H. A. KEINER & E. PLANCON.

CLOSURE FOR CONTAINERS.

APPLICATION FILED NOV. 10, 1913.

1,170,546. Patented Feb. 8, 1916.

Fig. 1.

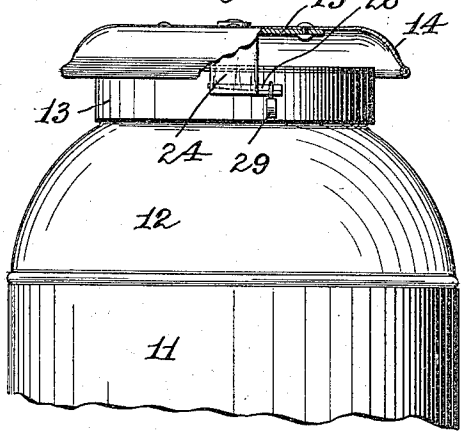


Fig. 2.

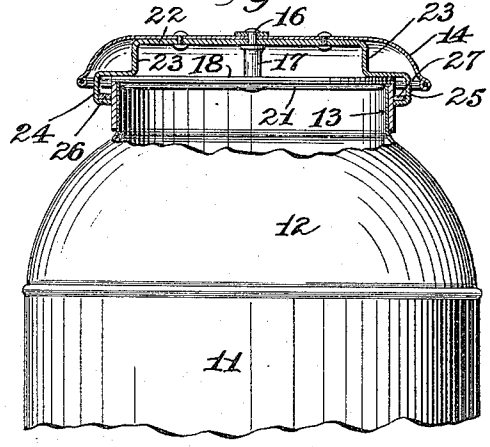


Fig. 3.

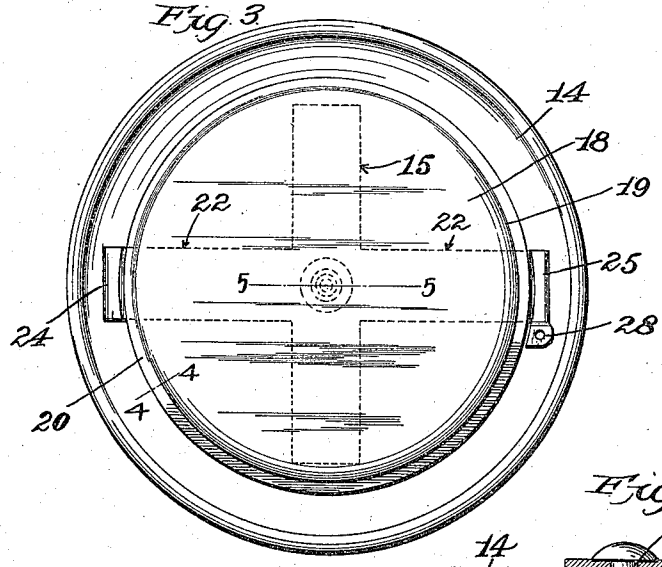


Fig. 4.

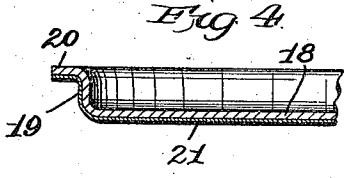
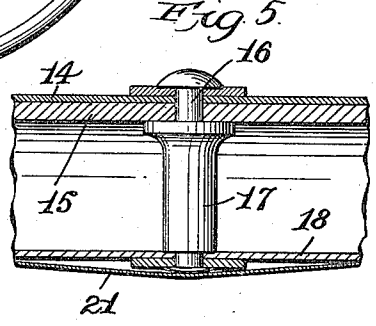


Fig. 5.



WITNESSES

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CLOSURE FOR CONTAINERS.

1,170,546. Specification of Letters Patent. Patented Feb. 8, 1916.

Application filed November 10, 1913. Serial No. 800,029.

To all whom it may concern:

Be it known that we, HENRY A. KEINER and EMILE PLANÇON, citizens of the United States, and residents of the city of New York, borough of Queens, county of Queens, and State of New York, have invented certain new and useful Improvements in Closures for Containers, of which the following is a specification.

This invention relates to sheet-metal containers for liquids, with more particular reference to the comparatively large cans used for the transportation and delivery of milk in bulk. It will be readily understood that there are at least three more important features which should be possessed by containers of this character; first, they should be capable of substantially hermetic sealing; second, the seal should be of a sanitary character, considering the frequent cleansing and repeated use of the container; and, third, the closure should be capable of being readily removed and replaced to facilitate rapid handling of the cans when they are filled and rapid dispensation of the milk or other liquid contents at the point of delivery. Furthermore, it is well known that these cans are subjected to exceedingly hard usage in handling and in transit, and it will be apparent that the can cover or closure must not only be simple and effective, but that the cover itself as well as the connection between cover and body portion of the can must be of a very strong and durable character.

The principal object of the present invention is the provision of an improved container and closure which shall possess to the highest possible degree the necessary or desirable features or qualities above set forth.

We are aware that in order to provide a substantially hermetic seal in connection with containers of this and many other kinds, some sort of suitable packing is employed between can and cover—for sanitary and other reasons this packing usually consisting in a paper or paper board disk or ring which may be discarded after use. The cap or cover is usually screwed down over the neck of the container, and in clamping the packing between cover and container by this operation it will be apparent that the packing is subjected to no small amount of friction which, if the packing be of paper or paper stock, produces no harmful or unsatisfactory results so long as the packing is in a substantially dry condition. It is well known, however, that when ordinary paper or paper-stock is wet or moistened, the fibers of which it is composed lose their normal adherent qualities and the material becomes subject to easy disintegration when rubbed or subjected to frictional forces. These cans being adapted to contain liquid matter, the paper or paper-board disk employed for packing ofttimes becomes moistened or wet before the cover is firmly seated on the can, under which circumstances the friction generated by seating the cover on the can destroys the interposed layer of packing or, at least, the efficacy thereof.

This invention may be said to consist, generally, in the provision of means, in connection with a container and closure of the character to which we have referred, for eliminating friction between the cover or seat, and the packing during the operation of closing or sealing the container, and at the same time preserving the requisite strength and durability of the container, the cover or closure and the connection between these parts.

Our invention further consists in various details of construction and in combinations of parts all as hereinafter fully described and particularly pointed out in the claims.

Our invention will be more readily understood by reference to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of the upper portion of a container provided with a closure embodying our invention, a portion of the cover being shown in central section; Fig. 2 is a similar view with the entire cover and its seat shown in transverse central section; Fig. 3 is a bottom plan view of the cap or cover; Fig. 4 is an enlarged fragmentary section taken substantially on the line 4—4 of Fig. 3, and Fig. 5 is an enlarged fragmentary section taken substantially on the line 5—5 of Fig. 3.

Referring now to the drawings in detail, numeral 11 designates the body portion of a sheet-metal container of the character to which we have referred, the upper portion 12 of which is rounded off and terminates in a neck 13 of reduced diameter.

The cover and closure comprise a substantially bowl-shaped shell 14, reinforced

by a cross-shaped metal casting 15, centrally secured within the shell 14 by means of the rivet 16. This rivet 16 is elongated and projects downwardly to form a pivot 17 upon which is rotatively mounted the disk 18. This disk 18 is preferably provided with an up-turned edge 19 which terminates in the flange 20. This flange 20 registers with and is adapted to be superposed on the upper edge of the neck 13. Below this disk 18, we provide the disk 21 of paper or paper-stock, thick enough to provide a suitable packing and of such diameter that the extreme edge thereof may be curved upwardly around the up-turned portion 19 of the disk 18 and be interposed between the flange 20 of the disk 18 and the upper edge of the neck 13, whereby when said disk 18 is firmly clamped down against the upper edge of the neck 13, the edge of the paper disk 21 provides a packing which insures a substantially hermetic seal. The arms 22 of the reinforcing member 15 are elongated and provided with down-turned portions 23 whereby the ends of said arms may provide auxiliary supports for the disk 18, which is rotatable thereagainst, and at the ends of these arms 22 are provided with hooks 24 and 25 adapted to engage lugs 26 and 27, respectively, on the neck 13 of the container, the free ends of these hooks being inclined from the horizontal and the lugs 26 and 27 being correspondingly inclined, whereby a screw effect is insured in seating the cover upon the container, and the disk 18 is firmly clamped down upon the upper edge of the neck 13 with the paper disk 21 therebetween.

Obviously, in seating the cover, if the disk 18 formed an integral part of or was rigidly secured to the cover, the friction generated between cover and container would have a tendency to destroy the paper packing therebetween if the latter were in a moist or wet condition, and it will be apparent that in providing a disk which is rotatable with respect to the packing hooks and lugs, a very small proportion of this friction will prevent rotation of the disk with respect to the container neck when the cover is rotated to seat the same, and there will therefore be no tearing or disintegrating effect upon the wet or moist paper, thus insuring substantially hermetic sealing under any ordinary conditions.

With respect to the construction just described it will be noted that there has been no sacrifice of strength and durability, the shell 14 providing not only a substantial support for the sealing disk but also providing a protecting hood to prevent the ingress of foreign substances to the sealing means proper.

We have shown the hook 25 provided with an apertured extension 28, the aperture in which is adapted to register with a corresponding aperture in an extension of the lug 27, whereby an ordinary padlock 29 may be employed to lock the container in its closed and sealed condition.

We claim as new and desire to secure by Letters Patent:

1. The combination with a container of a cap or cover comprising a main or body member, a second or sealing member, means for securing said cap or cover to said container by rotating said main or body member relative to said second or sealing member and to said container and packing interposed between said second or sealing member and said container.

2. The combination with a container of a cap or cover comprising a main or body member, a second or sealing member rotatably connected therewith, and means for securing said cap or cover to said container by rotating said main or body member relative to said second or sealing member and to said container.

3. The combination with a container of a cap or cover comprising a main or body member, a second or sealing member rotatably connected therewith, means for securing said cap or cover to said container by rotating said main or body member relative to said container and packing interposed between said second or sealing member and said container.

4. The combination with a container of a cap or cover comprising a main or body member, means for strengthening or reinforcing said main or body member, a second or sealing member, means for joining together said main or body member, said reinforcing means and said second or sealing member, and means for securing said cap or cover to said container.

5. The combination with a container of a cap or cover comprising a main or body member, means for strengthening or reinforcing said main or body member, a second or sealing member, means for joining together said main or body member, said reinforcing means and said second or sealing member, means for securing said cap or cover to said container and packing interposed between said second or sealing member and said container.

6. The combination with a container of a cap or cover comprising a main or body member, means for strengthening or reinforcing said main or body member, a second or sealing member and means for securing said strengthening or reinforcing means to said container.

7. The combination with a container of a cap or cover comprising a main or body member, means for strengthening or reinforcing said main or body member, a second or sealing member, means for securing said

strengthening or reinforcing means to said container and packing interposed between said second or sealing member and said container.

8. The combination with a container of a cap or cover comprising a main or body member, means for strengthening or reinforcing said main or body member, a second or sealing member, means connecting said main or body member, said strengthening or reinforcing means and said second or sealing member, and means for securing said strengthening or reinforcing means to said container.

9. The combination with a container of a cap or cover comprising a main or body member, means for strengthening or reinforcing said main or body member, a second or sealing member, means connecting said main or body member, said strengthening or reinforcing means and said second or sealing member, means for securing said strengthening or reinforcing means to said container and packing interposed between said second or sealing member and said container.

In testimony of the foregoing, we have hereunto set our respective hands in the presence of two witnesses.

HENRY A. KEINER.
EMILE PLANÇON.

Witnesses:
AARON GINSBURG,
EDWARD C. WILLIAMS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."