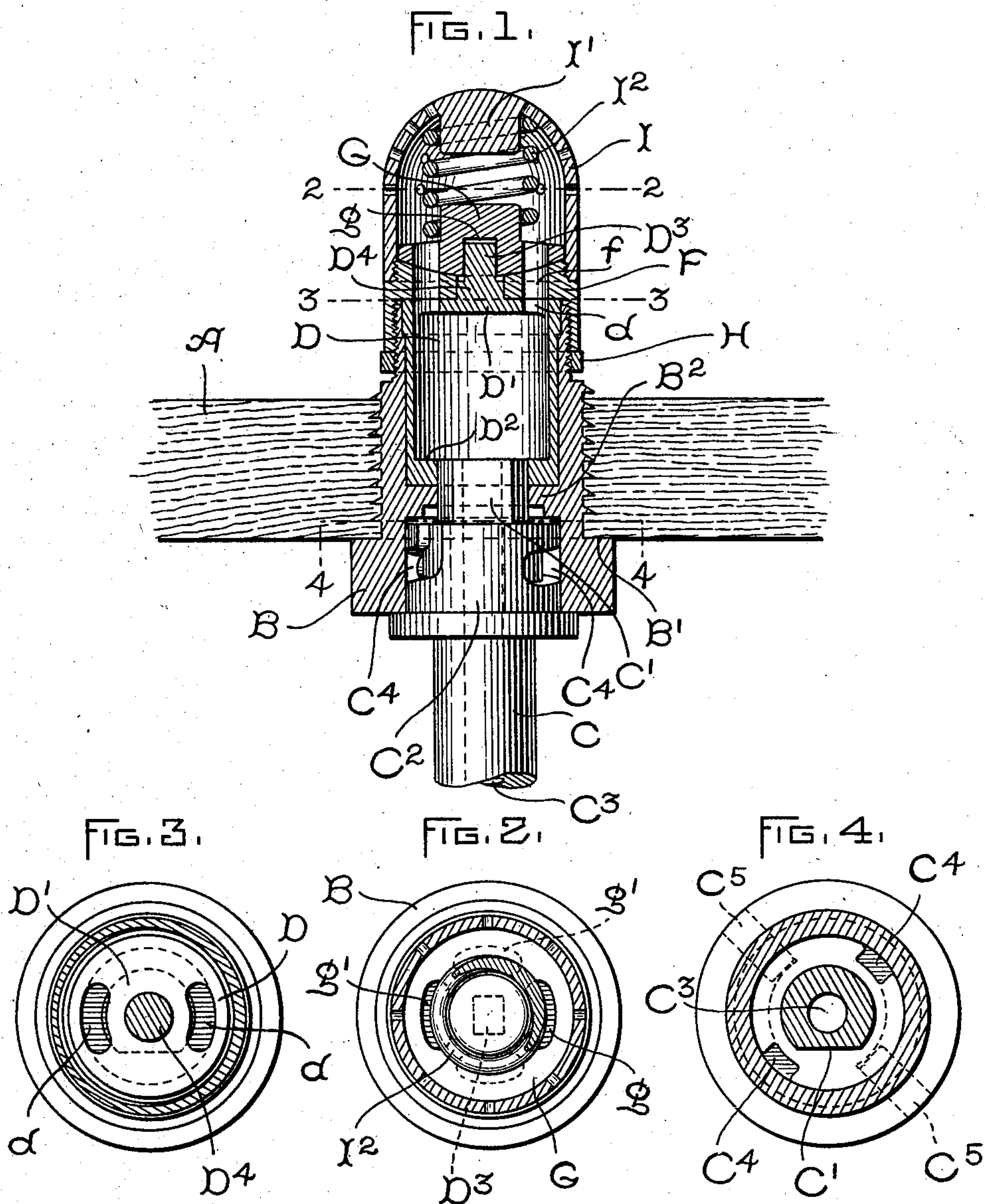


(No Model.)

F. W. ALBRECHT, Jr.
BUNG FOR ALE BARRELS.

No. 603,243.

Patented May 3, 1898.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FREDERICK W. ALBRECHT, JR., OF BROOKLYN, NEW YORK.

BUNG FOR ALE-BARRELS.

SPECIFICATION forming part of Letters Patent No. 603,243, dated May 3, 1898.

Application filed November 11, 1897. Serial No. 658,144. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK W. ALBRECHT, Jr., a citizen of the United States, residing at Brooklyn, in the county of Kings, State of New York, have invented certain new and useful Improvements in Bungs for Ale-Barrels, of which the following is a specification.

To prevent ale-barrels from souring after they have been emptied, it is necessary to provide them with bungs having therein an air-tight valve which is so arranged that it must be closed before the tap can be removed.

My invention has for its objects to provide a bung which will exclude air from a barrel either before or after its contents have been removed and one in which wear will have no appreciable effect upon its utility. There are a variety of bungs in the market intended for this use, and while they may be air-tight at the start they soon become worn and permit air to enter the barrel.

In the accompanying drawings, Figure 1 is a vertical section of my improved bung; and Figs. 2, 3, and 4 are sections taken, respectively, on lines 2 2, 3 3, and 4 4 of Fig. 1.

For convenience of illustration a portion only is shown of a cask or barrel A, and mounted therein is a screw-threaded plug or bung having a shoulder B', formed integral therewith, which is seated on the barrel. The plug is divided by partition B² into two parts, both of which are cylindrical, the outer part being arranged to receive tap C and the inner part to receive cylinder D of the valve. Mounted in the inner opening of the plug is a cylinder D', forming a disk-valve having flat parallel heads D' and D², making right angles with the sides. The lower head D² is provided with a round central opening having a slightly-flattened portion arranged to engage with a similar flat portion C' on tap C. The upper head or disk D' is provided with openings d, which when the valve is in the open position, as shown in the drawings, coincide with openings f in the stationary valve-seat F. Projecting from and formed integral with head D' is a projection having a cylindrical portion D⁴ and a squared end D³. The latter is arranged to enter socket g in the rotary spherical valve G for actuating it. Cylinder D is retained in place by valve-

seat F, which is secured to bung B by an internal screw-thread. By changing the vertical height of valve-seat F disk-valve D can be adjusted, and lock-nut H will retain the parts in place. Valve-seat F is provided with one flat and one spherical surface, the former engaging the disk-valve D and the latter with spherical valve G. Openings f are provided to permit liquid to pass. Screw-threaded to seat F is a spherical strainer I, having a central projection I' in the top to hold spring I² in place.

Rotary valve G is provided with a spherical surface which engages a similar surface on valve-seat F. In constructing the bung the spherical valve-seat and valve are turned as true as possible in a lathe, after which they are ground with flour of emery. This makes a perfectly true joint between the parts and will, when the openings g' are in the position shown by dotted lines, Fig. 2, prevent air from entering the barrel.

Formed integral with the valve is a projection G', which forms a support for one end of spring I². Socket g is formed in the under side of the valve, and a slight amount of play is provided to permit the valve to center itself. The most objectionable feature in the valves commonly used is that they leak around the central actuating-spindle, so by supporting valve G by a spring located at a point outside of the valve proper and dispensing with the center spindle passing through the valve I am enabled to provide a perfectly air-tight valve.

Tap C may be of any desired construction, the one shown in the drawings comprising a cylindrical piece C², having a central opening C³, communicating with the opening in valve D. Cam-slots C⁴ are arranged to engage with pins C⁵ and hold the tap in place. When the tap is rotated in a left-hand direction, flat portion C', engaging with a similar portion on valve D, will rotate the valve and close it, and the tap may then be removed. Valve G, being mechanically connected to valve D through pin D³, will also be closed, and it will be seen that the ports or openings f are closed both top and bottom.

By supporting valve G by a spring in the manner shown it will automatically center and adjust itself for wear.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a barrel-bung, the combination of a metal support arranged to be secured to the barrel, a spherical valve-seat provided with a port or opening, a spherical rotary valve arranged to open and close the port, a support therefor located on the side of the valve-seat opposite the actuating device, the arrangement of the support being such that no portion of it projects through the valve and an actuating device for imparting a rotary movement to the valve.

2. In a barrel-bung, the combination of a metal support arranged to be secured to the barrel, a spherical valve-seat, a self-centering spherical valve, a spring situated outside of the working parts of the valve forcing the valve against the seat, and an actuator arranged to impart a rotary motion to the valve, so arranged that it does not project through the valve.

3. In a barrel-bung, the combination of a screw-threaded plug which is secured to the barrel, a ground spherical valve-seat screw-threaded to the plug, a self-centering spherical valve, a strainer secured to the plug, and a spring located between the strainer and valve for holding the valve in place.

4. In a barrel-bung, the combination of a

screw-threaded plug, a valve-seat provided with flat and spherical faces, disk and spherical valves, a clamping-ring for holding the disk-valve in place, a spring-support for the spherical valve, and an actuating device.

5. In a barrel-bung, the combination of a screw-threaded plug, a spherical valve-seat, a spherical valve mounted for rotary movement, a socket in the curved side of the valve, and an actuator which passes through the valve-seat and enters the socket in the valve.

6. In a barrel-bung, the combination of a screw-threaded plug, a valve-seat screw-threaded to the plug and provided with flat and spherical surfaces, ports in the valve-seat, disk and spherical valves, a socket in the spherical valve, a plug on the disk entering the socket, a spherical strainer screw-threaded to the valve-seat, and a compression-spring which supports the spherical valve in place and permits it to automatically adjust itself.

In witness whereof I have hereunto set my hand this 8th day of November, 1897.

FREDERICK W. ALBRECHT, JR.

Witnesses:

ALBERT C. FEST,
MARIA FEST.