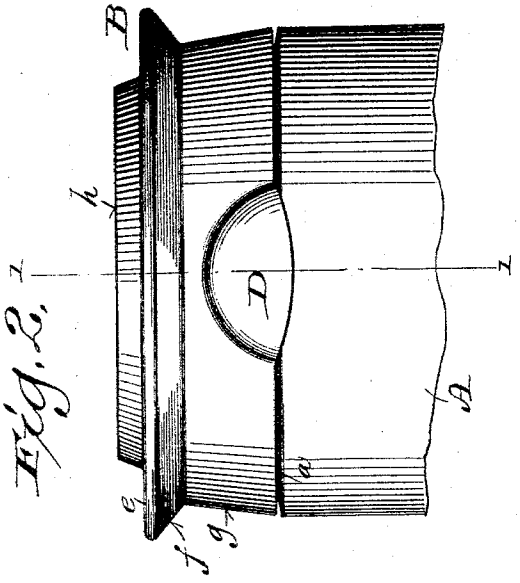
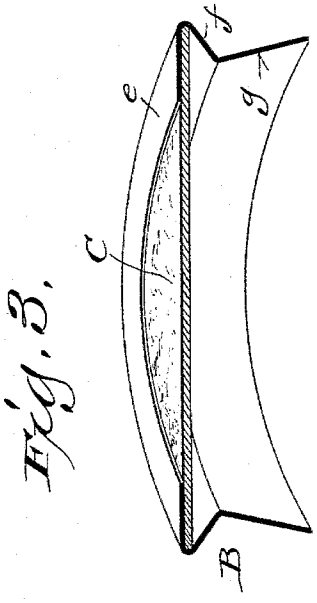
(No Model.)

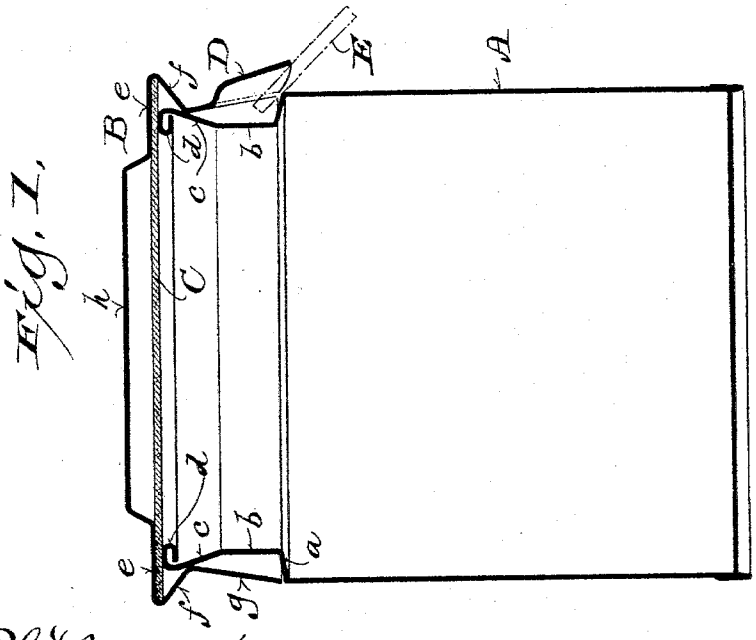
F. A. WALSH.

CLOSURE FOR VESSELS.

No. 571,814. Patented Nov. 24, 1896.







Witnesses:
Geo. W. Young.
A. C. Adolff.

Inventor:
Francis A. Walsh
By H. G. Underwood
Attorneys

UNITED STATES PATENT OFFICE.

FRANCIS A. WALSH, OF MILWAUKEE, WISCONSIN.

CLOSURE FOR VESSELS.

SPECIFICATION forming part of Letters Patent No. 571,814, dated November 24, 1896.

Application filed July 16, 1896. Serial No. 599,389. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS A. WALSH, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Closures for Vessels; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to closures for vessels; and it consists, essentially, in means whereby a vessel may be securely closed by a cover wholly or partly of sheet metal, without seaming or soldering the cover to the vessel, as well as incidentally in means for the ready release of the cover without injury thereto, all as will be fully set forth hereinafter and subsequently claimed.

In the drawings, Figure 1 represents a vertical section taken through a vessel embodying my present invention, taken on the line 1 1 of Fig. 2. Fig. 2 is a front elevation of the cover and upper part of the vessel shown in Fig. 1. Fig. 3 is a perspective sectional view illustrating a somewhat modified form of cover.

In the drawings accompanying the present application, A represents a sheet-metal vessel having an inwardly-extending shoulder *a*, from which rises an annular flange *b*, the same being somewhat flared outward, as shown at *c*, and terminating in a bead or roll *d* at the top.

B represents the cover or closure, the same having an annular rim *e*, with a downward annular flange *f g*, the part *f* extending inward for contact with the outwardly-flaring part *c* of the vessel, and the part *g* flaring outwardly, as shown.

C represents a packing or gasket, primarily held against the under side of the cover between its rim *e* and the part *f* of the cover-flange, and adapted, when the vessel is closed, to rest between the under side of said rim *e* and the upper face of the bead or roll *d*, as shown in Fig. 1.

The cover is applied to the vessel by springing the former upon the latter, there being sufficient yield to the flange *f g* to permit this, and the two parts being held together by the contact of the contracted part of the said cover-flange against the part *c* of the vessel-flange.

D is a swell formed in the part *g* of the cover-flange to aid in the removal or release of the closure, which is accomplished by inserting any suitable tool or lever beneath said swell, as shown by the dotted lines at E in Fig. 1, and then fulcruming said tool or lever upon the shoulder *a* and giving a quick upward turn of said tool or lever against the bottom edge of said swell D, when the cover will be instantly freed without injury and ready for use by again springing it back to place, as before, or when desired, as a slip-cover, by simply placing it over the vessel. The top of this cover B may be continuous and raised, as shown at *h* in Figs. 1 and 2, or may be simply a flat continuation of the rim *e*, or it may be cut away centrally, as shown in Fig. 3, this being wholly immaterial so long as a sufficient rim *e* is left to bear upon the top edge of the vessel to be closed and afford a sufficient base or body for the described spring of the flange *f g*.

My said cover is preferably stamped or formed up from a single piece of sheet metal and is capable of acting as a closure for vessels other than of sheet metal, such, for example, as glass fruit-jars and the like, so long as the latter present a proper surface to receive the contact of the contracted part of the cover-flange and permit the latter to be sprung over the top of the vessel and held in place by a wedging contact, as described.

From the foregoing it will be seen that my cover has contact with the vessel only on a single horizontal plane and exerts a continuous downward pressure on the inclined exterior surface of the vessel, and as said cover is absolutely free from contact with the side or wall of the vessel above and below said line or plane of contact the described springing off of said cover, without injury thereto, or any change in the shape or angular projection of the cover-flange can be readily accomplished, and the cover reapplied in the same manner as originally, which would be impossible if the said cover-flange coincided in shape or angular projection with the exterior surface of the vessel at the point of contact.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. A closure for vessels comprising a sheet-metal cover having a downward-extending flange, provided with an inward bend or contraction for contact with the exterior surface of the vessel to be closed on a single plane, said flange being free from contact with the vessel above and below said plane.

2. The combination with a vessel of a closure therefor, comprising a sheet-metal cover having a downward-extending flange provided with an inward bend or contraction, the diameter of the top of the said vessel being greater than that of the said cover-flange at the line of said inward bend or contraction, and the said cover-flange above and below the line or plane of said inward bend extending outwardly, free from contact with the side or wall of the vessel, whereby the closure is effected by springing the cover over the top of the vessel, and the said cover held tightly to place by the contact on a single horizontal plane between the said inward bend or contracted part of the cover, and the exterior surface of the said vessel.

3. The combination with a vessel having an exterior shoulder near one end and a flanged end extending upwardly and outwardly beyond the shoulder, of a closure therefor comprising a sheet-metal cover having a downward-extending flange bent or contracted inwardly for contact on a single horizontal plane with said outwardly-extending flange of the vessel, the diameter of the top of the latter being greater than that of the said cover-flange at the line of said inward bend or contraction, and said cover-flange being formed with an outward swell, whereby the closure is effected by springing the cover over the vessel-top, and the said cover held tightly to place by a wedging contact, but capable of instant release without injury to the cover by the action of a lever inserted beneath the said swell and fulcrumed on the said shoulder.

4. The combination with a vessel of a closure therefor comprising a sheet-metal cover having a spring-flange for wedging contact on a single horizontal plane with the vessel to be closed, a fulcrum-point on the vessel and a projection on the cover-flange adjacent to said fulcrum-point for enabling said cover to be released or sprung off without injury thereto by a suitable tool or lever.

5. A closure for vessels, comprising a sheet-metal cover of greater diameter than that of the vessel to be closed, and having a spring-flange extending inwardly, at an angle, to the line or point of contact with the side or wall of the vessel, and thence outwardly, whereby the said flange is free from contact with the said side or wall both above and below the said line or point of contact.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

FRANCIS A. WALSH.

Witnesses:
H. G. UNDERWOOD,
B. C. ROLOFF.