in cost of man-
ufacture.

In the accompanying drawings forming part of
this specification and wherein similar reference
40 characters refer to similar parts throughout the
several views,

Fig. 1 is a perspective view of the partly sealed
bottom of the receptacle;

Fig. 2 is a perspective view of the sealed and
45 finished bottom of the receptacle;

Fig. 3 is an elevational section of the bottom
end of the receptacle;

Fig. 4 illustrates a modified form of the partly
sealed bottom of the receptacle;

50 Fig. 5 illustrates said modified form completely
sealed and treated;

Fig. 6 is an elevational section of another modi-
fied form of the receptacle; and

55 Fig. 7 is a perspective view of the bottom of
another embodiment of the receptacle folded in

the same manner as illustrated in Fig. 1 and 2.

It is the purpose of my present invention to
provide a receptacle which is sealed by folding
with an impressed bottom to the end of utilizing
the well known matter of fact that receptacles
5 produced by folding blanks are comparatively in-
expensive in manufacture and thereby obtaining
a receptacle having the advantages as to strength
and tightness of receptacles of the more expensive
kind which are produced by molding, and in ad-
10 dition obtaining a method of extensive manufac-
turing of inexpensive receptacles.

In carrying out the aim of my invention I em-
ploy a tubular blank or a rectangular blank of
15 paper or similar material and fold same so that
a sealed bottom is obtained, whereafter said bot-
tom is impressed so that reinforcing zones are
obtained at the junctures between the body of the
receptacle and edges of flaps that are obtained
on the sealing of said bottom end. In the de-
20 scription hereinafter it is supposed that a paper
blank is employed for the purpose referred to.

In the embodiment illustrated in Fig. 1-3 the
bottom of the receptacle is sealed by folding pri-
25 marily the rectangular paper blank 1 to consti-
tute a rectangular body one end of which is sealed
by primarily folding the ends of two opposite side
walls into overlapping relation as shown in Fig.
1 and folding side flaps 3 thereby obtained into
30 superposed relation, as shown in Figs. 2 and 3.
Then the bottom is subjected to a pressing ac-
tion so that it is formed with a reinforcing zone
4 extending not only over the corners of the re-
ceptacle but all around the bottom leaving a
35 channel 6 between said reinforce and the body of
the receptacle. Thus a reinforcing bulb 5 is
formed at the bottom of the receptacle, extending
beyond the longitudinal seam obtained on pri-
marily folding the rectangular blank as well as
40 beyond the corners of the receptacle. Though
part of the reinforcing and tightening zones ex-
tending from one corner to another may be omit-
ted they will provide an additional stiffening of
the bottom of the receptacle and counteract the
45 interior pressure of liquid, etc. supplied to the
receptacle. For the purpose of obtaining a par-
ticularly tight receptacle bottom it may be con-
venient to impregnate the inside of the recep-
tacle with wax or any similar tightening sub-
stance. Then the channels 6 are filled partly or
50 entirely with wax as shown in Fig. 3.

It may under circumstances be convenient to
perform the folding of the blank in a manner
indicated in Figs. 4 and 5, thereby dispensing
55 with the seams 8 and 7 shown in Fig. 1. Such

folding is executed in a manner well known in the art and therefore but a brief description thereof may be necessary herein. A rectangular blank or strip is folded about the end of a rectangular mandrel so that said end supports the undivided bottom 9 of the receptacle to be formed. Then the edges 10 of two opposite ends 11 of the blank are folded into superposed relation as illustrated in Fig. 4 so that two opposite flaps 12 are obtained constituting extensions of the parts 10. On proceeding with the known folding operation said flaps are, in order to prevent leakage, folded upon the side parts 10 into a position indicated in dash and dotted lines in Fig. 4. Such a sealing will not ensure complete tightening as liquid will have a tendency of escaping through the seam at 13. Besides a receptacle folded in such manner will not have an attractive appearance, and part of the seam at 13 may accidentally be torn off.

If however according to this invention the bottom of the receptacle is pressed inwards the flaps 12 may be folded about the bottom 9 into the position shown in Fig. 5 as the subsequent pressing operation will completely ensure tightness and obviously possible irregularities of the surface of the bottom will then be unimportant, the more that such irregularities are in part removed by the pressing action. Even in this case channels 6 may be obtained between the reinforcing zones and the body of the receptacle and such channels may be filled with wax, and it is obvious that a receptacle filled with liquid or heavy pulverulent material which has a tendency of bulging the bottom will rest more steady upon a surface if it is provided with the bulbs 5 than if its bottom rests directly on said surface.

Though as mentioned the reinforcing bulbs will remove the disadvantage of the bulging of the bottom of the receptacle it may under circumstances, especially if particularly heavy liquids are to be contained by the receptacle for a comparatively long time, be convenient to still more reinforce the bottom of the receptacle. For such purpose a piece of pasteboard or the like 14, Fig. 6 may be applied to the bottom preferably prior to folding the flaps 3 thereabout. In addition such a piece will facilitate the pressing subsequently executed.

The tubular part of the receptacle illustrated in Fig. 2 can be pressed so that its bottom end

obtains a rounded cross-sectional shape, as shown in Fig. 7. The projections 15 thereby obtained correspond to the corners of a rectangular receptacle. This embodiment will render a particularly steady resting of the receptacle on uneven surfaces.

I claim:

1. A receptacle having a tubular body and a bottom end which is sealed by folded end portions of the tubular body comprising flaps having folded edges, and a plurality of projections each constituting an extension of said tubular body at the juncture between one of said edges and said tubular body leaving depressions between said edges.

2. A receptacle having a tubular body formed of a plurality of flat side walls, and a bottom end which is sealed by folded end portions of said walls comprising flaps having folded edges which extend from corners of the receptacle, and a plurality of projections each constituting an extension of said tubular body at one of said corners leaving depressions between said corners.

3. A receptacle having a tubular body and a bottom end which is sealed by folded end portions of the tubular body comprising flaps having folded edges, and a plurality of projections each constituting an extension of said tubular body at the juncture between one of said edges and said tubular body leaving depressions between said edges, said projections comprising upturned reinforcing zones within said tubular body.

4. A receptacle having a tubular body and a bottom end which is sealed by folded end portions of the tubular body comprising flaps having folded edges, and a plurality of projections each constituting an extension of said tubular body at the juncture between one of said edges and said tubular body leaving depressions between said edges, said projections constituting channels within the receptacle.

5. A receptacle having a tubular body the bottom end of which has a rounded cross-sectional shape and is sealed by folded end portions of the tubular body, comprising flaps having folded edges, and a plurality of projections each constituting an extension of said tubular body at the juncture between one of said edges and said tubular body leaving depressions between said edges.

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