

J. A. NUNN.  
Vent-Plugs for Beer-Barrels.

No. 158,303.

Patented Dec. 29, 1874.

Fig. 1.

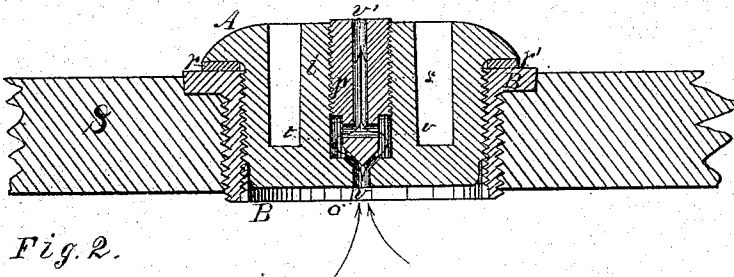
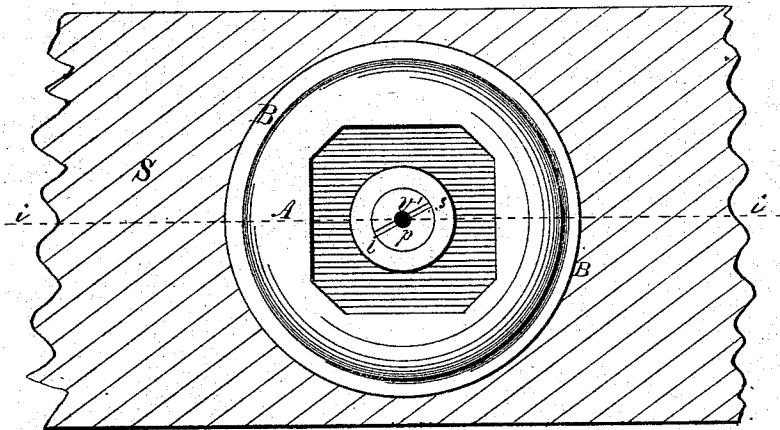


Fig. 2.

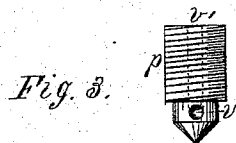


Fig. 3.

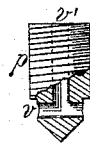


Fig. 4.

Witnesses:  
E. B. Whitmore  
L. M. Wooden

Inventor:  
Joseph A. Nunn

# UNITED STATES PATENT OFFICE.

JOSEPH A. NUNN, OF ROCHESTER, NEW YORK.

## IMPROVEMENT IN VENT-PLUGS FOR BEER-BARRELS.

Specification forming part of Letters Patent No. **158,303**, dated December 29, 1874; application filed December 3, 1874.

*To all whom it may concern:*

Be it known that I, JOSEPH A. NUNN, of the city of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Vent-Plugs for Beer-Barrels; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, sufficient to enable those skilled in the art to which it appertains to construct and make use of the invention, reference being had to the drawings accompanying this specification, and to the figures and letters of reference marked thereon, in which like letters refer to like parts throughout the specification, and on which—

Figure 1 represents a plan of the invention. Fig. 2 represents a vertical section through the line *i*, Fig. 1. Fig. 3 represents the vent-plug with the vent-port facing outward. Fig. 4 represents the vent-plug, having the transverse perforation, shown sidewise.

My invention relates to a vent-plug for a bung to a beer-barrel; and its object is, as the barrel is being filled, to provide for the escape of the air, and, as the liquid is drawn off, to provide for admitting the air, the same to be done without escape or loss of the liquid, and thereby rendering an uninterrupted and easy flow both for the ingress and egress of the same. It consists, first, in a screw-plug having its inward and lower end sloped or tapered to fit a seat and port in the bottom of the bung; second, in a vertical bore or tube lengthwise of the plug through its center, and intersecting with a transverse perforation or bore in the lower part of the plug, for the purpose of admitting, or the escape of, the air as it passes by the tapered end of the plug through the aperture provided for the same in the bottom of the bung, as hereafter more fully described.

In the stave *s* of a ready-made barrel is inserted the bung bush *B*, on top of which is the rubber washer *r*, having the metal bung *A* screwed down on the top of the washer. Into the center of the bung, from the top, and penetrating to within about one-fourth of an inch of the outside bottom of the same, is bored about a one-half-inch socket, *s*, having its lower portion, *t*, tapered inward and downward to about

one-eighth of an inch in diameter, from which point to the outside bottom of the bung the bottom is pierced, making an orifice, *O*, and thereby effecting an entrance to the cavity of the barrel. A screw-thread is cut on the interior surface of the socket *s*, preparing it for the screw-plug *P*, on which is cut a screw-thread corresponding with that on the socket. The lower portion of the plug is tapered so as to fit its seat *t* in the lower portion of the socket *s*, and its point is shaped to fit the orifice *o* in the bottom of the bung, which is effected for the seat *t* and the orifice *o* by the method called a "ground-joint," producing a perfect protection for the contents of the barrel against the ingress of air or escape of gas, as may be necessary. Between the taper and screw-thread, on the lower portion of the plug, there is left a straight space, *v*, of about one-eighth of an inch wide, for a transverse perforation, *v*, of about the same diameter as the width of the space. From the top of the plug, and intersecting with the said transverse perforation, is a vertical bore, *v'*, of the same diameter as the transverse perforation *v*, thus, by means of the vertical movement of the screw-plug, forming a connection between the outside and inside of the barrel for admitting air, or the escape of gas, as desired.

To operate my improvement, the bush and bung being regularly inserted, the plug *P* is placed in position, and, by means of a screw-driver, is turned down to its seat *t*, closing the orifice *o* and the barrel against the ingress or egress of air. By turning the plug backward with the screw-driver, the plug is raised out of its seat *t*, and, in the process of filling the barrel, the air, in escaping from the same, enters the orifice *o* and passes around the end of the plug as the plug is raised from its seat *t*, and at the same time enters both ends of the transverse perforation *v*, and meets at the intersection of the vertical bore *v'* and perforation *v*, and then passes up and out of the vertical bore *v'*, when, by the same means, the plug is turned down to its seat, hermetically securing the contents of the barrel. In the same manner, on drawing off the liquid, by raising the plug as before, the conduits are opened and the air flows in through them un-

til they are required to be again closed, when, by the same means, the ports *o*, *v*, and *v'* are closed, as desired.

By this construction the interior of the barrel is more perfectly secured against the ingress or egress of air than by any other method operated by an elastic rubber valve, because, first, the valve being of a flexible material, and attached only by one edge, it is liable to displacement, and becomes inoperative; second, when the barrel is empty and laid aside for future use, all elastic valves become dry, shrivel, contract, and are hard, consequently leak and are useless. It is more perfectly secured than by any vent-plug which passes the air in or out at the side of the plug, because it has a less number of ports, and is, therefore, less liable to get out of repair, and, as in my vent-plug the air passes out and in through

the length of the body of the plug and escapes at the top of the port, the port is more easily protected, and so more convenient.

What I claim as my invention, and wish to secure by Letters Patent, is—

In combination, the vent-plug *P*, provided with the vertical bore *v'*, intersecting with the transverse perforation *v*, the tapered plug-seat *t*, and, in the bottom of the bung, the orifice *o*, arranged for the purposes substantially as shown and herein described.

In testimony whereof I have hereunto set my hand on this 28th day of November, A. D. 1874.

JOSEPH A. NUNN.

Witnesses:

B. F. PARSONS,  
M. F. O'DER.