April 15, 1930. D. G. MAGILL 1,754,476

SALT CAN SPOUT

Filed April 16, 1926

Fig. 1.

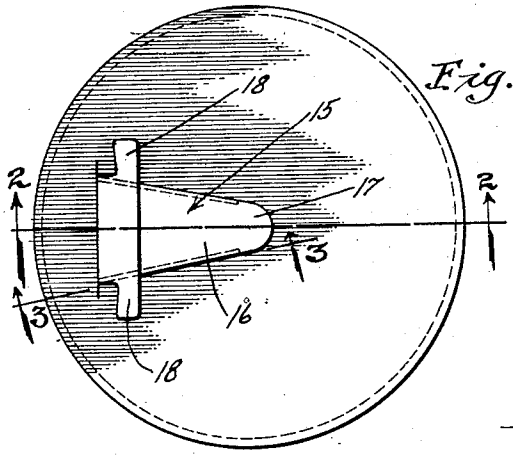


Fig. 3.

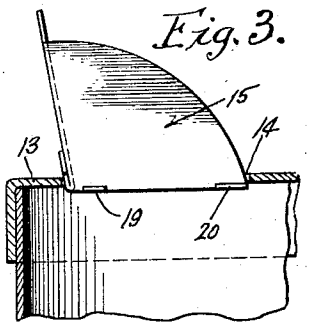


Fig. 4.

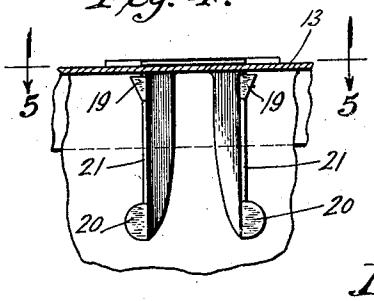


Fig. 2.

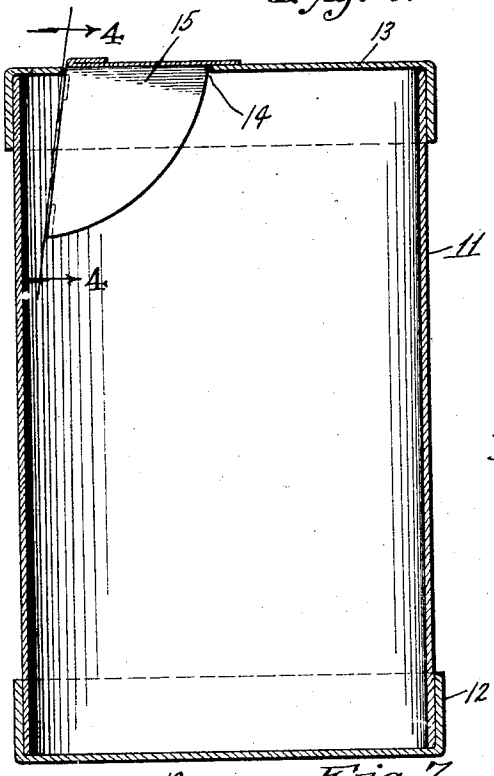


Fig. 5.

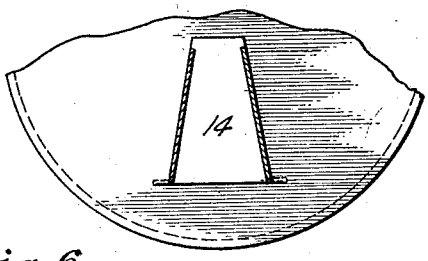


Fig. 6.

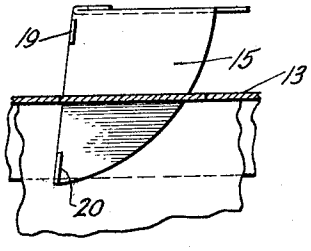
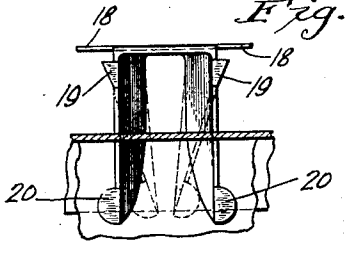


Fig. 7.



INVENTOR.
Donald G. Magill
BY Munday, Clarke & Carpenter
ATTORNEY

Patented Apr. 15, 1930 1,754,476

UNITED STATES PATENT OFFICE

DONALD G. MAGILL, OF CHICAGO, ILLINOIS, ASSIGNOR TO AMERICAN CAN COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY

SALT-CAN SPOUT

Application filed April 16, 1926. Serial No. 102,407.

This invention relates in general to pouring spout fibre containers and has for a particular object the provision of an improved spout for the dispensing of dry, granular or pulverized substances, such as salt, sugar, spices, and the like.

Heretofore it has been the usual and common practice to assemble pouring spouts to fibre can tops before the tops had been permanently assembled to the can body. This procedure was necessary because the old type of spout could only be secured to the can top while said top was off the can body, and its under or inside was accessible for spout securing operations.

These fibre can tops are usually of the slip cover type and in order to prevent their being accidentally removed before they reach the ultimate consumer they are securely glued to the can body. It is very desirable to perform the gluing operation immediately after the can top has been formed, while they are still damp and before they have been warped, twisted and contracted by the drying out of the fibre. This means that the gluing must be done in the can making factory, and not in the packing plant, and it is for this practice that my spout is especially adapted.

One of the objects of the invention is the provision of a spout made of sheet metal, celluloid, or like resilient material, and which is of an improved and novel construction so as to be adapted for application to a can cover, either before or after the latter has been permanently secured to the can body.

A still further and important object of the invention is the provision of a pouring spout which has all the advantages of the old types of spouts and which can be more readily applied to a permanently secured can top either at the can factory or at the packing plant, and either to an empty or to a filled capped can body.

Another important advantage of my invention is the provision of a spout which does not involve the necessity of providing for a special hinging connection of the spout to the container cover.

Another object of my invention is to provide a novel form of spout which may be secured to the container top entirely from the outside of the can and without necessity of access to the inside of the can.

Another object of my invention resides in forming the pouring spout with an integral laterally extending portion adapted to overlie the marginal edges of the aperture in the container top whereby to form a hinge portion upon which the spout is adapted to swing and whereby also to prevent the spout from being pushed completely through the container through the aperture thereof.

Another object of my invention resides in providing the pouring spout with integral laterally extending portions which are constructed and arranged to extend over the marginal edges of the aperture of the container top to limit the inward position of the spout relative to the top.

Still another object of my invention resides in the novel manner of forming this integral laterally extending portion of the spout by an economical blank cutting operation and folding operation.

Another object of my invention resides in providing a novel type of spout which is adapted to be fastened to the top of the container and which permits the container being filled through the pouring opening of the top without interference with said filling operation due to the presence of the spout.

Another object of my invention resides in providing a novel type of spout hingedly mounted on the top of the container, which spout is provided with stop lugs adapted to limit the outward swinging movement of the spout and which stop lugs are made integrally with the material of the spout and in such manner to combine saving of material with ease of assembly of the spout to the container top.

Another object of my invention resides in the manner of cutting and folding these stop lugs whereby metal is saved in the blanking or cutting out operation, and in addition, due to the folded arrangement of these stop lugs, the latter permit the spout to open to a maximum position.

Still another important object of my invention is the provision of novel lugs which

perform a combination cutting or assembling, hinging and holding function.

Still another object of my invention resides in the method of forming my novel spout and in the improved method for attaching it to the container top.

Other objects and advantages of the invention will be apparent as it is better understood from the following description, which taken in connection with the accompanying drawings discloses a further embodiment thereof.

Referring now to the accompanying drawings which form part of these specifications and in which the same reference characters designate corresponding and like parts,

Fig. 1 is a top plan view of the top or cover of the container with the spout in closed position.

Fig. 2 is an elevational transverse section of the container and spout on line 2—2 of Fig. 1.

Fig. 3 is a fragmentary sectional view of the container top on line 3—3 of Fig. 1, showing the spout in open or pouring position.

Fig. 4 is a sectional view on line 4—4 of Fig. 2, showing the spout in closed position, and also showing the peculiar construction of the two pairs of lug members.

Fig. 5 is a partial top plan view taken on line 5—5 of Fig. 4.

Fig. 6 is a partial section through the spout and container top, showing the spout in partially assembled position.

Fig. 7 is a similar view, showing the whole spout in partially assembled position and also showing in dotted lines the manner of inserting the spout into the pouring opening.

For the purpose of illustrating my present invention I have shown a fibre can body 11 with a bottom 12 glued or otherwise secured to the body. A slip cover 13 is also glued or otherwise secured to the top part of the container body. Said cover 13 has a pouring opening 14 in the top thereof. A sheet metal spout or a spout made of similar resilient material, generally indicated by the reference character 15, is provided with a top wall 16, the front part of which terminates in a lip or finger piece 17 adapted to overlie the container wall and limit inward movement of the front part of the spout. The rear part of the top wall 16 is bent back upon itself and the wing-like lateral extensions 18 prevent the rear part of the spout from being pushed further into the pouring opening than is normally desirable. These wing-like extensions 18 of the top wall 16 also cooperate with a pair of tapered cutting members or lugs 19 to form a hinge connection between the spout and the can body. The tapered cutting lugs 19, when the spout is inserted into the pouring opening for the purpose of assembly, encounter the corners formed by the side walls or edges and the rear wall or edge of the pouring opening and slit or sever them to the extent of the dimension of the wide part of the taper, and when the spout has been completely pushed home and the top wall 16 and the wing extensions 18 lie flat on top of the cover, the lugs 19 hook underneath, i. e., on the inside of the cover wall, and prevent the spout from being knocked or pushed outwardly (Fig. 4), and at the same time these tapered lugs 19 cooperate with the wings 18 to form a simple, effective, and inexpensive hinge connection between the container cover and the spout. It will be noticed that another pair of extensions or stop lugs 20 are provided, one on each depending spout side wall or wing 21. These stop lugs 20 are semi-circular extensions of the spout side wings, and are bent at substantially right angles to the latter, and are for the purpose of preventing the spout from being swung outwardly to open or pouring position more than substantially 90°. Heretofore these stop lugs were formed from extensions of the spout side wings lying in the same plane as the side wings. With the stop lugs arranged laterally, as clearly shown in Fig. 4 of the drawings, two great advantages are accomplished over the old type of stop lugs. My lateral stop lugs permit the spout being swung outwardly to a fuller extent, namely, to a complete vertical position where the top wall 16 of the spout is at right angles with the flat top of the cover. Such a fully extended position of the spout facilitates the dispensing operation. I have also found in actual manufacturing practice that the shape and arrangement of the stop lugs as shown in the drawings of my invention accomplish a substantial saving in tin plate or other spout material. For instance, under the old process where these stop lugs, which projected laterally from the curved portion of the wing as indicated in dotted lines at 20′ in Fig. 6. and were not bent at an angle for normal position, considerable loss of sheet metal was present in the cutting out operations because these projecting lugs prevented the wing portions of the cut outs being made close together; but in my present arrangement, since these lugs 20 extend from the straight edge portion of the blank, as indicated at 19′ in Fig. 6, and not the curved edge thereof, blanks can be more economically cut out, since the two curved wing portions of two adjacent blanks can be brought close together during the cutting out process and a minimum of intervening metal wasted. It will also be noted that when the stop lug 20 is cut out from the straight edge portion of the wing as at 19′ it lies in the same plane as the wing 21 and must be bent at an angle thereto, approximately a right angle or substantially as shown. In this position it would be at once apparent that since this stop lug 20 lies at this angle it will engage approximately flatly with

the under side of the container top, thereby permitting the spout to swing to full open position as indicated in Fig. 3. When these stop lugs were made as heretofore, i. e., cut out with the wing portion 21 in Fig. 6, and lying in the same plane thereof as indicated at 20′, and not subsequently bent laterally, when the spout was assembled in the container top this stop lug would prevent the spout opening fully.

In assembling the spout with the assembled container body and cover, the side wings 21 of the spout are squeezed sufficiently together and inserted into the pouring opening 14, as shown in dotted lines in Fig. 7. Pressure is then applied to the top wall part 16 of the spout until the cutting edges of the lugs 19 encounter the corners formed by the side walls and back wall of the pouring opening and cut their way into the interior of the can and the spout is completely pushed home and securely and hingedly held to the cover by the cooperative functions of the parts 18, 19, and 20. It will be understood that while the lugs 19 perform their cutting function the severed edges of said corners are temporarily bent inwardly but they spring back to normal position as soon as the lugs 19 have completely entered the inside of the container, and bar the return of the lugs to the outside under normal conditions.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description and it will be apparent that various changes may be made in the form, construction, and arrangement of the parts without departing from the spirit and scope of the invention or scarificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A device of the class described comprising a container provided with a cover having an aperture therethrough, a spout comprising a lid portion adapted to normally close the aperture in said cover and having pivotal portions overlying said cover, said spout having members adapted to normally extend within the container, said members having portions adapted to cut through the edge portions of the aperture of the cover when said members are inserted through the aperture, said cutting portions constructed and arranged to normally lie on the under side of the cover and to cooperate with said pivotal portions of the lid to permit a non-detachable hinging movement of the spout.

2. A device of the class described comprising a container provided with a cover having an opening therethrough, a spout for said opening, said spout comprising a lid having portions wider than said opening and said spout having depending members provided with stop members also wider than said opening, said offset members being constructed and arranged so that when said spout is inserted into the opening of the top said stop members will lie beneath the edges of the opening in the cap and said laterally extending portions on said lid shall overlie the edges of the opening of said cap, said wider portions on said lid and said laterally extending members being constructed and arranged to form cooperative hinged portions for said spout and non-detachably connecting said spout to said container cover.

3. In a device of the class described the combination of a container cover provided with an opening, a spout adapted to be inserted in and to fill said opening, said spout having portions overlying the edge of said opening and said spout being provided with wings adapted to pass through the opening in said cover and said wings provided with laterally extending lugs formed with cutting edges adapted to cut through the material of said cover so as to permit said lugs to lie wholly on the under side of said cover.

4. In a device of the class described the combination of a cover having an aperture, a pouring spout therefor comprising a lid portion adapted to close said aperture, said lid portion having resilient wings adapted to extend through said aperture, said wings having laterally extending lugs provided with cutting edges adapted to cut through the material of said cover and adapted to be positioned on the under side of said cover.

5. In a device of the class described the combination of a spout for a pouring opening in the cover of a container comprising a single piece of sheet metal formed with a lid portion shaped wider than and corresponding with the opening in the container, said lid portion having an overfold provided with substantially narrow laterally extending lugs of greater width than the body of the lid, and said spout being formed with sector shaped, spaced apart wing portions, said wing portions having laterally extending wedge like lugs spaced from the substantially narrow lugs of said overfold, and said wing portions having laterally extending lugs formed on their outermost tips.

6. In a device of the class described the combination of a container top provided with an aperture, a pouring spout adapted to seat in and close said aperture, said spout being formed of sheet metal and provided with an integral rearly extending portion of greater width than the remaining part of the spout, said rearly extending portion being folded backwardly upon the remaining portion of the top to provide an overfold with laterally extending wings adapted to overlie the marginal edges of the aperture.

7. A pouring spout adapted to seat in and close the filling and discharge opening of a container, said spout when in closed position

comprising a top wall for closing said opening, an extension of said top wall being bent back upon said wall to form outside pivot members, depending wings, extensions on said wings to form inside pivot members and cooperating with said outside member to form a hinge connection and another set of extensions on said wings to limit the outward movement of said spout when the latter is shifted to pouring position.

8. A pouring spout adapted to seat in and close the filling and discharge opening of a container, comprising a lid portion for closing said opening, depending guide wings, cutting extensions on said wings to permit said spout to be assembled without access to the interior of the container after the latter has been filled, and lid extensions cooperating with said cutting extensions to form a hinging connection between said spout and said container, said lid portion and said guide wings forming a discharge chute for discharging the contents of the container when the spout is shifted to pouring position.

9. A pouring spout for containers comprising a top wall for closing the pouring opening when the spout is in closed position, depending side walls, cutting means on said side walls for cutting through the container when the spout is assembled, and flat stop lug extensions on said side walls close to said cutting means and cooperating therewith to form a hinge and adapted to lie flat against the inner container wall adjacent the pouring opening to permit maximum outward movement of said spout to pouring position.

DONALD G. MAGILL.