Feb. 13, 1923. 1,445,068.

P. N. BROWN.

CYLINDER SHAPE SLIP LID CONTAINER BOX.

FILED NOV. 12, 1918.

Fig. 1

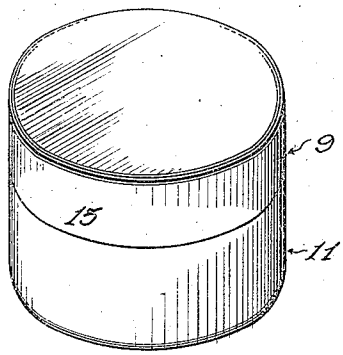


Fig. 2

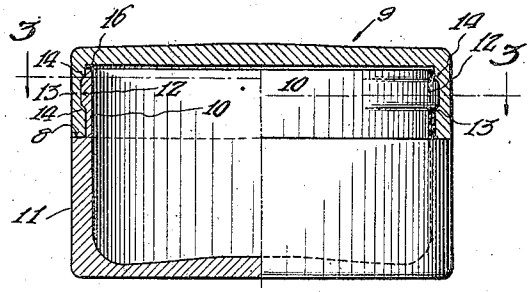


Fig. 3

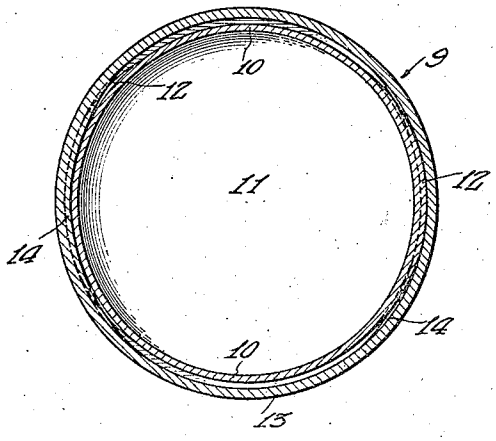
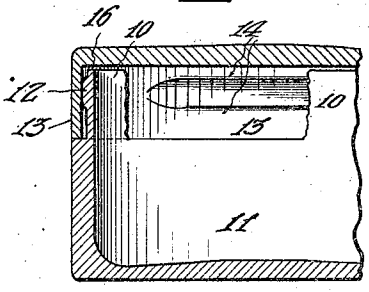


Fig. 4



Inventor
P. N. Brown.
By H. R. Kerslake
Atty.

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UNITED STATES PATENT OFFICE.

PETER NURSE BROWN, OF MOSMAN, NEAR SYDNEY, NEW SOUTH WALES, AUSTRALIA.

CYLINDER-SHAPE SLIP-LID CONTAINER BOX.

Application filed November 12, 1918. Serial No. 262,111.

To all whom it may concern:

Be it known that I, PETER NURSE BROWN, subject of the King of Great Britain and Ireland, residing at 75 Holt Avenue, Mosman, near Sydney, New South Wales, Australia, have invented certain new and useful Improvements in Cylinder-Shape Slip-Lid Container Boxes, of which the following is a specification.

To provide against accidental opening of slip-on lids or caps of container boxes of cylindrical shape, said lids or caps are made close fitting so that more or less force is necessary to remove them. In many cases this tightness of the lid is inconvenient, as powders or other contents of the container are frequently spilled in applying force to open the lid; and in any case the close fitting of the lid renders manufacture costly in consequence of the degree of accuracy in fitting necessary.

The object of the present invention is to construct the container body and the lid so that the lid may be readily removed and readily placed on the container body, and when placed held securely against accidental displacement and opening.

My invention is specially useful in the case of turned wooden boxes for which it has a special utility in view of the liability of shrinkage of the wood, but is usable also in the cases of spun metal or pressed metal boxes, and boxes made of glass, ceramic ware, papier-mâché, or other moulded cast or pressed substances.

My invention consists in forming the neck portion of the container body and the lid of slightly elliptical or other symmetrical section instead of truly circular horizontal section, the lid being slightly yielding and a little larger in section than the body neck so that it may be slipped on or slipped off readily; and in forming a crescent shaped lip or lips on the lid rim adapted to engage a complementary crescent shaped lip or lips formed on the body neck, engagement of these lips being effected by partially rotating the lid relatively to the body, whereby also lateral contact and movement of the lid rim and body neck is effected as the shorter radii of the lid is turned towards parallelism with the larger diameter of the body neck due to the yielding lid.

In a container box so constructed, the lid may be readily slipped into or off the body when the lid is positioned with its major or larger radii parallel or approximately so with the major or larger radii of the body neck. When the slightly yielding lid is brought towards the major or larger radii of the body neck, the complementary lips are engaged and the rim and neck are also engaged laterally where the broader radius or radii of the inner member contacts with the narrower radius or radii of the outer member due to the yielding lid. The lid is thus tightly gripped on the body, and risk of its accidental displacement is obviated, but the lid can be readily freed and removed when rotated sufficiently to bring the major radii of the body and lid parallel or nearly so.

In manufacture, the body is turned or otherwise formed cylindrically with a salient crescent shaped lip at either side of its neck; in the case of a shallow neckless box similar lips are formed at or near the top edge of the body. The lid is slightly yieldable and is formed with complementary crescent shaped lips within its rim portion. The lip positions may be reversed, the body lip being internal and the lid lip peripheral. Obviously lips at one side only of the box would serve the purpose in view though not as satisfactorily as lips at either side; again, instead of two lips, three or four symmetrically disposed lips on body and lid respectively might be used.

In the accompanying drawing, Fig. 1 is a perspective view of a wooden box container according to the present invention; Fig. 2 a vertical sectional elevation with the lid in locked position; Fig. 3 an horizontal plan on the plane 3—3 Fig. 2; and Fig. 4 a broken vertical section showing the lid in free position.

The collar abutment 8 at the rim of the lid 9 is not necessary though it is desirable for effectively sealing the contents of the box. On the periphery of the neck portion 10 of the body 11, two oppositely disposed crescent shaped lips or enlargements 12 are formed, and on the opposite inner sides of the lid rim 13 two complementary crescent shaped lips or enlargements 14 are formed. The lid is placed on the box with the clear portions of the lid rim in register with the lipped portions of the body neck, there being quite free clearance in this relative position

of the parts. When the lid is so placed on the body and partially rotated the lid rim lips engage under and laterally with the body neck lips and the lid is then held secure, a wedging action being obtained in the movement of the respective lips over each other due to the yielding of the lid and this action effects a tight frictional grip which is not released accidentally as when the box is dropped or overturned.

The sectional shape of the lips is immaterial. In the drawing they are shown of rectangular key shape but they may be of angular or bead section, and the box neck is finished to an edge of uniform thickness above its lips; whilst in Fig. 2 a cover lip 16 is formed in the lid rim. These features are, however, of no material consequence and may be disregarded.

What I claim as my invention and desire to secure by Letters Patent is:—

A container including a cylindrical wooden body portion having a neck portion provided with opposed integral crescent shaped projections on the outer surface thereof so that in median horizontal section the internal surface is cylindrical while the outer surface is elliptical, a slightly yielding flanged lid adapted to fit over said neck and being in median horizontal section externally circular and internally elliptical the major diameter of the lid being slightly greater than the external major diameter of the neck, and the lid being provided with opposed crescent shaped grooves at its minor diameter to render the same slightly less than the major diameter of the neck whereby the minor diameter of the lid may be brought into engagement with the major diameter of the neck because of the yielding action of the lid.

In testimony whereof I affix my signature in the presence of two witnesses.

PETER NURSE BROWN.

Witnesses:
W. G. HUMPHREYS,
H. C. CAMPBELL.