

J. MORGAN & H. E. GRABAU.
DETACHABLE SPOUT FOR CONTAINERS.
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1,044,560.

Patented Nov. 19, 1912.

Fig. 1.

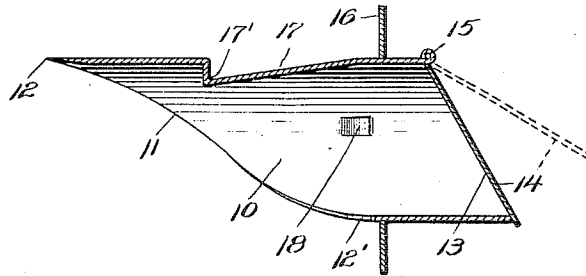


Fig. 2.

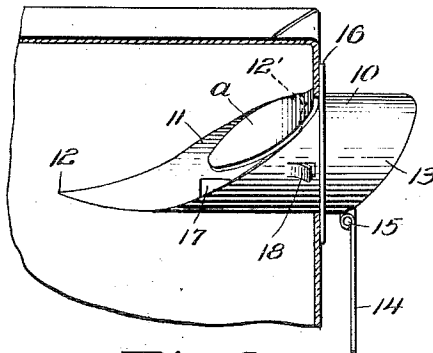


Fig. 3.

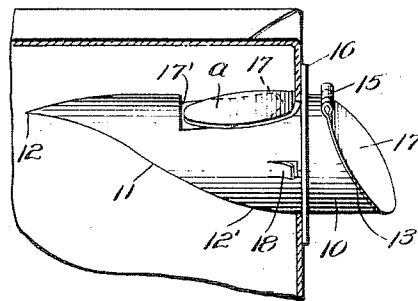


Fig. 4.

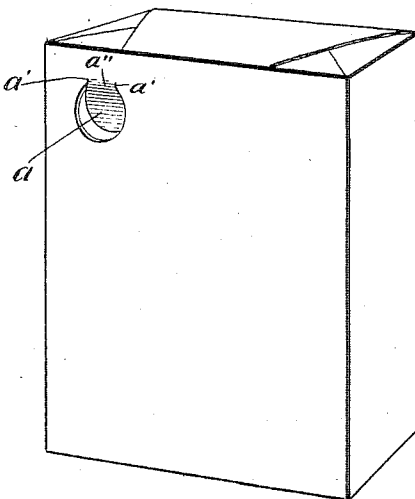


Fig. 5.

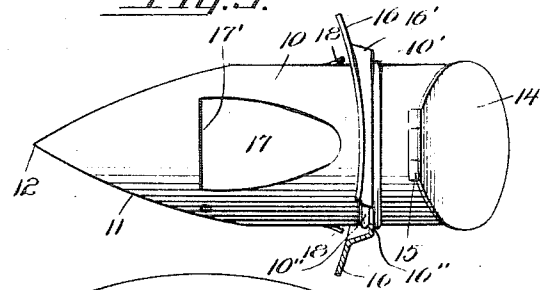
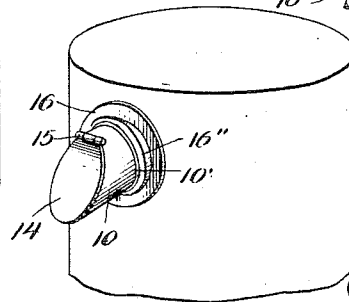


Fig. 6.



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UNITED STATES PATENT OFFICE.

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DETACHABLE SPOUT FOR CONTAINERS.

1,044,560.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, JOHN MORGAN and HANS E. GRABAU, a subject of the King of Great Britain and a citizen of the United States, respectively, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Detachable Spouts for Containers, of which the following is a specification.

This invention relates to detachable spouts for containers and is principally adapted for use in connection with paper boxes containing granular material, such as cereals, whereby the boxes may be readily opened and the contents discharged through the spout.

The object of the invention is to provide a detachable spout which is dust-proof, sanitary, simple in construction, inexpensive to manufacture and which provides a free opening for the passage of the contents of the container to which it is applied.

The invention is illustrated in the accompanying drawings, in which:

Figure 1 is a longitudinal section of one form of the invention. Fig. 2 is a perspective view showing the manner in which the device is inserted in the container. Fig. 3 is a view similar to Fig. 2 and showing the device in position in the container and ready to discharge the contents therefrom. Fig. 4 is a perspective view of a container showing the character of the opening made by the spout when inserted. Fig. 5 is a top plan of a modified form of the invention for use in connection with cylindrical containers. Fig. 6 is a perspective view of a cylindrical container showing the device illustrated in Fig. 5 applied thereto.

Referring to the drawings it will be seen that the invention comprises a cylindrical tube 10, one end of which is preferably cut on a bevel as indicated at 11 to form a cutting edge and a point 12. We prefer to have the portion 12' of the edge 11 left blunt for a purpose to be hereinafter described. The other end of the tube 10 is preferably cut on a bevel as indicated at 13, and is provided with a suitable closure 14 which is hinged to the tube at 15. The tube is provided with a suitable flange or collar 16 which may be attached thereto in any suitable manner as by soldering, as shown in Fig. 1 or the tube may be provided with spaced beads 10' and 10'' as shown in Fig. 5 with the flange 16 arranged between the

beads and adapted to turn on the tube 10. The tube 10 is provided with a depression 17 on the side opposite the cutting edge 11 for a purpose to be described later. The tube may also be provided with tongues 18 which are preferably upset from the metal of the tube to form locking devices to hold the tube in position.

In the form shown in Fig. 5 it will be seen that the flange 16' is formed to fit the surface of a cylindrical container as shown in Fig. 6. In this form the central portion of the flange 16 is cupped as indicated at 16' to provide a flat portion 16'' to fit between the flanges 10' and 10''.

The device is preferably inserted in the container at a point adjacent one corner thereof as shown in Fig. 2 with the point 12 and the hinge 15 downward. As the device is forced through the side of the container it will be readily understood that the cutting edge 11 will cut a tongue *a* and the blunt portion 12' of the edge 11 will bend the same inward. When the spout has been forced into the container until the flange 16 engages the side thereof the spout is given a half turn to bring it into the position shown in Fig. 3. In this position it will be seen that the tongue *a* will lie against the side of the tube and in the depression 17, the inner edge of the tongue *a* engaging the side 17' of the depression 17 and serving as a lock to prevent the spout from working out of its proper position. The ends of the tongues 18 will engage the side wall of the container on the inner side thereof and also serve as a locking means to hold the spout in position. From Fig. 3 it will be seen that the closure 14 for the spout will be normally closed and also that there is a free opening provided through the spout for the passage of the contents of the container, it only being necessary to tip the container to the proper angle in order to discharge the contents thereof.

From Fig. 4 it will be observed that when the spout is first inserted in the container it will make a cut therein, in the form of a circular arc, and make slight tears at the ends of the cut, as indicated at *a'* and leave the tongue *a* attached to the wall of the container by a small strip *a''* owing to the edge 11 having the blunt portion 12'. We prefer to have the cut made in this manner in order to prevent the part *a* from being de-
ing detached from the side wall of the con-

tainer and thereby interfere with the passage of the contents through the spout. We also prefer to have the cut thus formed so as to provide the tongue *a* in order to utilize the latter as a locking device to hold the spout in position as above described.

It will be understood that various changes may be made in the minor details of construction of the device within the scope of the claims and we therefore do not wish to be limited to the precise details shown and described.

Having thus described the invention what is claimed as new is:

1. In a device of the class described, a tubular member of substantially cylindrical form having one end thereof cut on a bevel to form a cutting edge, and a flange arranged on the tubular member and curved about an axis extending transversely of the tubular member, said tubular member being so constructed that it is adapted to be forced through the wall of a container and then turned around therein, as and for the purpose described.

2. In a device of the class described, a substantially cylindrical tubular member having one end thereof cut on a bevel to form a cutting edge and a cutting point, and the other end provided with a closure, said tubular member having an exterior flange, and a depression in the wall thereof forming a transverse abutment between said flange and said point.

3. In a device of the class described, a substantially cylindrical tubular member having one end thereof cut on a bevel to form a cutting edge and a cutting point and the other end provided with a closure, said tubular member also having a flange on the exterior thereof and adapted to turn thereon, and an outwardly projecting locking device between said flange and said cutting edge.

4. In a device of the class described, a substantially cylindrical tubular member having one end thereof cut on a bevel to form cutting edges and a cutting point, and the other end thereof provided with a closure, said tubular member also having an exterior flange thereon, a depression in its

wall forming a transverse abutment between said flange and said point, and outwardly projecting locking means adjacent said flange and between the latter and said cutting edge.

5. In a device of the class described, a substantially cylindrical tubular member having one end thereof cut on a bevel to form a cutting edge and a cutting point, and the other end provided with a closure having a hinge connection with the tubular member, and said tubular member being also provided with an outwardly projecting flange, a depression providing an exterior transverse abutment facing away from said point, and outwardly projecting locking means adjacent said flange and between the latter and said cutting edge.

6. In a device of the class described, a tubular member of substantially cylindrical form having one end thereof cut on a bevel to form a cutting edge, and a flange curved about an axis extending transversely of the tubular member and arranged on the tubular member and adapted to be turned relative to the latter, said tubular member being so constructed that it is adapted to be forced through the wall of a container and then turned around therein, as and for the purpose described.

7. In a device of the class described, a tubular member of substantially cylindrical form having one end thereof cut on a bevel to form a cutting edge, and also having a plurality of outwardly arranged axially spaced projections, and a flange arranged on the tubular member between said projections and adapted to be turned relative to the tubular member; said tubular member being so constructed that it is adapted to be forced through the wall of a container and then turned around therein, as and for the purpose described.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN MORGAN.
HANS E. GRABAU.

Witnesses:

E. R. FITZ MAURICE,
HERMAN F. LOOS.