May 19, 1936. J. J. SCHMERLER 2,041,375

PAPER RECEPTACLE AND CLOSURE THEREFOR

Filed Jan. 5, 1935

Fig. 1

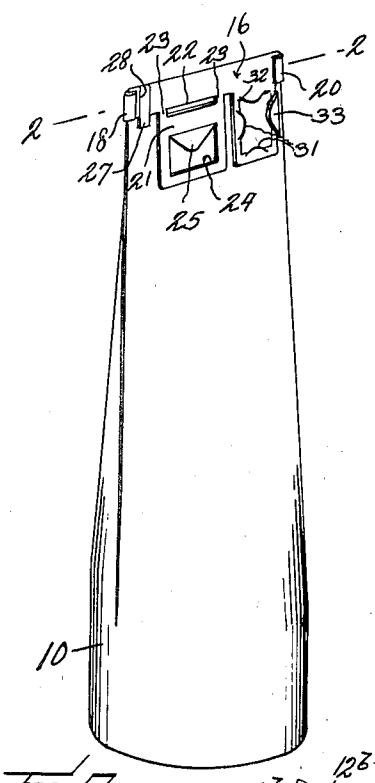


Fig. 2

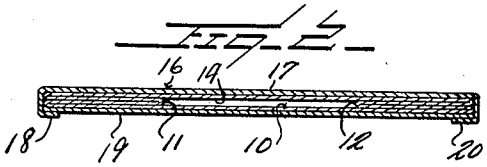


Fig. 3

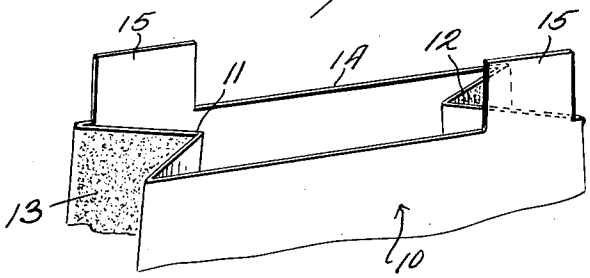


Fig. 4

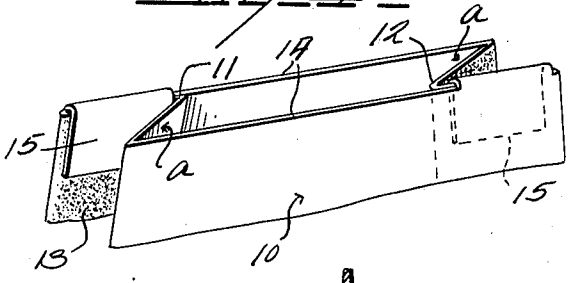


Fig. 5

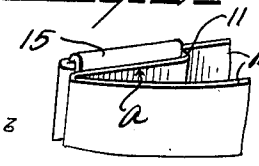


Fig. 6

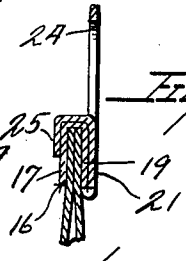


Fig. 8

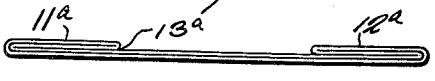


Fig. 9

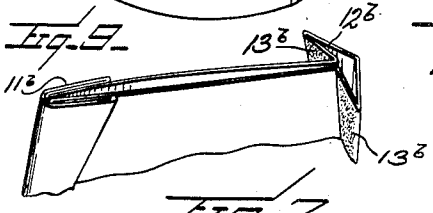
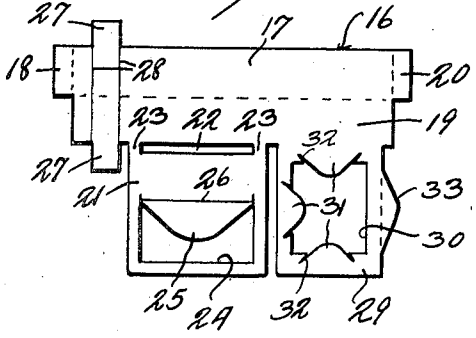


Fig. 7



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Patented May 19, 1936 2,041,375

UNITED STATES PATENT OFFICE

2,041,375

PAPER RECEPTACLE AND CLOSURE THEREFOR

Joseph J. Schmerler, New York, N. Y.

Application January 5, 1935, Serial No. 560

10 Claims. (Cl. 229—1.5)

This invention relates to "Sealcones" such as illustrated and referred to in my pending application for patent Serial Number 735,667, filed July 17, 1934.

Receptacles of this kind are made of relatively heavy paraffine paper and have a cylindrical bottom portion and a flattened upper end which is normally held closed by a sealing strip. Such cones have heretofore been made from a tapered blank and are formed with a seam extending the full length of the receptacle. Oftentimes these cones are provided with a bottom formed of a separate piece of material which is set in and pasted to the bottom by means of gum tragacanth or the like. These seams are very likely to be attacked by moisture from outside, particularly in warm weather, this moisture acting to soften the adhesive, and further the seams are attacked by the water which is present in the liquid, as for instance, cream or milk which is the liquid ordinarily dispensed in these "Sealcones". This is due to the fact that while paraffine is used to impregnate the receptacle, yet paraffine is brittle and due to handling the paraffine cracks at any joint or seam, leaving the joint or seam open to the action of the liquid.

Receptacles holding milk or cream must be capable of holding their shape and prevented from breaking down for from forty-eight to seventy-two hours at the least. This is ample time for the liquid to attack and soften the small amount of adhesive used at the seams, even if this adhesive be gum tragacanth which is the least soluble of all adhesives.

On account of this defect "Sealcones" could not be used for any liquid material where the cone had to keep its shape and integrity for even seventy-two hours, and therefore these "Sealcones" could not be used for carbonated beverages. This product has to be kept for a very long period, sometimes a month or more. Carbonated beverages are kept in moist cold places and usually directly on ice, and while liquids having a fatty consistency as milk or cream may be retained in a weakened cone, carbonic oxide gas will certainly force its way out wherever a crack or pin hole is to be found. Liquids exert a pressure only downward and laterally to the level of the liquid, but carbonic oxide gas under pressure exerts its pressure in all directions and leakage will therefore be very likely to take place.

The general object of my invention is to overcome these defects in the construction of "Sealcones" by providing a one-piece cone from top to bottom without any joint or seam.

I have illustrated in my prior application above referred to, means whereby the bottom of the cone may be formed from the blank itself without any joint or seam, and in this present application I have illustrated means whereby the seamless body may be folded at its upper portion so as to provide a flattened top having a width equal to the diameter of the base of the receptacle and which top may be closed by means of a metallic clip or folded strip, as will hereinafter appear.

A further object of the present invention is to so fold the upper end of the receptacle as to provide a pouring spout or crease at either end of the folded top and provide a clip or sealing strip at the upper end of the cone which may be readily either pulled off or pulled back so as to permit the liquid to be poured from the end of the receptacle without the necessity of opening up the entire upper end, as is the case to-day.

A further object is to provide a sealing strip or clip of this character which may be cheaply made, which will tightly close the upper end of the receptacle, which may be readily manipulated to tear off one end of the sealing clip or strip, and which is provided with a handle capable of being turned up into position to permit the sealing strip to be pulled longitudinally to open one corner of the upper end of the receptacle to permit pouring.

A further object in this connection is to provide a sealing strip which will indicate plainly if it has been tampered with and which will thus give the customer some protection against substitution.

A still further object is to provide the sealing strip with means whereby a label may be readily attached thereto which is necessary where the receptacle is used for drugs, such as citrate of magnesia or the like.

Other objects will appear in the course of the following description.

My invention is illustrated in the accompanying drawing, wherein:—

Figure 1 is a perspective view of a "Sealcone" constructed in accordance with my invention and with my improved sealing strip applied thereto.

Fig. 2 is an enlarged section on the line 2—2 of Fig. 1.

Fig. 3 is a fragmentary perspective view of the upper end of the receptacle before the parts are folded.

Fig. 4 is a like view to Fig. 3, but with the parts partially folded but unpasted.

Fig. 5 is a perspective view of one end of the structure shown in Fig. 4, showing the parts folded and pasted.

Fig. 6 is a transverse vertical sectional view through the top of the receptacle with the parts folded and pasted and clamped together.

Fig. 7 is a plan view of the blank from which the sealing strip is made.

Fig. 8 is a diagrammatic top plan view of the receptacle showing a different way of folding the parts.

Fig. 9 is a diagrammatic top plan view of the receptacle showing still another way of folding the sides of the receptacle.

Referring to the drawing, 10 designates the body of the receptacle which may be made in the paper mill as a long initially cylindrical blank and without a seam, which is afterwards cut up into short sections from which the completed receptacle is to be formed. I have not illustrated in this application the manner in which the bottom of the receptacle is formed, as this is illustrated in my prior application before referred to. The bottom is formed upon a mandrel and after the bottom has been formed the upper end of the receptacle at opposite sides is creased or folded to provide two V-shaped folds 11 and 12. The outer faces of these folds are coated with an adhesive 13. The side walls 14 of the receptacle are provided each at one end with a tab 15. The wall of each one of the folds 11 and 12 is brought against the side wall 14 and then the tab is folded over one wall of the fold 11 or 12 and then the two folds are pasted together by means of the adhesive 13 in the manner shown in Fig. 5. This provides a pouring crease at one or both ends of the top of the receptacle. If it were not for this tab 15 then a double pouring crease would be formed at each end of the top of the receptacle and liquid would pour out through both of these folds. It is in order to prevent this formation of a double pouring crease that I have provided the tab 15.

After the receptacle has been filled with liquid, the upper end of the receptacle is closed by means of a metallic clip or sealing strip, designated generally 16, this strip being folded along the middle line so as to provide two side walls which when pressed together clamp the two side walls of the mouth of the receptacle against each other. The wall 17 of the strip is sometimes provided at one end with a foldable lug 18, while the same wall 17 of the strip is provided at the opposite end with a like lug 20. The seal 19 has an extension 21 constituting a handle. At the junction of this extension 21 with the wall 19 there is formed the longitudinally extending slot 22 so that the handle extension 21 is connected to the wall 19 by two relatively short portions 23. The handle extension is also formed with a cut-out or stamped-out portion 24 defining a lug 25, that is weakened at its junction 26 with the body of the extension. This handle is intended to be turned upward, when the receptacle is to be used, so that it lies flat against and projects above the wall 19, and this lug 25 is designed to be bent over the upper edge of the strip 16 so as to strengthen and reinforce the handle at this point. Between the handle extension 21 and the folded lug 18 there are provided two downwardly extending ears 27 and the score lines 28 extend upward from these ears to the crest or ridge of the folded strip 16. The lines 28 are sufficiently deeply scored so that these ears 27 may be pulled upward by the user and the strip torn upon the lines 28 so as to leave the body of the sealing strip separated from that end of the sealing strip which carries the folded-over lug 18. When this has been done and the handle turned upward, it is possible to shift the sealing strip 19 longitudinally upon the top of the receptacle a sufficient distance so as to permit a pouring opening to be formed at one end of the top. Then after a sufficient quantity of the liquid has been poured the sealing strip may be pulled back again so as to close the mouth of the receptacle. With this construction the sealing strip may be pulled back to open the mouth of the receptacle partially, or pulled forward to close the mouth of the receptacle any desired number of times.

While not necessary under some circumstances, yet it is often desirable to provide some means for carrying a label. This is particularly necessary where the receptacle contains material vended from a drugstore, and to this end the sealing strip is formed with an extension 29 cut out to provide a central opening 30, three walls of this opening having tabs 31 formed thereon and defined by slits 32. These tabs may be pulled upward slightly and a label inserted beneath the tabs in an obvious manner, this label being held in place by folding over a triangular projection 33 which extends from one lateral edge of the portion 29. This portion 29 may also be used for carrying advertising and may be used as a carrier for trade-marks or the like. The connection between the extension 21 and the wall 19 is so slight that if it were bent up into its operative position and the sealing strip pulled off of the receptacle so as to permit the contents to be poured out and the receptacle refilled and then the handle 21 be bent down again, the metal would crack across the joints 23 and this crack would show plainly to the customer that the contents of the receptacle had been tampered with.

It will be seen that I have provided a receptacle which is formed of one single piece of material without solution of continuity and which is so folded at its upper end as to provide for flattening the upper end of the receptacle and closing it by means of a sealing strip and which is further so formed that the adhesive used on the folds of the upper portion is entirely on the outside of the receptacle and therefore cannot be affected by the liquid contents thereof, and further it will be seen that these folds are so formed that a single pouring spout is provided when the sealing strip has been removed or manipulated so that it may be drawn back. I have also provided a sealing strip for a receptacle of this character which may be readily torn across at one end so as to permit the sealing strip to be shifted longitudinally to permit the contents of the receptacle to be poured out, and then may be shifted back to close the receptacle, which cannot be done with the sealing strips now in use. The sealing strip may be readily stamped out and readily put in position and clamped upon the mouth of the receptacle, and while I have illustrated certain details of construction for this sealing strip, it is obvious that the principle of the strip might be embodied in other formation than that shown, and that I do not wish to be limited to these details except as defined in the appended claims.

Neither do I wish to be limited to the particular

manner of folding the receptacle at its upper end, as shown in Fig. 2, as this reduction in width of the upper end of the receptacle may be secured by other folds. Thus in Fig. 8, the folds are not formed as reentrant folds, but the receptacle is folded at its ends as at 11a and 12a and these folds are brought around upon the outside face of the receptacle body and are pasted to the body at 13a. It is to be understood, however, that the adhesive used in order to hold these folds in place is always upon the exterior faces of the folds where it cannot be attacked or affected in any way by the liquid contents of the receptacle.

In Fig. 9 another manner in which the receptacle may be folded, is illustrated, two folds 11b and 12b being formed at each end of the receptacle, there being an adhesive 13b disposed between the confronting faces of the folds but entirely exterior of the inner surface of the receptacle.

It is also to be understood that under some circumstances the lugs 18 and 20 are not used, and in this case, of course, it is not necessary to provide the tearing lugs or weakened portions 27, as where the lugs 18 and 20 are not used, the sealing device may be shifted longitudinally without the necessity of tearing the seal across as is necessary where the folding lugs 18 and 20 are used.

I claim:

1. A seamless paper receptacle having a cylindrical lower portion, the upper end being formed with opposed and longitudinally extending downwardly tapering re-entrant folds, the upper end of the receptacle adjacent the folds having tabs folded downward one over the adjacent wall of each of the re-entrant folds and pasted to this wall, the confronting outer faces of the folds being pasted to each other.

2. A seamless paper receptacle having a cylindrical lower portion, the upper end of the receptacle being formed with downwardly tapering longitudinally extending pasted folds, and a longitudinally folded sealing strip embracing the mouth of the receptacle and having end lugs bent over to close the ends of the sealing strip, one end of the strip having depending lugs and having score lines extending upward to the crest of the strip, the lugs constituting means whereby the metal may be torn away on said score lines to thereby remove one end of the sealing strip to permit the sealing strip to be shifted longitudinally of its length.

3. A seamless paper receptacle having a cylindrical lower portion, the upper end of the receptacle being formed with downwardly tapering longitudinally extending pasted folds, and a longitudinally folded sealing strip embracing the mouth of the receptacle and having end lugs bent over to close the ends of the sealing strip, one end of the strip having depending lugs and having score lines extending upward to the crest of the strip, the lugs constituting means whereby the metal may be torn away on said score lines to thereby remove one end of the sealing strip to permit the sealing strip to be shifted longitudinally of its length, one wall of the strip having a downwardly projecting handle extension adapted to be bent upward against the face of the strip and extending above it to constitute a handle.

4. A seamless paper receptacle having a cylindrical lower portion, the upper end of the receptacle being formed with longitudinally extending folds whereby the upper end of the receptacle may be flattened, and a longitudinally folded sealing strip of metal embracing the mouth of the receptacle and holding the opposed walls of the receptacle flattened against each other, one wall of the sealing strip having a downwardly projecting handle extension adapted to be folded up against the body of the strip and extend above it to constitute a handle, the junction between the extension and the body of the strip being weakened.

5. A seamless paper receptacle having a cylindrical lower portion, the upper end of the receptacle being formed with longitudinally extending folds whereby the upper end of the receptacle may be flattened, and a longitudinally folded sealing strip of metal embracing the mouth of the receptacle and holding the opposed walls of the receptacle flattened against each other, one wall of the sealing strip having a downwardly projecting handle extension adapted to be folded up against the body of the strip and extend above it to constitute a handle, the junction between the extension and the body of the strip being weakened, the extension being cut out at its center to provide a tongue adapted to be flattened down over the crest of the sealing strip when the handle is folded up against the strip.

6. A seamless paper receptacle having a cylindrical lower portion, the upper end of the receptacle being formed with longitudinally extending folds whereby the upper end of the receptacle may be flattened, and a longitudinally folded sealing strip of metal embracing the mouth of the receptacle and holding the opposed walls of the receptacle flattened against each other, one wall of the sealing strip having a downwardly projecting handle extension adapted to be folded up against the body of the strip and extend above it to constitute a handle, the junction between the extension and the body of the strip being weakened, the strip having a downward extension from one side wall formed to hold a name card.

7. A seamless paper receptacle having a cylindrical lower portion, the upper end of the receptacle being formed with longitudinally extending folds whereby the upper end of the receptacle may be flattened, and a longitudinally folded sealing strip of metal embracing the mouth of the receptacle and holding the opposed walls of the receptacle flattened against each other, one wall of the sealing strip having a downwardly projecting handle extension adapted to be folded up against the body of the strip and extend above it to constitute a handle, the junction between the extension and the body of the strip being weakened, the sealing strip having a downward extension from one side wall, the extension having its central portion cut out to form a frame, three sides of the frame having tongues to engage over a name card and slits to receive the edges of the card, the fourth side of the frame having a tongue adapted to be bent back over the edge of the card to prevent the card from slipping out of said slits.

8. As an article of manufacture, a sealing strip for paper receptacles, the strip being of metal and longitudinally folded to provide two side walls, the ends of one side wall being bent over upon the other side wall to hold the strip closed, the strip adjacent one end having downwardly extending lugs and the body of the strip having score lines extending upward from said lugs to

the crest of the folded strip whereby the strip may be torn away upon said score lines.

9. As an article of manufacture, a sealing strip for paper receptacles, the strip being of metal and longitudinally folded to provide two side walls, the ends of one side wall being bent over upon the other side wall to hold the strip closed, the strip adjacent one end having downwardly extending lugs and the body of the strip having score lines extending upward from said lugs to the crest of the folded strip whereby the strip may be torn away upon said score lines, one wall of the strip being extended to form a handle, the junction between the handle and the wall of the strip being weakened whereby the handle may be turned upward against the wall of the strip to extend above the same, the handle having a tongue adapted to be bent over the crest of the folded strip.

10. As an article of manufacture, a sealing strip for paper receptacles, the strip being of metal and longitudinally folded to provide two side walls, the ends of one side wall being bent over upon the other side wall to hold the strip closed, the strip adjacent one end having downwardly extending lugs and the body of the strip having score lines extending upward from said lugs to the crest of the folded strip whereby the strip may be torn away from said score lines, one wall of the strip being extended to form a handle, the junction between the handle and the wall of the strip being weakened whereby the handle may be turned upward against the wall of the strip to extend above the same, the handle having a tongue adapted to be bent over the crest of the folded strip, one wall of the strip having an extension formed to provide a frame for holding a name card, the frame being formed with slits and tongues to receive the edge of the card, and with means for preventing the removal of the card after its insertion in said slits.

JOSEPH J. SCHMERLER.