W. J. STEVENS.

Bung.

No. 208,499. Patented Oct. 1, 1878.

Fig. 5.

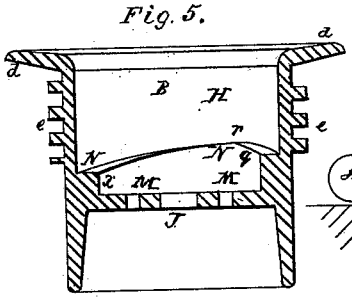


Fig. 6.

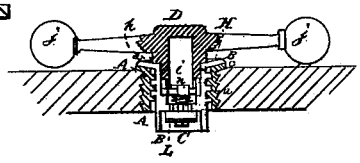


Fig. 1.

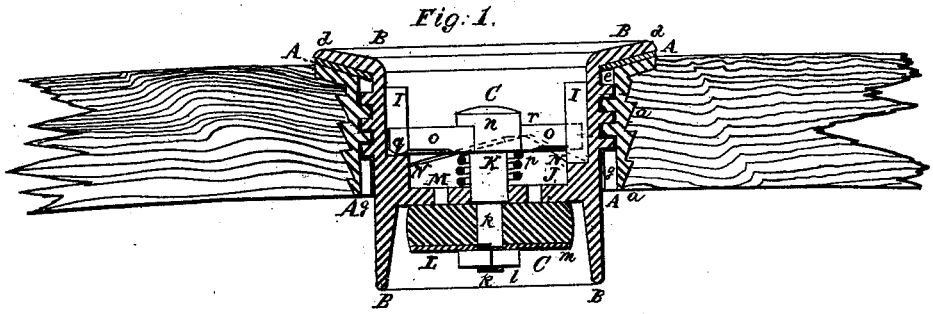


Fig. 2.

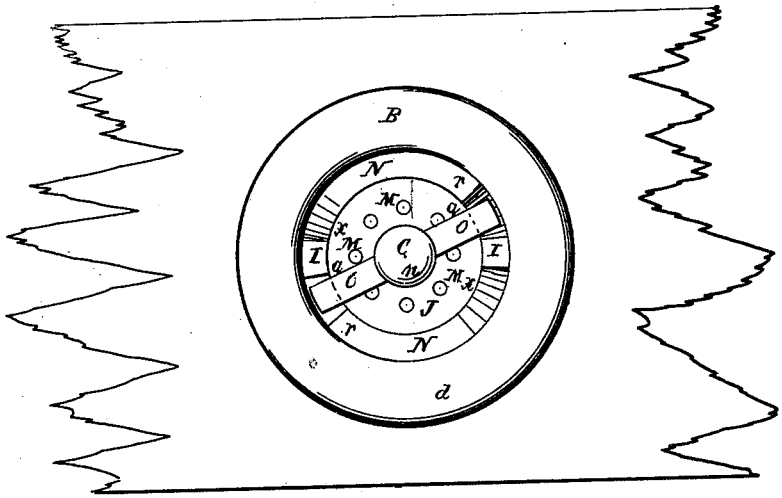


Fig. 3.

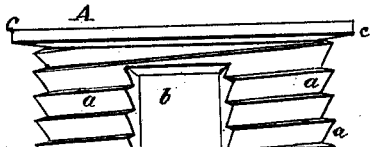
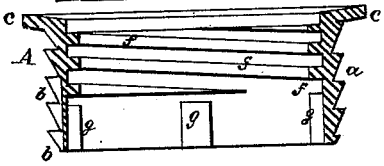


Fig. 4.



Witnesses

R. Boeklen.

Wm. C. Brown

Inventor.

William J. Stevens

UNITED STATES PATENT OFFICE

WILLIAM J. STEVENS, OF NEW YORK, N. Y.

IMPROVEMENT IN BUNGS.

Specification forming part of Letters Patent No. **208,499**, dated October 1, 1878; application filed March 22, 1878.

To all whom it may concern:

Be it known that I, WILLIAM JAY STEVENS, of the city, county, and State of New York, have invented a new and useful Improvement in Bungs for Beer-Kegs, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a vertical central section of the bung and its bush for beer-kegs, according to my improvements. Fig. 2 is a top view of the same. Fig. 3 represents a detached side view of the bush of the same. Fig. 4 is a vertical central section of the same. Fig. 5 represents a detached vertical central section of the bung of the same. Fig. 6 represents a vertical central section of the bung brought home into the bush with the wrench with which it is operated, and the whole represented on a reduced scale.

The object of this invention is to furnish a proper durable metal bung and bush, with a vent that may be locked and unlocked, in the opening for filling the beer-keg, and with the bush provided with portions of its threaded shank removed to cut its way to secure it in the stave of the keg, and the bung provided to secure it air-tight in the bush with rapidity, to retain the carbonate properties of the beer after filling the keg, and so that the vent is locked during transportation and before the keg is tapped, and that the vent is ready to unlock to give vent to discharge the beer in detail suitably, so that by these means a bung is obtained for the keg which can be used many times over, and with the convenience of being provided with the proper vent for the discharge of the keg, and largely saving the expense for a new bung for every filling of the keg.

The letter A of reference represents the bush for the bung B; the letter C, the vent or valve of the bung; and D, the handle or wrench by which the bung is operated.

The outside of the shank of the bush has a screw-thread, *a*, on it, of the saw-tooth shape, as shown, with the V-point edge in upward direction. Equally-distributed portions *b* of the periphery of the threaded shank from about the first turn of the thread at the top are cut away, as shown, to have the bottom end of said shank provided like a screw-tap for cutting its way into the stave, which has the proper opening in it. The upper end of the bush has the usual flange *c*, so as to have a firm bearing upon the stave; and said flange has its surface inwardly beveled and made smooth, to meet the bottom surface of the flange *d* on the bung, with a washer of packing material.

The object of having said top surface of the bush beveled is to avoid said surface becoming soon roughened in rolling the keg over the ground. The interior of the bush and exterior of the bung are provided with a square male and female screw-thread, *e* and *f*, of a rapid pitch, and the female thread on the interior of the bush commences a little below the top of the same, and terminates nearly midway of its length. The portion below the female thread toward the bottom end of the interior of the bush is made to continue with the large diameter of the female screw-thread, with exception of several inward-projecting guide-ribs, *g*, which guide the smooth or unthreaded portion of the bung. The male thread on the bung terminates also with a few turns near the termination of the female when placed home. The portion below the male thread on the bung is made equal with the small diameter of said thread, so that said portion enters very freely. At the same time the bung is properly guided, and has its commencing portion of the screw-thread shaped to always properly enter the female thread of the bush.

To screw and secure the bush into the keg, a wrench is employed, which has a male screw-thread and a shoulder to meet the female and top surface of the bush.

To drive home the bung, a wrench is employed, as shown in Fig. 6, with a shank, *i*, to enter the top hollow portion H of the bung, and with a shoulder, *h*, to meet the top surface of the bung. The hollow portion H has two opposite inward-projecting noses, I I, for which the shank of the wrench is slotted, and the top of said wrench is provided with handles *j j*, cast or secured to it, so as to gain momentum and turn the bung home with rapidity, and thereby close the keg with speed after being filled.

To provide the bung with a vent for drawing the beer in detail from the keg, the bung is

made with a valve or vent seat, J, a short distance above its lower end, which is also made hollow like the portion above the seat, to embed and protect the stem K as well as the base L of the valve from undue contact.

The seat J is smooth on its lower face, and has through it for the passage of the air several small holes, M. The valve-stem K has a shank, *k*, upon which the base L is secured by means of a screw-nut, *l*, and washer *m* on its bottom end, or by means of riveting said washer, whichever may be more suitable. The valve L is made of rubber or other elastic material. It is made disk shape, and closes the openings M, unless a vacuum is caused in the keg by drawing the beer, or that the valve is set so as to leave a slight opening. The stem K has on its upper end a head, *n*, with two opposite arms, O O, and has a spiral spring, *p*, between the head *n* and the valve-seat J, which presses against the head *n* to close the valve upon its seat; and said portion of the stem K between the head and shank passes through the seat J, and is fitted to slide therein. Now, in order to lock the valve to prevent its opening during transportation of the keg, I form in the hollow portion of the bung H an interior peripherical inclined shoulder, N, which has a short partly-lowering portion, *q*, after its most elevated part *r*. The arms O O project over said shoulder, so that by turning them from the lower part of the incline of said shoulder upon the most elevated part of the same the said arms, with the valve, are caused to raise and press the valve L tightly upon its seat, and by turning said arms past the elevated portions *r* upon the portion *q* the valve is still tight upon its seat; but by turning the arms back to the lowest portion, *x*, of the incline the valve is depressed from its seat to admit the air, as required for drawing the beer.

To turn the arms over the elevated portions *r*, a lever or wrench is required, for which purpose the wrench used to operate the bung is provided to take hold of said arms by means of a slot formed on its end.

The bung above described, with the bush and vent, is readily cleaned. It entirely dispenses with the wood bung, which is required to be renewed for every filling of the keg on account of turning sour, and is seldom sufficiently tight on account of its pores.

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

1. The bung B, provided with the inclines N *q* and noses I I, to form a lock for the arms O O, substantially as described.

2. The bush A, provided with an internal thread, *f*, the guides *g g*, and external thread *a*, having recessed portions *b*, substantially as described.

3. The bung B, provided with the inclined shoulder N, in combination with the valve C, provided with its stem K, and arms O O, to effect the locking of the valve, substantially as and for the purpose herein stated.

4. The combination of the bush A, provided with its interior threaded portion, and guide-ribs *g*, and beveled shoulder C, and portions *b*, and the bung B, its male thread *e*, and beveled flange *d*, and seat J, and cam-shoulder N, and the valve C, with the arms O O and spring *p*, the elastic valve-base L, substantially as and for the purpose herein set forth.

5. The combination, for a vent-bung, of the valve-seat J and shoulder N with the valve-base L and spring *p*, the stem K, and arms O O, substantially as and for the purpose herein described and shown.

In witness whereof I hereunto set my hand this 21st day of March, 1878.

WILLIAM J. STEVENS.

In presence of—
R. BOEKLEN,
WM. BROWN.