

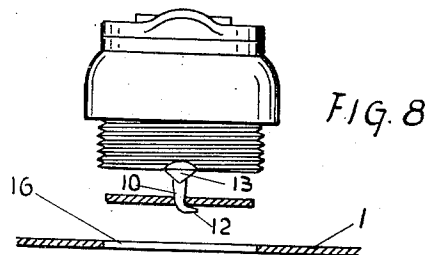
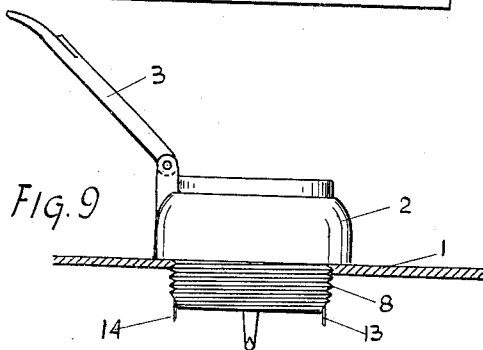
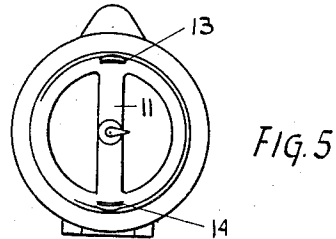
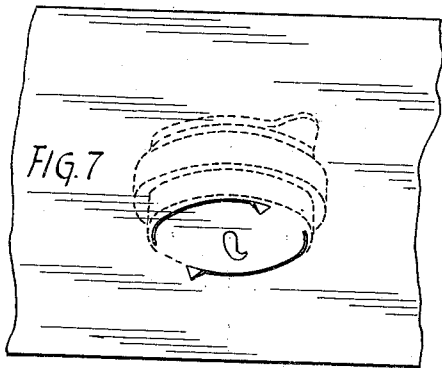
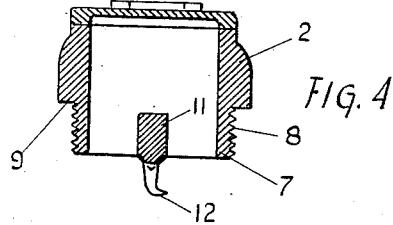
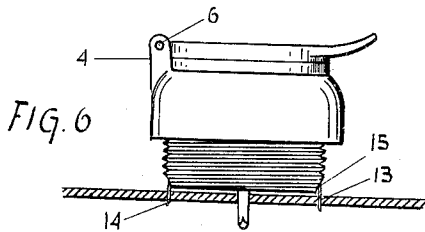
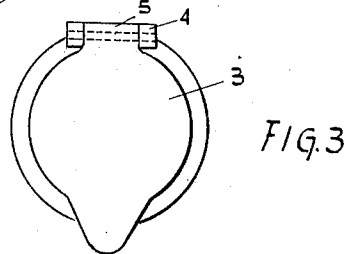
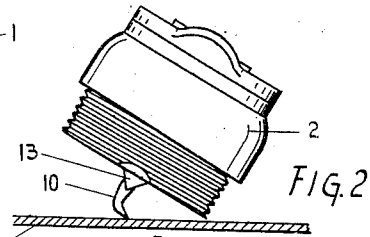
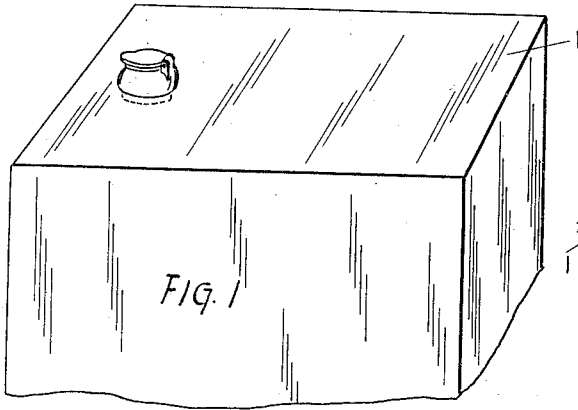
July 26, 1932.

W. J. THOMPSON

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REMOVABLE PACKAGE MOUTHPIECE

Filed March 12, 1931



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UNITED STATES PATENT OFFICE

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REMOVABLE PACKAGE MOUTHPIECE

Application filed March 12, 1931. Serial No. 522,023.

This invention relates to a device useful for the purpose of discharging the contents of packages. More particularly, the invention is concerned with a device which may be used on carboard or fiber board boxes or containers for such divers substances as soap, salt, sugar, cereals, seeds or the like. Such containers come in a sealed manner and the device contemplated by the invention is one which may be used as an outlet for a container of substance and is removable therefrom so that it can be readily employed with other new containers. The device really constitutes a removable outlet fixture for such containers. The device preferably includes means which by suitable manipulation of the device it may form its own aperture in the sealed container. These objects together with other objects and advantages will appear as the description progresses.

Fig. 1 is a perspective view of the top of a container showing the device in operative position.

Fig. 2 is a view illustrating how the device may first be applied to a container.

Fig. 3 is a top plan view thereof.

Fig. 4 is a vertical section taken through the device.

Fig. 5 is a bottom plan view.

Fig. 6 shows the device applied to a container but before the formation of an aperture in the container.

Fig. 7 is a perspective looking from underneath the material of the container illustrating the device forming its own opening or aperture.

Fig. 8 is a view in illustration of how the cut-out part may be removed to provide the aperture.

Fig. 9 illustrates the device attached to a container and ready for use.

A container of cardboard, fiber board or the like for holding a substance, such as for example, one of the substances above mentioned, is shown at 1 and, as appreciated by those familiar with such matters, these containers are delivered in a sealed manner. The outlet fixture may advantageously comprise a hollow body 2 and it may be provided with a hinged top 3 which is hinged to the

body as by means of ears 4 thereon with a fulcrum pin taken through the ears 4 and boss 5 on the cover; the fulcrum pin is shown at 6.

The body is provided with a portion preferably reduced in diameter, as illustrated at 7, and provided with screw threads 8 or other suitable corrugated or roughened surface. This affords, accordingly, a shoulder 9. There is a central pivot or centering device at 10 which may be carried by a bridge 11. This is for the purpose of piercing the container and it preferably has an end 12 disposed at an angle. Also the device is equipped with one or more cutting instruments, of which there are preferably two, diametrically opposite each other and carried by or at the lower edge of reduced part 7. In the drawing there are two knives or cutting instruments shown as will be seen at 13 and 14. These cutting knives may be pointed as shown in Figs. 2 and 8 for piercing the container and they are preferably of curved formation as shown in Fig. 5, their curve preferably being substantially that of an arc taken around the pivot member 10 as a center.

The device is employed as follows: It is first taken and applied to a container similar to the manner illustrated in Fig. 2 and the pointed member 12 is forced through the container wall; then the device is preferably positioned so that it stands perpendicular as regards the pierced wall and forced against the container so that the knives 13 and 14 pierce the container wall after the manner illustrated in Fig. 6. Following this, the device is rotated at which time the knives 13 and 14 cut the container wall as illustrated in Fig. 7. Where two cutting knives are provided one half rotation is all that is necessary. This severs a piece from the wall of the container which may then be removed by lifting the device as shown in Fig. 8, the angled end 12 serving to remove the severed piece or plug leaving in the wall an aperture 15. The severed piece may now be removed from the centering member 10 and the device inserted in the aperture 15, as by means of screwing or forcing the threaded portion 7 into the

aperture preferably until the shoulder 9 seats against the top of the container. It will be noted that the knives are located radially inward slightly from the outer boundary of the reduced part 7 so that the aperture which is formed is slightly less in diameter than the member 7. Accordingly, the member 7 fits tightly in the aperture and when screwed into the same its threads serve to establish a threaded formation on the edges of the aperture. The final position is as substantially illustrated in Fig. 9. The device is now ready for use and the container may now be picked up and the contents thereof poured out through the outlet fixture. The hinged lid may be freely acting upon its pivot so that it will normally close as shown in Fig. 1, but as soon as the container is inverted the lid will drop open permitting the contents to pass therethrough. The hinged lid serves to keep the container tightly closed to protect the remaining contents. This is advantageous for edible things such as cereals, or for salt wherein it is desirable to keep out moisture, but the hinged lid may be omitted if desired, especially where the outlet fixture is to be used for packaged soap or the like. The device may be made of various materials such as metal, as for example, aluminum or suitable alloy, or it may be made of a hard rubber, phenolic condensation product, or other composition in which event the cutting knives may be made of steel inserts and also, if desired, metal may be employed for the centering member 10, the lid, fulcrum pin, and other parts.

It will be noted that the material may be cut out as at 15 around the base of the knives. This permits of exposing the cutting edges sufficiently to facilitate application of the stone to sharpen them.

I claim:

1. An outlet fixture device for use in dispensing solid substance in relatively finely divided form, from containers of fiber board or the like, comprising a body of tubular form, the circular walls of which are closed and the ends of which are open, said body at one end having a portion which is threaded or roughened on its exterior surface, and having portions adjacent thereto of greater diameter whereby an abutment is formed adjacent the said threaded or roughened end, a piercing element means supporting the piercing element substantially on the axis of the hollow body so that the same projects beyond the said roughened end of the body, a cutting knife carried by the body portion at the said roughened end and projecting in an axial direction therefrom, said piercing element being adapted to be inserted through the fiber board container and said body being adapted to be rotated whereby the knife severs a disk from the said container, said roughened end of the body being adapted to

be inserted in the aperture left by the severed disk with the said abutment lying against adjacent parts of the container, and a movable closure member for closing the end of the hollow body opposite the end having the piercing element and knife.

2. An outlet fixture device for use in dispensing solid substance in relatively finely divided form, from containers of fiber board or the like, comprising a body of tubular form, the circular walls of which are closed and the ends of which are open, said body at one end having a portion which is threaded or roughened on its exterior surface, and having portions adjacent thereto of greater diameter whereby an abutment is formed adjacent the said threaded or roughened end, a piercing element, means supporting the piercing element substantially on the axis of the hollow body so that the same projects beyond the said roughened end of the body, said piercing element being substantially of tapered form and decreasing in cross-dimensions substantially from its point of support to its free end and said free end being of hooked formation a pair of diametrically opposed cutting devices carried by the said roughened end of the body and projecting in an axial direction therefrom, said piercing element being adapted to be inserted through the fiber board container and said body being adapted to be rotated whereby the knives sever a disk from the said container, said hooked end being adapted to remove the severed disk upon withdrawal of the body from the container, said roughened end of the body being adapted to be inserted in the aperture left by the severed disk with the said abutment lying against adjacent parts of the container, and a movable closure member for closing the end of the hollow body opposite the end having the piercing element and knives.

In testimony whereof I affix my signature.

WILLIAM J. THOMPSON.