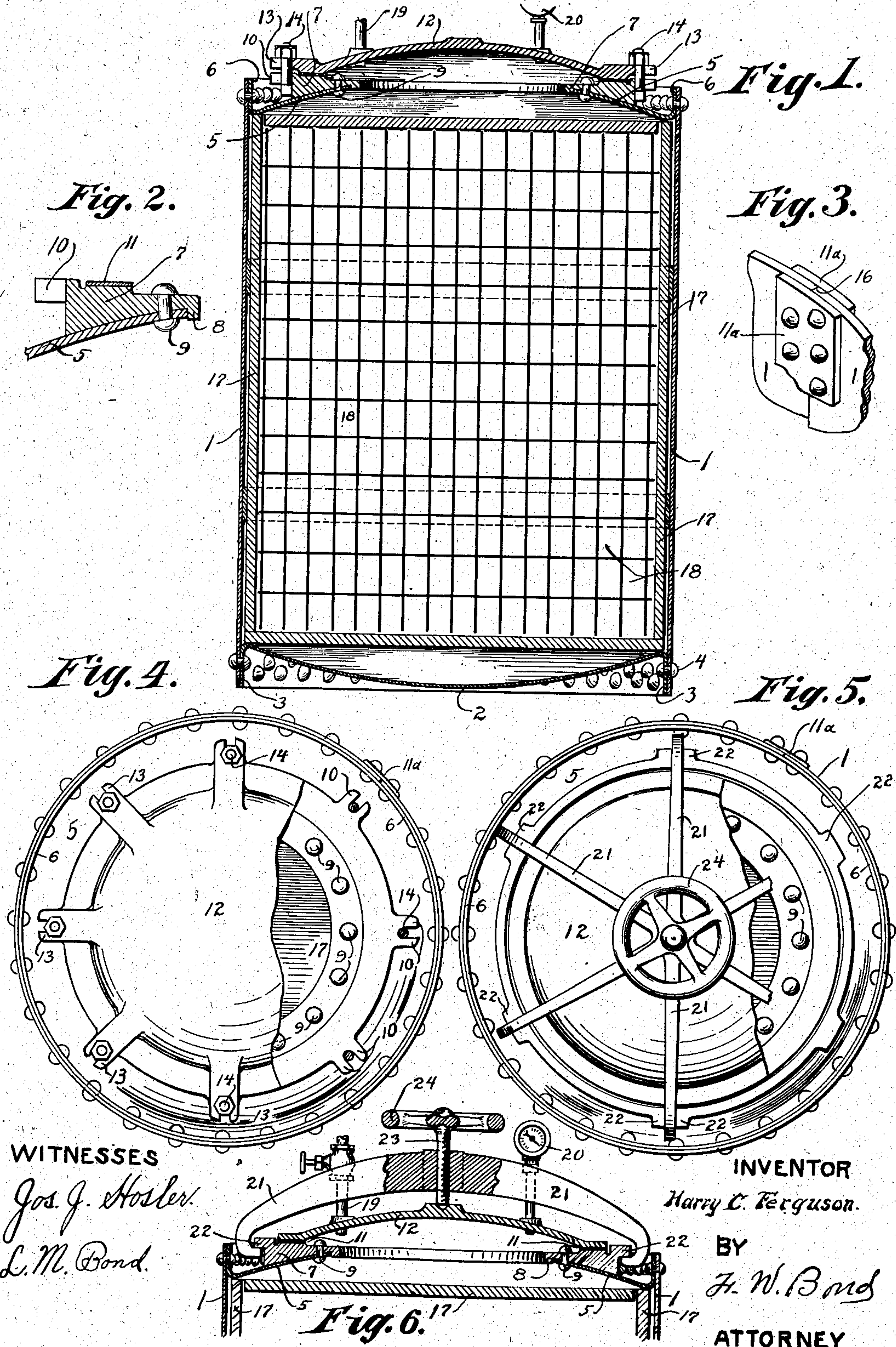


No. 815,081.

PATENTED MAR. 13, 1906.

H. C. FERGUSON.
VACUUM PRESERVING RECEPTACLE.

APPLICATION FILED APR. 13, 1905.



WITNESSES

Jos. J. Hosler.

L. M. Bond.

INVENTOR

Harry C. Ferguson.

BY

F. W. Bond

ATTORNEY

UNITED STATES PATENT OFFICE.

HARRY C. FERGUSON, OF CANTON, OHIO, ASSIGNOR TO THE VACUUM STORAGE CASK COMPANY, OF CANTON, OHIO, A CORPORATION OF OHIO.

VACUUM PRESERVING-RECEPTACLE.

No. 815,081.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed April 13, 1905. Serial No. 255,474.

To all whom it may concern:

Be it known that I, HARRY C. FERGUSON, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Vacuum Preserving-Receptacles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the figures of reference marked thereon, in which—

Figure 1 is a longitudinal vertical section. Fig. 2 is a transverse section of the cover-connecting ring. Fig. 3 is a view of the vertical joint. Fig. 4 is a top view showing a portion of the removable cover broken away. Fig. 5 is a top view showing a modification for connecting the removable cover. Fig. 6 is a sectional view of the modification shown in Fig. 5.

The present invention has relation to vacuum preserving-receptacles; and it consists in the peculiar construction and arrangement hereinafter described, and particularly pointed out in the claims.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, 1 represents the body of the receptacle, which is preferably cylindrical in cross-section and may be formed of any desired size, reference being had to the capacity of the receptacle designed to be constructed. To the lower end of the body 1 is attached the bottom 2, which bottom is convexo-concave and the convex surface of said bottom located outward. The bottom 2 is provided with the flange 3, which flange is for the purpose of securely attaching the bottom to the body 1 by means of the rivets 4 or their equivalents. For the purpose hereinafter described the flange 3 should be so formed and the inner surface of the body also that when the flange 3 is brought up against the inner surface of the body 1 a close fit will be produced.

To the top or upper end of the body 1 is securely attached the curved cover portion 5, which is provided with the flange 6, which flange is connected to the top or upper end of the body 1 in substantially the same manner as the flange 3 of the bottom 2. To the cover portion is securely attached the ring 7, the

under side of which is curved to correspond with the curvature of the upper face of the cover portion 5. The ring 7 is provided with the annular flange 8, which annular flange abuts against the inner edge of the cover-section 5, as illustrated in Figs. 1 and 2. For the purpose of securely attaching the ring 7 to the cover-section 5 rivets, such as 9, are employed. The ring 7 is provided with any desired number of notched lugs 10, which notched lugs are for the purpose hereinafter described. Upon the top or upper side of the ring 7 is located the gasket 11 and the removable cover 12, placed upon the gasket 11, as illustrated in Fig. 1. The cover 12 is convexo-concave and is provided with notched lugs 13, corresponding with the notched lugs 10, formed upon the ring 7. In the notched lugs are located the clamping-bolts 14, which clamping-bolts are for the purpose of securely seating the cover 12 and clamping the gasket 11 between the upper edge of the ring 7 and the lower contact edge of the cover 12. For the purpose hereinafter described the joints of the body 1 are covered by contact-strips 11^a, which contact-strips overlap the joint 16 of the body 1, as illustrated in Fig. 3.

Within the body 1 is located the fibrous lining 17, which may be of any suitable material, and if in the event eggs are to be preserved suitable egg casings or receptacles, such as 18, together with the eggs placed within the body 1 and the removable parts of the receptacle brought into proper position and connected so as to produce as near as possible an air-tight receptacle, after which the air contained in the receptacle is withdrawn through the pipe 19 by means of a suitable air-pump, thereby producing a vacuum, or substantially so, and for the purpose of determining the quantity of air removed a vacuum-gage, such as 20, is provided. It will be understood that the atmospheric pressure is of a considerable force, and when a vacuum or a partial vacuum is produced the tendency is to collapse or press the shell of the receptacle, thereby increasing the porosity of the material, and in order to overcome this objection and at the same time producing a receptacle that will be light or may be constructed of light material the bottom 2, the cover-section 5, and the cover 12 are formed so as to present convexed outer surfaces. It will be understood that by so

forming the parts any atmospheric pressure will have a tendency to close the outer pores of the metal, thereby decreasing the porosity of the material, whereas by forming the top and bottom of the receptacle straight or in planes the tendency is to bend or spring the bottoms inward during the time the air is withdrawn from the receptacle and again when the air is admitted to allow or permit the tops and bottoms to assume their normal positions, by which action the porosity of the metal is continually increased and the joints have to become loose and admit the seeping in of the air; but by my peculiar arrangement this difficulty is overcome, and for the purpose of providing for the downward pressure of the cover-section so that there may be no relative movement as between said cover-section and the ring 7 said ring is provided with the annular flange 8, which annular flange abuts against the inner edge of the cover-section 5.

It will be understood that the pressure upon the body 1 will be the same upon the top and bottom of the receptacle, and by providing the top and bottom with outer convexed surfaces the pressure upon the body 1 and upon the tops and bottoms will be equalized in such a manner that there will be no relative movement as between said parts regardless of the outer atmospheric pressure varying from time to time as against the inward pressure or non-pressure.

The object and purpose of providing the notched flanges 10 and 13 is to provide a means for conveniently removing the cover 12 by simply loosening the nuts upon the clamping-bolts 14 and removing a portion of the clamping-bolts.

In Figs. 5 and 6 I have illustrated a modified form for connecting the cover 12, which

consists in a spider yoke 21, connected to the ring 7, and the ring 7, provided with the spider yoke-engaging flange 22 and the spider yoke provided with the clamping-screw 23, which screw can be rotated by the wheel 24, so as to clamp or press the cover 12 in close contact upon the gasket 11.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a vacuum preserving-receptacle, the combination of a body having secured thereto a convexo-concave bottom, a cover-section formed convexo-concave and provided with an attaching-flange, a ring secured to said cover-section and provided with an annular flange adapted to abut against the cover-section, a removable cover formed convexo-concave, and means for attaching said cover to the ring fixed to the cover-section, and a gasket located between the removable cover and the ring, substantially as and for the purpose specified.

2. In a vacuum preserving-receptacle, a body provided with a convexo-concave bottom, a cover section or ring formed convexo-concave and provided with an attaching-flange, a ring connected to the cover-section and provided with an annular flange adapted to engage the cover-section, a removable cover formed convexo-concave, and a gasket located between the cover and the ring, and means for securing the removable cover, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

HARRY C. FERGUSON.

Witnesses:

H. V. BRIGGLE,
F. W. BOND.