(No Model.)

# W. W. GUPTILL.

## LOCKING STOPPER FOR BOTTLES.

No. 441,240. Patented Nov. 25, 1890.

Fig. 1.

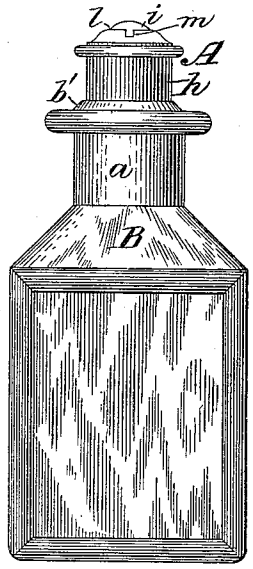
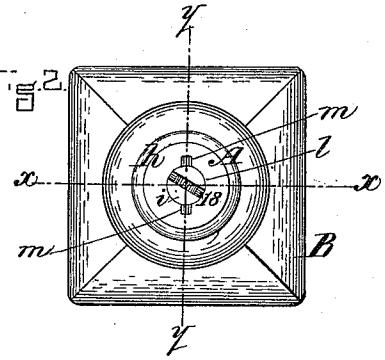



Fig. 2.



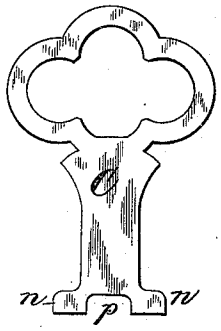




Fig. 3.

Fig. 4.

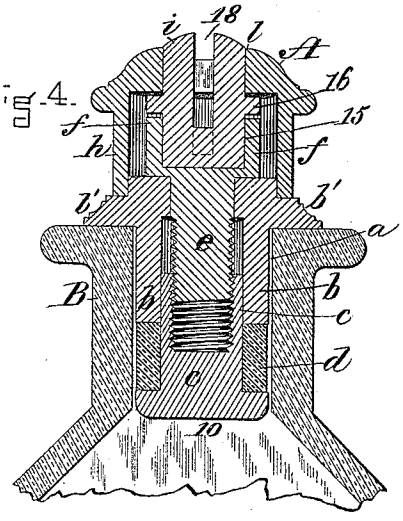



Fig. 5.

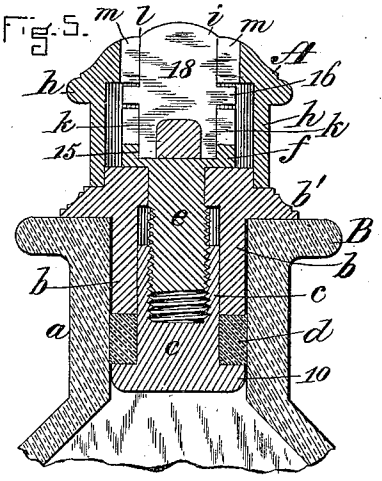



Fig. 6.

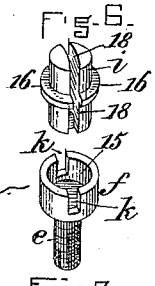



Fig. 7.

Fig. 8.

Fig. 9.

WITNESSES.

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# UNITED STATES PATENT OFFICE.

WINSLOW W. GUPTILL, OF BOSTON, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO CLARENCE W. FOX, OF SAUGUS, MASSACHUSETTS.

## LOCKING-STOPPER FOR BOTTLES.

SPECIFICATION forming part of Letters Patent No. 441,240, dated November 25, 1890.

Application filed April 9, 1890. Serial No. 347,244. (No model.)

*To all whom it may concern:*

Be it known that I, WINSLOW W. GUPTILL, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented an Improved Locking-Stopper for Bottles, Jugs, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of a bottle having my improved locking-stopper applied thereto. Fig. 2 is a plan of the same. Fig. 3 is an enlarged elevation of the key for locking the stopper. Fig. 4 is an enlarged vertical section through the stopper and the neck of the bottle on the line $x\,x$ of Fig. 2. Fig. 5 is a similar section on the line $y\,y$ of Fig. 2. Figs. 6, 7, 8, and 9 are details in perspective.

My invention relates to that class of bottle-stoppers in which a rubber ring or disk is expanded laterally within the neck of the bottle by compression between two portions of the stopper, which are drawn together by a screw or other device; and my invention has for its object to construct a bottle-stopper of this description which can be locked within the neck or mouth of the bottle or other receptacle by means of a removable key, thus particularly adapting it for a great variety of purposes—for instance, for bottles for containing poisons, or where it is desired to prevent unauthorized persons from abstracting spirituous or other liquids from bottles, jugs, or demijohns.

To this end my invention consists in a bottle-stopper provided with an elastic ring or plug adapted to be expanded laterally within the neck or mouth of the bottle or other receptacle to lock said stopper in place therein by compression between a stationary and a movable portion of the stopper, said movable portion being operated by a screw, which extends upward into a closed chamber or casing at the top of the stopper and is adapted to be operated by a removable key introduced through a slot or aperture in the said casing, the mechanism for expanding the elastic portion of the stopper and thereby locking it in position being thus placed out of reach of any one not possessed of the proper key, as hereinafter more fully described.

In the said drawings, A represents my improved bottle-stopper, composed of a hollow portion *b*, within which is fitted to slide vertically therein a short hollow portion *c*, provided at its bottom with a head 10, Figs. 4, 5, and 9, between which and the bottom of the portion *b* is placed a ring or annular plug *d*, composed of rubber or other suitable elastic material. The portion *b* is provided with a lateral flange *b'*, which is adapted to rest on the top of the neck of the bottle B and prevent the stopper from being pushed down too far into its neck or mouth *a*. The portion *c*, which is preferably of square or polygonal form in cross-section and is encircled by the rubber ring *d*, is provided with an internal screw-thread, within which fits a screw *e*, provided with a large head *f*, by turning which the head 10 of the portion *c* may be drawn up toward the portion *b*, thus compressing the rubber ring *d* and expanding it laterally, as seen in Fig. 5, against the inside of the neck or mouth of the bottle, jug, or other receptacle to which the stopper is applied, the said ring when thus expanded forcibly against the inside of said neck or mouth serving to lock the stopper therein, so that it cannot be withdrawn until the screw *e* is turned in the opposite direction to permit the rubber ring to contract in diameter in a manner common to bottle-stoppers of this description. The head *f* of the screw *e* rests upon the top of the portion *b*, to which is soldered or otherwise permanently secured a cylindrical casing *h*, which incloses the said head *f* and prevents the same from being turned except by means of a properly-shaped key C, Fig. 3, which is inserted through the top of the casing *h*, as hereinafter described, and engages with slots or notches *k* in the said head *f*. This head *f* is provided with a recess 15, Fig. 7, for the reception of a swiveling plug *i*, having a flange 16, which lies close to the top of the head *f*, as seen in Figs. 4 and 5. The plug *i* is provided with a vertical cleft or notch 18, and the portion of the plug above the flange 16 passes up through and completely fills a circular aperture *l*, formed in

the top of the cylindrical casing *h*, said aperture *l* having two notches *m m* diametrically opposite each other, which permit the two lateral projections *n n*, formed at the bottom of the key C, to pass down into the interior of the cylindrical casing *h* when the plug *i* is turned, as seen in Fig. 5, to bring its cleft 18 into line with the said notches *m m*. The key C is inserted into the cleft 18 and pushed down through the notches *m m* until its projections *n n* have passed entirely through the top of the casing *h*, when they will rest on the edge of the recess 15 in the head *f* of the screw *e*. The key is then turned with the plug *i* until the notch or cleft 18 of the latter is opposite to or in line with the notches *k k* in the head *f* of the screw *e*, as seen in Fig. 5, when the key, owing to a notch *p* in its bottom and the depth of the cleft 18 in the plug *i*, can be pushed in so that the projections *n n* will engage with the said notches *k k*. The screw *e* can now be turned by means of the key, so as to expand the rubber ring *d* within the neck or mouth of the bottle, as seen in Fig. 5, and lock the stopper immovably in place therein, after which the key is raised to clear the notches *k* in the head *f*, and can then be rotated in either direction until the cleft 18 in the plug *i* is in line with the notches *m m* in the top of the casing *h*, when the key can be readily withdrawn, leaving the stopper securely locked in place, so that it will be impossible to remove it without the key, as the head of the screw *e*, which controls the expansion and contraction of the rubber locking ring, is entirely inclosed and protected by the casing *h*, the entrance to which is guarded by the rotary notched plug *i* and notches *m m* in such manner as to render it difficult to pick the lock with any ordinary instrument which would be likely to be at hand. I do not, however, limit myself to the exact construction of lock here shown, as it is obvious that variations may be made in its details without departing from the spirit of my invention.

The above-described stopper presents a neat and finished appearance, is simple, cheap, and durable, and will be found particularly useful wherever it is desired to prevent unauthorized persons from tampering with or gaining access to the contents of bottles, jugs, or other receptacles, or for bottles containing poisons, when the fact of being obliged to unlock the bottle with a key would be likely to call attention to the nature of its contents, and thereby avoid accidental poisoning from carelessness.

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

1. In a locking bottle-stopper, the combination, with an elastic ring or plug adapted to be expanded laterally by compression between the stationary and movable portions of the stopper, of the screw *e*, engaging with the said movable portion and having a notched head located within a chamber or casing *h*, forming a part of said stopper, a notched plug swiveling within a recess in the head of the screw *e* and extending up through a circular opening in the casing *h*, provided with notches *m m*, and the key C, with its lateral projections *n n*, adapted to pass through the notches *m m* and engage with the notches in the head *f* of the screw *e*, substantially as set forth.

2. In a locking bottle-stopper, the combination of the portion *b*, provided with a closed chamber or casing *h*, the portion *c*, sliding within the portion *b* and having a head 10, the elastic ring or annular plug *d*, encircling the shank of the portion *c* and adapted to be expanded laterally by compression between the portion *b* and the head 10, the screw *e*, engaging with the portion *c* and having a recessed head *f*, provided with notches *k k*, the rotary plug *i*, with its cleft 18 swiveling in the head *f* and projecting up through and filling a circular opening in the top of the casing *h*, said opening having the notches *m m*, and the removable key C, adapted to engage with the head of the screw *e*, substantially as set forth.

Witness my hand this 4th day of April, A. D. 1890.

WINSLOW W. GUPTILL.

In presence of—
P. E. TESCHEMACHER,
HARRY W. AIKEN.