Jan. 19, 1932. F. BROWN 1,841,934

PAPER BOTTLE

Filed Sept. 30, 1930

Fig. 1.

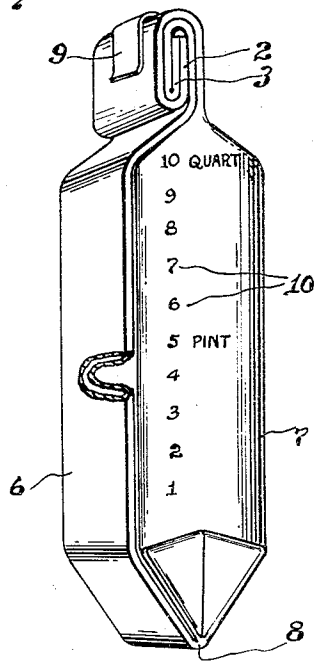


Fig. 2.

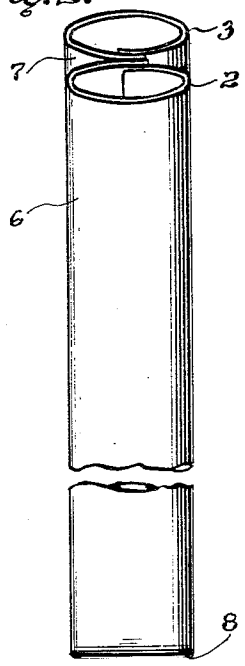


Fig. 4.

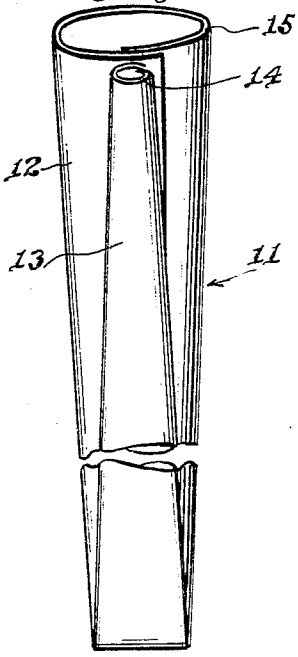


Fig. 3.

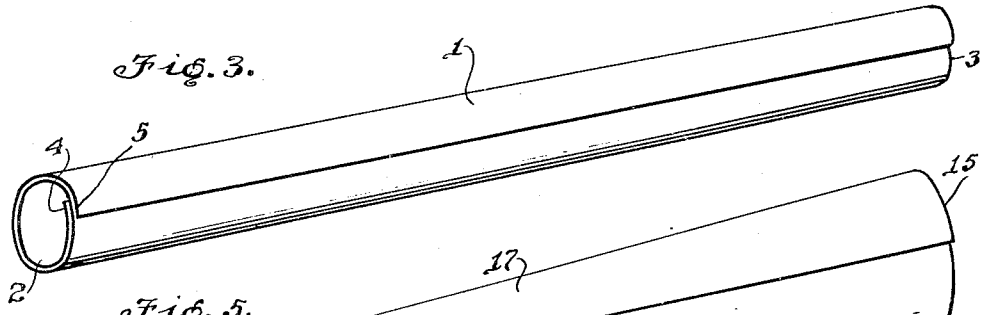


Fig. 5.



Fig. 6.



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Patented Jan. 19, 1932

1,841,934

UNITED STATES PATENT OFFICE

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PAPER BOTTLE

Application filed September 30, 1930. Serial No. 485,502.

This invention relates to paper bottles and more especially to a foldable bottle made from one sheet of paper.

The principle object of the invention is to provide a bottle made from a roll of waterproof paper bent in the middle to the form of U.

Another object of the invention is to provide a U-shaped bottle made from a roll of waterproof paper so arranged that as one of the legs fills up the walls distend and correspondingly contracts the walls of the other leg so that the cup may conveniently be used.

Other objects of the invention will appear as the disclosure progresses. The drawings are intended to merely indicate a possible embodiment of the invention. It is obvious that the actual needs of manufacture may necessitate certain mechanical changes. It is therefore not intended to limit the invention to the embodiment illustrated but rather to define such limits in the appended claims. For a more general understanding of the invention attention is called to the drawings. In these drawings like reference characters denote like parts throughout the specification.

Figure 1 is a perspective view of the paper bottle sealed up and ready for use.

Figure 2 is a perspective view of the bottle opened up and before liquid is poured into one of the legs.

Figure 3 is a perspective view of the roll of paper from which the bottle is formed.

Figure 4 is a modified form of the bottle.

Figure 5 is the roll of paper from which the bottle shown in Figure 4 is made, and

Figure 6 is a developed length of the paper used in making the bottle.

Referring now to the drawings in detail numeral 1 designates the roll of paper for making the bottle formed from one piece of material open at the ends 2 and 3, and adhesively joined at the edges 4 and 5. The paper is dipped in paraffin before being made into a roll, and when the edges 4 and 5 are pressed together a water tight joint will be made. For making the bottle ready for use the roll is bent in the center in the form of a U as shown in Figure 1. Numeral 6 designates one leg of the U and 7 the other leg. Either leg can be used for holding the liquid. The leg 7 which is filled up will distend its walls against the walls of the leg 6 and therefore the walls of leg 6 will correspondingly contract as indicated in Figure 1. At the same time a seal at the bottom 8 is formed which will normally prevent any liquid from passing into the contracted leg 6. The greater the amount of liquid the greater the pressure at the seal 8 and the less chance there is for the liquid to enter the leg 6. However, should any liquid, by accident, flow past the seal 8 and enter the leg 6 it will only rise as high as the liquid in the leg 7 due to the well known physical law that water seeks its own level. After the bottle is filled up the ends 2 and 3 are sealed up by folding over the said ends in the manner shown in Figure 1. A spring clip 9 may be used to prevent the sealed portion 2 and 3 from becoming broken.

Printed on the outside of the leg 7 is a set of graduations 10 for ascertaining the amount of liquid in the bottle. The stock from which the bottle is made is more or less transparent so by looking against the light the liquid level can plainly be seen.

In this form of bottle the bottom does not provide a sufficient base surface for the bottle to rest on. Therefore to hold the bottle in an upright position a deep cup may be used in which to insert the lower part of the bottle and keep same in an upright position. However, it is not absolutely necessary to have the container in an upright position but it can lie on its side and function just as well and without any leakage, especially when the clip 9 is used to keep the ends 2 and 3 folded.

The bottle 11 shown in Figure 4 is the same as that shown in Figure 1 with the exception that the legs 12 and 13 taper. The top edges 14 and 15 may be folded and sealed in the same manner as the preferred form of the bottle. When unsealed the liquid may be drained by drawing with the mouth on the leg 13 in the same manner as using a hollow straw for draining the contents of a glass. Numeral 16 designates the stock from

which the modified form of the bottle is made of and 17 the stock in the form of roll prior to being bent in the middle.

Having described my invention; I claim:

1. In a paper bottle of the class described, a tubular body portion bent substantially in the middle in the form of a U and means to seal the top ends of the legs of the U by folding them over.

2. A paper bottle of the class described made from a tubular body portion and bent substantially in half forming two legs, a seal at the bottom for confining the contents of one leg of the bottle, and means to seal both legs of the bottle together.

In testimony whereof I affix my signature.

FRANKLIN BROWN.