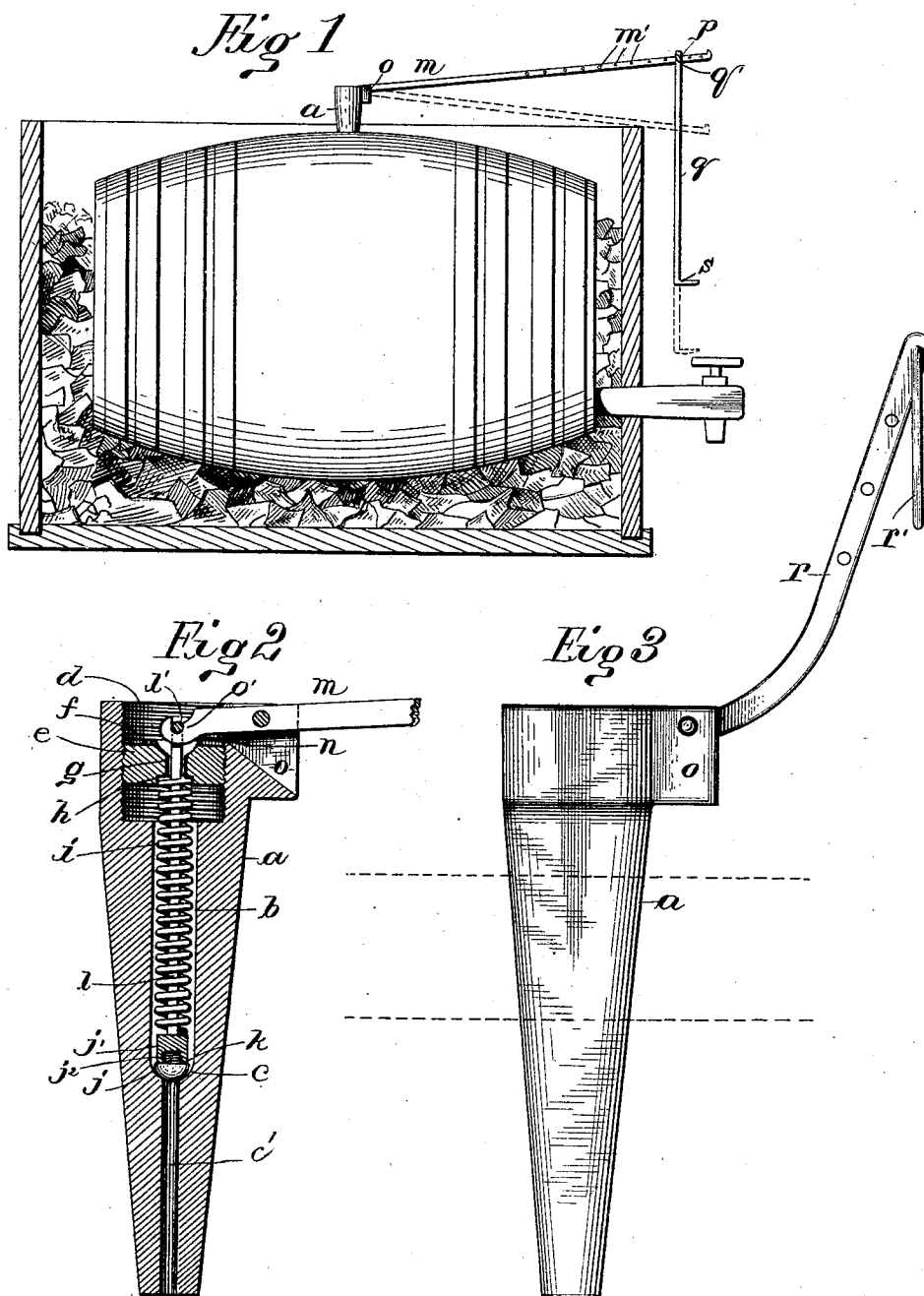


(No Model.)

F. W. POLLE.
VENT FOR LIQUID RECEPTACLES.

No. 484,816.

Patented Oct. 25, 1892.



Witnesses
C. C. Burdine
J. B. Owens.

Inventor
Friederich W. Polle,
per De Boie & De Boie
Attorneys.

UNITED STATES PATENT OFFICE.

FRIEDERICH W. POLLE, OF WASHINGTON, DISTRICT OF COLUMBIA.

VENT FOR LIQUID-RECEPTACLES.

SPECIFICATION forming part of Letters Patent No. 484,816, dated October 25, 1892.

Application filed April 18, 1892. Serial No. 429,628. (No model.)

To all whom it may concern:

Be it known that I, FRIEDERICH W. POLLE, a citizen of the United States, residing at Washington, District of Columbia, have invented certain new and useful Improvements in Vents for Liquid-Receptacles; and I do 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, which form a part of this specification.

My invention relates to that class of vent-plugs used for beer-kegs and similar receptacles for holding effervescing liquids.

A particular object sought to be accomplished is to improve upon my prior patent, No. 284,479, granted September 4, 1883. The mechanism of this prior patent, while working successfully, soon wore out because of the contact of the valve-actuating pin with the valve, for as the pin came in contact with the soft rubber of which the valve was made it would gradually wear the valve, so that in a little while the latter would fail to make a tight fit against its seat. In my present device this defect has been overcome by employing the peculiar mechanism and combination of parts more fully described hereinafter, and pointed out in the claim.

In the accompanying drawings, Figure 1 represents a view showing my improvements applied to an ordinary beer-keg. Fig. 2 represents a vertical section of the vent-plug and its mechanism. Fig. 3 is a view of a modification.

The reference-letter *a* represents a tapering body portion having a central passage *b* formed therein. In this passage a valve-seat *c* is formed. The passage extends on beyond the valve-seat to the small end of the body, but is considerably reduced in size.

Formed in the upper end of the passage *b* is an enlarged recess *d*, having internal screw-threads formed therein. Fitting in this recess is a screw cap or nut *e*, which is correspondingly threaded and may be adjusted in the recess by means of the usual slot *f*, formed on its upper side. A central hole or passage *g* is made in the cap *e* and flaring outwardly

to form a second valve-seat, which may be used in conjunction with an upwardly-seating valve, if desired. An indentation or recess *h* is formed on the lower side of this nut, which receives the upper end of a coil-spring *i*. This spring is confined between the cap *e* and the valve *j*, which is seated upwardly on the seat *c*. The valve *j* is made of a metallic body portion *j'*, having formed in its end an internally-threaded recess *j²*, into which the rubber cap *k* is screwed.

In order to make the valve as durable as possible, the face which comes in contact with the seat is made convex or hemispherical and the seat *c* is concaved to correspond therewith. It will be seen that the harder this valve is pressed down on its seat the greater will be its effectiveness in closing the reduced portion *c'* of the vent-channel. By having a stem *j³* and socket *j'* the valve proper *j* will not be as much chafed and worn by constant use as those formerly in use, wherein the valve-stem passed through the rubber, but will expand laterally and better perform its functions.

Secured to the upper end of the metallic body *j'* is a rod or stem *l*, which extends upwardly through the spring *i* and projects above the cap *e*. This rod has formed on its end an eye *l'*, by which it is secured to the actuating-lever *m*. In the side of the recess *d* is cut an opening *n*, having flanges or projections *o* located on each side. Between these flanges is fulcrumed the lever *m*. This lever is of the first class and has formed on its short arm a hook *o'*, which is adapted to enter the eye *l'* of the valve-rod. The long arm of the lever *m* is of an unusual length and has formed on one side a series of indentations *m'*, which are adapted to receive the thumb-screw *p* of the pendent operating-section *q*. An eye *q'*, formed on the upper end of this section, embraces the lever *m*, and through the medium of the thumb-screw *p* and indentations *q'* an effective pivotal connection between the two is made.

Assuming that the cask is in an ice-box, as shown in Fig. 1, and that it is desired to draw off a quantity of beer, the faucet is opened; but by reason of a vacuum being formed in the cask the beer will not flow out. The section *q*, which hangs over the side of the ice-

box, by means of thumb-ring *s* is then pulled down, and through the medium of lever *m* the valve is lifted from its seat and a quantity of air admitted into the cask. As soon
5 as the air enters the cask the beer begins to flow out of the faucet. This flow is, however, immediately checked when the valve is allowed to close. This operation is founded on a well-known principle and needs no further
10 description.

The amount of beer drawn may be regulated entirely by the vent-plug; but it may be best to keep the faucet closed when not in use to prevent any possible loss.

15 The modification shown in Fig. 3 illustrates my plug applied to an ordinary beer-cask not in an ice-box. In such a case the long levers are not necessary, as the operator may easily reach the plug without the use of such levers.
20 A short lever *r*, provided with an operating-ring *r'*, is used in place of the lever *m*.

Having thus described my invention, what

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

The combination, with a vent-plug containing a central vent-channel having a reduced portion, of a valve located in the channel and provided with a stem, a threaded socket portion attached to the inner end of the stem, a spring for normally holding the valve in
25 closed adjustment, the valve proper being composed of elastic material formed with a convex wearing-surface, and a shank adapted to enter said threaded socket, and a concaved
30 seat surrounding the throat of the reduced part of the channel, in the manner and for the purpose substantially as described. 35

In testimony whereof I affix my signature in presence of two witnesses.

FRIEDERICH W. POLLE.

Witnesses:

RHESA G. DU BOIS,
I. B. OWENS.