

June 29, 1943.

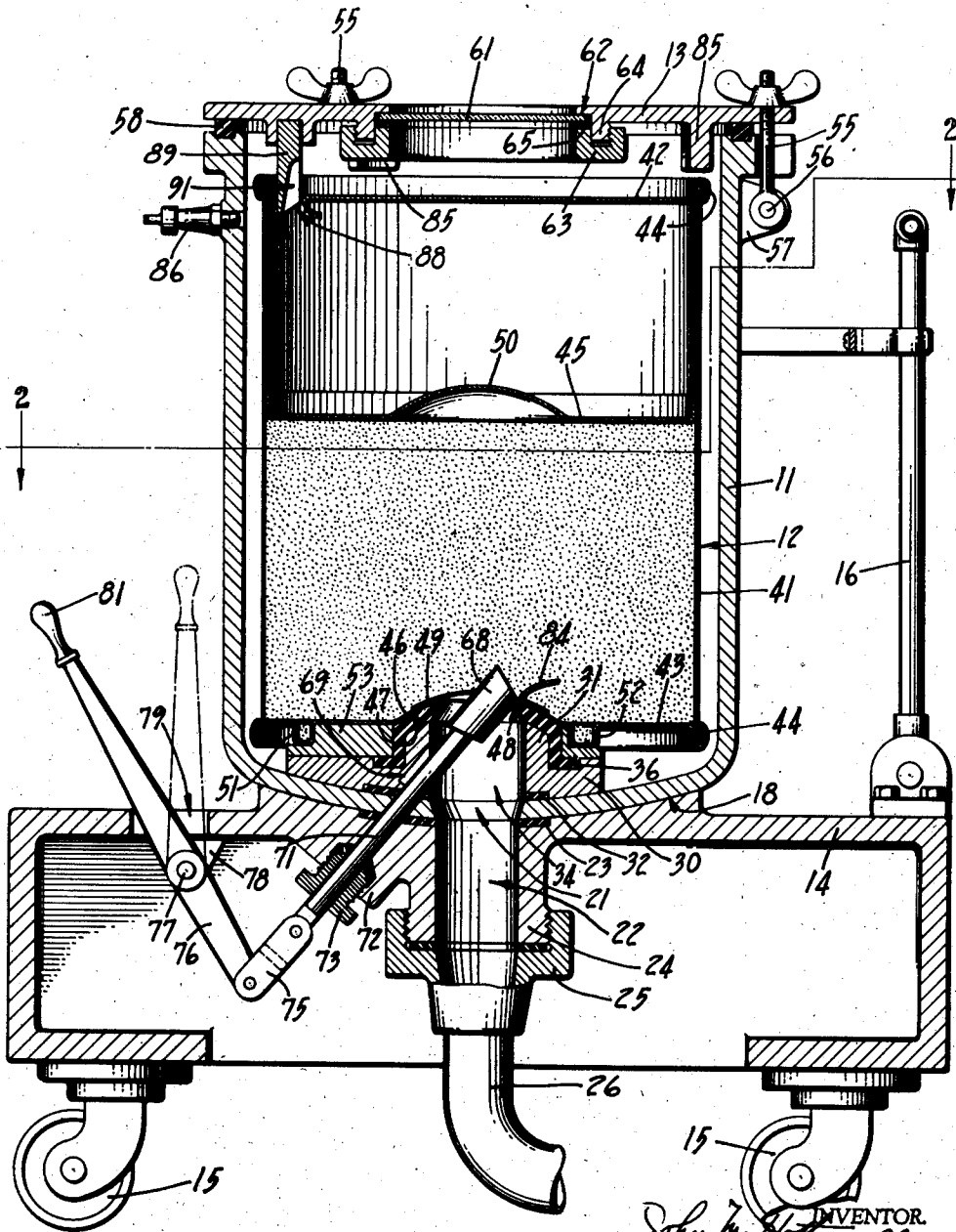
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LUBRICATING DISPENSER

2,322,808

Filed May 21, 1940

2 Sheets-Sheet 1

Fig 1



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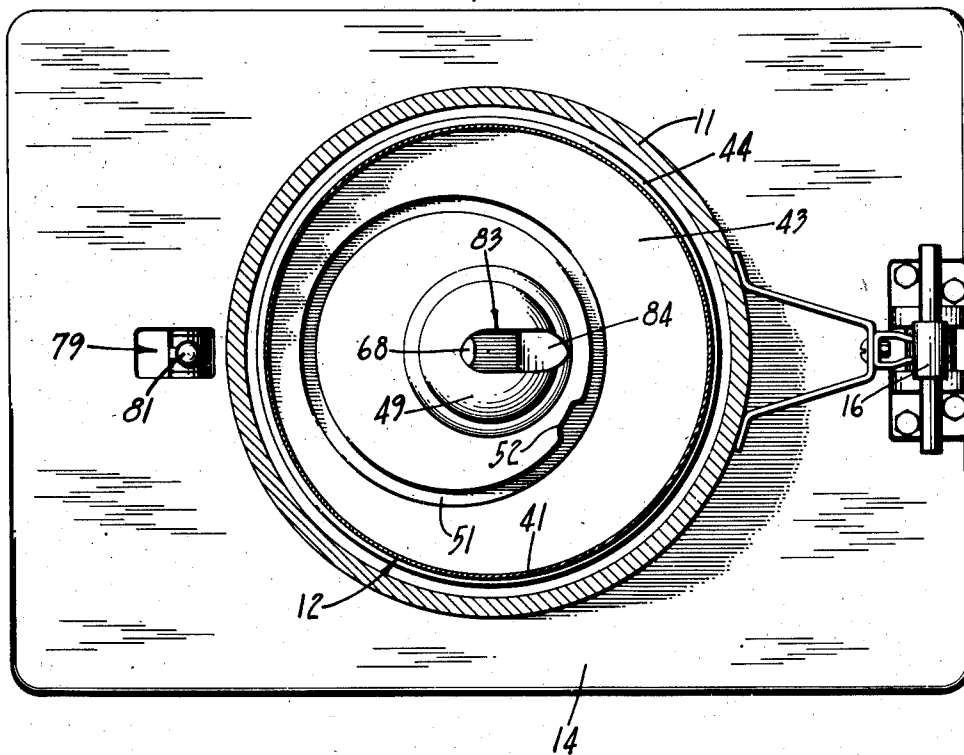
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LUBRICATING DISPENSER

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2 Sheets-Sheet 2

Fig 2



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LUBRICATING DISPENSER

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3 Claims. (Cl. 221-47.1)

The present invention relates to lubricating dispensers and the like in which a factory sealed container holding the lubricant may be inserted into the dispenser and has particular reference to a dispenser which will receive and retain only a certain kind of container which may be opened for dispensing purposes only if it is properly received in the dispenser.

In the sales of lubricants such as automobile oils and greases packed in containers and delivered by way of enclosed dispensing devices, a practice which unfortunately is indulged in at some service stations is to deliver to the customer a grade of lubricant which is of an inferior quality to that which he orders. Unless the customer is watchful of the attendant he is not assured that he receives what he asks for.

The present invention contemplates overcoming this difficulty by providing a dispensing device which will take only factory sealed containers having a special key feature which may be arranged so that only a particular brand of lubricant may be dispensed from the device. Thus a customer stopping at a service station which sells a particular brand of products and having dispensers which are arranged to retain only containers holding that particular brand of products, will be assured that he gets what he asks for. In some respects, this is an improvement over the Elmer L. Nall United States Patent 2,026,588, issued January 7, 1936.

An object therefore of the invention is the provision of a dispensing device adapted to receive a factory sealed container wherein a fixed key feature in the dispenser will prevent the use of any other character of container excepting that which the dispenser is adapted to receive and retain so that the customer will be assured of receiving the product of the company using such a special container.

Another object is the provision of such a dispensing device wherein the container may be opened for dispensing purposes after it is in position in the dispenser so that spilling of the container contents will be prevented during insertion of the container into the dispenser.

Another object is the provision of a dispensing device of this character wherein provision is made for inspection of the container while in the dispenser so that the brand mark of the product may be visible at all times.

Another object is the provision of such a dispensing device which is portable and of a construction which is adapted to retain containers of large enough capacity to hold five gallons or

more of lubricant and which provides improved features not found in the dispenser of the Nall patent mentioned above.

Numerous 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 preferred embodiment thereof.

Referring to the drawings:

Figure 1 is a vertical sectional view of a dispensing device embodying the instant invention, the view illustrating a container in place within the device, the container being shown in section; and

Fig. 2 is a horizontal cross section taken substantially along the broken line 2-2 in Fig. 1.

As a preferred embodiment of the invention the drawings disclose a dispensing device of the carriage or portable type which includes a cylindrical shell or hollow casing 11 adapted to receive a factory sealed container 12 of lubricant to be dispensed. The casing is provided with a top cover plate 13 and is carried on a base 14 having wheels 15 and a handle 16 for moving the device from place to place. The bottom of the casing 11 is preferably convex in cross section and is secured in any suitable manner in a concave seat 18 formed in the base 14.

The bottom of the casing is formed with a dispensing opening 21 which aligns with an opening 22 formed in the base 14. A gasket 23 is interposed between the casing 11 and its seat 18 and surrounds these openings. The opening 22 extends down through a depending boss 24 which is formed integrally with the base. The lower end of the boss is threaded and carries a coupling 25 having a flexible hose 26 connected thereto for discharge of the lubricant.

Inside the casing 11 in the bottom thereof there is a container support plate 30 which is secured in place in any suitable manner and which is formed with a raised rounded crown 31. A gasket 32 is interposed between the plate and the bottom of the casing around the dispensing opening 21. The plate is formed with an opening 34 which is in alignment with the opening 21. The plate also carries a resilient gasket 36 which extends above the plate as an arch which is in engagement with the crown 31 around the opening 34 and is adapted to constitute a seal with the container 12 when it is in place in the casing.

The container 12 is preferably a sheet metal container comprising a cylindrical body 41 hav-

ing top and bottom closures 42, 43 secured there-
to in suitable seams 44. Inside the container
there is a follower plate 45. In the bottom close-
ure 43 there is an inwardly extending dome
shaped wall section 46 which sets off a recess
47. This wall section is formed with a dispens-
ing aperture 48 which is sealed with a frangible
disc 49 adapted to be broken when in proper
position within the dispenser to dispense the
lubricant from the container. The follower plate
45 is formed with a similar dome shaped wall
section 50 which conforms to the contour of the
wall section 46 so that the plate may follow down
to the bottom of the container.

In order to associate the container with a partic-
ular brand of product a key feature is formed
in its bottom closure 43. This feature includes
a circular depending channel bead 51 which is
formed eccentrically of the bottom diameter of
the container. At one place in the circular chan-
nel there is an enlarged boss section 52.

The dispensing device which is adapted to re-
ceive the container is provided with a cooperating
key plate 53 which conforms to the contour of
the eccentrically disposed channel bead 51 of the
container bottom. Since the boss section 52 in
the container bottom may be located in a num-
ber of places around the circular channel bead
51 either on the inside or the outside of the bead,
a number of combinations may be readily made.
Corresponding combinations may also be made
in the key plate. Each combination may be
assigned to a different brand of product but
only containers having the combination which
matches the key plate in the dispenser may be
used in that particular dispenser.

Thus a dispenser adapted to dispense a certain
brand of grease will have a key plate 53 in its
casing 11 which will match the bottom of the
container in which such a particular brand of
grease is packed. Only that container will fit
onto the plate 53 and will make contact with the
sealing gasket 36 to prevent leakage. Hence no
other container can be used in that dispenser.
The customer is thereby protected against the
substitution of inferior products. To make sure
that the plate 53 cannot be maliciously altered
and to thus make it tamperproof, it is perman-
ently secured to the container support plate 30
around the sealing gasket 36 in the bottom of
the casing 11.

With the container in place in the casing 11
the cover plate 13 is positioned on top of the
casing and is secured by wing nut bolts 55. These
bolts are carried on pivot pins 56 pivotally
mounted in lugs 57 formed on the outside of
the casing at intervals around its cylindrical
wall. A resilient gasket 58 is interposed between
the cover plate and the upper edge of the casing
to provide a hermetic joint between these parts.

Provision is made for visibly inspecting the
container which is locked in the dispenser. For
this purpose there is a glass window 61 in the
cover plate 13. The window is preferably circular
and is disposed in a seat 62 formed in the plate.
A locknut 63 threaded onto a shoulder 64, which
depends from the cover plate, holds the window
in place against its seat and a gasket 65 inter-
posed between the window and the locknut forms
a hermetic joint around the window.

After locking the container in the casing 11
the frangible disc 49 in its bottom closure 43 is
broken to permit dispensing of the lubricant.
Breaking of the disc is preferably brought about
by a cutting head 68 which is disposed in a recess

69 formed in the container supporting plate 30
adjacent its dispensing opening 34. The cutting
head is formed on a stem 71 which extends at
an angle down through the support plate 30, the
bottom of the casing 11, a boss 72 formed on the
base 14, and through a stuffing box nut 73 secured
in the boss.

The lower end of the stem 71 extends beyond
the stuffing box nut 73 and is connected by a link
75 to an operating lever 76. The operating lever
is mounted on a pivot pin 77 carried in a lug 78
formed on the base 14. The lever extends up
through a slot 79 in the base 14 and its upper
end is formed with a handle 81 which is con-
veniently located for manual operation.

By actuating the lever 76 in the proper direc-
tion the cutting head 68 is moved upwardly out
of its recess 69 and is forced through the frangi-
ble disc 49 in the bottom of the container. The
head, cutting through the disc, forms a dispens-
ing opening 83 (Fig. 2) therein and bends the
cut-away portion of the disc, which forms a tab
84, back out of the way as shown in Fig. 1. Dur-
ing this cutting operation the container is held
against upward displacement by lugs 85 which
extend down from the cover plate 13 and engage
against the top seam 44 of the container. These
lugs will also engage a container which does not
fit the key plate 53 and thus prevent closing
down of the cover plate when an attempt is made
to fit the wrong container into the dispenser.

The contents of the container is forced out
through the opening 83 in the frangible disc 49
and passes through the openings 34, 21, 22 in the
dispenser and is conveyed by way of the flexible
hose 26 to the place where it is to be used. This
dispensing action is preferably brought about by
air pressure. For this purpose there is provided
an air inlet valve 86 which is threaded into a
side of the casing 11 and which has communica-
tion with the interior of the casing. This inlet
valve may be connected by way of a flexible hose
to a suitable source of compressed air.

Compressed air entering the casing 11 sur-
rounds the container and enters it through a
vent hole or aperture 88 which is punched in the
top closure 42. This hole may be punched in
the container top with any suitable instrument
before the cover plate 13 is bolted into position
on the casing or if desired the hole may be made
automatically when the cover plate is being placed
in final position. For this latter purpose there
is provided a punch 89 which is fixed in the cover
plate 13 and depends therefrom. The punch is
formed with a sharp point so that it will readily
pierce the container top. A groove 91 formed
in the side of the punch permits the compressed
air to pass into the interior of the container while
the punch remains in the hole or aperture 88
in the container top.

Compressed air entering the container exerts
its force on the follower plate 45 and thus pushes
the plate down against the lubricant in the con-
tainer. It is this action that forces the lubricant
out into the dispensing hose 26 as hereinbefore
explained. When the follower plate 45 nears the
bottom of the container it presses against the
tab 84 made when the frangible disc 47 is cut
through and as the plate descends it forces the
tab down flat against the bottom of the container.
This permits the follower plate to descend to the
very bottom of the container and thus com-
pletely empty the container.

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 sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A device for dispensing the contents of closed sealed containers having an end wall of predetermined configuration, comprising a closed casing into which a sealed container is adapted to be inserted and fully enclosed, said casing having a dispensing outlet in register with a dispensing opening made in the container, normally retracted manually operative movable cutting means carried by said device for producing said container dispensing opening, a cover for hermetically confining the container in the casing and having means thereon for cutting a venting aperture in said container when the cover is forced home into sealing position, a compressed air inlet in said casing for admitting air into the casing and into the container through said aperture to force the container contents out through its dispensing opening and through the dispensing outlet in the casing, and a key plate permanently secured in the bottom of said casing and having a configuration conforming to and fitting the said predetermined end wall configuration of the container, so that only containers having such predetermined end wall configuration will fit into dispensing position in the casing of said dispensing device.

2. A device for dispensing the contents of closed sealed containers having a wall of predetermined configuration, comprising a casing into which a sealed container is adapted to be inserted and fully enclosed, a cover for closing said casing with a container in fully inserted position therein, said casing having a dispensing outlet in registry with a dispensing opening made in the container, normally retracted manually operative

movable means carried by said device for producing said dispensing outlet in said sealed container after the same is fully seated in dispensing position within said casing, a key plate disposed in the base of said casing having a configuration fitting and corresponding to the predetermined configuration of said wall of an inserted container, so that only containers having such predetermined wall configuration will fit into dispensing position in said casing of the device, and means on the inner side of said cover disposed to engage an improperly inserted container having a non-fitting engagement with said key plate to prevent closing of the cover on said casing.

3. A device for dispensing the contents of closed sealed containers having an end wall of predetermined configuration, comprising a casing into which a sealed container is adapted to be inserted and fully enclosed, said casing having a removable cover for closing the same and a dispensing outlet in registry with a dispensing opening made in the container, a normally retracted manually reciprocable cutter element operative in the dispensing outlet of said casing for producing the dispensing opening in the closed sealed container after the same has been fully seated against the lower end of said casing, a key plate disposed at the bottom of said casing having a configuration conforming to and fitting the predetermined configuration of said container end wall, so that only containers having such predetermined end wall configuration will fit into dispensing position in said casing of the device, means for producing a vent aperture on a sealed container inserted within said casing, and fluid pressure means communicating with the interior of said casing for exerting pressure on the container content through said vent aperture to dispense said contents through said container opening and said dispensing outlet of the casing.

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