

(No Model.)

T. N. CURTIS & E. W. HATCH.

DRAFT BUNG FOR BEER KEGS, &c.

No. 361,618.

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Fig. 2.

Fig. 1.

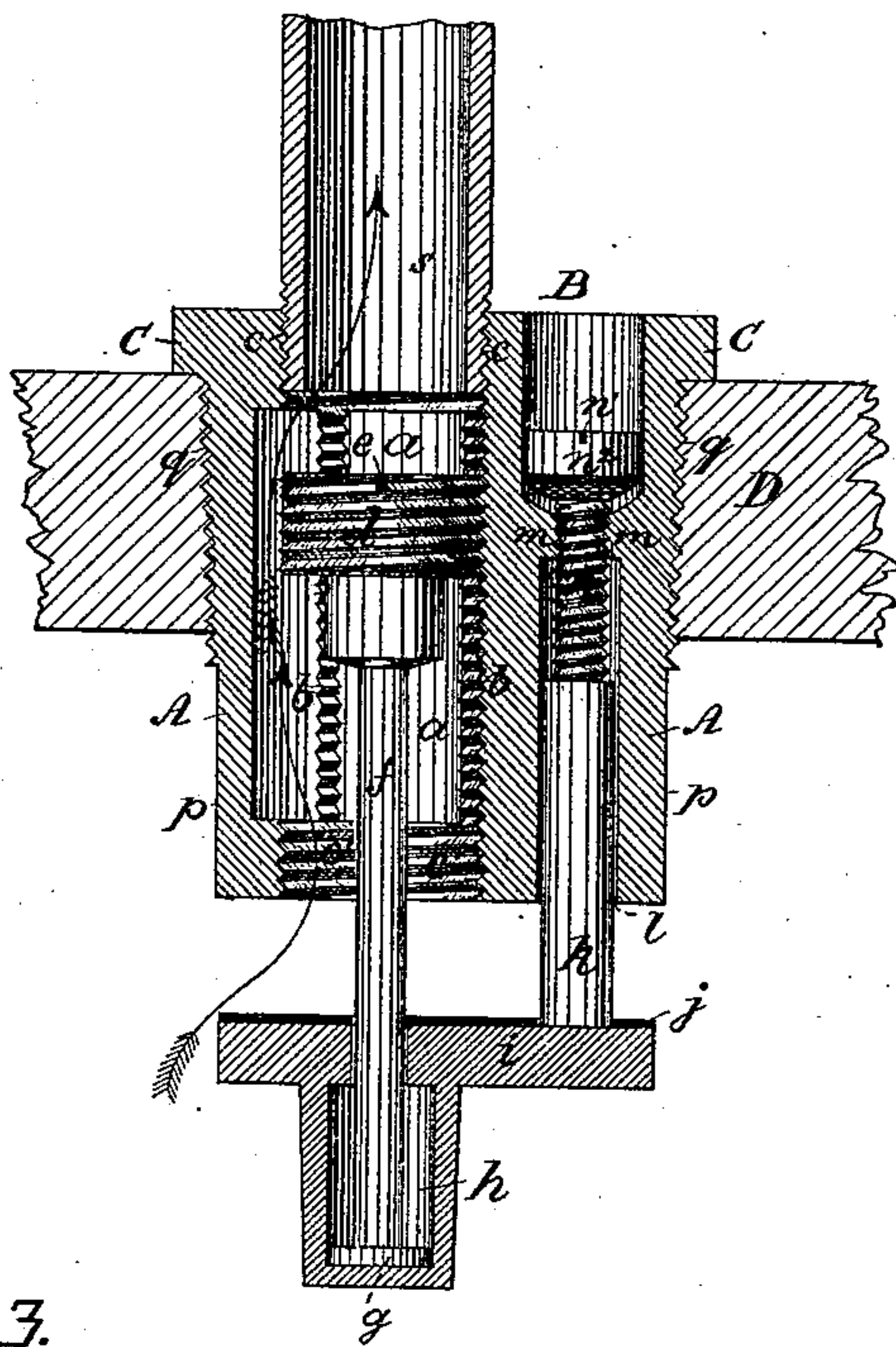
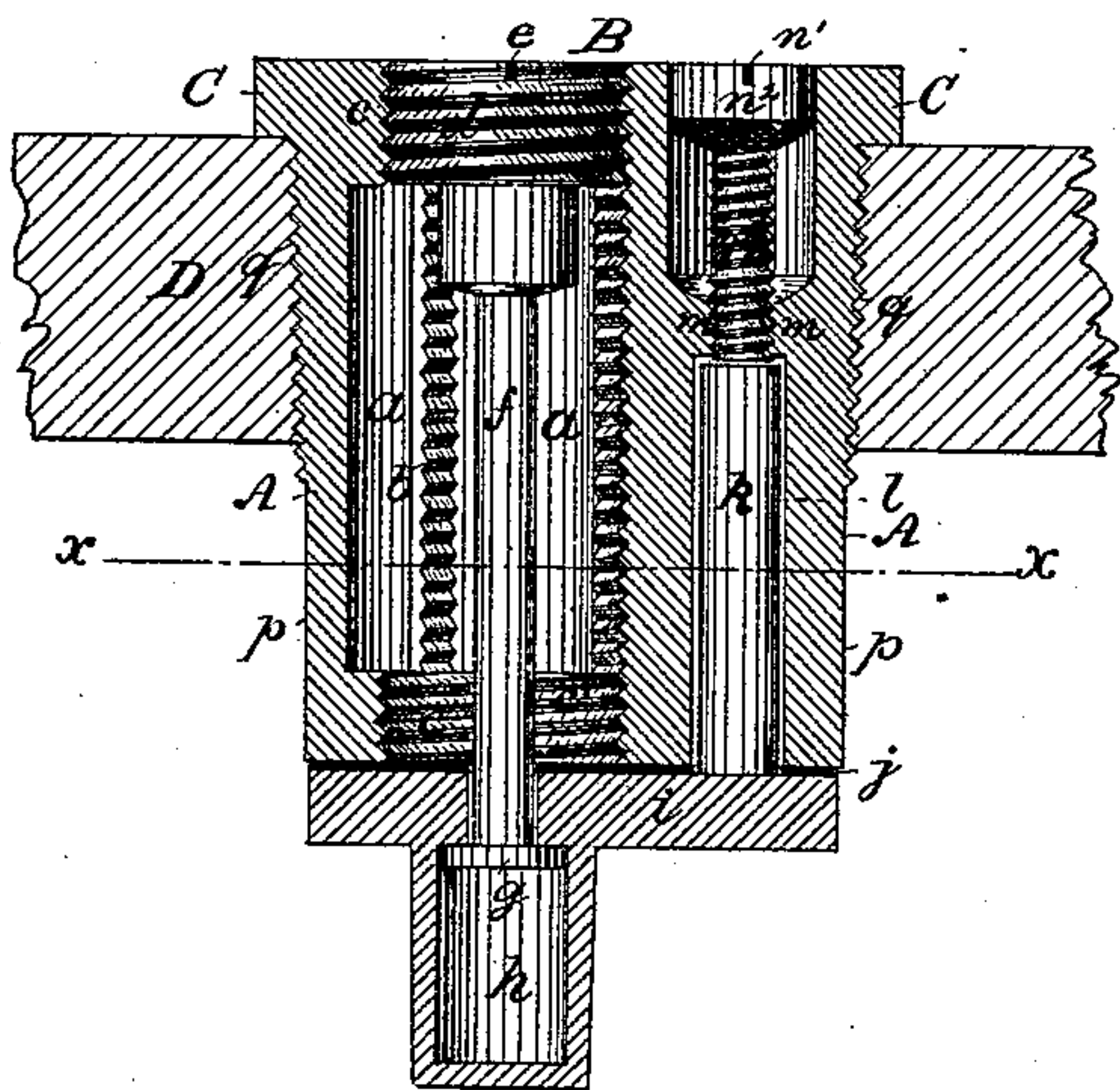


Fig. 3.

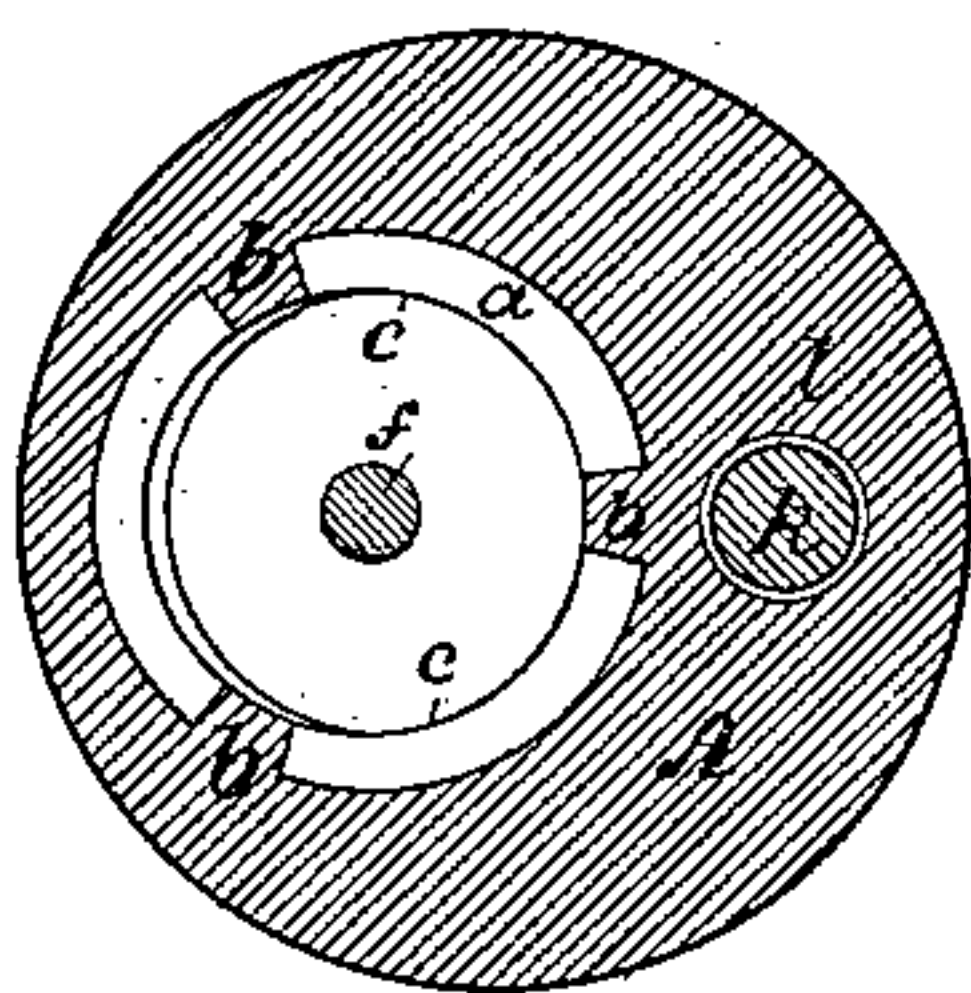


Fig. 4.

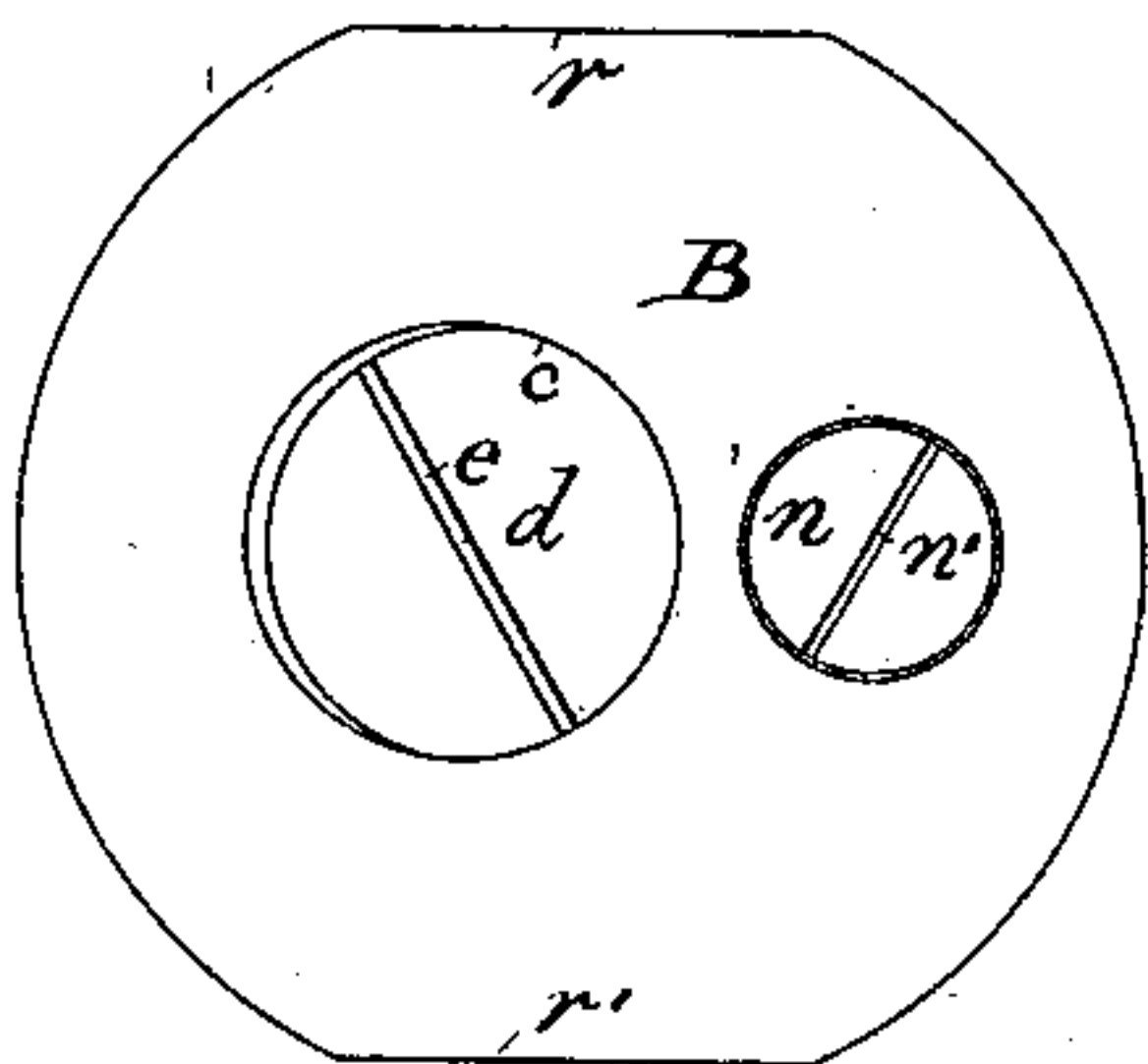
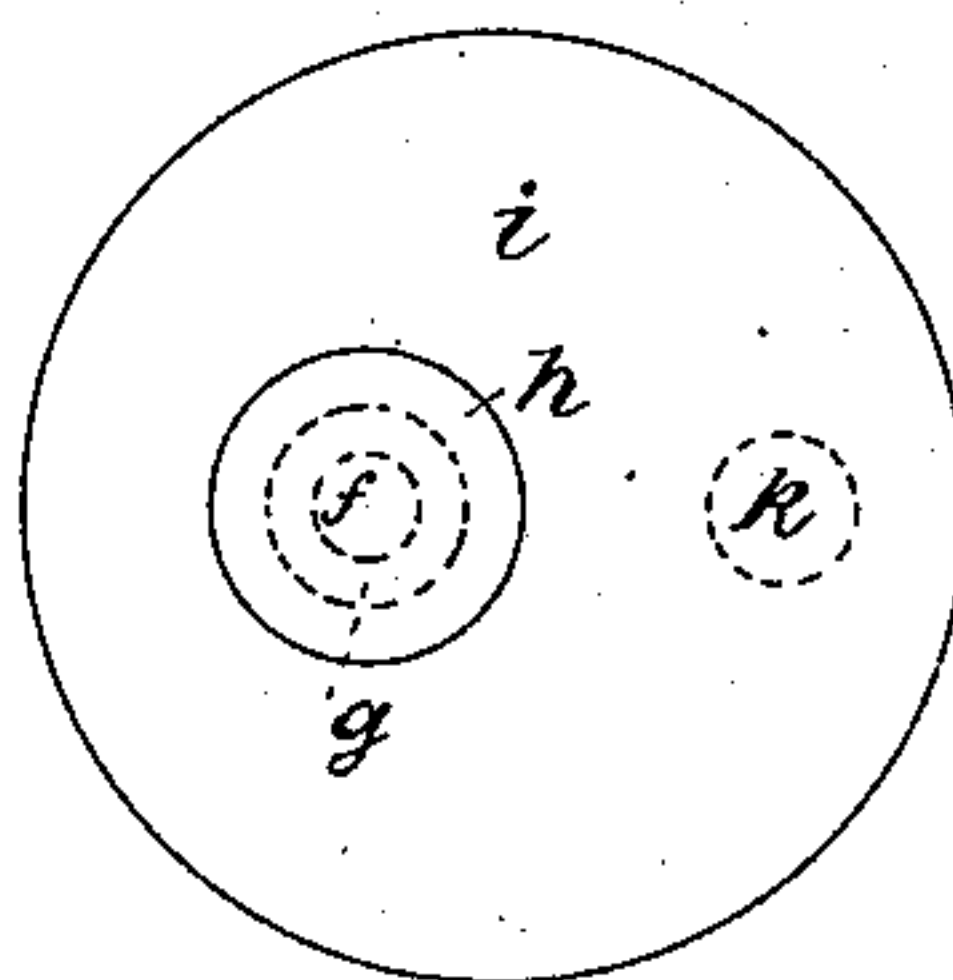


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

THEODORE N. CURTIS AND EDWARD W. HATCH, OF BOSTON, MASSACHUSETTS, ASSIGNORS OF ONE-THIRD TO J. P. TURNBULL, OF SAME PLACE.

DRAFT-BUNG FOR BEER-KEGS, &c.

SPECIFICATION forming part of Letters Patent No. 361,618, dated April 19, 1887.

Application filed September 9, 1886. Serial No. 213,088. (No model.)

To all whom it may concern:

Be it known that we, THEODORE N. CURTIS and EDWARD W. HATCH, of the city of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Draft-Bungs for Beer-Kegs, Barrels, Casks, &c., of which improvements the following is a specification.

Our invention relates to a bung for kegs, barrels, casks, &c., made of any suitable metal and capable of being readily inserted into the heads or cylindrical surfaces thereof; and the objects of the invention are to obviate the many drawbacks heretofore experienced in the use of wooden bungs, and to provide a bung which, when inserted into the keg or barrel, may become a permanent part of the same, so that the liquors or liquids drawn therefrom may be permitted to pass freely through the bung without the slightest waste of material or of the gas, which the contents of the keg or barrel may be heavily charged with, while at the same time made of sufficient strength and secured sufficiently to the keg or barrel to withstand the pressure of the gas against it, and so arranged that the contents of the keg or barrel may at all times be kept free from dirt or other foreign matter, which was not the case where wooden bungs were used for such purposes. It is important that a bung should possess these characteristic features, for in the use of the heretofore well-known wooden bungs in barrels containing malt liquors heavily charged with gas it has proved to be almost impossible to retain the gas until the entire contents of the barrel had been discharged, and hence the liquors have become flat, and in many instances rendered thereby useless.

Our invention consists of a bung made of brass or other suitable metal, by preference in cylindrical form, with the exterior circumference or surface thereof for a portion of its length smooth, while the remaining portion in the direction of the face is provided with a threaded surface. The face of the bung is slightly larger in diameter than the exterior circumference of the same, forming a projecting rim all around, and which rim is curved on two of its sides and straight on the other two—that is to say, the curved surfaces are tangent to the straight surfaces thereof for the

application of a wrench thereto for turning the bung to its proper position in the keg or barrel. The interior of the bung is hollowed out, forming distinct chambers separated from one another by ribbed or ratchet-surfaced narrow projecting walls meshing at their respective ends with threaded annular walls. To the end of the annular threaded wall is inserted a screw-threaded head provided upon its face with a transverse groove. This screw-threaded head is rigidly secured to a stem, carrying at its opposite end a plunger, which plays freely within a chamber, cast with or otherwise secured to a circular end plate, and provided upon its upper surface with a packing-ring made of leather or other suitable material for maintaining an air-tight connection between the end plate and the bung when closed. To the circular end plate is secured, in line with the valve-stem, a post which extends upward into a narrow, smooth-surfaced, oblong, annular chamber provided in the bung for preventing the end plate from turning and for regulating the extent of movement of the valve. The upper portion of this chamber is slightly larger, by preference, in diameter than the lower portion, and the two chambers are partially separated from one another by a wall formed therein, the upper portion or breast of which tapers to a central opening, and the interior is provided with an annular threaded surface for the reception of a self-packing screw, whereby the extent of movement of the valve is regulated, permitting of the free passage of the liquor or liquid through the hollowed-out chambers between the ribbed partition-walls therein to pipes or tubes secured into the threaded wall in the face of the bung for being drawn off for immediate use, as hereinafter more particularly explained.

In the accompanying drawings we have shown our invention in a form that has been found practically efficient, embracing the essential features thereof, and in which—

Figure 1 is a vertical central section through a draft-bung, showing the position of the several parts thereof when secured within the keg or barrel in a position ready for attaching the pipes or tubes to the same for drawing the liquor therefrom upon the opening of the valve appliance. Fig. 2 is a similar view showing,

partly in section, the head of a barrel and a tube connected to the face of the bung and with the valve and regulating-screw in proper positions for permitting of the free passage of the material through the bung. Fig. 3 is a transverse section on the line $x x$ of Fig. 1, showing the hollowed-out chambers formed in the bung divided by ribbed projecting walls and a screw-threaded head with the transverse groove in its face. Fig. 4 is a top view of the face of the bung, showing the shape thereof, and Fig. 5 is an end view thereof, showing the valve-chamber, and in dotted lines the hub or plunger secured to the valve-stem for freely playing therein and the post in the circular end plate for regulating the movement of the valve.

Referring to the drawings, A represents the barrel of the bung provided with a smooth-surfaced face, B, preferably larger in diameter than the barrel of the bung having a projecting rim, C, on preferably two of the sides of the face, fitting against the head of the keg or barrel D.

The interior of the bung is provided with hollowed-out chambers a , divided from one another by ribbed projecting walls b , extending therethrough and meshing at their respective ends with threaded annular walls c . To the threaded annular end wall the screw-threaded head d , having a transverse groove, e , in its face, is inserted, and to this screw-threaded head d is rigidly secured a stem, f , carrying at its opposite end a plunger or hub, g , which plays freely within a chamber, h , cast or otherwise secured to a circular end plate, i . This circular end plate, i , is provided upon its upper surface with a packing-ring, j , made of leather or other suitable material, and to this plate a post, k , is rigidly secured, fitting into an oblong smooth-surfaced narrow chamber, l , provided in the barrel of the bung A. In this narrow chamber l is formed a wall which tapers from the cylindrical surface of the chamber to the center, the breast of which is bowl-shaped, and the prolongation of this chamber beyond the wall m to the face of the bung is somewhat larger in diameter than the lower portion for the reception of a self-packing screw, n , inserted from the face of the bung. This self-packing screw has a transverse groove, n' , in its face, and has a leather or other suitable packing-button, n^2 , fitting snugly against the under side of the head thereof. This regulating-screw, when screwed down by any suitable appliance, will fit snugly into the breast of the wall of this chamber, holding the valve in the position indicated in Fig. 2, and likewise the circular end plate in an open position, permitting of the free passage of the liquor through the hollowed-out chambers of the bung in the direction indicated by the arrows.

The exterior circumference of the barrel of the bung has a smooth surface, p , extending for a portion of its length, and the remaining

portion q being screw-threaded to the rim, as shown in Figs. 1 and 2.

The manner of inserting the bung into a keg or barrel and its mode of operation when therein will now be described.

A hole is bored, by means of an auger or other similar tool, in the head or cylindrical surface of the keg or barrel, of a diameter commensurate with that of the lower portion of the barrel of the bung. The bung is then inserted therein to the threaded cylindrical surface and a wrench applied to the sides $r r'$ of the rim of the bung, and then screwed down so that the head of the keg or barrel will fit snugly against the under side of the rim. The screw-threaded head d is then turned several revolutions within the hollowed-out chamber to about the position shown in Fig. 2, and the regulating-valve screw n being retained in the position indicated in Fig. 1 until the pipe or tube s has been attached to the annular threaded wall c , formed in the face of the bung B.

It will of course be understood that the pressure of the gas within the keg or barrel against the back of the circular end plate will firmly hold the valve and this circular end plate, provided upon its upper surface with a suitable packing-ring, in a closed position until the self-packing screw is turned to the position shown in Fig. 2, when the liquid will commence to discharge through the hollowed-out chambers in the direction of the arrows through the pipe s , for being used.

This construction and arrangement of a draft-bung, it will be observed from the foregoing description thereof, presents these special characteristic features—that the contents of a keg or barrel are kept free from dirt and other foreign matter, that a wasteful escape of gas is practically prevented, and that loss of material in tapping a fresh keg or barrel of malt liquor is obviated, which results have not been obtained where the ordinary wooden bungs for such purposes have been used.

Having thus described the nature and objects of our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A draft-bung for kegs, barrels, &c., provided with hollowed-out chambers therein, separated from one another by ribbed projecting walls, along which surfaces a threaded head carrying a stem is made to travel, and the opposite end of which stem is provided with a plunger or hub playing freely within a chamber secured to an annular plate, and devices, substantially as described, for regulating the movement of the valve, for the purposes set forth.

2. A draft-bung for kegs, barrels, &c., of cylindrical form, having a portion of its exterior surface threaded and a face projecting beyond its circumference, three or more hollowed-out interior chambers separated from one another by ribbed projecting walls, along which a threaded head carrying a stem is made

to travel, and to the stem is secured a plunger which plays freely within a chamber cast with a circular plate, in combination with a rod secured to said circular plate, an annular chamber in the barrel of said bung, and a self-packing screw projecting downward through a wall formed in said chamber, substantially as and for the purposes set forth.

3. A draft-bung for kegs, barrels, &c., of cylindrical form, having hollowed-out interior chambers therein, separated from one another by ribbed-surfaced walls extending there-through and meshing at their respective ends with annular threaded walls, in combination with a threaded head carrying a stem, a plunger or hub secured to the opposite end of said stem, a valve-chamber provided in a circular plate, a chamber and a rod extending upward therein, and a self-packing screw extending downward through a wall provided in said chamber, substantially as and for the purposes set forth.

4. A draft-bung for kegs, barrels, &c., having a plain-surfaced face projecting beyond the circumference of the barrel of the bung, in combination with hollowed-out interior chambers separated from one another by ribbed-surfaced partition-walls meshing at their respective ends with annular threaded walls, of a screw-threaded head having a transverse groove in its face, a stem secured to said head, a plunger rigidly secured to said stem, a valve-chamber cast with an annular plate, a packing-ring thereon, and means for holding the valve in an open position, substantially as and for the purposes described.

In witness whereof we have hereunto set our hands in the presence of two subscribing witnesses.

THEODORE N. CURTIS.
EDWARD W. HATCH.

Witnesses:

MARY TURNBULL,
AGNES J. CURTIS.