W. ENTICOTT.

Self Opening and Closing Bung.

No. 217,274. Patented July 8, 1879.

Fig. 1.

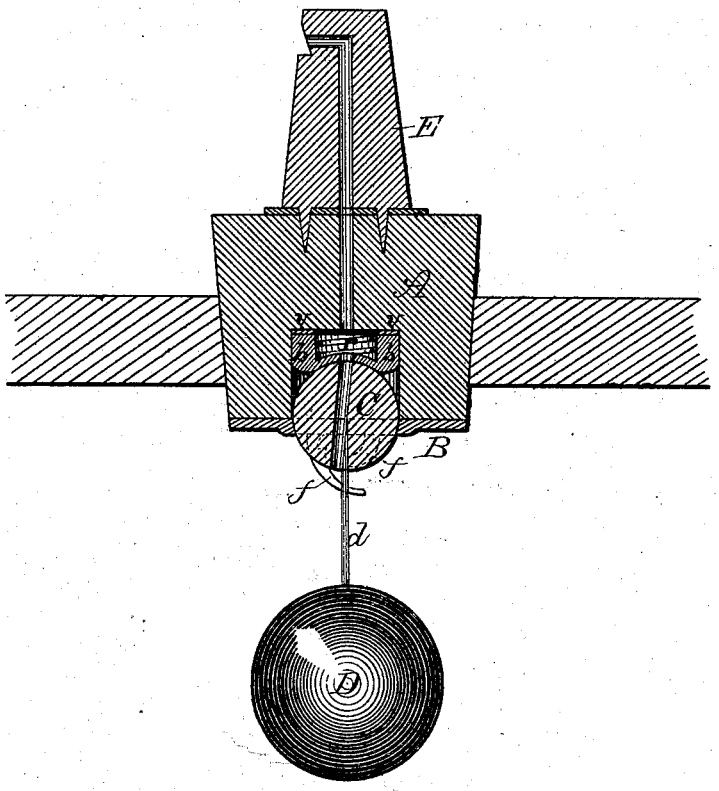
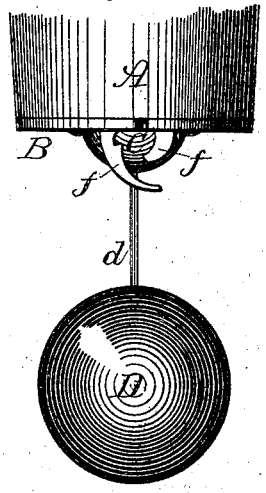


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM ENTICOTT, OF ALLEGHENY, PENNSYLVANIA.

IMPROVEMENT IN SELF OPENING AND CLOSING BUNGS.

Specification forming part of Letters Patent No. **217,274**, dated July 8, 1879; application filed March 1, 1879.

To all whom it may concern:

Be it known that I, WILLIAM ENTICOTT, of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Self-Opening and Self-Closing Bungs; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to self-closing and self-opening bungs for the escape of gas from barrels containing coal-oil or other fluids; and it consists in adapting to the under side of a bung a ball-valve controlled by a weight therefrom suspended, the said valve being pierced vertically to correspond with a vent in the top of the bung so long as the barrel remains in a vertical or upright position, and becomes hermetically sealed when the barrel is rolled or its position changed, as will be fully described hereinafter.

The accompanying drawings represent my invention.

Figure 1 is a vertical section, and Fig. 2 is a side elevation, of the lower part of the bung and weight.

The bung A is of the usual form, has a vent-hole through its top, and at its bottom a hole or opening of sufficient dimension to receive within it an elastic cushion, *b*, made of material to resist the action of the fluid in the barrel and of the gas escaping from it.

To better retain the elasticity of the cushion, a spiral spring, *r*, is introduced at its inside. The cushion is also provided with a leather ring, *v*, at the end in contact with the bung, and thereby glued or otherwise secured to the wood to prevent leakage, and a hole is made through the cushion, that corresponds with the one through the top of the bung.

A plate, B, covering the bottom of the bung, is thereto attached, the said plate having in its center a seat for the ball-valve C, the valve being adjusted to come in contact with the cushion *b* above it.

To the valve C a stem, *d*, is attached, and to the end of this a weight, D, controlling the motions of the valve.

A hole passing from the bottom through the top of the valve corresponds with the one through the cushion *b*, and with the vent-hole in the bung so long as the weight, from a changed position of the barrel, does not turn the ball-valve to either side; but when the barrel is turned over or rolled about, the weight D, by its gravity, turns the valve and hermetically closes the bung.

On opposite sides, upon the plate B, are catches *f*, constructed to arrest the stem *d* with its weight, and prevent unnecessary wear of the valve when the barrel is rolled or removed from place to place, and formed to again release the stem when the barrel is returned to its former upright position.

The bung is to be introduced into the center of one end of the barrel, and when the barrel stands in an upright position, the bung upward, the weight D keeps the vent open for the escape of gas; but when barrels are exposed in this position to rain, the water gathering on the head of the barrel might find an entrance through the vent in the bung. To obviate this a suitable cap, E, is provided, which, when placed over the vent-hole in the bung, excludes not only the water, but allows the gas to continue to escape through an opening near its top.

The object of my invention is to prevent the losses sustained from the bursting of barrels, and the consequent waste of material, occasioned by an accumulation of gas in the barrels containing coal-oil or other fluids from which gas evolves.

By letting the gas escape without requiring any extra labor, and yet keeping the barrels in a condition to be rolled or handled with safety at all times against loss of the liquids, and again to continue the outflow of gas as soon as the barrel is restored to an upright position, I have attained the end proposed.

Having thus described my invention, I claim—

1. The plate B, secured to the bottom of bung, and seated therein the valve C, pierced

by a hole, and controlled by a weight attached to the ball of the valve, substantially as shown and described.

2. The plate B, holding a ball-valve in its seat, and having at opposite sides the catches *f*, to hold the weight D when the barrel is rolled, and again release it when the barrel is set on end, substantially as set forth.

3. The combination of the bung A, cushion *b*, valve C, plate B, cap E, and weight D, substantially arranged as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 26th day of February, 1879.

WILLIAM ENTICOTT.

Witnesses:

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