Sept. 3, 1935. O. N. WISWELL 2,013,328

DISPENSER

Filed May 19, 1933

Fig. 1.

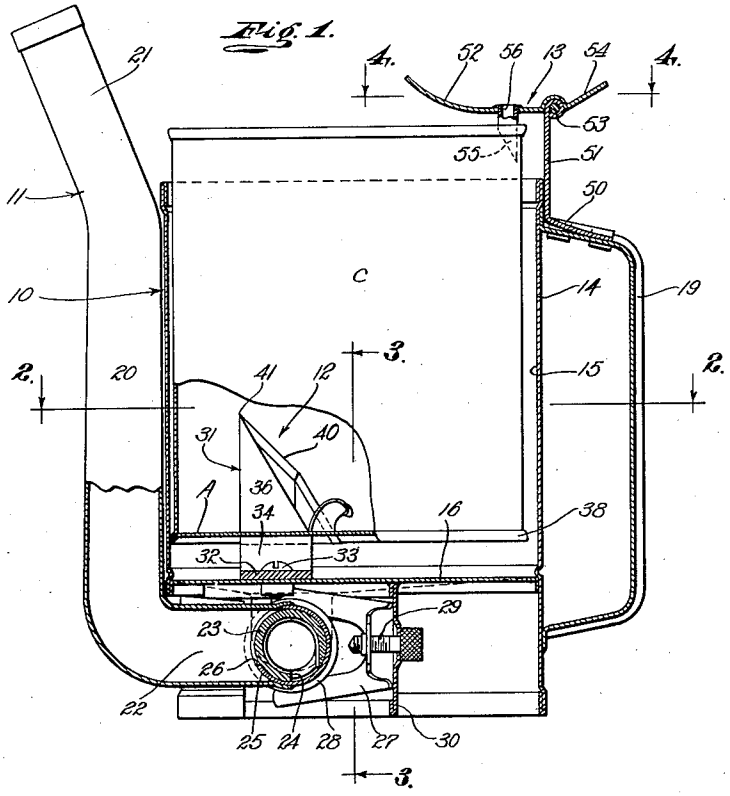


Fig. 2.

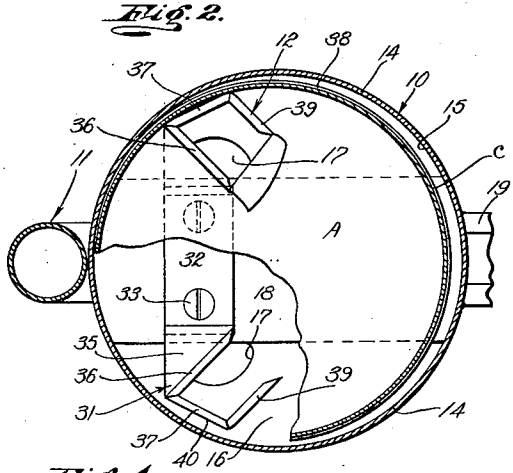


Fig. 3.

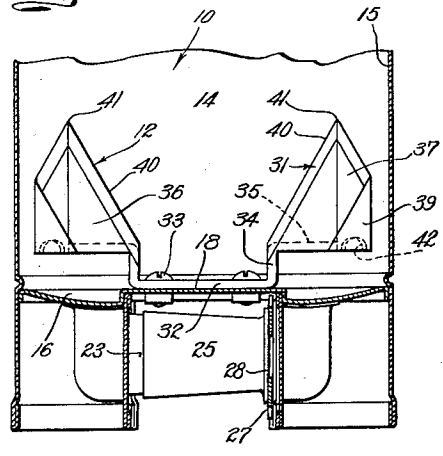
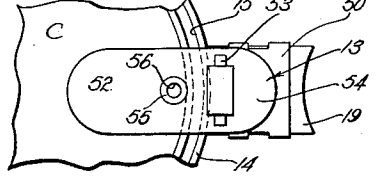


Fig. 4.



Inventor
Ozro N. Wiswell
By
His Attorney

Patented Sept. 3, 1935

2,013,328

UNITED STATES PATENT OFFICE

2,013,328

DISPENSER

Ozro N. Wiswell, Los Angeles, Calif., assignor to Swingspout Measure Company, Los Angeles, Calif., a corporation of California

Application May 19, 1933, Serial No. 671,876

5 Claims. (Cl. 221—23)

This invention relates to a dispenser, and relates more particularly to a dispensing receptacle provided with means for opening sealed containers. It is a general object of the present invention to provide a simple, practical dispenser for handling lubricating oils and the like, having a convenient and effective means for opening sealed containers.

Lubricating oil is being marketed in labeled and sealed containers to prevent its substitution and adulteration. Dispensing receptacles have been introduced having cutters for opening sealed containers of oil so that the oil may be poured directly from a container into the crank case of an engine. Time is an important factor in the selling and dispensing of motor oil, and the dispensing receptacles that have been introduced, having cutters for opening sealed containers, have not proved entirely satisfactory, as they do not permit the oil to freely and quickly flow from the containers after they have been opened.

An object of the invention is to provide a dispensing receptacle having means for opening sealed containers that allows the contents of the containers to quickly and freely discharge from the containers and receptacle.

Another object of the invention is to provide a dispensing receptacle having a movable or swingable discharge spout whereby liquids may be easily poured into inaccessible receiving openings, etc., and provided with means for the easy opening of sealed containers that allows for the quick discharge of the liquid from the containers.

Another object of the invention is to provide a dispensing receptacle of the character mentioned that is convenient to use and in which the container opening means is easy to operate.

Another object of the invention is to provide a receptacle for dispensing motor oil or the like, that is adapted to receive a sealed container and that has a cutter for opening the inner or lower end of the container as it is pushed into the receptacle, and a means for admitting atmospheric pressure into the upper end of the container to provide for the quick free discharge of the oil from the container.

Another object of the invention is to provide a dispensing receptacle having one or more simple cutters operable to make comparatively large openings in an end of the container at its periphery that quickly drain the entire contents of the container.

Another object of the invention is to provide a dispensing receptacle having internal cutters for making openings in the lower end of the container as it is pushed down within the receptacle, and a cutter for piercing the upper end of the container to admit atmospheric pressure to the container and thus provide for the quick discharge and draining of its contents.

Another object of the invention is to provide a dispensing receptacle of the character mentioned in which the cutter for admitting atmospheric pressure into the upper end of the container may be easily operated by the thumb of the operator's hand that is holding or carrying the receptacle.

A further object of the invention is to provide a dispensing receptacle of the character mentioned that is simple and inexpensive of manufacture.

Other objects and features of the invention will be best and fully understood from the following detailed description of a typical form and application of the invention, throughout which description reference is had to the accompanying drawing in which:

Fig. 1 is a vertical detailed sectional view of the dispenser provided by this invention illustrating the manner in which the cutters make openings in its lower end, and admit atmospheric pressure into its upper end. Fig. 2 is a transverse detailed sectional view taken as indicated by line 2—2 on Fig. 1 with certain parts of the container broken away. Fig. 3 is a fragmentary vertical sectional view taken substantially as indicated by line 3—3 on Fig. 1, and Fig. 4 is a fragmentary top or plan elevation taken as indicated by line 4—4 on Fig. 1.

The dispenser provided by the present invention includes generally, a body 10, a swingable discharge spout 11 for the body, cutter means 12 in the body for making openings in a container C pushed into the body 10, and means 13 for admitting atmospheric pressure into the upper end of the container.

The body 10 of the receptacle is adapted to receive the container C and to hold the contents of the container as they are dispensed or discharged. The body 10 may be shaped and protioned to handle or receive containers of different proportions and shapes. In the particular embodiment of the invention illustrated in the drawing, the body 10 has cylindrical walls 14 providing a chamber or opening 15 of round horizontal cross section. The upper end of the opening 15 is open to receive the container C. The lower wall or bottom 16 of the body 10 is spaced above the lower end of the body wall 14. In ac-

cordance with the invention, spaced discharge openings 17 are provided in the bottom 16. The portions of the bottom 16 adjacent the openings 17 are inclined downwardly toward the openings leaving an elevated portion or bridge 18 between the openings. A suitable handle 19 is provided on the body 10.

The spout 11 is provided to discharge the liquid that flows out through the openings 17 from the sealed container C. The discharge spout 11 is pivoted on the body 10 so that it may be readily swung downwardly to discharge the oil into the more or less inaccessible receiving opening of an engine crank-case, or the like. The spout 11 is comparatively long, having a straight intermediate or major portion 20 that is vertically disposed adjacent the wall 14 of the body 10 when the spout is in its up or unactuated position illustrated in the drawing. The upper or outer end portion 21 of the spout is preferably inclined as illustrated. The discharge spout 11 has a lower portion 22 extending inwardly through an opening in the wall 14 of the body 10 below the bottom 16. A tubular transverse or horizontal member 23 is mounted below the bottom 16 and has its opposite ends in communication with the spaced openings 17. An opening 24 is provided in the wall of the tubular member 23. A sleeve 25 is provided on the inner end of the spout portion 22 and surrounds the stationary tubular member 23. The sleeve 25 is free to turn on the member 23 and has an opening 26 adjacent the upper side of the spout portion 22 that is adapted to come into register with the opening 24 when the spout is pivoted downwardly.

The tubular member 23 and the sleeve 25 are longitudinally tapered and means is provided to urge the sleeve 25 toward the larger end of the member 23 to maintain a liquid tight seal between the sleeve and member and to maintain a suitable frictional engagement between the sleeve and member to yieldingly resist pivoting of the spout. A yoked member 27 engages around one end part of the member 23 and cooperates with a flange 28 on the sleeve 25. A screw 29 passes through an opening in a vertical part 30 of the body 10 and is threaded into an opening in the yoke member 27 to maintain the yoke member in suitable pressural engagement with the flange 28 of the sleeve 25. The construction just described may be adjusted to maintain the liquid tight seal between the sleeve 25 and member 23 and to suitably yieldingly resist pivoting of the spout. It will be apparent how the spout 11 may be pivoted downwardly from the position illustrated in the drawing to a discharging position where the opening 26 is in register with the opening 24 to allow the free discharge of the oil from the receptacle.

The cutter means 12 is operable to make spaced openings in the lower end of the container C when the container is forced or pushed downwardly into the body opening 15. In the particular form of the invention illustrated in the drawing, the means 12 includes two cutters 31 spaced above the bottom 16 of the receptacle. In accordance with the invention, the cutters 31 are positioned directly over the discharge openings 17 and are formed so as to make comparatively large openings in the end A of the container which allow the liquid to freely drain from the container directly into the openings 17. The cutters 31 may be located at any elevation above the bottom 16 and may be mounted in the body 10 in any suitable manner, for example, they may be supported on the body walls at points considerable distances above the bottom. In the particular embodiment of the invention illustrated in the drawing, the two cutters 31 are provided on or form parts of a single cutter body supported on the bottom 16. The cutter body includes a mounting portion or base 32 seated on the elevated bridge 18 of the bottom 16. The base 32 extends transversely across the bridge 18 and is attached to the bridge by bolts or screws 33. The cutter body extends upwardly at each end of the base 32 as at 34 and has outwardly extending flat horizontal portions 35 spaced above the bottom 16. The cutters 31 project upwardly from the portions 35 and are integral with the cutter body.

Each cutter 31 includes an end or side portion 36 projecting vertically upward from a body part 35 and lying in a plane substantially radial relative to the vertical center of the body 10. A vertical tangential connecting or intermediate portion 37 joins the outer edge of each end portion 36. The portions 37 are comparatively close to the wall 14 of the body and are spaced from the body wall so that the bead 38 at the lower end of the container C may closely or slidably pass between them and the body wall 14. A vertical outer end portion 39 extends inwardly from the outer edge of each tangential cutter portion 37. The outer end portions 39 are substantially parallel with the inner end portions 36. The lower ends of the cutters 31 are open, that is, they are spaced between the lower end of the cutter parts 36, 37 and 39. The cutters 31 are positioned directly above the openings 17 as clearly illustrated in Fig. 2 of the drawing so that their open lower ends are in direct vertical alignment with the discharge openings 17.

In accordance with the invention, a cutting edge 40 is provided on the upper end of each cutter 31. The cutting edges 40 are inclined upwardly and outwardly from the outer edges of the end portions 36 and 39 to join at sharp points 41 at the points of joinder of the end portions 36 and tangential portions 37. The cutting edges 40 are formed by sharpening or bevelling the inner sides of the cutter parts 36, 37 and 39 so that the material outlined by the cut formed by the cutters is rolled inwardly in the manner clearly illustrated in Fig. 1 of the drawing. The cutting edges 40 of the cutters are preferably at a substantial pitch or inclination to provide sharp points 41 and to more readily cut the end A of the container as the container is pushed downwardly. The points 41 of the cutters easily pierce the end A of the container as the container is pushed into the receptacle and the cutting edges 40 continue the cutting action as the container is forced downwardly so that comparatively large clean openings are formed in the end of the container. It is to be particularly noted that the sharpened points 41 of the cutters 31 pierce or enter the end A of the container C immediately adjacent the peripheral bead 38 so that the openings formed by the cutters extend inwardly from the bead 38. The openings formed in the end A of the container, in extending inwardly from the bead 38, are operable to quickly drain the entire contents from the container. In accordance with the invention, openings 42 are provided in the lower ends of the tangential cutter portions 37 to permit the free draining of any liquid that may be trapped at the outer sides of the cutters. It will be apparent how the liquid or oil contained in the container C is free to flow through the

openings formed by the cutters 31 and discharge directly through the openings 17.

The means 13 for admitting atmospheric pressure into the upper end of the container C is an optional means that may be operated subsequent to the pushing of the container on to the cutters 31. In accordance with the invention, the means 13 may be operated by the thumb of the operator's hand that is in holding engagement with the handle 19. The means 13 includes a bracket 50 attached to the body 10 of the receptacle. In the construction illustrated in the drawing, the bracket 50 is attached to the upper end portion of the handle 19. The bracket 50 has an upstanding part 51 projecting upwardly from the upper edge of the body 10. A cutter carrier 52 is hinged or pivoted to the upper end of the bracket part 51. A pivot pin 53 pivotally connects the cutter carrier 52 with the bracket part 51. The cutter carrier 52 is pivotable between a substantially vertical position and a substantially horizontal position where it projects inwardly from the bracket part 51 above the opening 15 of the body. An outwardly projecting operating part or handle part 54 is provided on the cutter carrier 52 to provide for its easy operation. The handle part 54 is adapted to lie flat against the bracket part 51 when the carrier is in its up position and projects upwardly and outwardly when the carrier 52 is in its down position illustrated in Fig. 1 of the drawing. A cutter 55 is provided on the carrier 52 and is operable to perforate or pierce the upper end of the container C. The cutter 55 projects from the inner or lower side of the carrier 52 and is tubular having a longitudinal opening 56. The upper or outer portion of the cutter 55 is carried in an opening in the cutter carrier 52 so that the upper or outer end of its opening 56 is at all times open to the atmosphere. The lower end of the tubular cutter 55 is bevelled or inclined downwardly and outwardly to have a sharp edge or cutting point. The outer portion of the cutter carrier 52 may be curved upwardly as illustrated in the drawing. The cutter carrier 52 of the means 13 is normally in its up or inoperative position so that it is out of alignment with the body opening 15 and so that the cutter 55 does not interfere with the passage of the container C into the body. After the container C has been pushed on to the cutters 31 the cutter carrier 52 may be depressed or swung inwardly and downwardly so that the cutter 55 pierces the upper end of the container and admits atmospheric pressure to the container for the free discharge of its contents. In practice, the cutter carrier 52 may be readily pivoted inwardly and downwardly by the thumb of the operator's hand engaging the handle 19 to force the cutter 55 into the upper end of the container.

It is believed that the utility of the dispensing receptacle provided by the present invention will be readily understood from the foregoing detailed description. When it is desired to open the container C and dispense its contents, the body 10 of the receptacle is placed on a suitable support and the container is passed into the body opening 15 and pushed downwardly onto the cutters 31. As described above, the cutter carrier 52 of the means 13 is normally in an up or inoperative position where the carrier and cutter 55 do not interfere with the passage of the container into the body. When the container C is pushed onto the cutters 55, the points 41 of the cutters pierce the lower end A of the container and the cutting edges 40 operate to make substantially U-shaped cuts in the end of the container. The cutters and cutting edges 40 are formed so that the material outlined by the cuts is rolled upwardly and inwardly, providing large clean openings in the end of the container. The horizontal parts 35 on the lower ends of the cutters operate to limit the downward or inward movement of the container C after the cutting operation. The liquid contents of the container C are free to discharge or drain through the cutters into the openings 17 so that they may be dispensed through the spout 11. After the container C has been pushed downwardly on to the cutters 31 to the position where its end A engages the stop parts 35, the cutter carrier 52 of the means 13 may be swung inwardly and downwardly so that the cutter 55 pierces the upper end of the container. The tubular cutter 55 readily admits air or atmospheric pressure into the upper end of the container thus facilitating the quick discharge of its contents through the openings formed by the cutters 31. The sharpened or inclined lower end of the cutter 55 easily pierces the upper end of the container C. The cutter 55 may be easily actuated or forced through the upper end of the container by depressing the carrier 52. The carrier 52 is located and formed so that it may be readily engaged and operated by the thumb of the operator's hand holding the handle 19.

It is to be understood that the spout 11 may be swung downwardly to its discharging position where the opening 26 registers with the opening 24 to allow the free discharge of the liquid through the spout. As the openings formed by the cutters 31 are comparatively large and extend inwardly from immediately adjacent the bead 38 of the container, the entire contents of the container quickly discharge under the action of the atmospheric pressure admitted into the upper end of the container through the cutter 55. The openings 42 in the cutter portions 37 allow for the complete drainage of liquid from the outer sides of the cutters. After the liquid has been completely drained from the container C and the body 10 through the spout 11, the cutter carrier 52 may be easily swung to its up or out position by engaging and depressing the handle part 54 of the carrier. The downwardly and outwardly inclined end of the cutter 55 allows the cutter to pass out of the opening that it has formed in the container with suitable clearance or freedom. When the cutter 55 has been disengaged from the container, the container may be removed from the body 10. In practice, the body 10 and cutter parts 35 may be proportioned and related to the container so that the container projects somewhat from the upper end of the body 10 when it is resting on the parts 35 after being opened by the cutters 31. Due to this proportioning and relating of the parts, the upper end of the container may be conveniently engaged or grasped when it is desired to remove the container from the dispenser. The present invention provides a dispensing device having a simple and effective means for opening the container that provides for the rapid discharge and draining of the entire contents of the container.

Having described only a typical preferred form of my invention, I do not wish to be limited or restricted to the specific form or application herein set forth, but wish to reserve to myself any variations or modifications that may appear to those skilled in the art or fall within the scope of the following claims:

Having described my invention, I claim:

1. A dispensing receptacle including, a body having an opening adapted to receive a container, there being discharge openings in the lower end of the body, a movable spout on the body in communication with said discharge openings, and cutters in the body adapted to cut openings in the container when it is moved into the body opening, the cutters having open lower ends directly above said discharge openings.

2. A dispensing receptacle including, a body having an opening adapted to receive a container, there being discharge openings in the lower end of the body, and cutter means in the body including an integral member comprising a base attached to the lower internal wall of the body, spaced upwardly projecting parts on the base having horizontal shoulders, and cutters projecting upwardly from said shoulders and operable to cut openings in the end of the container.

3. A dispensing receptacle including, a body having an opening adapted to receive a container, there being discharge openings in the lower end of the body, and cutter means in the body including an integral member comprising a base attached to the lower internal wall of the body, and cutters projecting upwardly from the opposite ends of the base and operable to cut openings in the container, the cutters having open lower ends directly over the discharge.

4. A dispensing receptacle including, a body adapted to receive a container, the body including a lower end having spaced discharge openings and an elevated portion between the openings, and cutters supported on said portion and disposed above said openings operable to cut openings in the lower end of the container.

5. A dispensing receptacle including, a body adapted to receive a container, the body including a lower end having spaced discharge openings and an elevated portion between the openings, a swingable discharge spout on the body in communication with said openings, cutters supported on said portion and located directly above the spaced openings operable to cut openings in the lower end of the container, and means for admitting atmospheric pressure into the upper end of the container.

OZRO N. WISWELL.