No. 801,581. PATENTED OCT. 10, 1905.

J. FRANKE.

BUNG.

APPLICATION FILED NOV. 7, 1904. 2 SHEETS—SHEET 1.

Fig. 1

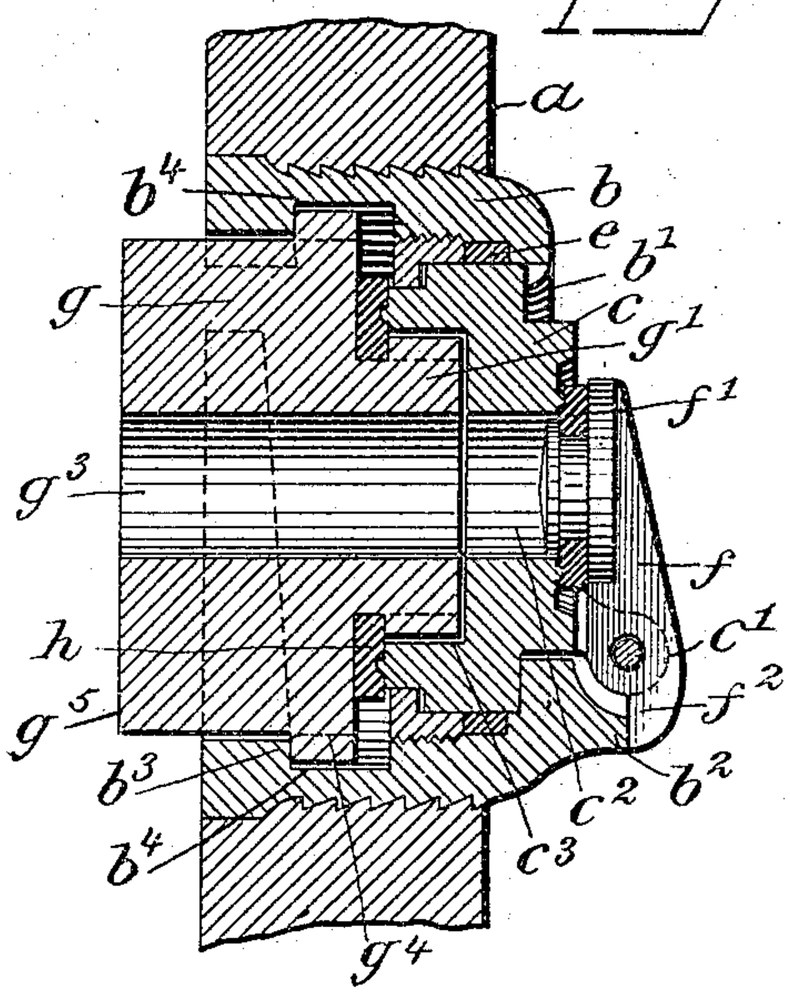


Fig. 2

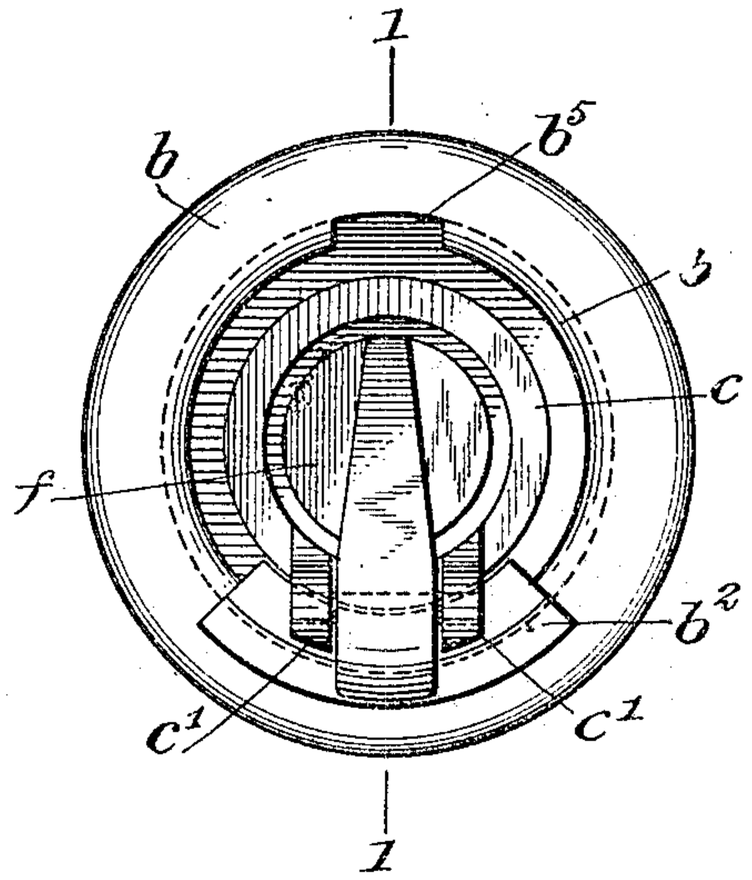


Fig. 3

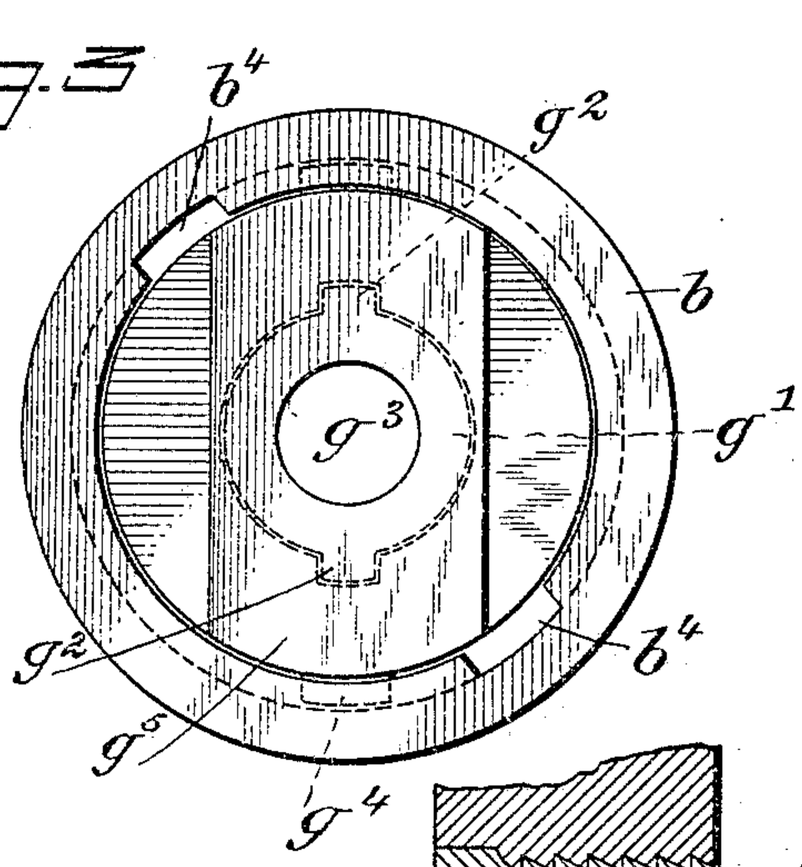


Fig. 4

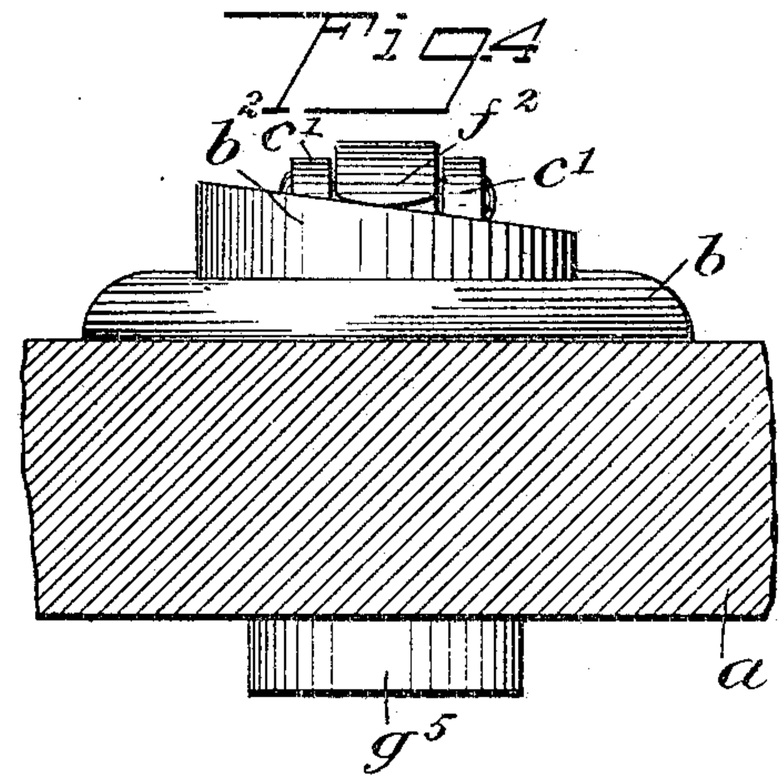
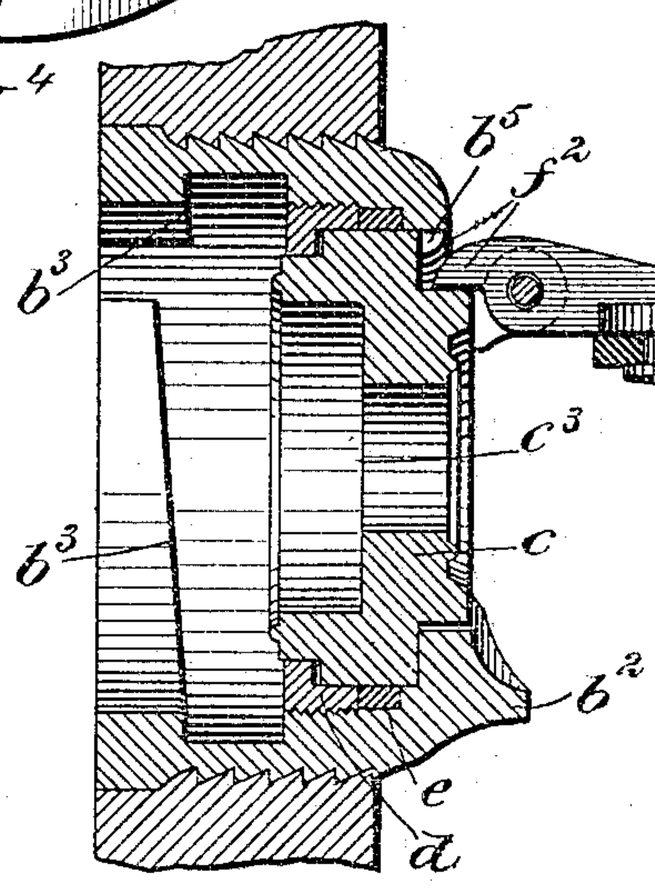


Fig. 5



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2 SHEETS—SHEET 2.

Fig. 6

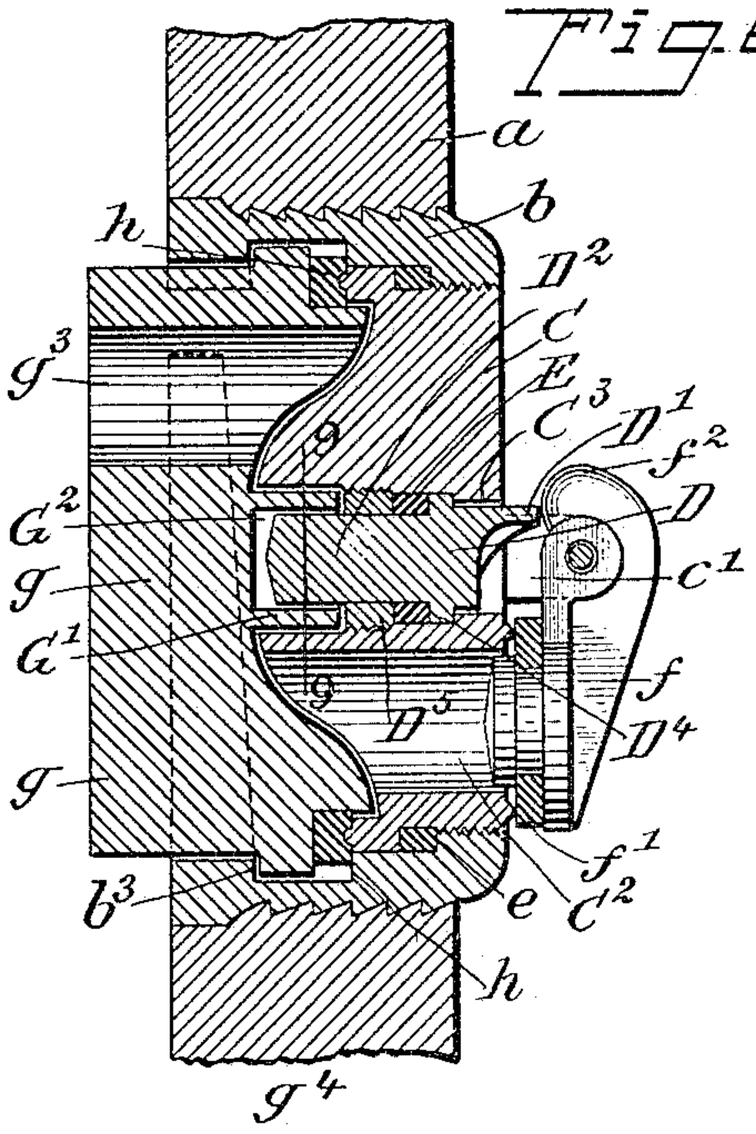


Fig. 7

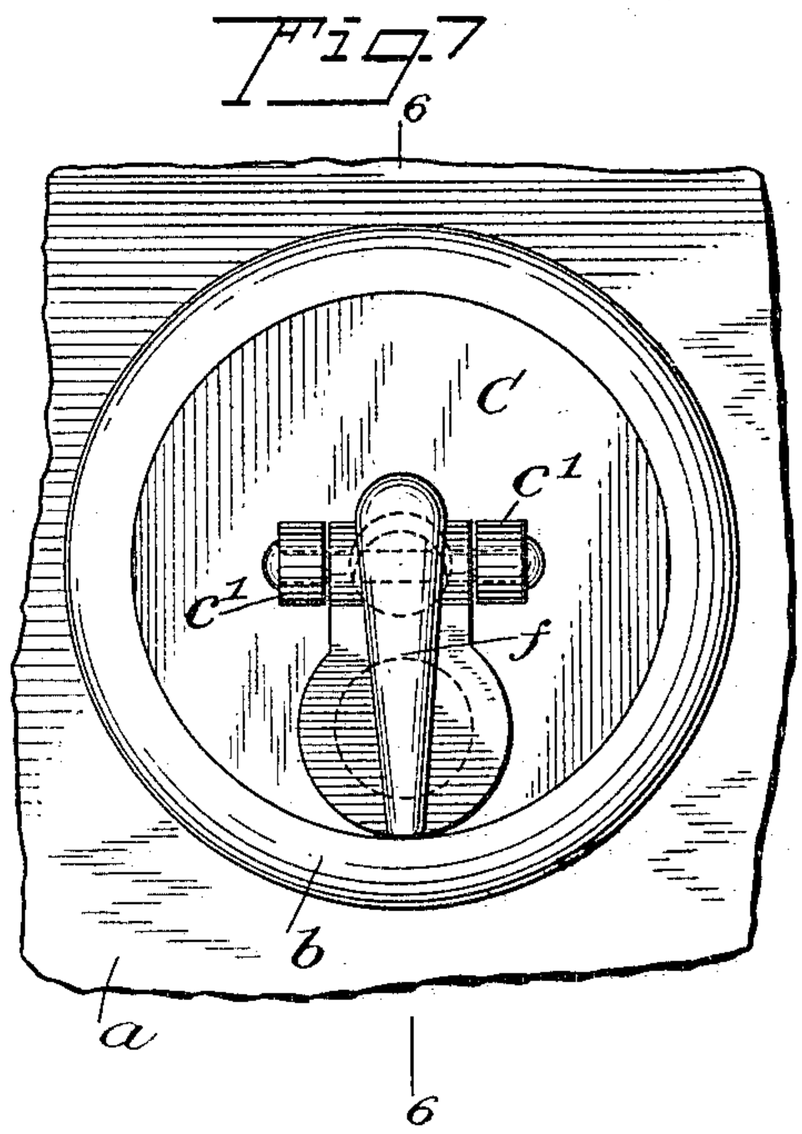


Fig. 8

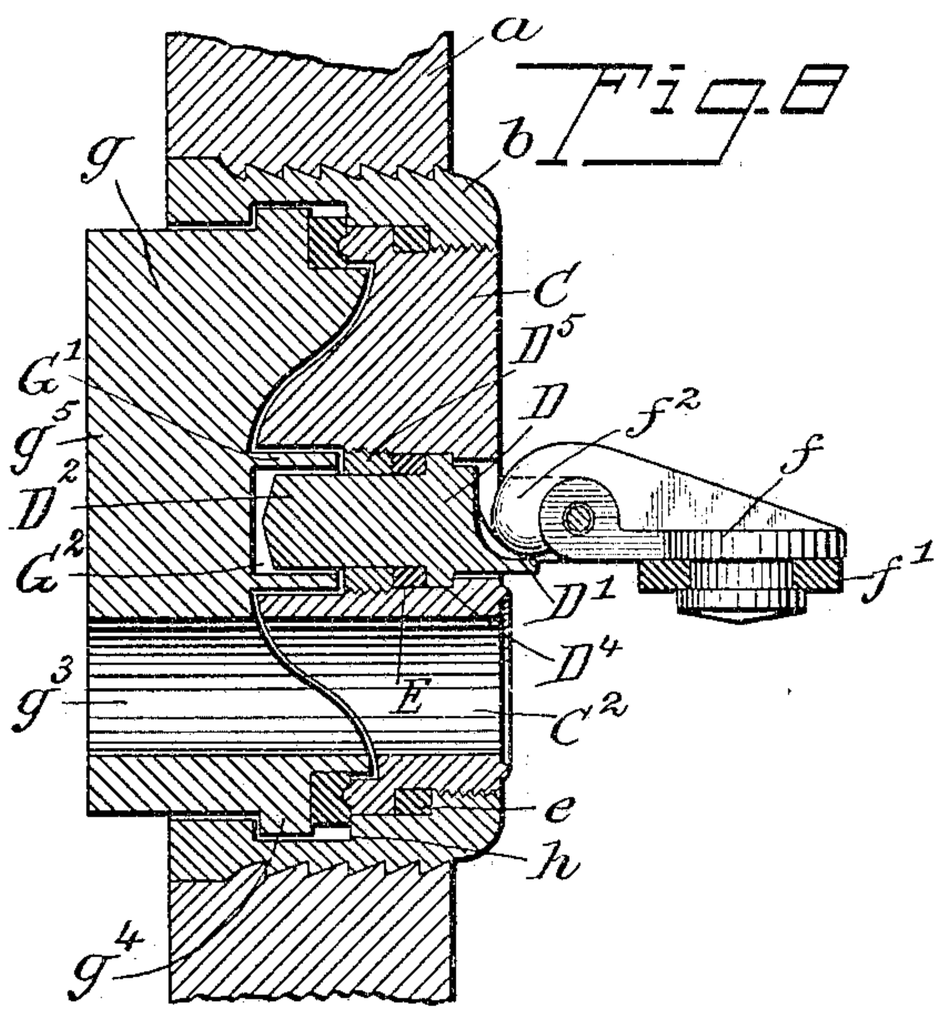
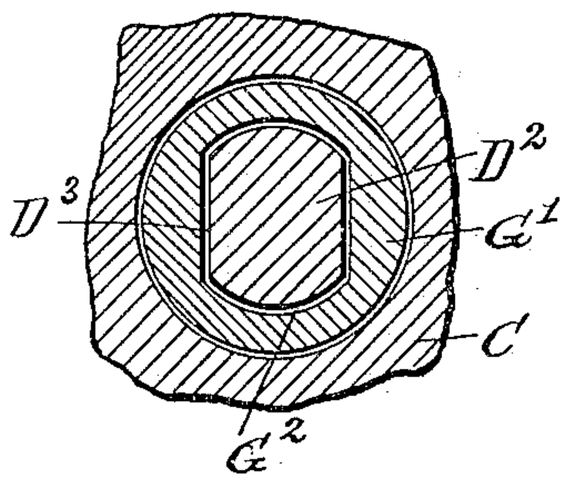


Fig. 9



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UNITED STATES PATENT OFFICE.

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BUNG.

No. 801,581. Specification of Letters Patent. Patented Oct. 10, 1905.

Application filed November 7, 1904. Serial No. 231,713.

To all whom it may concern:

Be it known that I, JULIUS FRANKE, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Bung, of which the following is a full, clear, and exact description.

My invention relates to bungs, and although it is capable of uses for all purposes to which bungs are applied it is especially adapted for use upon beer and ale barrels and the like.

The principal objects of the invention are to provide means whereby the tube of a faucet can be introduced through the bung into the barrel without danger of any of the contents being discharged except through the faucet.

Further objects of the invention are to provide means for closing the passage through which the tube is admitted, for locking the valve in closed position, and for unlocking it when the parts are in such position as to permit the tube to be thrust through the bung.

Additional objects of the invention, largely dependent upon and related with those mentioned above, will appear in the course of the subjoined description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a central sectional view on the line 1 1 of Fig. 2, showing a practical embodiment of my invention. Fig. 2 is an elevation of the same, taken from the inside. Fig. 3 is an elevation taken from the outside. Fig. 4 is a sectional view of the wall of the receptacle, showing the parts of the bung in elevation. Fig. 5 is a sectional view similar to Fig. 1, but showing the parts in another position. Fig. 6 is a central sectional view on the line 6 6 of Fig. 7, showing another embodiment of my invention. Fig. 7 is an elevation of the same, taken from the inside of the receptacle. Fig. 8 is a sectional view similar to Fig. 6, showing the parts in another position; and Fig. 9 is a fragmentary sectional view on an enlarged scale on the line 9 9 of Fig. 6.

Referring to the first five figures, *a* represents the wall of the receptacle, and *b* the main portion of the bung, which is threaded or secured in an opening of the wall of the receptacle in any convenient or desired manner. The bung is hollow and is provided with a cap *c*, which in this embodiment of the invention is secured between projections b' and a collar *d*, which is screwed to the internal wall of the bung. A packing *e* is provided between the collar *d* and the bung. Although secured in its position with respect to the bung, the cap *c* is capable of turning upon its own axis. It is provided with projections c', between which is pivoted a flap-valve *f*. It will be readily understood that any other kind of a valve may be employed and that the necessary modifications in the parts to operate it which would have to be made come within the scope of my invention. This valve is provided with a packing f', seating upon the inner edge of a perforation c^2, with which the cap *c* is provided. The valve is also provided with a rear extension f^2, which is adapted to ride upon an inclined surface b^2 upon the bung *b*. For the purpose of turning the cap *c* a key *g* is provided. This key has a projection g' extending into a depression c^3 in the cap. This projection fits the depression and is provided with lugs g^2, by means of which it will be obvious that the turning of the key will turn the cap. A perforation g^3 is provided in the key, registering with the perforation c^3 in the cap. The bung is also provided with a track b^3, with which lugs g^4 on the key engage and which is designed to guide the key and force it toward the cap when the key is inserted in the bung and turned. These lugs g^4 are adapted to enter recesses b^4 between the tracks b^3. The parts are so related to each other that when the key is placed with the lugs g^4 in the recesses b^4 the projection f^2 will be at the highest point of the incline b^2, and consequently the valve *f* will be securely locked in closed position. It will therefore be seen that when the key is removed the valve is locked and no liquid can pass through the bung. Upon inserting the key it is turned by means of a projection g^5 so that the lugs g^4 ride up the tracks b^3. This forces the key toward the cap and compresses a packing *h* between them, thus providing an additional safeguard against the passage of liquid.

The faucet, which may be of any ordinary or desired construction and is not illustrated, is placed with its tube in the passages g^3 and c^2, and when the key is turned far enough to permit the projection f^2 to ride down the incline b^2 to the end thereof the valve *f* may may be forced open by the tube of the faucet, so as to permit liquid to enter the tube and the passages in the cap and key. The faucet

may be secured to the key in any desired manner, so as to prevent the passage of liquid between the key and faucet. When it is desired to remove the faucet, the tube is drawn into the passages g^3 and c^2 and the key is turned into such a position that the lugs g^4 can pass out through the spaces b^4, and in this position the projection f^2 will ride up upon the incline b^2 again, so that the valve will be forced to a closed position and locked there. If it is desired to remove the cap when the receptacle is empty, the key is turned around to a position at one hundred and eighty degrees from that in which the valve is closed, as shown in Fig. 1. This position permits the key to be withdrawn, as it places each lug g^4 in the opposite passage b^4 from that in which it was placed when the key was inserted in the bung. It also allows the valve f to be open, as shown in Fig. 5, for the reason that the projection f^2 is entirely away from the inclined surface b^2. It also permits the cap to be removed for the reason that a passage b^5 is provided in the projection b', preferably opposite to the highest point of the surface b^2. The collar d can be removed and then the cap c can be readily taken out, the projecting portion of the valve f passing through the passage b^5.

Referring now to Figs. 6, 7, 8, and 9, the letters a, b, b^3, c', e, f, f', f^2, g, g^3, g^4, g^5, and h represent elements similar in construction to those represented by the same letters in the other figures; but in this case the cap here represented by the letter C is not rotatable in operation, but is screwed into fixed position with respect to the bung b. This cap is provided with a passage C^2 for the same purpose as the passage c^2 in the other form, but located at one side of the center instead of concentrically with the cap, as is the case in the other form. Instead of being pivoted at a point near the edge of the cap the valve f is pivoted at a point near the center on the projections c', as in the other form. A second passage C^3 is provided in the cap for the reception of a turning element D. This element is provided with an inclined surface D′ and with a projection D^2 having flat sides D^3, with which a projection G′, having a depression G^2 of the same shape as the projection D^2, is adapted to engage. A packing E is provided between a shoulder D^4 on the turning element and a fastening-ring D^5. The inclined surface D′ is adapted to engage with the projection f^2 on the valve and to close it and lock it in closed position in a manner similar to that described above. It will be readily understood that the turning of the key g will cause the turning of the member D and the consequent manipulation of the valve f in the same manner as before. A further description of the operation of this modification is therefore believed to be unnecessary. When it is desired to remove the cap C, the key is first removed, and then the cap can be unscrewed in an obvious manner, taking with it the turning member D.

While I have illustrated and described only two forms of my invention, it will be readily understood that the same may be constructed in many other forms and that modifications of various kinds can be made in the forms herein shown and described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a bung, the combination of a cap removably mounted on the body of the bung and having a passage therethrough, a valve for said passage, a key having a passage, and means for permitting said valve to be opened when the key is turned to a certain position.

2. In a bung, the combination of a cap removably mounted on the body of the bung and having a passage therethrough, a valve for said passage, a key having a passage, means for locking the valve in closed position, and means for unlocking the valve when the key is turned to a certain point.

3. In a bung, the combination of a cap removably mounted on the body of the bung and having a passage therethrough, a valve for said passage, a key having a passage, and means for closing and locking the valve and for unlocking it.

4. In a bung, the combination of a cap removably mounted on the main portion of the bung and having a passage therethrough, a valve for said passage pivotally mounted directly on the cap and having a projection, an inclined surface adapted to engage with said projection, and means for causing a relative motion between the valve and surface to close the valve.

5. In a bung, the combination of a cap having a passage therethrough, a valve for said passage, an inclined surface on the body of the bung adapted to operate said valve, a key for causing a relative motion between the valve and surface to lock and unlock the valve, and means for guiding the key and for forcing it toward the cap as it is turned to unlock the valve.

6. In a bung, the combination of a cap having a passage therethrough, a flap-valve pivotally mounted directly on the cap for said passage and having a projection, an inclined surface on the bung adapted to engage with said projection, a key for causing a relative motion between the valve and surface to lock and unlock the valve, and means for preventing the removal of the key when the valve is unlocked.

7. In a bung, the combination of a cap having a passage therethrough, a valve for said passage, a key having a passage adapted to register with the first-named passage on the cap, an inclined surface adapted to engage with said valve for locking and unlocking it, and means for preventing the removal of the key when the valve is unlocked.

8. In a bung, the combination of a cap having a passage therethrough, a valve for said passage pivotally mounted on the cap, a key having a passage adapted to register with the first-named passage, means for locking and unlocking said valve, and means for permitting the removal of the cap with the valve when the valve is unlocked and in a certain predetermined position.

9. In a bung, the combination of a cap removable from the body of the bung and having a passage therethrough, a valve for said passage pivotally mounted on the cap, and means mounted on the inner surface of the bung for locking the valve in closed position.

10. In a bung, the combination of a cap removable from the body of the bung and having a passage therethrough, a valve for said passage pivotally mounted on the cap, means mounted on the inner surface of the bung for locking the valve in closed position, and means for unlocking the valve.

11. A bung having a removable rotatable cap provided with a perforation, a valve for said perforation removable with the cap, and a stationary inclined surface for positively closing and locking the valve; said valve having a projection for engaging said inclined surface.

12. A bung having a removable cap provided with a perforation, a flap-valve for said perforation removable with the cap and having a projection, and a stationary inclined surface constituting means for engaging said projection and locking the valve in closed position.

13. A bung having a removable cap provided with a perforation, a flap-valve for said perforation removable with the cap and having a projection, a stationary inclined surface constituting means for engaging said projection and locking the valve in closed position, and means for unlocking the valve.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses

JULIUS FRANKE.

Witnesses:
JNO. M. RITTER,
ALBERT E. FAY.