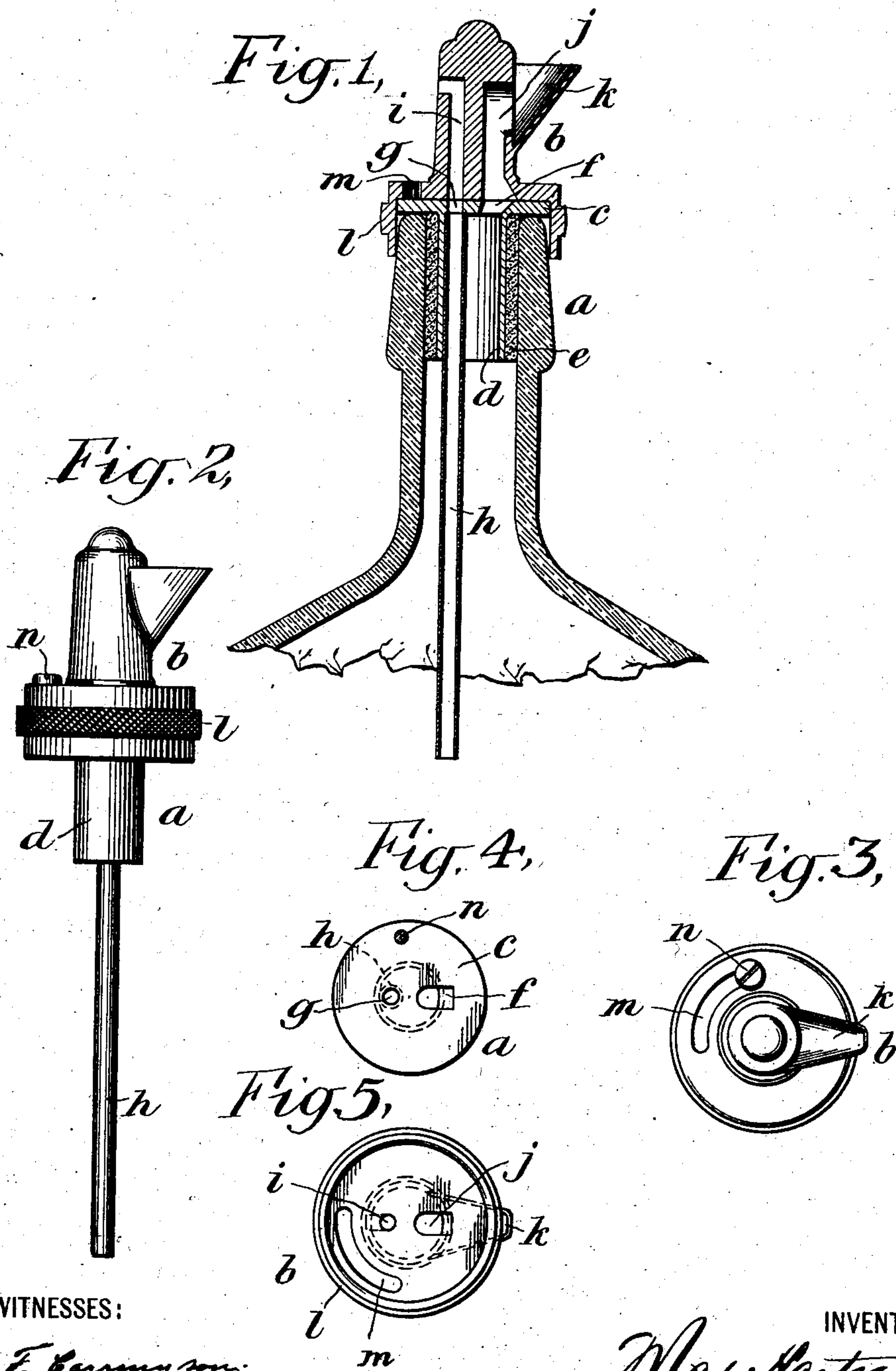


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PATENTED FEB. 24, 1903.

M. HARTOG.
BOTTLE STOPPER.
APPLICATION FILED OCT. 28, 1902.

NO MODEL.



WITNESSES:

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UNITED STATES PATENT OFFICE.

MAX HARTOG, OF PATERSON, NEW JERSEY.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 721,299, dated February 24, 1903.

Application filed October 28, 1902. Serial No. 129,079. (No model.)

To all whom it may concern:

Be it known that I, MAX HARTOG, a citizen of the United States of America, and a resident of Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Bottle-Stoppers, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to improvements in bottle-stoppers, and particularly to bottle-stoppers designed to prevent or permit the egress of liquid from the bottle by a relative movement of certain parts of the stopper, but without the removal of any part thereof.

I will now proceed to describe a bottle-stopper embodying my invention and will then point out the novel features in claims.

In the drawings, Figure 1 shows a central vertical section through a bottle-stopper embodying my invention and through a portion of a bottle in connection therewith. Fig. 2 is a side elevation of the bottle-stopper removed from the bottle. Fig. 3 is a top view of the same. Fig. 4 is a top view of the lower stationary member with the upper relatively movable member removed. Fig. 5 is an under side view of the upper movable member removed from the lower stationary member.

In the embodiment of my invention herein the bottle-stopper comprises a lower relatively stationary member *a* and an upper relatively movable member *b*. The lower relatively stationary member comprises a horizontal plate or flange *c* and a cylindrical neck *d*, dependent therefrom. Fitted to the outside of the neck *d* is a bushing *e*, of cork or similar material, so that the stopper as a whole may be conveniently fitted in the neck of a bottle. The cylindrical neck *d* is hollow and in permanent communication with a discharge-passage *f* in the flange or plate *c*. The flange or plate *c* has another passage *g*, which is in permanent communication with an air-tube *h*, secured to the inner side of the neck and projecting downwardly, so as to enter the interior of the bottle.

The upper or relatively movable member *b* has an air-passage *i*, adapted to register with the air-passage *g* in the member *a*, and has also a discharge-passage *j*, adapted to register with the passage *f* at one end and at the

other end opening out into a discharge-lip *k*, with which the said upper member is provided. The upper member is fitted to the flange or plate *c* of the member *a* and has also a dependent flange *l*, surrounding said plate and extending for some distance below it. The outer surface of the dependent flange *l* may be suitably knurled, so that it may readily be grasped and moved by the hand. The said member *b* is further provided with a slot *m*, through which a screw *n*, screwed into the flange or plate *c*, is permitted to pass. The slot is axially concentric with the member *b*, and the length of the slot, as shown in Figs. 3 and 5, is such as to permit a limited axial movement of the upper member with respect to the lower. When the upper member is in position with respect to the lower member, as shown in Fig. 1 of the drawings, the respective discharge and air ports and passages will be in register. When, however, the upper member is moved axially with respect to the lower member the distance permitted by the screw *n* and slot *m*, the said ports and passages will be out of register, so that ingress of air through the air passage and tube will be prevented, as will egress of liquid through the neck *d* and passage *j*. In operation therefore it is merely necessary to slightly turn the upper member in order to open or close the bottle. When adjusted to an open position, the liquid from the bottle will be readily poured in a steady and uniform stream, because of the shape of the discharge-funnel *k* and because of the provision of the air-passage and air-tube which will supply air to take the place of the liquid as fast as the liquid is discharged.

It will be seen that by my invention I have provided a simple and efficient bottle-stopper comprising but two parts and which may be operated at any moment to either open or close the bottle by a simple movement in one direction or the other of one of the parts.

It will of course be understood that I do not desire to be limited only to the precise details of construction and combination of parts as herein shown, as the same may obviously be modified within the spirit and scope of my invention.

What I claim is—

1. The combination in a bottle-stopper with

a stationary member *a* comprising a horizontal plate *c*, a dependent neck *d*, a bushing of cork or similar material surrounding said neck, and adapted to engage the neck of a bottle with which the device is designed to be employed, and an air-tube, and having air and discharge passages, of an axially-movable member *b* mounted thereon and comprising a horizontal plate, fitted to the said plate *c*, a dependent flange *l*, and an uprising portion carrying a discharge-lip *k*, and having air and discharge passages adapted to register with the air and discharge passages in the stationary member, and means connecting the two parts together and limiting the axial movement of the movable member.

2. The combination in a bottle-stopper with a stationary member *a* comprising a horizontal plate *c*, a dependent neck *d*, a bushing of cork or similar material surrounding said neck, and adapted to engage the neck of a

bottle with which the device is designed to be employed, and an air-tube, and having air and discharge passages, of an axially-movable member *b* mounted thereon and comprising a horizontal plate, fitted to the said plate *c*, said horizontal plate having a concentric slot *m* therein, a dependent flange *l*, and an uprising portion carrying a discharge-lip *k*, and having air and discharge passages adapted to register with the air and discharge passages in the stationary member, and a shouldered stud, fitted to the slot *m* in the horizontal plate of the member *b*, and secured to the plate *c* of the member *a*, thereby connecting the two members together, and limiting the axial movement of the movable member.

MAX HARTOG.

Witnesses:

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