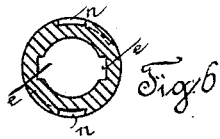
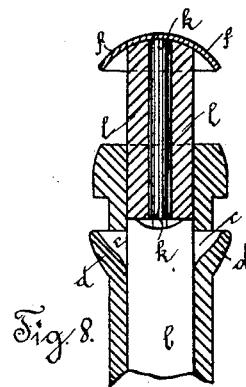
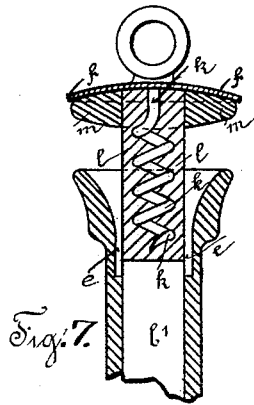
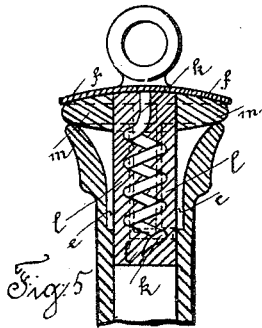
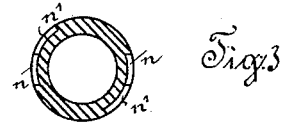
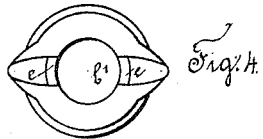
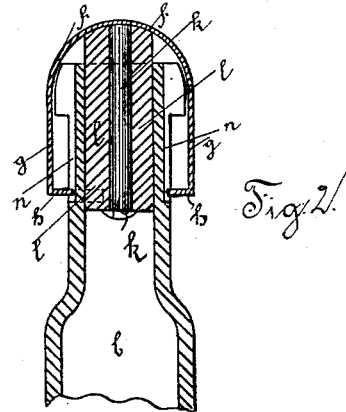
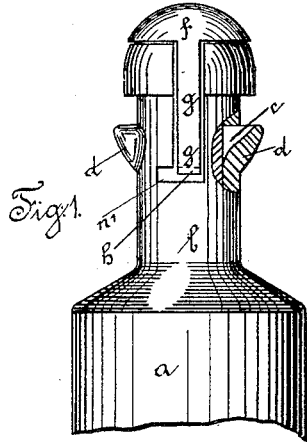


(No Model.)

M. ELB & F. G. MOSER.  
BOTTLE STOPPERING DEVICE.

No. 454,463.

Patented June 23, 1891.



Witnesses  
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E. D. Smith

Inventors  
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By  
Charles Thumel  
their Attys

# UNITED STATES PATENT OFFICE.

MAX ELB AND FRIEDRICH GEORG MOSER, OF DRESDEN, GERMANY.

## BOTTLE-STOPPERING DEVICE.

SPECIFICATION forming part of Letters Patent No. 454,463, dated June 23, 1891.

Application filed October 21, 1890. Serial No. 368,809. (No model.) Patented in Germany August 8, 1890, No. 55,590; in England September 26, 1890, No. 15,279, and in Belgium September 30, 1890, No. 92,160.

*To all whom it may concern:*

Be it known that we, MAX ELB and FRIEDRICH GEORG MOSER, subjects of the Emperor of Germany, residing at Dresden, in Germany, have invented certain new and useful Improvements in Bottle-Stoppering Devices, (for which we have obtained patents in Great Britain, No. 15,279, dated September 26, 1890; in Germany, No. 55,590, dated August 8, 1890, and in Belgium, No. 92,160, dated September 30, 1890,) of which the following is a specification.

This invention consists in a device for stoppering and closing bottles and other vessels, so constructed that when it is inserted into the neck of the bottle or the like to its full extent it entirely closes the outlet, being retained in this position by means of two bent pieces engaging in two grooves formed externally on either side of the neck, while when it is slightly raised, though not entirely removed from the bottle, it opens more or less two lateral orifices or passages, through either of which the liquid can escape, while the other admits the external air.

This device is especially valuable where it is desired to pour out small quantities of liquids, such as medicine, scent, acids, inks, and gaseous liquids.

In the accompanying drawings, Figure 1 represents the neck of a bottle with the stopper fully inserted and closing the two side passages provided in the neck. Fig. 2 is a longitudinal section of Fig. 1. Fig. 3 is a cross-section taken on a line below the outlet-orifices. Fig. 4 is a plan of a bottle-neck provided with channels, and Fig. 5 is a longitudinal section thereof with the stopper inserted. Fig. 6 is a cross-section, and Fig. 7 is a longitudinal section thereof with the stopper raised. Fig. 8 is a longitudinal section of a bottle-neck provided with lateral orifices and in which the stopper is raised.

The neck *b* of the bottle *a* to which this improved stoppering device is to be applied may either be provided with two lateral orifices *c*, the lower edge of which assumes the

shape of a lip *d*, (see *b*, Figs. 1 and 8,) or it may be formed with two grooves or channels *e*. (See Figs. 4 to 7.)

The stoppering device consists of a cap *f*, provided at each side with an arm or clamp *g*, the ends *h* of which arms are turned in somewhat like hooks. Within the cap *f* is secured a stopper *l*, of cork, wood, india-rubber, or equivalent material, by means of a pin or screw *k*. This stopper is of such length that when it is inserted into the bottle-neck to its full extent it projects beyond the lateral opening *c* or channel *e*, as the case may be. In the latter arrangement the cap *f* should be provided internally with a pad or packing *m*. The hook-shaped ends of the arms *g* enter, respectively, the vertical grooves *n*, provided one on each side of the neck of the bottle and terminating each at its lower end in a horizontal groove *n'*. In these horizontal grooves are held the hooks *h*, so long as the bottle remains closed, so that the stopper is prevented from rising spontaneously.

When it is desired to open the bottle, the stopper device is raised sufficiently to enable the stopper proper to take up its position over the side openings *c* of the neck of the bottle, or so as to open a portion of the channels *e*, as the case may be.

The stopper need not be removed from the neck of the bottle, all that is required to pour out the contents of the latter being a suitable adjustment of the outlet-openings by raising the stopper more or less, and thereby creating a larger or smaller free passage through the openings *c* or channels *e*.

Where openings such as *c* or grooves such as *e* are used there should be two of each in the bottle-neck, so that one may serve as an outlet, while the other admits air into the bottle.

We claim—

In a bottle-stoppering device, the combination, with a bottle having the pouring-channels opening into the bottle below the mouth thereof and having the bayonet-slots in the outer surface, as shown, of a stopper arranged to close said channels when inserted

to its full extent in the bottle-neck and to  
open them when only partially withdrawn  
therefrom, a cap fixed to said stopper and  
provided with downwardly-extending arms,  
5 the ends of which are bent or turned in to co-  
operate with said bayonet-slots to lock the  
stopper when pushed in and to hold it in  
position when partially withdrawn, substan-  
tially as described.

In testimony whereof we affix our signatures to  
in presence of two witnesses.

MAX ELB.

FRIEDRICH GEORG MOSER.

Witnesses:

EMIL DONNCH,  
RÜD. SCHMIDT.