H. L. MEAD.

VACUUM PACKAGE APPARATUS.

APPLICATION FILED JAN. 13, 1922.

1,434,018.

Patented Oct. 31, 1922.

Fig. 1.

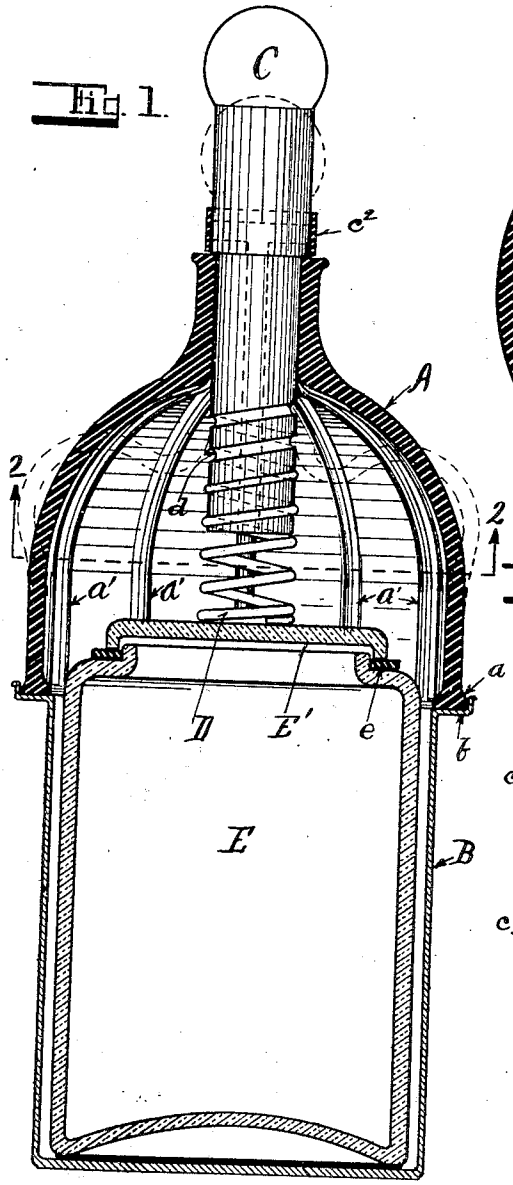


Fig. 2.

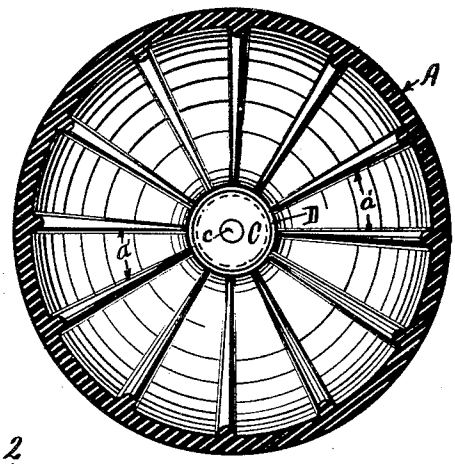


Fig. 3.

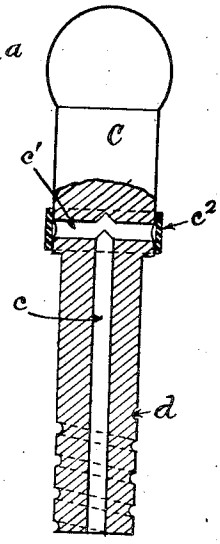
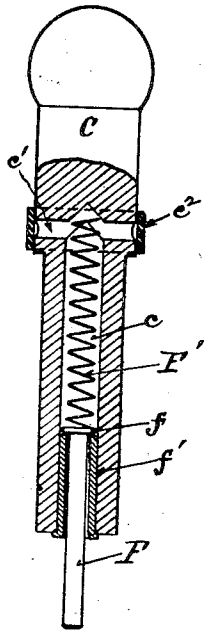


Fig. 4.



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atty.

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UNITED STATES PATENT OFFICE.

HENRY L. MEAD, OF ERIE, PENNSYLVANIA.

VACUUM-PACKAGE APPARATUS.

Application filed January 13, 1922. Serial No. 529,017.

To all whom it may concern:

Be it known that I, HENRY L. MEAD, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Vacuum-Package Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, forming part of this specification.

My invention relates to vacuum-package apparatus, and has for its general object to provide means for packing material in air tight receptacles to be maintained sealed by a preponderance of atmospheric pressure over a reduced pressure within the sealed receptacle.

More particularly the object of my invention is to provide suitable means for reducing the pressure within the receptacle.

The features of my invention are hereinafter fully explained and pointed out, and are illustrated in the accompanying drawings, in which:

Figure 1, is a central vertical section of my improved sealing apparatus.

Figure 2, is a transverse section on the line 2—2 in Fig. 1, looking in the direction of the arrow.

Figure 3, is a central section of the handle portion of my improved device shown in Fig. 1.

Figure 4, is a modified construction of the same.

In these drawings A indicates an inverted bell-shaped structure composed of rubber or other suitable flexible material, the lower edge of which is provided with a circumferential rib or bead *a* adapted to seat down upon an annular shoulder *b* of the receptacle B.

The structure A is provided with internal ribs *a'*, which serve to stiffen the wall of the inverted bell A and cause it to spring back to its normal position when it has been depressed, as hereinafter described, and as illustrated by broken lines in Fig. 1.

Inserted within the apex of the bell A is an operating handle C. This handle C is secured against longitudinal movement in the bell A by reason of the frictional contact between the two. The handle C is provided with a longitudinal opening *c*, which communicates with a transverse opening *c'*, and around the handle C I place a band of rubber or other elastic material c^2, which acts as a valve to prevent air from flowing into the transverse opening *c'*, but will permit air to flow therefrom.

The end of the handle C within the bell A is preferably provided with a spring D which is screwed into a suitable spiral groove *d* around said handle so that the length of the spring D below the handle can be adjusted as desired.

Within the receptacle B I place a container E which I desire to seal; and upon the top of this container is placed a cover E', the edge of which seats upon the ring of rubber or other suitable material *e* in the usual manner. Now, by placing the bell A upon the annular shoulder *b* of the receptacle B, and pushing downwardly upon the handle C, so that the bell A is distorted as shown by broken lines in Fig. 1, and then releasing the pressure upon the handle C, the recoil of the bell A, assisted somewhat by the spring D and the hand of the operator lifting on the handle C exhausts air out of the container E, the spring D acting to keep the cover E' seated upon the ring *e*. A repeated pressure upon the handle C again distorts the bell A and forces air therein outward through the passages *c* and *c'*, in the handle C. This operation is continued until sufficient air has been drawn out of the container E to give the desired external pressure of the atmosphere upon the cover E' to maintain a perfect seal between the cover E', ring *e* and container E. The spring D is for the purpose of exerting enough pressure on the cover E' to maintain it seated upon the ring *e*; but should not exert more pressure thereon than is necessary for that purpose. If the natural resiliency of the bell A is not sufficient to exhaust the air from the container the operator will lift on the handle C as may be found necessary.

In Fig. 4 I show a modification of the spring device associated with the handle C in which F indicates a rod having a head *f* on the upper end thereof, which is slidably secured within the longitudinal opening *c* of the handle C by means of a sleeve *f'* pressed into said opening, and above the head *f* of the rod is placed a spring F'

which maintains the rod F in its normal position, but when operated upon the receptacle cover E′ allows it to be pressed backward into the handle C.

Having thus fully shown my invention so that others can utilize the same, what I claim as new and desire to secure by Letters Patent is:—

1. In a device of the class described, a container, an annular shoulder around the upper end thereof, a resilient bell adapted to seat upon said shoulder, and means to allow air to escape from said bell when it is depressed and prevent air entering thereinto when it is assuming its normal position.

2. In a device of the class described, a cylinder having a closed end, an annular shoulder around the opposite end, a flexible bell adapted to seat on said shoulder, and a handle secured in the apex of said bell.

In testimony whereof I affix my signature.

HENRY L. MEAD.