

C. P. TOLMAN.
 METAL KEG.
 APPLICATION FILED MAY 23, 1914.

1,256,184.

Patented Feb. 12, 1918.

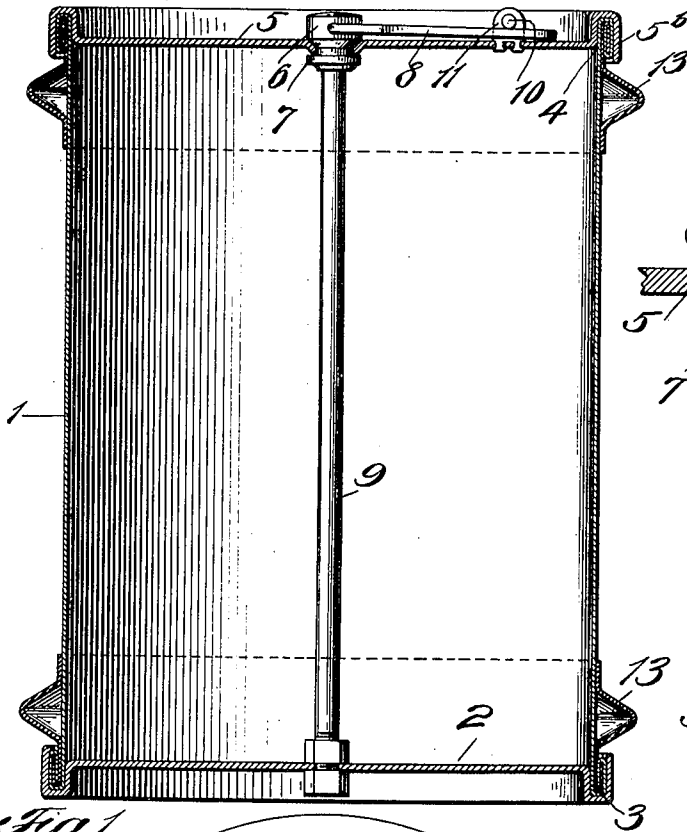


Fig. 1.

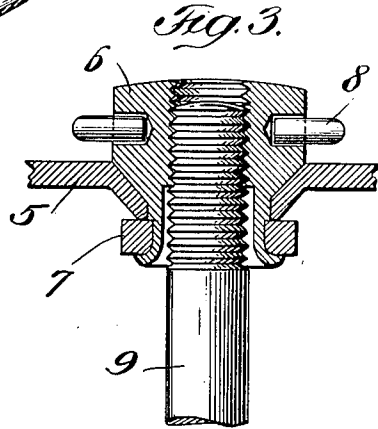


Fig. 3.

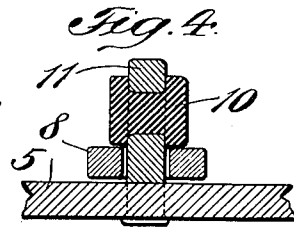


Fig. 4.

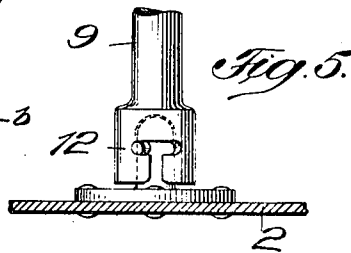


Fig. 5.

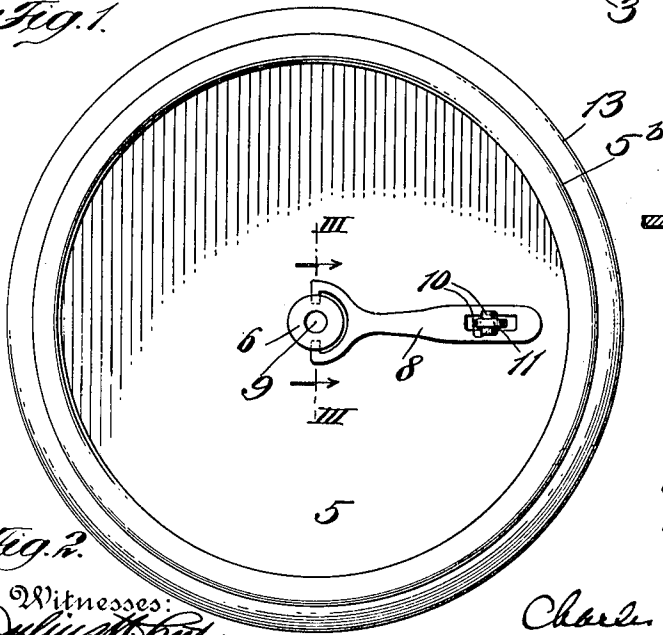


Fig. 2.

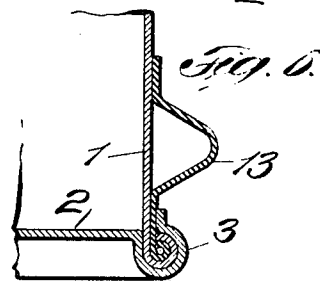


Fig. 6.

Witnesses:
Julius H. ...
Joseph M.weeney

Charles P. Tolman Inventor
 By *Otto ...* Attorney

UNITED STATES PATENT OFFICE.

CHARLES P. TOLMAN, OF NEW YORK, N. Y., ASSIGNOR TO NATIONAL LEAD COMPANY,
OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

METAL KEG.

1,256,184.

Specification of Letters Patent. Patented Feb. 12, 1918.

Application filed May 23, 1914. Serial No. 840,430.

To all whom it may concern:

Be it known that I, CHARLES P. TOLMAN, a citizen of the United States, residing at New York city, in the county and State of New York, have invented the following described Improvements in Metal Kegs.

The improved keg is designed for containing and transporting painters' white lead and similar heavy pastes or liquid materials, being specially suited for such uses by reason of its structural rigidity and the security and facility of manipulation of its closure means, and by the absence from the interior of obstructions or cavities likely to hinder the free discharge of the sticky contents, or interfere with the scraping or cleaning of the interior surface. The closure is capable of repeated use so that the keg is well adapted to serve as the original sale package of painters' materials to be thereafter used by the painter as a receptacle in which to mix his color and ship it from place to place, or to be returned to the manufacturer for refilling. The invention includes the structural details and general assemblage of the keg body and its closure and clamping means, and combinations thereof, and the principles of the invention will appear in the following description and also in the claims.

In the drawings forming part hereof,

Figure 1 is a vertical central section of a metal keg embodying the invention;

Fig. 2 is a top plan view thereof;

Fig. 3 an enlarged axial section of the cover-clamping agency on line III—III of Fig. 2;

Fig. 4 a similar sectional detail of the means for locking the keg or protecting it with a seal;

Fig. 5 a detail of a removable tension member; and

Fig. 6 a modified form of bottom seam.

The keg body 1 and its bottom head 2, are separately formed and permanently joined by a seam 3, which can be riveted or rolled, as desired. For smaller sizes, the body of the container may be drawn from a single blank, but in larger sizes a bottom seam of considerable section, such as indicated in the drawings, is desirable because of the stiffness it gives to the corner of the package.

Such a seam may be produced by rolling or folding together the edges of the side wall and bottom head with a separate inserted strip of metal incorporated as reinforcement in and between the folds, as shown either in Fig. 1 or Fig. 6, or otherwise. The rim at the top of the body is also thickened by means of a similar piece incorporated in it for the same purpose. According to this invention the inserted pieces are provided by the margins of the rings or rolling hoops 13. The keg is adapted to be rolled about on these hoops and in their preferred form they are made of sheet metal bent or pressed into ring shape with a V-shape cross-section, and also with side flanges one of which is preferably somewhat wider than the other. The edges of the wider flanges serve as the inserted pieces for the rim and seam, being folded or rolled therein, so that they thus not only reinforce these parts, as just pointed out, but also secure the hoops to the body in a superior manner. The opposite margins of the hoops may be left in free bearing contact upon the wall of the keg allowing the hoops to yield slightly, or such margins may be attached at intervals along their circumferences, if desired, in that case stiffening the hoops accordingly, or permitting the use of thinner sheet metal in their manufacture. When the narrower margins of the hoops are attached to the keg, it is preferred to do so by spot-welding them in order to avoid the use of rivets, penetrating the container's side wall. The rolling hoops as thus incorporated in the top and bottom seams are located near the ends of the keg and thus protect these parts from distortion from shocks in shipment. The top rim is formed by folding the upper margin of the container body and hoop-flange outwardly, so that the annular seat upon which the cover fits is alined with, or exterior to the body wall, and the interior surface of the receptacle is straight-sided from bottom to rim with no inwardly projecting parts or lips, that is to say, the said wall surface is non-reentrant throughout and thus free from pockets or cavities likely to retain portions of the contents or hamper their removal.

Inasmuch as the keg is by preference cylindrical, the bottom head and the remov-

able cover 5, may be duplicated except for their manner of attachment, and may thus be made in the same dies. The cylindrical body may be formed of a flat sheet with a welded seam, although a riveted seam could also be employed, as will be evident. The cover is pressed or formed with an upstanding, flanged margin, forming an inverted U-groove adapted to fit over and embrace the inside and outside of the top rim 4, and when so placed reinforces and protects the rim against distortion, as will be evident. The rounded or sloped under-surface 5^a thereof, adjacent the entrance to the groove, serves to center the cover on the rim and also to restore the shape of the latter if already distorted, while the manner of flanging makes the central part of the cover, relatively depressed, below the top of the groove. The outer wall 5^b of the groove is longer or deeper than the inner wall, and the inside width of the groove is no greater than necessary to accommodate the rim 4, and is also somewhat deeper than wide, being thus capable of accommodating and permanently confining a gasket or a strand of oakum or like material (not shown) which seals the joint when the cover is clamped on the rim. The recess represented by the depression of the main or central part of the cover is duplicated in the bottom head, and the exterior parts of the power means used to clamp the cover in place, are arranged to be within one or both these recesses and thus protected by the surrounding metal.

These means comprise a nut 6, which is swiveled in a hole near or at the center of the depressed part of the cover and permanently confined to the cover by means of a washer 7 secured to the nut by the upset end of the latter. The hole in the cover is dished or coned and the corresponding under surface of the nut is similarly coned as indicated in the drawings, so that when the nut bears on the cover, the hole will be reliably sealed against leakage. The interior of the nut is threaded only in its upper part and its lower part is counterbored to form a vestibule, more or less flared by the upsetting, to receive and guide the end of the rod 9 while the cover is being centered and applied to the rim of the keg. The rod 9 is secured to the interior of the keg by a suitable connection capable of withstanding not only the clamping force which holds the cover to its seat but also the very much severer shock strains exerted by the heavy contents in transport. According to the form of Fig. 1, the lower end of the rod is passed through a hole in the bottom head and a pair of inner and outer nuts is threaded thereon to clamp the margin of the hole, leak-tight, between them, the outer nut being within the depressed area of the bottom head above referred to, so that the keg will

be stable when set upon a flat surface. As thus mounted, the rod 9 projects rigidly from the center of the keg bottom to a point just below the level of the rim 4, where it is adapted to be engaged by the flaring entrance of the nut even before the cover has become fully centered on the rim, and so that as soon as it is centered, the rotation of the nut will immediately cause it to screw onto the rod and thereby bind the rim-groove of the cover upon the rim of the body and with as much pressure as may be necessary. The nut is provided with a handle or operating member 8, bail-jointed to it so that, when not in use, it may be folded flat against the cover and within the protected depression thereof, and the end of the handle is slotted, like a hasp, to receive a staple 11 riveted to the cover. A padlock or lead seal 10, inserted in the eye of the staple, will then lock or seal the handle and the keg as a whole. The staple 11 is stamped of sheet metal and held in place by two riveted lugs upset in punch holes in the cover, as indicated in Fig. 1.

The connection of rod 9 to the bottom head is desirably one that holds it more or less rigidly as a permanent part of the structure, disposed axially therein and parallel with the body side walls. Its rigidity obviously facilitates the act of finding the hole in the nut when the cover is being placed in position and may also be useful for other purposes, but as the rod is primarily a tension member, no particular degree of rigidity is necessary, and for the same reason it need be of no greater cross-section than necessary to withstand the tensile strain put upon it. Its form and also the manner of its connection to the interior are thus subject to variations. For example, it may be attached to the bottom head 2 by a bayonet-joint connection, such as indicated at 12 in the detail Fig. 5, so as to be removable from the keg if desired, and when employing any form of detachable connection, the member thereof which offers the least obstruction to the evacuation of the contents is desirably placed on the keg and the other on the rod or tension member. Thus, in Fig. 5, the stud member having the bayonet lugs is secured to the bottom head and the socket part is formed on the rod. The mounting of the rod or tension member 9 is desirably one that will permit its use as a thrust member for applying such power as may be necessary to relieve and force the cover from the rim. It will be noted that by reverse rotation of the nut 6,—in the direction to unscrew it—the washer 7 may be brought into pressing contact with the under side of the nut seat and with such force as may be required to dislodge the rim groove from the rim. The fitting of the washer to the nut is designedly made somewhat loose so that by such un-

screwing the nut will be lifted from its seat to admit the air necessary to balance atmospheric pressure on the under side of the cover, thus greatly facilitating the opening of the keg, especially when the contents are of an adhesive or pasty nature.

From the foregoing it will be observed that the power means for the cover comprise parts within and without the interior of the receptacle, which operate through the cover to clamp the latter on the receptacle body, and more specifically, two screw-threaded members, one or both of which project through the cover, one being permanently confined to the cover and adapted to vent it and the other being attached to the interior of the receptacle in position for mutual engagement. It will be further observed that one of such power members is a combined tension and thrust member, so that power may be applied to force the cover from its seat. It will be evident that various reversals, modifications and alterations in the form and mode of operation can be resorted to without departing from the principle of the invention.

I claim:

1. A shipping receptacle of the kind described comprising a body, a cover, and threaded clamping means passing through and connected with the cover and with the body for clamping the cover in place and for unseating it.

2. A shipping receptacle comprising a metallic body and a metallic cover adapted to form a leak-tight joint thereon, a power means having bearing upon the body and cover for forcing the cover from the body and a vent through the cover controlled by the power means.

3. A shipping receptacle comprising a metallic body and cover, the one fitting a groove in the other, threaded power means having bearing upon the body and cover for clamping the cover to the body and for unseating it, and a vent in the cover opened by such unseating operation.

4. A shipping receptacle of the kind described comprising a body, a combined tension and thrust member within the body, a cover, and power means cooperating with said member to clamp the cover to or force it from the body.

5. A metallic shipping receptacle for white lead or like material, comprising a body and cover, the cover having a clamping means permanently attached thereto and comprising a threaded power device and a hinged operating handle therefor adapted to be folded against the cover.

6. A shipping receptacle of the kind described comprising a body and cover and a clamping means for the cover comprising a threaded power device rotatable about a vertical axis centrally disposed on the cover, a

pivoted hasp handle therefor and means on the cover engaged by the handle to prevent the operation of the power device.

7. A metallic shipping receptacle of the kind described comprising a body and cover, means for clamping the latter upon the body, comprising a threaded rod secured to the interior of the body, and a nut for the rod journaled on and confined to the cover.

8. A shipping receptacle of the kind described comprising a cover having a groove, a body having a rim fitting into said groove, clamping means comprising a part on and confined to the cover and a part within the body, said cover part having an enlarged entrance to receive the body part while the rim is being brought into engagement with the groove.

9. A shipping receptacle of the kind described comprising a body having a threaded tension member within it, a cover having a nut permanently journaled thereon to engage the tension member and provided with an enlarged entrance to guide the member during the placing of the cover on the body.

10. A shipping receptacle of the kind described having a body and a cover, the cover being provided with a depressed central portion and an upstanding peripheral portion forming a rim groove, means for clamping the cover to the body comprising a nut journaled on and confined to the cover within the said depressed central portion, and a handle for the nut adapted to fold into the depressed area.

11. In a metallic shipping receptacle of the kind described, the combination of a body, a cover having an opening, a threaded rod secured to the interior of the body, and a nut on the cover for engagement with the end of the rod, said nut being held to the cover by rotatable engagement in said opening, said opening affording an air vent when the nut is unscrewed to release the cover, and the nut being provided with means for tightly closing the vent when it clamps the cover.

12. In a metallic shipping receptacle of the kind described, the combination of a body, a cover having an opening with a concave margin, a threaded rod secured to the interior of the body, and a nut journaled in said opening for engagement with the end of the rod and having an upper bearing portion to seat upon said concave margin when the cover is clamped and a lower bearing portion to press upward against the cover to unseat the same when the nut is unscrewed.

13. In a metallic shipping receptacle of the kind described, the combination of a body, a cover having an opening with a concave margin, a threaded rod secured to the interior of the body, a nut journaled in said opening and having an upper bearing

portion formed to seat tightly against said concave margin, and a washer mounted loosely in the lower portion of the nut adapted to bear against the under side of the cover to unseat the same and simultaneously to permit the entrance of air when the nut is unscrewed.

In testimony whereof, I have signed this specification in the presence of two witnesses.

CHARLES P. TOLMAN.

Witnesses:

MINNIE W. BATES,
HENRY O. BATES.