(No Model.)

P. C. LEIDICH.

SELF ACTING BUNG.

No. 599,788. Patented Mar. 1, 1898.

Fig. 2.

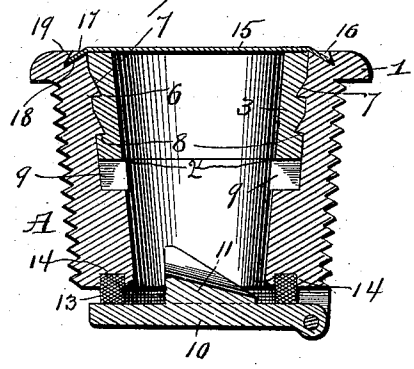


Fig. 4.

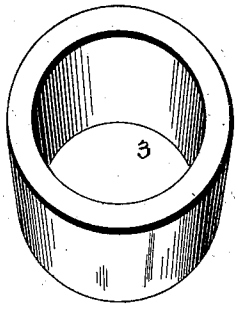


Fig. 4a.

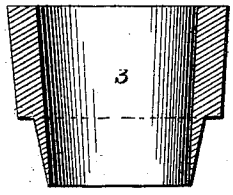


Fig. 3.



Fig. 1.

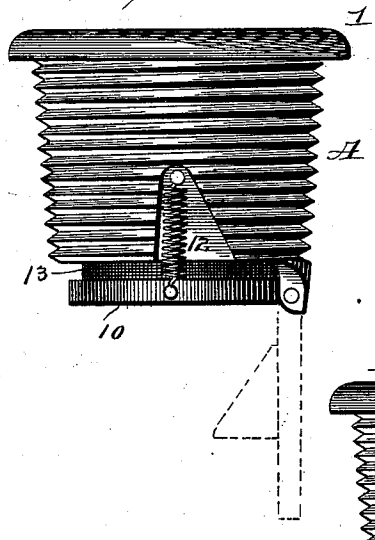


Fig. 5.

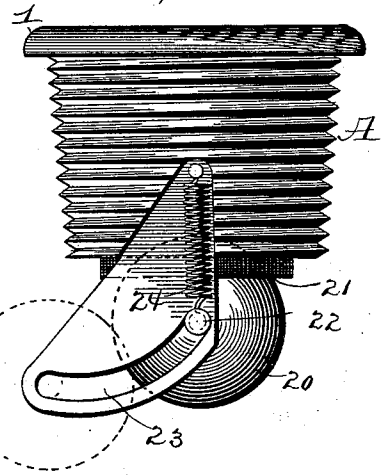
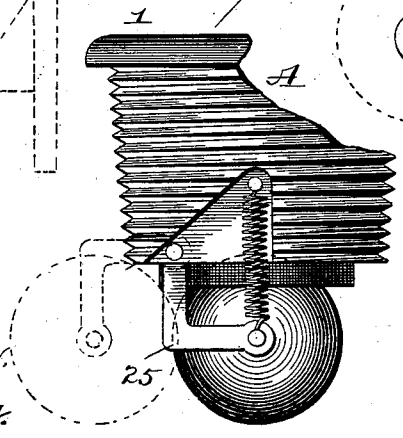


Fig. 6.



Witnesses
E. J. Nottingham.
G. F. Downing.

Inventor
P. C. Leidich
By H. A. Seymour
Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

PETER C. LEIDICH, OF TAMAQUA, PENNSYLVANIA.

SELF-ACTING BUNG.

SPECIFICATION forming part of Letters Patent No. 599,788, dated March 1, 1898.

Application filed January 23, 1897. Serial No. 620,437. (No model.)

To all whom it may concern:

Be it known that I, PETER C. LEIDICH, a resident of Tamaqua, in the county of Schuylkill and State of Pennsylvania, have invented certain new and useful Improvements in Self-Acting Bungs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in self-acting bungs or bung-hole closers; and it consists in certain novel features of construction and combinations of parts, which will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in elevation of my improved bung. Fig. 2 is a longitudinal sectional view. Fig. 3 is a detail of the removable seal. Fig. 4 is a similar view of the removable bushing. Fig. 4ª is a modified form of bushing, and Figs. 5 and 6 are views of modifications.

A represents the hollow bung-head. This preferably tapers slightly and has a screw-threaded exterior, whereby it is easily and securely driven into place in the bung-hole. This head is made of metal and preferably coated with block-tin or some similar material which will not in any wise affect the beer or other liquid contained in the keg or barrel. The outer end is flanged, as at 1, to rest flat upon the head of the keg or barrel and give a neat and finished appearance thereto.

The inner wall of the head is furnished with an annular shoulder 2, which constitutes a stop for the removable bushing. The numeral 3 represents this bushing. It is preferably made of wood or similar substance, which will readily yield when driven into place and which will effect an air and gas tight joint around the spigot and in the head when all the parts are in place. This bushing is made removable, so that it can be renewed when it loses its efficiency by merely cutting it out, and in consequence of this provision the bung is made much more lasting, as this is the portion which really gets all the hard wear and punishment incident to the usage given such articles. As a means for holding the bushing securely in place one or more circumferential ridges 6 6 are formed on the inner wall of the head, and to facilitate the insertion of the bushing the outer faces of the ridges are slightly tapered, as at 7, and to prevent a too ready removal of the bushing the opposite faces 8 have a sharp angle with reference to the inner wall of the bushing; also, to insure a tight fit the bushing might be provided with the tapering end *a* (indicated in Fig. 4ª) to enter the smaller bore of the head and fit snugly therein should the outer end fail to fit perfectly.

In the shoulder 2 one or more notches 9 9 are formed to receive a wrench or other device for turning the head into or out of the bung-hole. It will be observed that the bushing when in place rests over and conceals these notches, so that to an unauthorized person unfamiliar with the device there is no apparent means and certainly no easily accessible means for applying an instrument whereby to effect a removal of the bung.

The head A may have different forms of valves for automatically closing it when there is no spigot in the keg or barrel. I have shown three different constructions of valve. One is a flap-valve, as shown in Figs. 1 and 2, and the other is a ball-valve, as illustrated in Figs. 5 and 6. The valve disclosed in Figs. 1 and 2 is a plate or disk 10, hinged at one edge to the inner end of the hollow head. This plate or disk 10 is furnished inside with a teat 11, adapted to receive the inner end of the spigot when the latter is forced into the bung-hole, or the inner end of the siphon-tube if the latter is employed. In this way the valve is forced aside and open, two spiral springs 12 12 at the sides always tending by their tension to close the valve, and doing so immediately upon the spigot being removed. The tension of the springs is sufficient to hold the valve closed when not otherwise hindered, and yet it yields sufficiently to permit the spigot or tube to enter and force it aside. Just beneath this valve a rubber or other yielding washer 13 is placed, it being seated in an annular groove 14 in the inner end of the head, the object of the washer being to form an air and gas tight joint for the valve.

As a means of detecting any unauthorized opening of the bung a removable seal 15 is provided. This seal is made of sheet metal,

as iron or tin, and provided with a flange 16 at the edge. The hollow head A of the bung has a corresponding annular groove 17 to receive this flange. One edge 18 of this groove inclines inwardly and laterally to turn the flange outward when the seal is forced in place, and the outer edge of the groove is undercut a trifle, as at 19, to receive the extreme edge of the flange, so that when driven tightly in place the flange follows the sloping edge 18 and sinks into the outer undercut edge 19, where it is held securely. When a keg or barrel is filled, this seal is applied, as described, and the brewer's stamp is then pasted over it. To remove the seal, a sharp blow is applied directly on its center, and this causes the flanged edge to rebound and disengage itself from the groove 17, and to apply the seal again is a practical impossibility. So it is seen what an effectual guarantee it is in detecting any surreptitious tampering with the bung.

In the modification shown in Fig. 5 a ball-valve 20 is used, and the inner end of the head is slightly beveled, as at 21, to form a seat for the valve. The valve is furnished axially with trunnions 22 22, and curved guide-slots 23 23 are provided to receive these trunnions. Springs 24 24, as in the previous construction, connect the valve to the head. So it is apparent that the springs normally hold the valve on its seat and that the spigot or tube when inserted forces the valve inward and to one side through the curved guides 23 23, the springs returning the valve to its seat when not otherwise hindered by the presence of the spigot or tube in the bung-hole.

In the other modification shown in Fig. 6 instead of guides 23 23 the bell-crank levers 25 25 are resorted to, they being pivoted to the inner end of the head, where they swing to carry the valve back out of the way and return it to its seat when the conditions hereinbefore described are right for either movement. The form of the levers is such that they strike the head of the barrel or keg when moved a certain distance, thus limiting the movement to a certain extent and insuring its return to its seat when the spigot is removed from the hole.

Thus in all these forms the action is automatic and instantaneous and the closure is air and gas tight. The article itself is as lasting as the keg or barrel and probably even more so, and consequently most economical commercially.

In conclusion it may be stated that this bung is particularly applicable to old kegs and casks, as the size is a little greater than the standard size. So it is merely necessary to bore out the old hole a little larger and screw in my improved bung.

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

1. The combination with a bung having recesses on its outer surface, and a wooden bushing, of a valve hinged to the inner end of the bushing and springs connecting the sides of the valve at approximately opposite points with the bung and located or housed in the recesses.

2. The combination with a hollow bung provided with recesses on the outside thereof and shoulder in the interior, and having a breakable bushing adapted to be permanently held in place by said shoulder, of a valve connected to the inner end of the bung and provided with springs located in said recesses on its opposite sides.

3. The combination with a bung having recesses on its outer surface, and a wooden bushing, of a valve hinged to its inner end, said valve having an inclined formation on its inner face, and springs connecting the sides of the valve at approximately opposite points with the bung and located or housed in the recesses.

4. The combination with a bung-head having side frames projecting from the inner end thereof, said frames having curved slots, of a valve having trunnions mounted in said slots and springs for normally holding the valve against the inner end of the bung-head, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

PETER C. LEIDICH.

Witnesses:
C. S. DRURY,
GEO. F. DOWNING.