

(Model.)

T. POWERS.  
Bung for Barrels.

No. 232,903.

Patented Oct. 5, 1880.

Fig. 1.

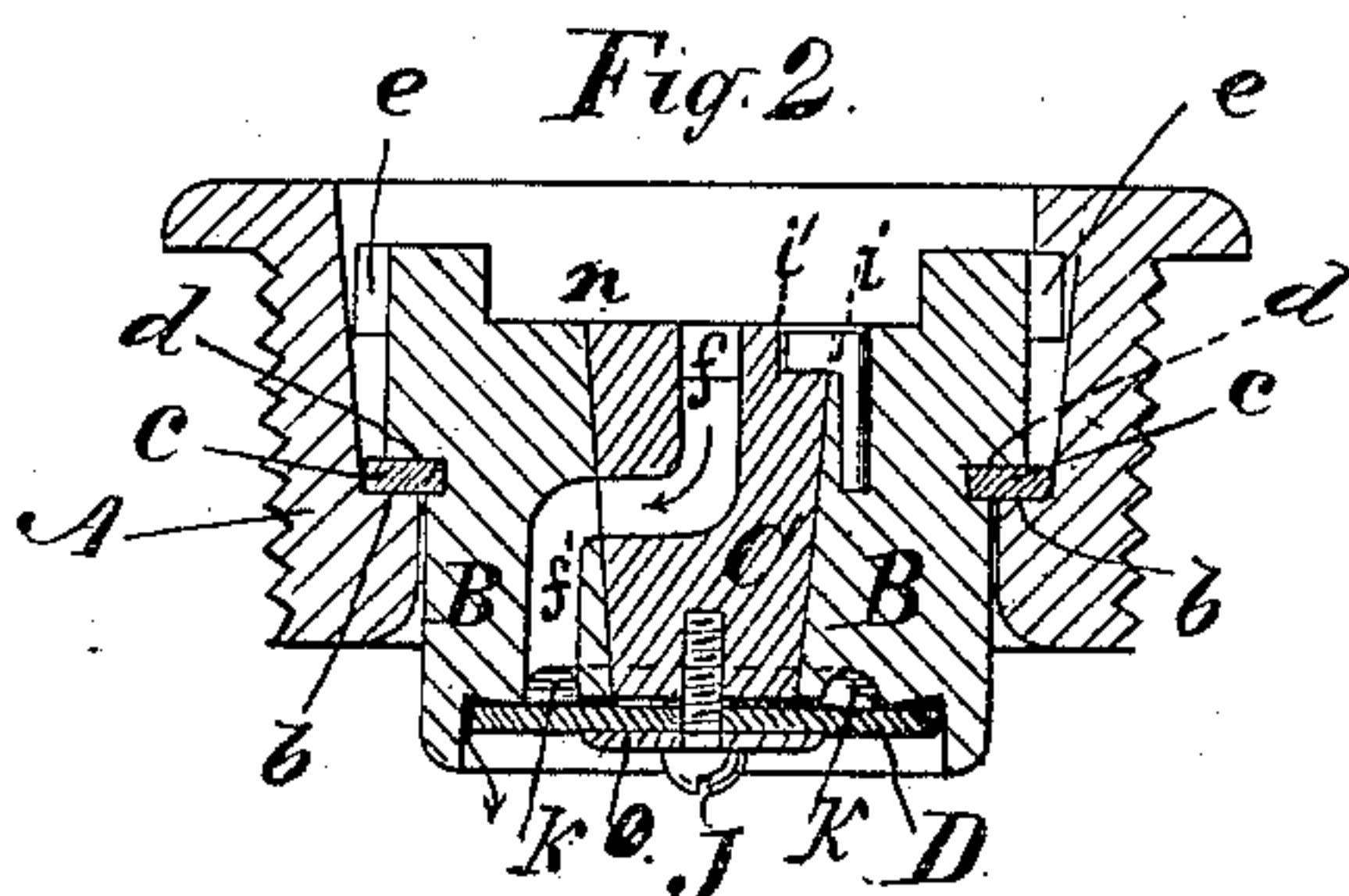
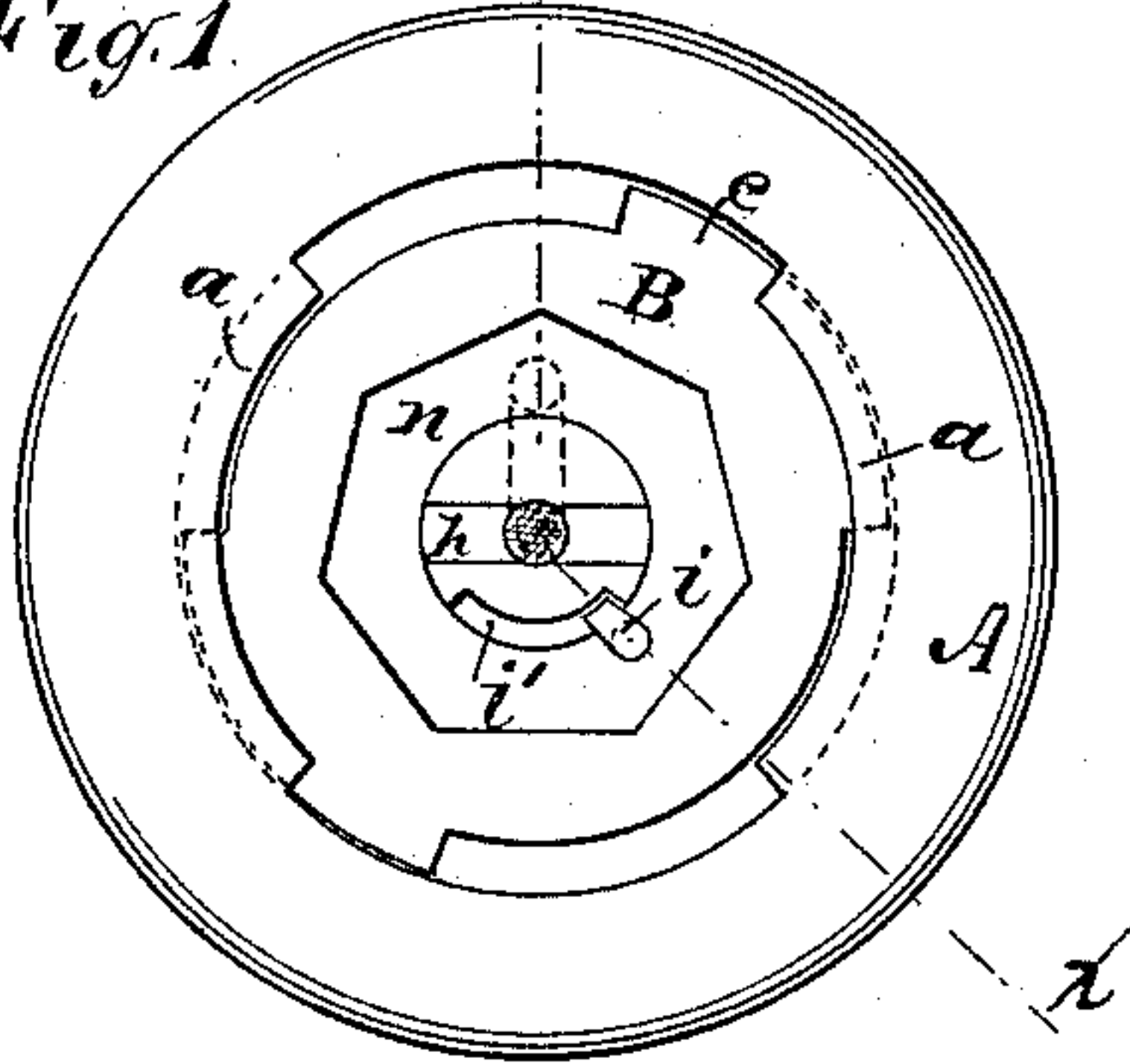


Fig. 3.

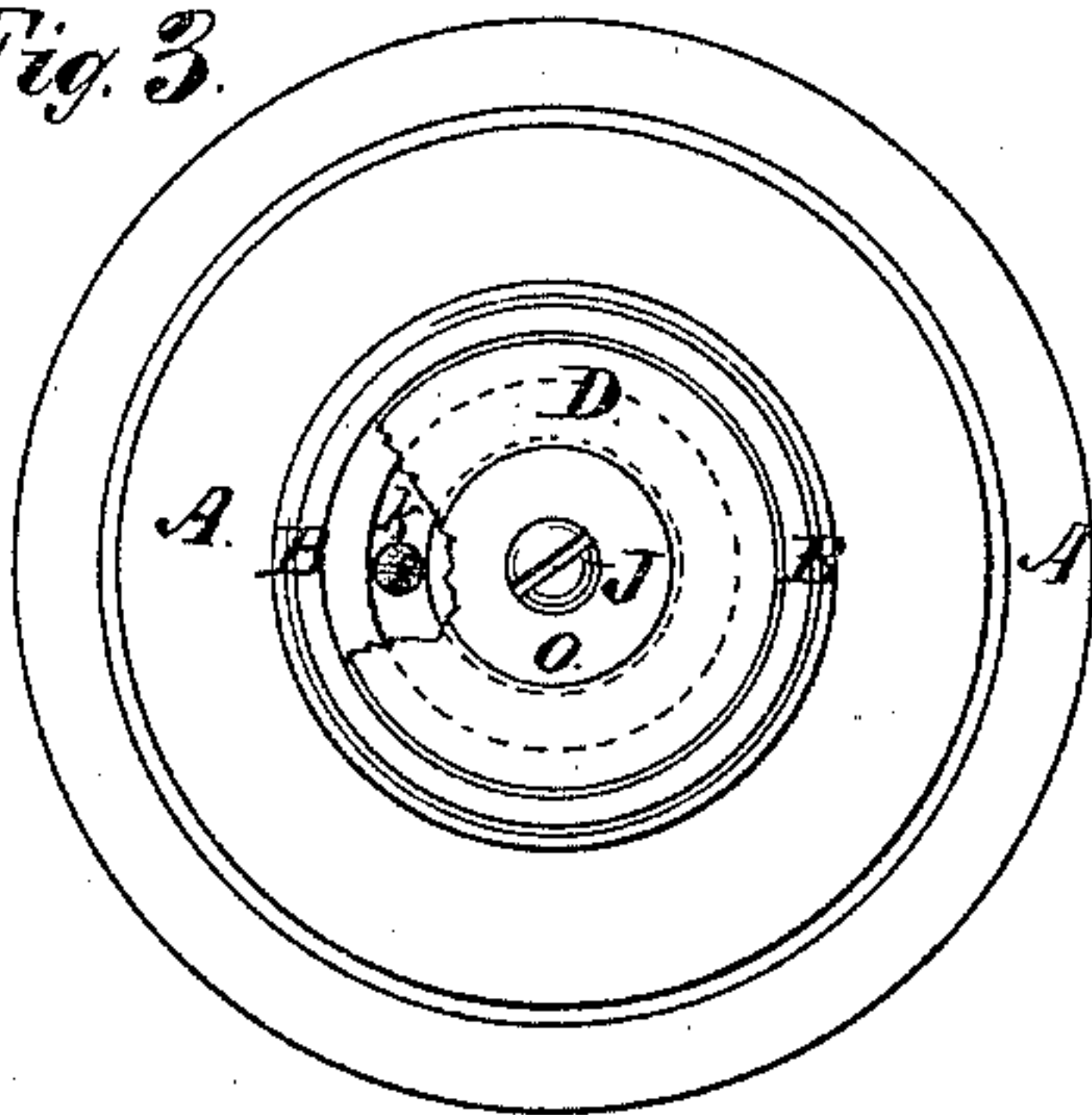


Fig. 4.

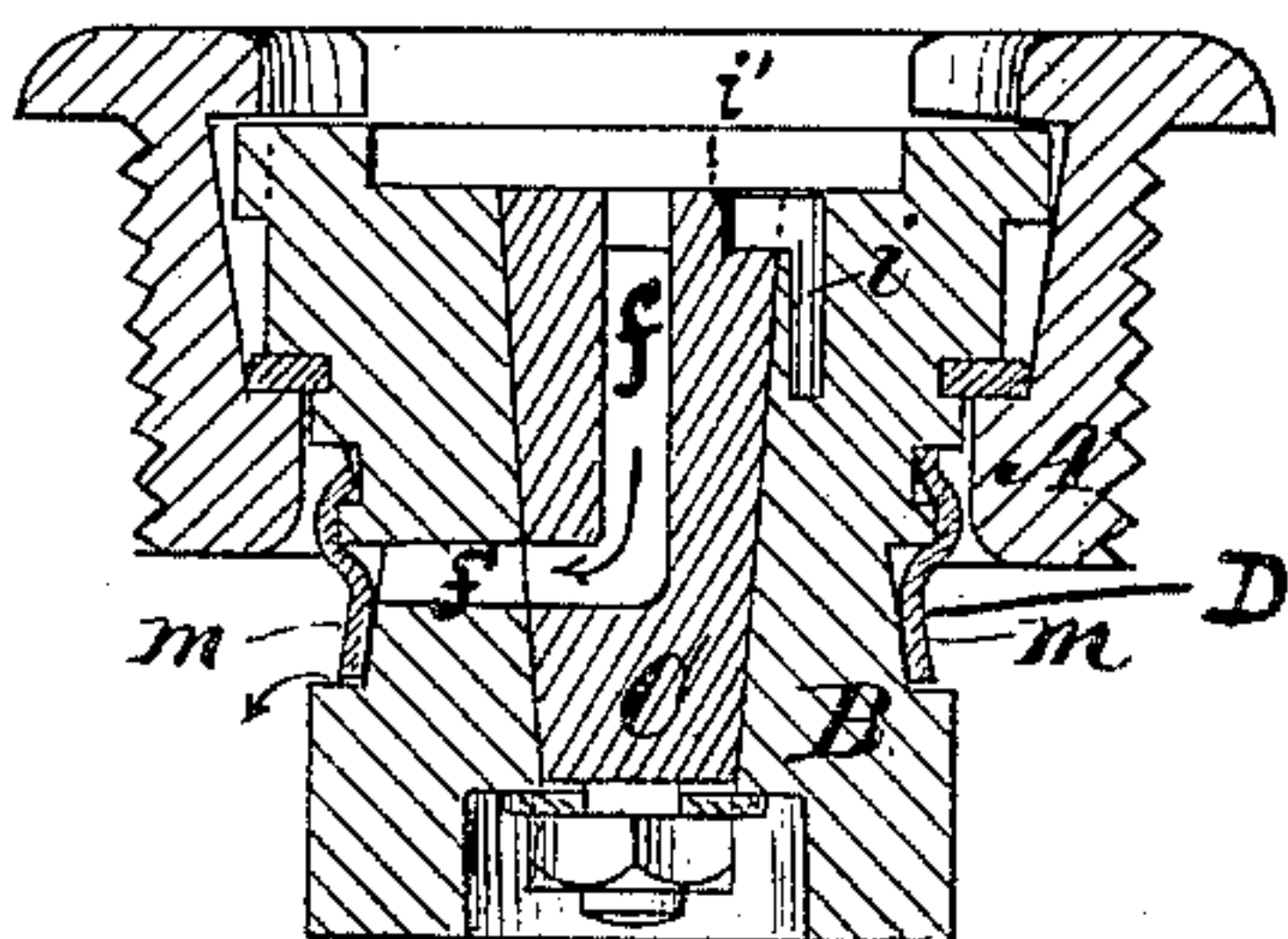
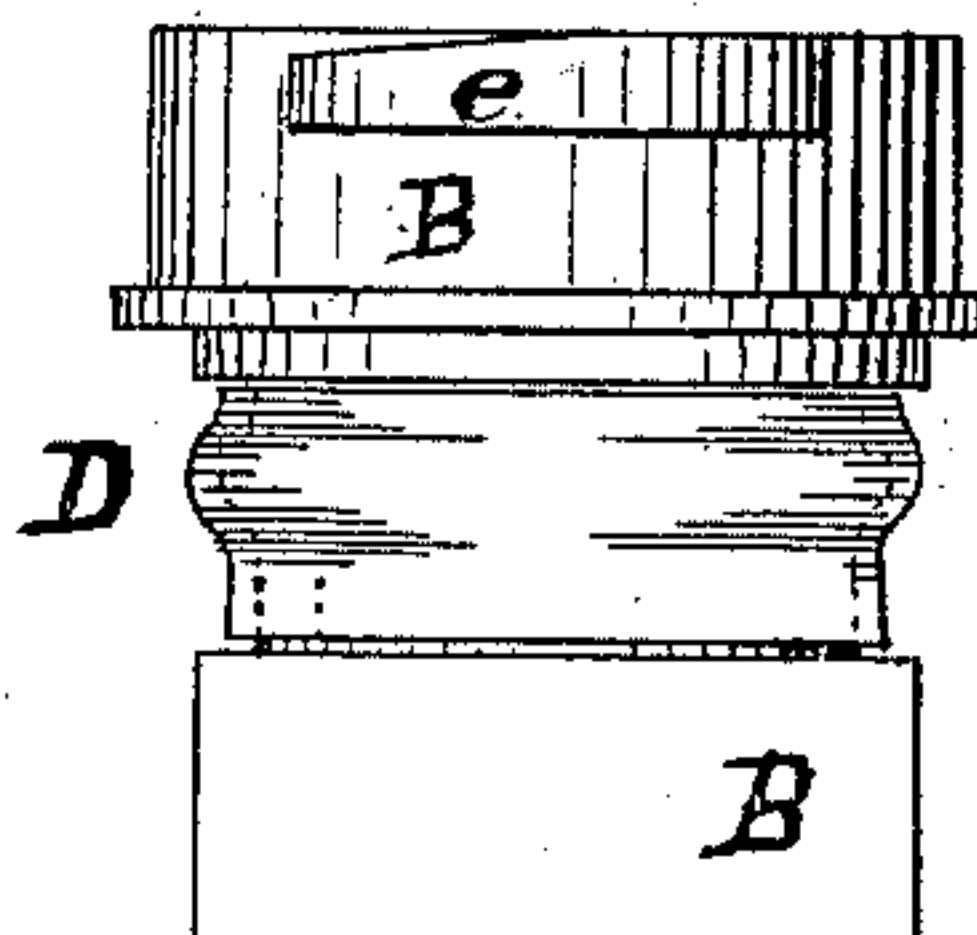


Fig. 5.



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# UNITED STATES PATENT OFFICE.

TITUS POWERS, OF NEW YORK, N. Y.

## BUNG FOR BARRELS.

SPECIFICATION forming part of Letters Patent No. 232,903, dated October 5, 1880.

Application filed March 2, 1880. (Model.)

*To all whom it may concern:*

Be it known that I, TITUS POWERS, of the city of New York, State of New York, have invented a new and Improved Bung for Barrels and Kegs, of which the following is a specification, reference being had to the accompanying drawings, forming part of the same, in which—

Figure 1 is a top view of a bung embodying my invention. Fig. 2 is a longitudinal section on line *x x*, Fig. 1; Fig. 3, a surface view of the under side of the same. Fig. 4 is a central longitudinal section of the bung, showing a modification of the valve, and Fig. 5 is an elevation of the plug shown in section in Fig. 4.

My invention relates to a bung provided with a vent that is controlled by a valve which permits the admission of air into the cask to which it is applied and prevents its escape therefrom.

My bung consists of four principal parts—viz., first, the case or bushing, fitted to be secured tightly in the bung-hole of a cask; second, the main plug, fitted into said case, forming an air-tight joint therein, and removable at pleasure; third, the vent-plug in the center of the main plug; and, fourth, a valve controlling the vent.

The several parts, with the exception of the valve, may be made of any suitable metal. The valve is preferably made of rubber.

A is the case or bushing, provided with a screw-thread on its outer surface, and preferably made tapering, adapting it to be screwed tightly into the bung-hole of a barrel or keg. At the upper end are two segments, *a a'*, of an inwardly-projecting annular flange. The internal diameter of the lower portion of the bushing is somewhat less than that of the upper portion, forming a shoulder at *b*, on which is placed a packing-ring, *c*, of some suitable material, preferably of rubber.

B is the main plug, that fits snugly into the bushing, with a shoulder at *d*, that rests on the packing *c*, thereby forming a tight joint at said packing when the plug B is pressed forcibly upon it. At the upper end of the said plug are laterally-projecting lugs *e e'*, with inclined upper surfaces, as seen in Fig. 5, adapted to pass down between the segments *a a'* when the plug is inserted in the bushing, and, as

the plug is turned to pass under the said segments and lock the plug firmly down upon the packing *b*.

The vent-plug C is tapering and fits snugly into a corresponding hole through the center of B. A vent-hole, *f*, Fig. 1, is made through this plug C, passing from the upper end down a short distance through its center, and then out through the side of the plug. A hole, *f'*, is also made through the body of the plug B, so that when, by turning plug C, the lower end of the hole *f* is adjusted to it there is a continuous opening through the two plugs, as seen in Fig. 2, forming a vent for the admission of air or its escape from the barrel. By turning the plug C in its seat it is evident the said vent is closed.

A slot, *h*, as in a screw-head, is made in the upper face of the plug C, whereby it may, by the aid of a screw-driver, be conveniently turned in its seat to open and close the vent, and a stop, *i*, is provided, which works in notch *j'* in the plug, whereby the plug C is limited in its movement.

In a recess in the lower end of the plug B is a flexible disk, D, Fig. 2, secured at its center to plug C by a screw, J. Between the head of said screw and the disk is a washer, *o*, larger in diameter than the lower end of the plug C, whereby the screw is enabled to secure the said plug and keep it tight in its seat. Above the said disk an annular groove, *k*, is made in the face of the lower end of plug B, into which the vent *f f'* opens, and which is covered by the said disk. This disk forms a very sensitive valve, which will permit the free passage of air or gas down through the vent *f f'*, while it will effectually prevent the passage of air or gas in the opposite direction.

In Figs. 4 and 5 the valve is formed of a flexible elastic band, *m*, instead of a disk, and is placed in an annular groove around the body of the plug B, and the vent-hole in the plug is made laterally directly through the wall of the plug, directly under the band *m*. A slight pressure of the air against the inner surface of the band will carry it away from the plug at the point of pressure, thus permitting its entrance into the barrel, while pressure in the opposite direction will effectually close the vent. I consider the band the equivalent of



the disk; but I regard the form of the valve shown in Figs. 1, 2, and 3 as the preferable form.

The plug B should be set into the bushing A so that its upper face is somewhat below the level of the rim of the bushing, and the upper end of the plug C should be somewhat below the upper face of plug B, whereby both will be out of the way of injury or disturbance that might otherwise occur from rolling or handling the barrel or keg in which the bung may be inserted. This bung is specially adapted for casks for holding beer and other liquors containing gases, which it is desirable should be retained and not allowed to escape, and from which the liquor is drawn off at intervals through a faucet inserted in the lower part of the cask.

The application and operation of this bung are as follows: A bung-hole of suitable size being made in the barrel or keg, the bushing A is secured into it, so as to form an air-tight joint. The plug B not being yet inserted, the barrel may be filled through the bushing. Then the plug B, with the plug C inserted and set to close the vent, is put in place in the bushing and turned to lock it tightly down upon the packing *c*, an angular countersink, *n*, being made in the upper end of the plug B, in which a suitable wrench may be inserted to turn the plug. Then, when it shall become necessary, in drawing off the liquor through the faucet, to admit air to give the requisite vent,

the plug C is to be turned so as to open the passage *f f'*, when the air will rush in past the valve, the valve being instantly closed as soon as the faucet is turned off, so that no gas is permitted to escape.

The vent may be left open and closed only by the valve while the cask is at rest in position for drawing off the contents, and closed by turning the plug C for safety at other times.

When the cask is to be refilled the plug B is turned so as to unlock it from the bushing A, when it may be readily removed to be again replaced when the cask is filled.

The common wooden bung in general use is destroyed with every emptying of the cask, entailing great expense.

The bung here described is permanent, and will last as long as the cask.

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

A vented bung composed of the bushing A, plug B, provided with the vent-hole *f'*, fitted, as described, with an air-tight joint into the said bushing, and detachable therefrom at pleasure, the vent-plug C, provided with the vent-hole *f*, and fitted, as specified, into an opening in the plug B, and the valve D, all constructed and combined to operate as and for the purpose set forth.

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Witnesses:

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