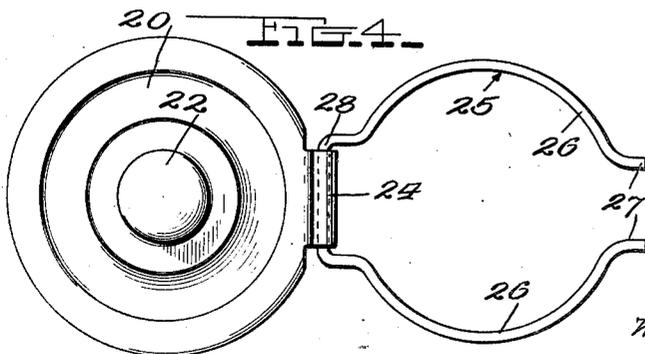
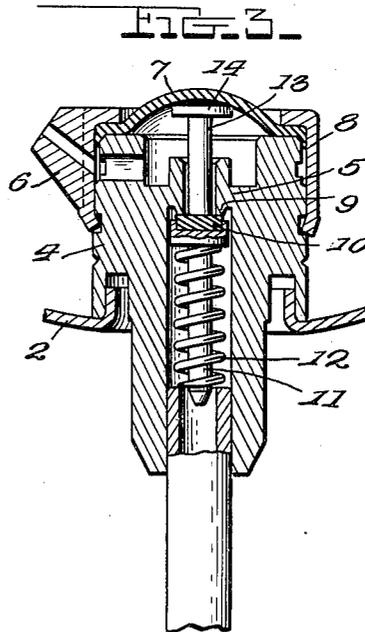
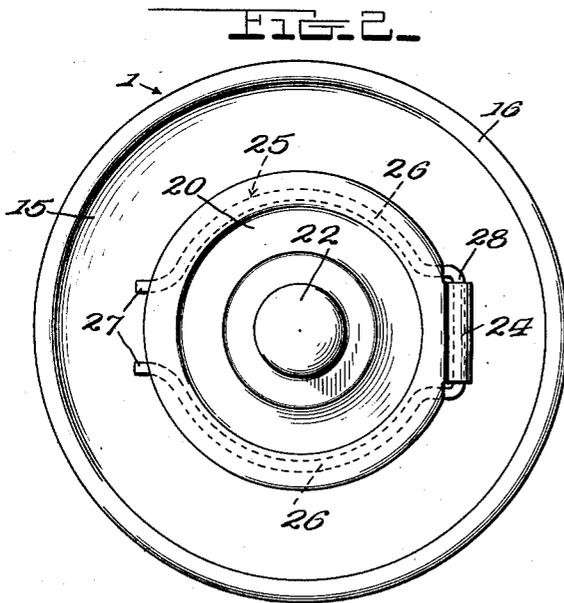
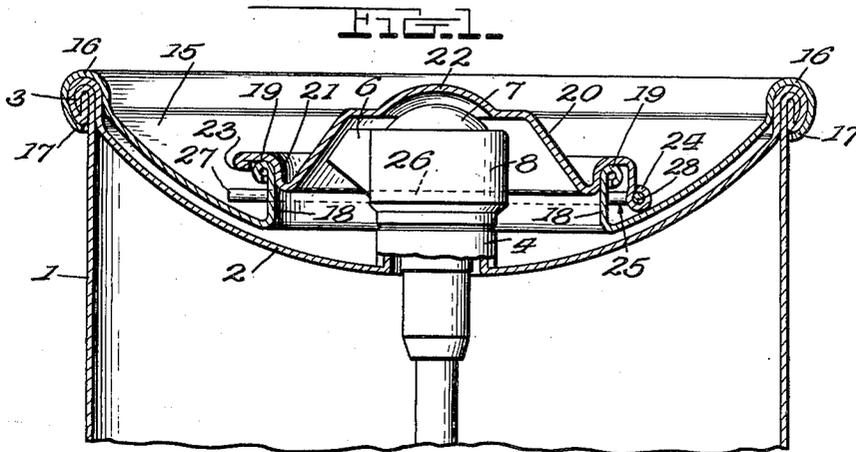


Sept. 22, 1953

J. HENCHERT  
PROTECTOR FOR A DISPENSING DEVICE FOR LIQUID PRODUCTS  
RETAINED UNDER PRESSURE IN A CONTAINER  
Filed July 13, 1950

2,653,053



INVENTOR.  
*John Henchert,*  
BY  
*Mason, Porter, Diller & Stewart*  
*Attys.*

# UNITED STATES PATENT OFFICE

2,653,053

## PROTECTOR FOR A DISPENSING DEVICE FOR LIQUID PRODUCTS RETAINED UNDER PRESSURE IN A CONTAINER

John Henchert, Chicago, Ill., assignor to Conti-  
nental Can Company, Inc., New York, N. Y., a  
corporation of New York

Application July 13, 1950, Serial No. 173,646

1 Claim. (Cl. 299—95)

1

The invention relates to new and useful im-  
provements in a protector for a dispensing de-  
vice for liquid products retained under pressure  
in a container. In my copending application  
Serial No. 39,525 filed July 19, 1948, now Patent  
No. 2,623,785, there is shown a dispensing con-  
tainer for products of the above type wherein  
the valve is opened for dispensing purposes by pres-  
sure applied to a flexible disk forming a part of  
one of the walls of the valve body. The disk is  
exposed and if pressure is accidentally applied  
thereto, the valve will be opened and the prod-  
uct dispensed until the disk is released or the  
pressure within the container is exhausted.

An object of the present invention is to pro-  
vide a protective means permanently secured to  
the container and covering the flexible disk to  
prevent pressure from being accidentally ap-  
plied thereto which protective means includes a  
removable member overlying the flexible disk and  
dispensing nozzle for giving access thereto for  
dispensing purposes.

A further object of the invention is to provide  
a protective means for a dispensing container of  
the above type which includes a member con-  
forming in shape to the outer face of the con-  
tainer end and permanently attached to the  
end seam, which member has a central opening  
surrounded by an upstanding neck within which  
is disposed the valve body and flexible disk, said  
protective means also including a cover member  
pivotally attached to the neck and overlying the  
disk for giving access thereto for dispensing pur-  
poses.

In the drawings, which show by way of illus-  
tration one embodiment of the invention:

Figure 1 is a vertical sectional view of a dis-  
pensing container with the improved protective  
means applied thereto;

Figure 2 is a plan view of the same;

Figure 3 is a vertical sectional view through the  
valve body showing the arrangement of the flex-  
ible disk which opens the valve when pressure is  
applied thereto;

Figure 4 is a plan view of the cover member  
and the hinging means associated therewith de-  
tached from the container.

The container to which the invention is ap-  
plied includes a body portion 1, an end portion 2  
secured to the body portion by a double seam 3  
of the usual construction. This end portion 2  
is concave as viewed from the outside of the con-  
tainer. At the center thereof is an opening and  
attached to the container end at said opening  
is a valve body 4. The valve body has an open-

2

ing extending from the lower end thereof to the  
upper end and a partition member 5 separates  
this opening into two chambers, an upper and  
a lower chamber. A nozzle 6 is attached to the  
valve body and has an opening leading to the  
upper chamber. The upper side of the upper  
chamber is closed by a flexible disk 7 secured  
thereto by a ring member 8 carrying the nozzle 6.

At the lower side of the partition 5 is a valve  
seat 9 with which a valve 10 makes contact.  
Within the lower chamber is a rod 11 surround-  
ed by a spring 12 which is placed under tension  
and operates to hold the valve normally closed.  
Within the upper chamber is a stem 13 having  
a flat head 14 which lies close to the inner sur-  
face of the flexible disk 7. When pressure is  
applied to the disk the valve will be opened and  
the product under pressure from the container  
will flow into the upper chamber and be dis-  
pensed through the opening in the nozzle. For  
a further detailed description of the dispensing  
device reference may be made to the copending  
application supra.

The specific features of the dispensing nozzle  
form no part of the present invention. The  
broad features, however, of a dispensing device  
having a valve which is opened by finger pressure  
applied to a flexible disk forming a wall of the  
valve body does have an important bearing on  
the present invention which relates to a protec-  
tive means permanently secured to the container  
and covering this flexible disk to prevent acci-  
dental pressure being applied thereto. This pro-  
tective means includes a member 15 which is  
shaped to conform to the outer surface of the  
container end 2; said member 15 extends over  
the end seam as indicated at 16 and is provided  
with a depending flange 17 which is adapted to  
be turned underneath the end seam for perma-  
nently attaching this member 15 to the con-  
tainer. The member 15 has a relatively large  
central opening surrounded by an upstanding  
neck 18 which is rolled outwardly into a hollow  
bead 19. When this member 15 is attached to  
the container the valve body 4 and the flexible  
operating disk 7 are disposed within this neck  
portion. These parts are preferably dimensioned  
so that the flexible disk lies slightly below the  
plane passing tangentially across the upper ex-  
treme of the end seam. Associated with this  
member 15 is a cover member 20 which has a  
depression in the outer face thereof forming a  
friction wall 21 which is adapted to engage with-  
in the neck 18.

The central portion of the cover extends in-

3

wardly and upwardly and the central portion is domed as indicated at 22 so as to overlie the flexible disk 7. The flange of the cover is turned underneath as indicated at 23 for the purpose of strengthening the cover. At one side of the cover there is a projecting portion 24 which is rolled into a bead and is adapted to receive a bracket member 25. The bracket member 25 extends straight through the rolled bead 24 and is provided with arms 26, 26 having the ends thereof 27, 27 turned outwardly. These arms are adapted to embrace the neck portion of the member 15 and thus the cover is attached to the neck portion so that it may swing on the pintle portion 28 of the bracket member 25. When the cover is in closed position as shown in Figure 1, it will be retained in this position by the friction wall 21 engaging the inner surface of the neck 18. In this closed position the domed portion 22 of the cover is spaced slightly away from the flexible disk 7.

The cover is made of comparatively heavy metal so that if there is accidental contact with the cover it will not spring so as to flex the disk and open the valve. The cover is likewise slightly below a plane tangential to the end seam so that one can be stacked on another without pressure being applied to the cover.

A dispensing container with this protective means applied thereto can be packed in a hand-bag or packed for shipment and may be stored without fear of the flexible disk being accidentally pressed upon so as to open the valve and bring about undesirable dispensing of the liquid contents therein. When it is desired to use the container for dispensing the liquid therein the hinged cover is swung on its pintle to open posi-

4

tion and this gives ready access to the flexible disk and the nozzle so that dispensing can be accomplished as desired.

It is obvious that minor changes in the details of construction and the arrangement of parts may be made without departing from the spirit of the invention, as set forth in the appended claim.

I claim:

10 A dispensing device for liquid products retained under pressure in a container comprising a valve body, a dispensing nozzle carried thereby, a valve, a flexible disk forming a wall of the valve body, devices within the valve body operated by pressure applied to the disk for opening the valve, and a protective means permanently secured to said container and covering said disk to prevent accidental pressure thereon, said protective means including a member conforming in shape to the outer face of the container end and permanently attached to the end seam, said member having a central opening surrounded by an upstanding neck within which is disposed said valve body and flexible disk and a cover member pivotally attached to said neck and overlying the disk for giving access thereto for dispensing purposes.

JOHN HENCHERT.

References Cited in the file of this patent  
UNITED STATES PATENTS

Number	Name	Date
1,657,562	Ballou -----	Jan. 31, 1928
1,800,156	Rotheim -----	Apr. 7, 1931
2,080,728	MacNeill et al. ----	May 18, 1937