

(No Model.)

M. A. SKALL.
VALVE STOPPER FOR BOTTLES.

No. 542,068.

Patented July 2, 1895.

Fig: 5.

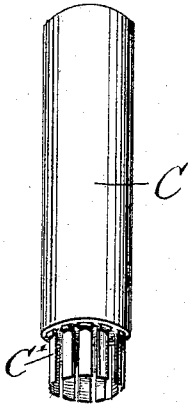


Fig: 1.

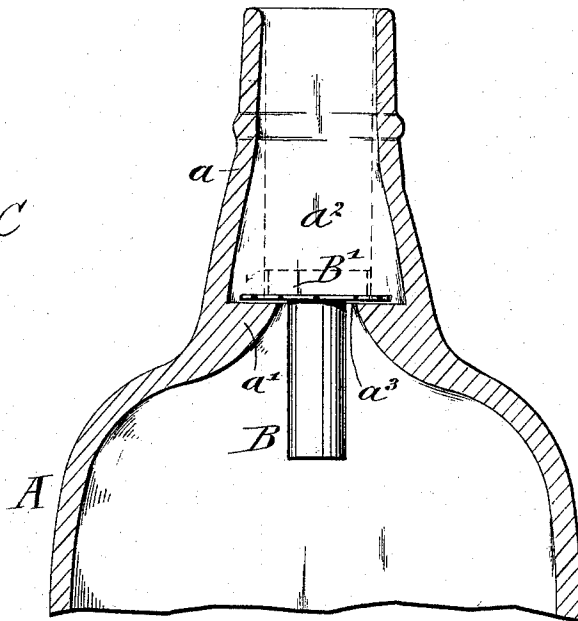


Fig: 6.

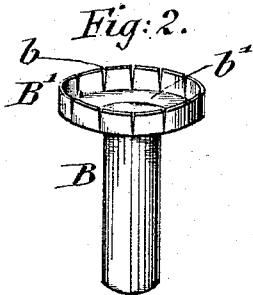
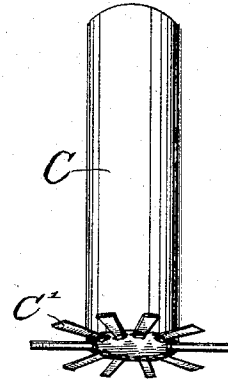
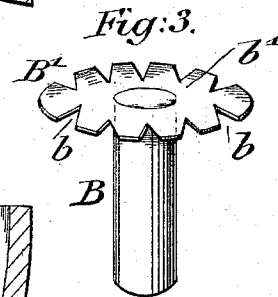
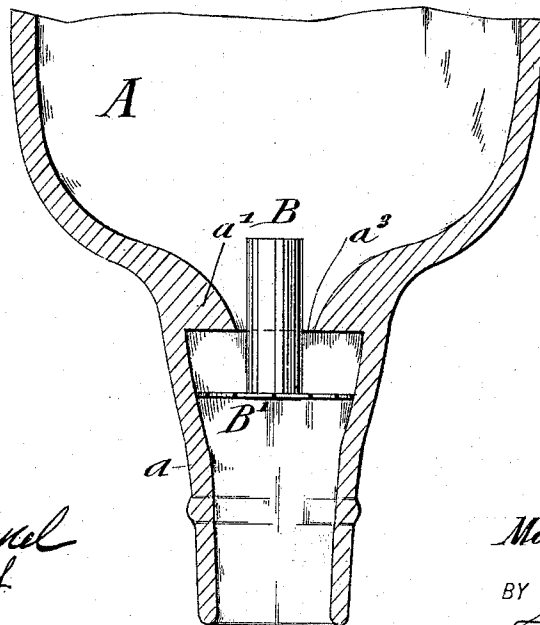


Fig: 4.



WITNESSES:
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UNITED STATES PATENT OFFICE.

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VALVE-STOPPER FOR BOTTLES.

SPECIFICATION forming part of Letters Patent No. 542,068, dated July 2, 1895.

Application filed February 6, 1895. Serial No. 537,439. (No model.)

To all whom it may concern:

Be it known that I, MAX A. SKALL, a citizen of the United States, residing in the city, county, and State of New York, have invented a certain new and useful Improved Valve-Stopper for Bottles, of which the following is a specification.

My invention relates to a valve-stopper for bottles, and the object of the same is to provide a guard device to prevent the refilling of bottles with spurious liquors, medicines, &c.

My invention consists of certain features of construction and combinations of parts to be hereinafter described and then pointed out in the claim.

In the accompanying drawings, Figure 1 is a vertical section of a bottle embodying my invention. Fig. 2 is a detail perspective view of the valve, showing the same before the disk is flattened. Fig. 3 is a similar view showing the valve after the disk is flattened. Fig. 4 is a longitudinal section of the bottle, showing the valve unseated when the liquor is poured out of the bottle. Figs. 5 and 6 are perspective views of a tool for applying the valve-stopper to the bottle, the same being shown in contracted and spread positions, respectively.

The bottle A, having the usual neck a , is provided at the base of the neck, internally of the same, with an annular shoulder a' , which can be formed in any suitable manner, as by means of a mandrel inserted into the neck when the glass is in a soft condition, the neck being afterward contracted at its upper portion, so as to form an enlarged chamber a^2 , directly above the valve-seat formed by the shoulder a' .

The valve consists of a cylindrical stem or shank B, which is preferably of heavy material, and is guided through the contracted orifice a^3 below the valve-seat a' , the outer end of the stem B having affixed thereto, by its central portion, a disk B', the circumferential portion of which projects a considerable distance around the stem and is provided with a series of notches b . The notches b enter the peripheral portion of the disk to such an extent only that an unnotched inner portion b' is provided between the points of the notches and the stem B, so that when the valve is seated the unnotched portion b'

will rest upon the valve-seat a' and thereby close the orifice a^3 . When the valve is seated in this manner, should the stopper be accidentally left out of the bottle the air is prevented from getting at and injuring the liquor contained in the same. In case an attempt should be made to inject a spurious liquor into an empty bottle it will be seen that the force of the incoming liquor will project the valve against the valve-seat, so that the orifice a^3 is completely closed. The pouring out of the liquor from the bottle is permitted by reason of the notches b in the periphery of the disk B' of the valve, for when the bottle is tilted to pour the valve will be unseated and the liquor will pass first through the contracted orifice into the chamber a^2 and then out of the neck after passing through the notches. As the diameter of the disk B' is greater than that of the internal diameter of the outer end of the neck, it will be seen that the valve could not be inserted into the neck without the notched portion be first turned up at right angles to the disk in the shape shown in Fig. 2. This having been done, the valve is dropped into the neck of the bottle, so that the unnotched portion of the disk will rest upon the valve-seat formed by the shoulder a' , whereupon the tool shown in Figs. 5 and 6 is inserted into the neck and the notched portions of the disk spread out by a few taps on the teeth between the notches, so that the disk will be flattened and the same be in one plane, as shown in Fig. 3. The tool consists of a handle C, to which is pivoted at its lower end, at a slight distance in from the edge, a circular series of presser-feet C', which hang down when the tool is being inserted, but which rise and spread when the tool is driven in by the stroke of a hammer, so that the notched portion of the disk is flattened.

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

The combination, with a bottle provided in its neck with an internal annular shoulder made integral with and arranged in the lower part of the bottle-neck, said bottle-neck being provided with a contracted mouth merging into an enlarged chamber between the mouth and the internal shoulder, of a valve consist-

ing of a stem or shank guided in the opening
formed by the annular shoulder, and a cir-
cumferentially - notched disk secured cen-
trally to one end of the shank and projecting
5 around the same, said disk being capable of
insertion into the bottle-neck and expansion
to a greater diameter than the contracted
mouth of the bottle, so as to abut against the
inner wall of the contracted portion of the

neck when the bottle is inverted, substan- 10
tially as set forth.

In testimony that I claim the foregoing as
my invention I have signed my name in pres-
ence of two subscribing witnesses.

MAX A. SKALL.

Witnesses:

PAUL GOEPEL,
GEORGE W. JAEKEL.