

T. M. ARMSTRONG.
Vent-Bung.

No. 216,993.

Patented July 1, 1879.

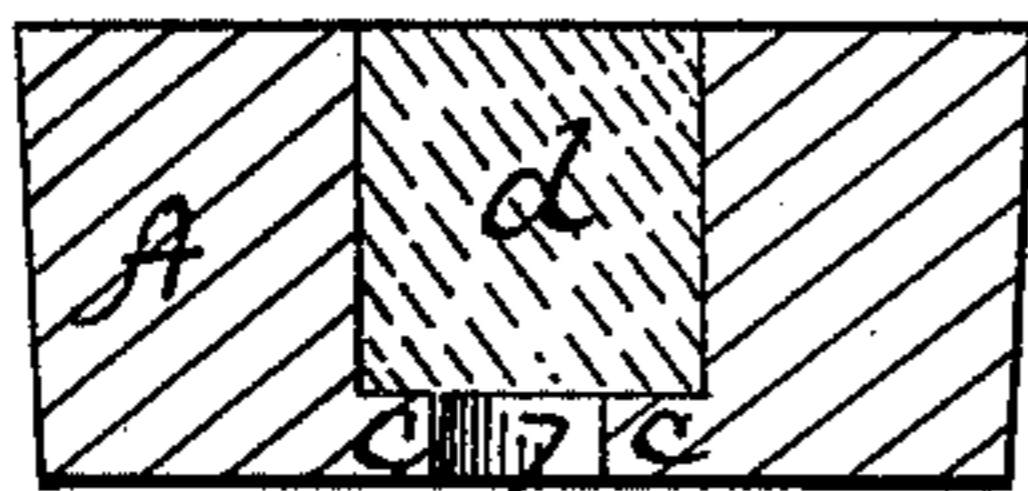


Fig. 1.
d

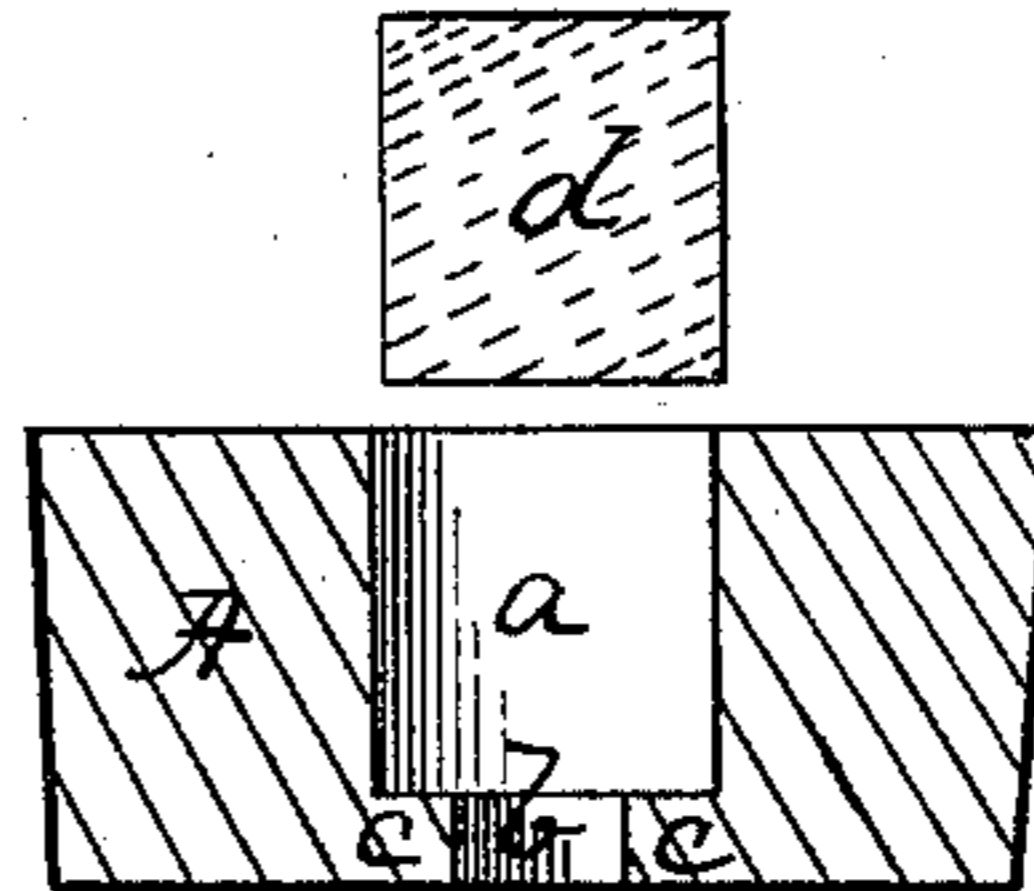


Fig. 2.
d

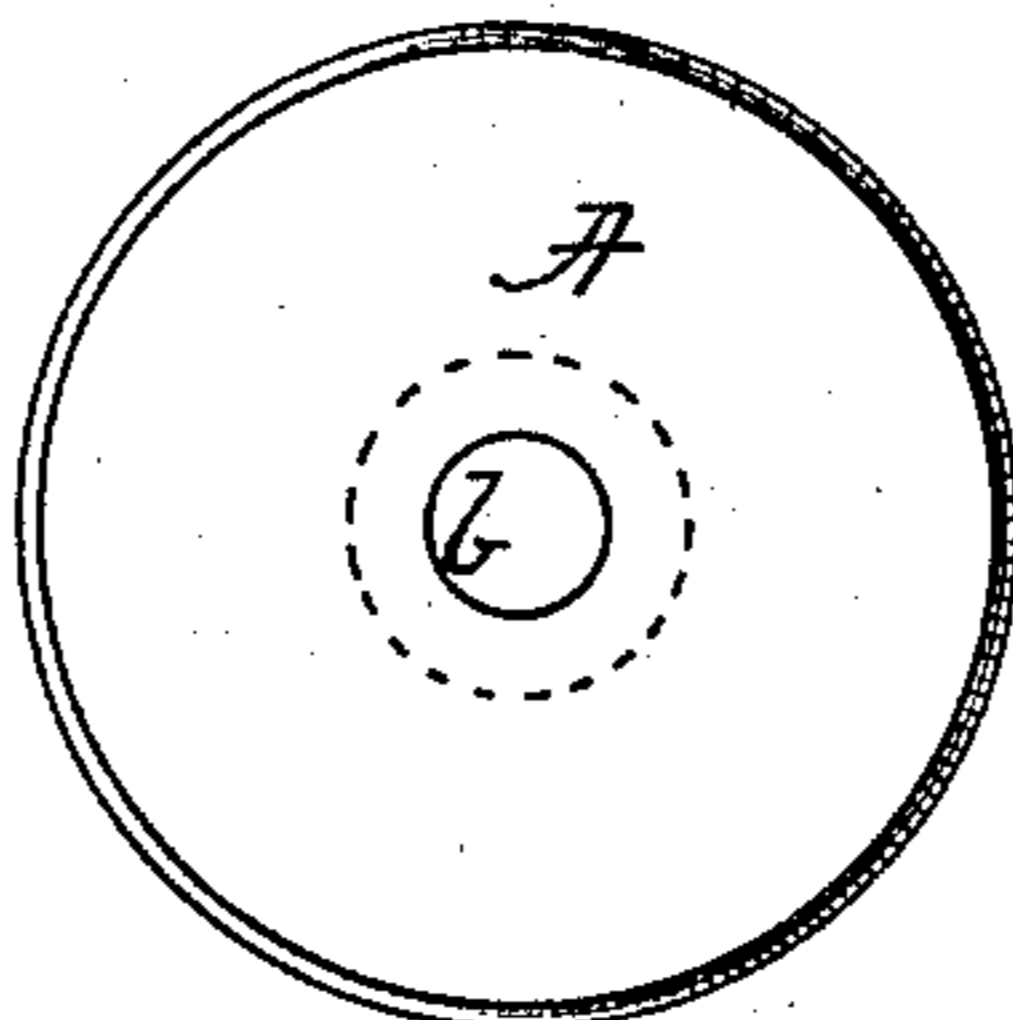


Fig. 3.
d

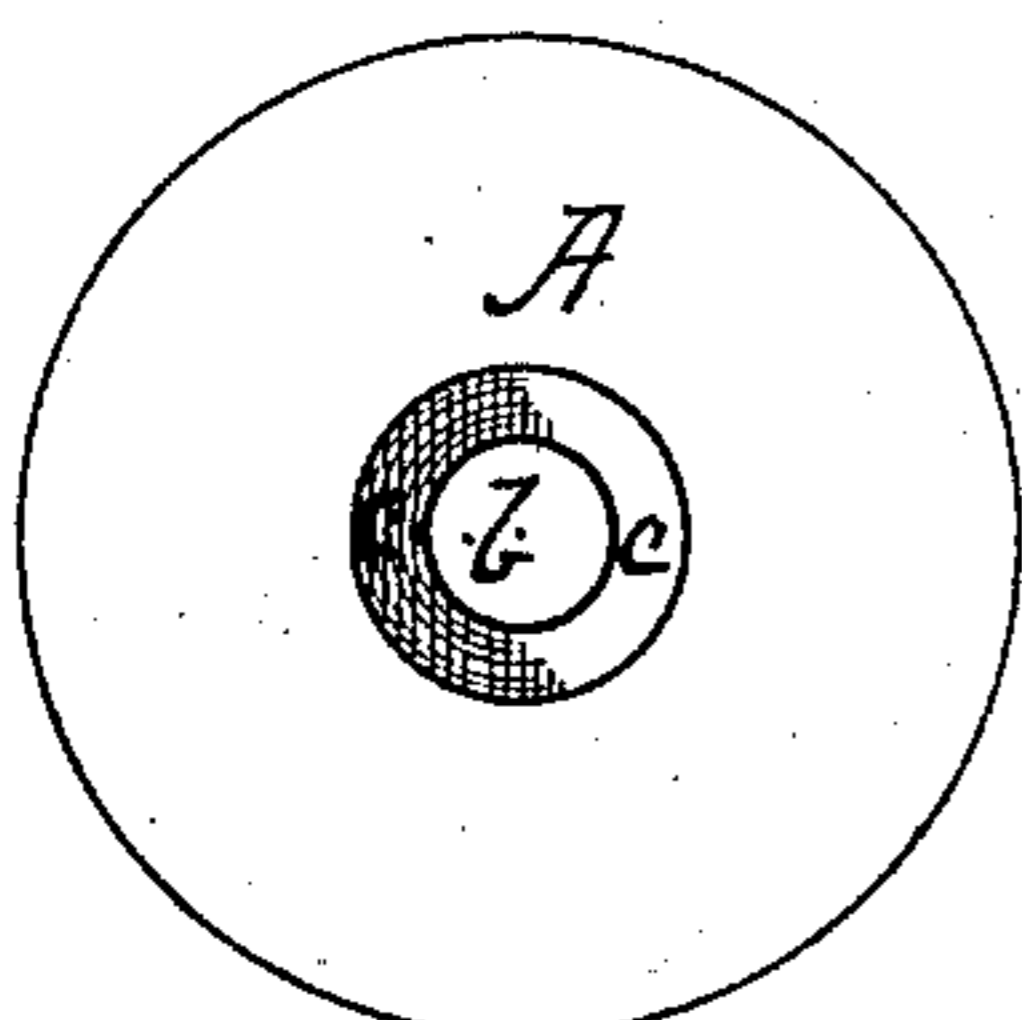


Fig. 4.
d

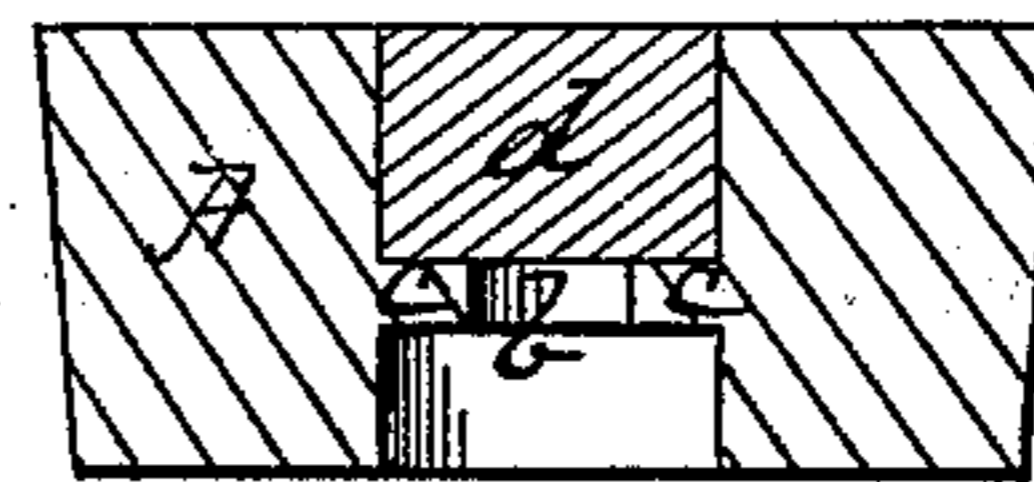


Fig. 5.
d

Witnesses.

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UNITED STATES PATENT OFFICE

THOMAS M. ARMSTRONG, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN VENT-BUNGS.

Specification forming part of Letters Patent No. 216,993, dated July 1, 1879; application filed May 12, 1879.

To all whom it may concern:

Be it known that I, THOMAS M. ARMSTRONG, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Bungs for Casks, Barrels, &c.; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a sectional view of a bung embodying my invention, the central cork or plug being in position. Fig. 2 is a similar view, the cork or central plug removed. Fig. 3 is an under-side view of the bung. Fig. 4 is a top view of the bung, the central cork or plug having been removed. Fig. 5 is a modification.

Like letters refer to like parts wherever they occur.

My invention relates to the construction of vent and faucet bungs; and consists, first, in a perforated vent-bung having a frangible flange, shoulder, or seat within the orifice, adapted to support a detachable plug or cork, which completes the bung; secondly, in a vent-bung having a central orifice provided with a frangible flange, shoulder, or seat, said central orifice closed by a cork or equivalent plug.

In the formation of bungs for beer and other barrels it has been found desirable to so construct the bungs that a faucet or vent-plug can be readily introduced without the removal of the bung, and without permitting the escape of gas from the barrel, as the escape of gas or the free admission of air would render the liquid flat or stale. To meet this demand various bungs have been devised, each and all based on the displacement of some portion of the bung, either a central plug or a septum or web.

In one class of bungs a central orifice, either straight or tapering, has been formed, and the same closed by a central plug or cork; but in this class of bungs several objections exist: First, if the central plug is of wood it must be cut across the grain, and is then troublesome to form and insert, or it is cut with the grain, and in that case is liable to permit the escape of the gas. If the length of the plug is not

equal to the thickness of the bung, then a cavity will be left in the bung for the accumulation of dirt, which, when the faucet or vent-tube is driven in, will be carried with the central plug into the liquor; and if cork is used, which in all cases is the most desirable, it will add greatly to the expense of the bung, as the best of cork and thick sheets thereof must be used, owing to the thickness of the bung.

In a second class of bungs the center of the bung has been bored but partially through, (from one or both sides,) so as to leave a septum or web, to be subsequently broken through by the introduction of the vent-plug or faucet, and in such cases there exists not only the objection of dirt accumulating in the central cavity, but the liability of the web or septum becoming accidentally punctured or broken, which would permit the escape of the gas, and the loss in manufacture from the number of imperfect bungs, arising from defects in the wood. To overcome this the bung has been channeled, so as to leave intact the central portion, and in some cases the cavity has been closed by a central plug; but such construction but partially overcomes the objections, while it renders it much more difficult to introduce a vent-plug or faucet without permitting the escape of gas.

The object of the present invention is to produce a cheap and effective bung of the class specified, and one which will not be liable to the objections specified.

I will now proceed to describe my invention, so that others skilled in the art to which it appertains may apply the same.

In the drawings, A indicates a bung, which has its center cut away or bored out on one or both sides, as at *a*, so as to leave a septum or web of such thickness as can be readily broken through by driving in the vent-plug or faucet. The web or septum is then cut through, as at *b*, further weakening the same, and leaving it in the condition of an internally-projecting annular frangible flange or shoulder, *c*, which will support a cork plug or like substance, *d*, employed for closing the center of the bung, and will reduce the area of pressure of the gases on said cork or plug *d*. In all cases I prefer to use a cork for closing the central orifice of the bung, as at *d*, for the reason that

the same more certainly and effectually prevents the escape of gas; but a plug of other material may be used if preferred.

In Figs. 1 and 2 I have shown the preferred position for the frangible flange or shoulder *c*—that is to say, next the bottom surface of the bung, so that it will break away more readily when force is applied; but, if preferred, it may be formed in the bore near the middle of the bung, as shown in Fig. 5. When the vent-plug or faucet is to be inserted its end is applied to the plug *d* and the plug driven in forcibly, so as to detach or break up the frangible shoulder *c*, and permit the plug or cork *d* to drop into the barrel or cask.

The advantages of my invention are, first, that I am enabled to use a cork for closing the central opening of the bung, which material experience has shown to be the best for the purpose, and this without increasing the cost of manufacture, as the cork, owing to the presence of the perforated septum, is reduced in length and can be cut from thin sheets; secondly, the perforated septum or shoulder protects the cork, so that but a small part of it is exposed to the direct pressure of the gas in the barrel, thus obviating both the displacement of the cork and the leakage of gas; thirdly, the perforation in the septum weakens the same, and renders it easily broken

down when a vent-tube or faucet is driven in; and, fourthly, the central cork being flush with the exterior of the bung prevents the accumulation of dirt and its entrance into the barrel when the center of the bung is driven in.

It is evident that instead of a single central orifice, *b*, in the septum *c*, a series of small orifices might be formed in the septum, in order to weaken it and permit it to give way when the cork is forced in by the vent-plug or faucet.

Having thus set forth the nature and advantages of my invention, what I claim, and desire to secure by Letters Patent, is—

1. A vent-bung having a central opening or bore with a perforated septum or internal flange or seat, frangible, as described, substantially as and for the purpose specified.

2. A vent-bung having a central hole with a perforated septum or internal annular shoulder, frangible, as described, said central hole closed by a cork or plug, substantially as and for the purpose specified.

In testimony whereof I, the said THOMAS M. ARMSTRONG, have hereunto set my hand.

THOS. M. ARMSTRONG.

Witnesses:

F. W. RITTER, Jr.,
JAMES H. PORTE.