Aug. 21, 1923. 1,465,793

A. SCHILLING

DETACHABLE SPOUT FOR CONTAINERS

Filed July 11, 1921

Fig. 1.

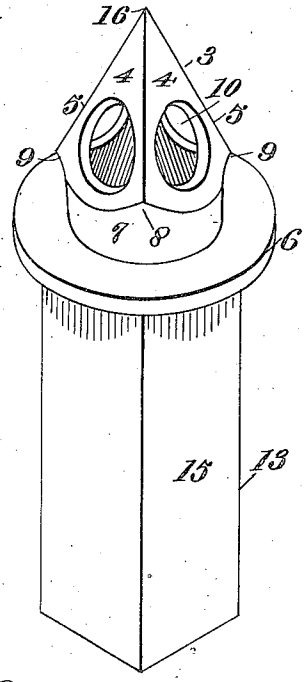


Fig. 3.

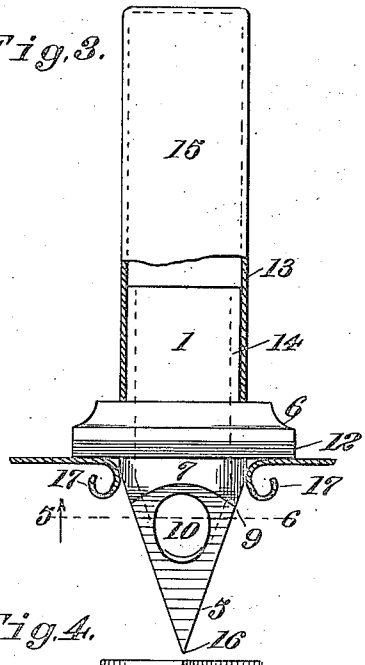


Fig. 2.

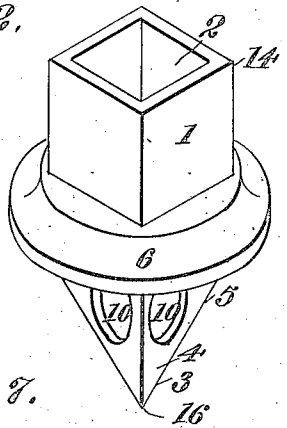


Fig. 4.

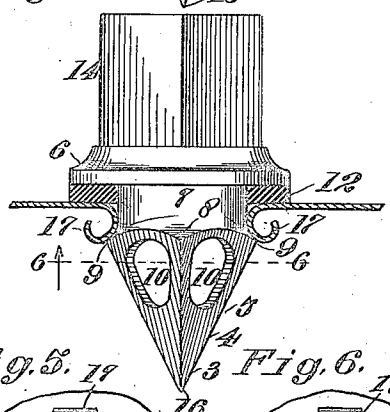


Fig. 5.

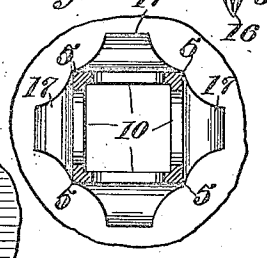


Fig. 6.

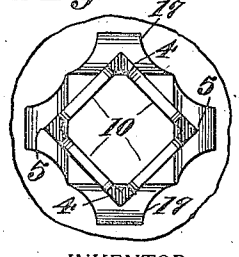
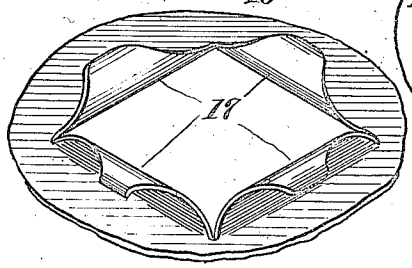


Fig. 7.



INVENTOR
A. Schilling
BY
Agnew & Totten
ATTORNEYS

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UNITED STATES PATENT OFFICE.

AUGUST SCHILLING, OF SAN FRANCISCO, CALIFORNIA.

DETACHABLE SPOUT FOR CONTAINERS.

Application filed July 11, 1921. Serial No. 483,748.

To all whom it may concern:

Be it known that I, AUGUST SCHILLING, a citizen of the United States, residing at the city and county of San Francisco and State of California, have invented certain new and useful Improvements in Detachable Spouts for Containers, of which the following is a specification.

Certain commodities are packed in vacuum in suitable containers to preserve the strength thereof, and this is particularly true in the packing of coffee. It is well known that a container of coffee, vacuum packed, will rapidly deteriorate and lose its strength and aroma after the container is opened and the proper closure is not provided therefor, and it is to overcome these objections particularly in connection with packages containing coffee, that the present invention is directed.

The present invention has for its principal object to provide a tubular spout provided with a puncturing point adapted for insertion through the end or body of a container, and which, during its insertion, cuts or severs the material, and provides its own receiving opening, the severed or cut material being curled back or rolled on the main portion to provide an anchoring flange for the spout. A further object is to provide a construction which permits the easy insertion and removal of the spout into and from operative position without cutting a disk to form the insertion opening, which is common in devices of this character now in use. A further object is to provide a handle or measuring cup, affording a closure for the spout and also affording a means for inserting the spout and removing the same from operative position.

The invention consists broadly in a tubular member open at one end and fashioned at its opposite end to provide a puncturing point and a cutting edge for assisting in the easy insertion of the point within the material. The body is flanged to provide a stop to limit the inserting of the same and is grooved adjacent the flange to provide a recess and shoulder for cooperating with the material acted on by the point in the formation of the opening, whereby the member is rigidly held in position, there being further provided a closure forming a handle, and a measuring cup for the spout.

With the above mentioned and other objects in view, the invention consists in the novel construction and combination of parts hereinafter described, illustrated in the accompanying drawings and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction within the scope of the claim may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

To more fully comprehend the invention, reference is directed to the accompanying drawings, wherein—

Fig. 1 is a view in elevation of the preferred embodiment of my invention in inverted position.

Fig. 2 is a view in elevation of the spout with the closure removed.

Fig. 3 is a view in elevation of the spout at the completion of its insertion within a receptacle wall.

Fig. 4 is a view similar to Fig. 3 with the spout in locked position.

Fig. 5 is a sectional view taken on line 5—6, Fig. 3.

Fig. 6 is a sectional view taken on line 6—6, Fig. 4.

Fig. 7 is an inverted plan view of a container illustrating the opening formed by the insertion of the spout and the manner of curling the material providing a reinforcement surrounding the opening.

In the drawings, 1 indicates a tubular body open at its upper end as at 2, and at its opposite end is provided with a relatively solid puncturing point 3, preferably polygonal in cross section with the meeting edges of the respective point faces 4 affording suitable cutting edges 5 extending longitudinally of the point to facilitate the insertion of the point through relatively stiff material.

The body 1 at the base of the point 3 is provided with an annular flange 6 affording a top or surface for limiting the insertion of the body within the surface, and immediately below the underside of said flange the body is provided with an annular groove 7 of a relatively large diameter, providing outwardly curved shoulders 8, one at the base of each edge 5, said shoulders affording locking projections 9 at the base of the point 3 for retaining the member in position in the receptacle.

The faces 4 of the polygonal point 3 is formed with one or more apertures 10 therein, which provide a communication through

the point into the tubular opening 11 in the body 1, affording a discharge for the contents of the receptacle into which the spout is inserted.

A suitable flexible washer or gasket 12 is adapted to rest on the undersurface of the flange 6 and affords a sealing means between the flange and the upper surface of the receptacle, as hereinafter described.

The upper end of the tubular member 1 is adapted to be closed by a tubular cup or shell 13 for positioning over the end 14 of the member 1 above the flange 6, and said member 13 and end 14 are preferably formed with one or more flat faces 15, whereby a rotative movement may be imparted to the member 1 to lock the same within the opening in the receptacle wall formed by the insertion thereof.

The device being constructed as described, it is inserted into a receptacle, preferably through the top wall or end thereof, in the following manner.

The member 13 is firmly grasped and the apex 16 of the point 3 is spotted in the end wall at a point adjacent its edge. Pressure is applied to the member 13 which forces the point 3 inwardly, causing edges 5 to cut the material forming the end wall, and the faces 4 on the continued insertion of the point roll said material inwardly and backwardly on itself, as at 17, until such time as the surface of the washer 12 contacts with the outer face of the receptacle wall. A slight rotation is then imparted to the member 13, which, in turn, slightly rotates the member 1 to position the portions 9 of the shoulder 8 beneath and in frictional engagement with the cut, curled portions 17 of the receptacle wall.

It will be apparent that the material removed by the point 3 in making its opening is rolled rearwardly, affording a yieldable retaining flange or reinforced wall surrounding the opening and to be engaged by the portion 9 of the shoulder 8 to lock the member 1 in position within its opening.

It will be apparent that on the container becoming empty, it is a simple matter for the house-wife to readily remove the spout therefrom, and it will be observed that the particular formation of the tapering pointed end of the spont enables the same to be readily inserted on the exercise of but little force, when the same is to be projected into the relatively soft top or closure of a hermetically sealed coffee can. It will also be apparent that the present detachable spout is adapted for use in connection with any package having sufficiently rigid walls capable of being punctured and of sufficient strength to support the spout and from which it is desired to pour the contents.

I claim:—

A detachable spout for containers, comprising a tube open at one end and having its opposite integral end tapered and polygonal in cross section, the sides of the tapered portion disposed at angles to each other with their meeting edges forming cutting blades, the sides of the tapered portion being provided with openings communicating with the interior of the tube, an integral flange extending annularly of the tube in spaced relation to the base of said tapered portion, the tube intermediate said flange and base of the tapered end being substantially circular in cross section providing a locking projection at the base of the meeting edges of each side of the tapered portion, a flexible washer on the underside of the flange, and a closure for the tube affording a means for imparting an axial movement thereto when desired.

In testimony whereof I have signed my name to this specification.

AUGUST SCHILLING.