

No. 775,899.

PATENTED NOV. 22, 1904.

M. ELFSTRAND.
STOPPER FOR BOTTLES.
APPLICATION FILED JUNE 8, 1903.

NO MODEL.

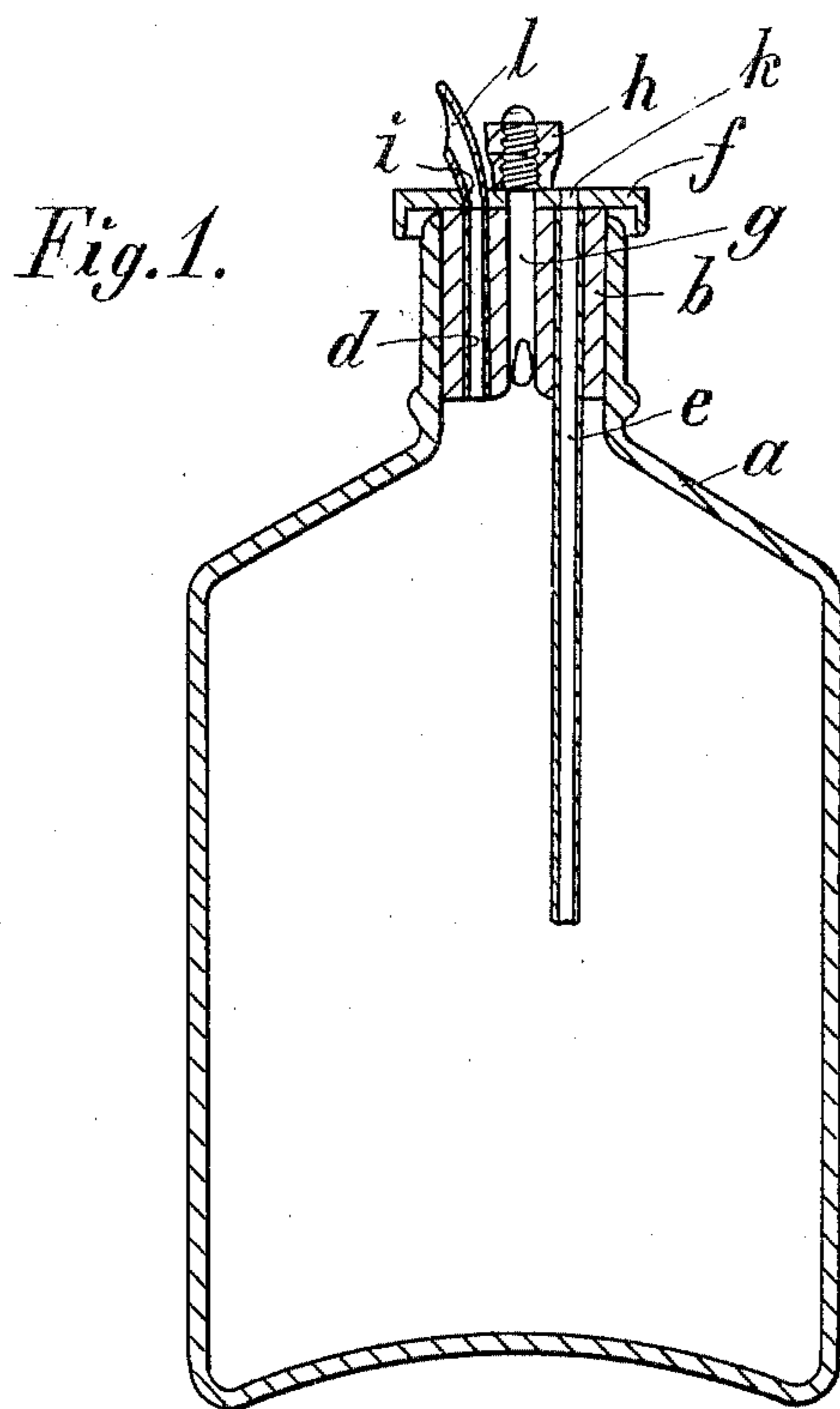
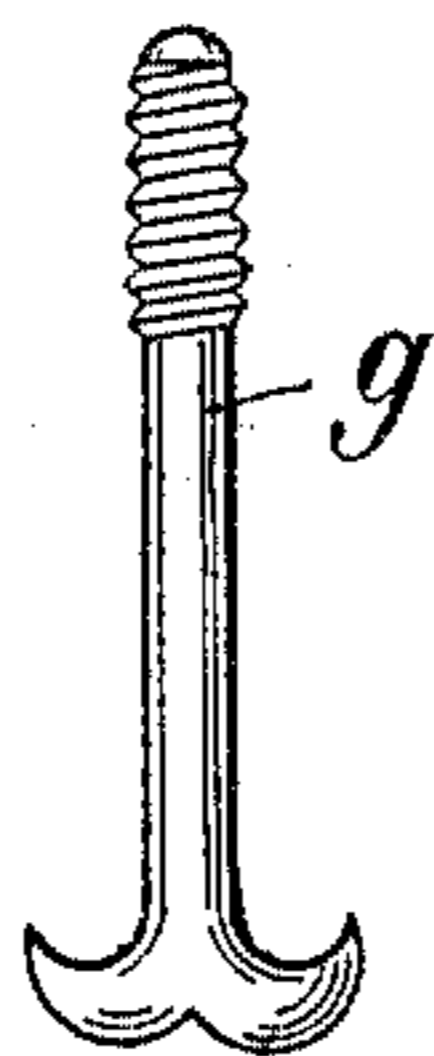


Fig. 2.



Witnesses:
Evald Delmar
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Inventor
Mårten Elfstrand
by Axel Axel
his att'y

UNITED STATES PATENT OFFICE.

MÅRTEN ELFSTRAND, OF UPSALA, SWEDEN.

STOPPER FOR BOTTLES.

SPECIFICATION forming part of Letters Patent No. 775,899, dated November 22, 1904.

Original application filed July 10, 1902, Serial No. 115,075. Divided and this application filed June 8, 1903. Serial No. 160,640.
(No model.)*To all whom it may concern:*

Be it known that I, MÅRTEN ELFSTRAND, a subject of the King of Norway and Sweden, and a resident of Upsala, Sweden, have invented new and useful Improvements in Stoppers for Bottles and the Like, of which the following is a specification, reference being had to the drawing accompanying and forming a part hereof.

10 This invention relates to improvements in stoppers for bottles and the like through which the liquid may be poured out without removing the stopper.

The object of the invention is to provide a 15 stopper of a simple construction which may be used also for bottles or the like containing volatile fluids, such as ether or the like, without any loss of the contents of the bottle when the stopper is closed and in which wearing 20 will have no perceptible influence on the capacity of the stopper to close a bottle or the like gas-tight.

The invention consists, briefly, in providing on the upper side of a stopper of cork or 25 other elastic material, such as india-rubber, a turnable plate having two or more holes or openings corresponding to channels or pipes in the stopper and in providing means for pressing the said turnable plate air-tightly 30 against the stopper.

The invention also consists in the combinations and arrangements hereinafter described and claimed.

In the accompanying drawings I have shown 35 a constructional form of my invention.

Figure 1 shows a vertical section of a drop-bottle provided with a stopper constructed in accordance with the present invention, and Fig. 2 shows a detail.

40 Referring to the drawings, a plug or stopper proper, *b*, of elastic material, such as cork, is inserted in a bottle *a*. In the said stopper are in well-known manner fixed two pipes *d* and *e*, of glass, metal, or other suitable material, of which the one *e* is adapted to let in the air into the bottle. On the upper side of said stopper *b* is provided a plate *f* or other 45 suitable body of glass, metal, or any other

material. The said plate or body is turnable on a screw *g*, fixed in the said stopper *b*, a 50 nut *h* being provided on said screw for pressing the plate *f* air-tightly against the upper side of the stopper *b* by compressing the stopper in longitudinal direction. Instead of the said nut *h* any other device—for instance, a 55 spiral spring, a small plate held by a pin, or the like—may be used for pressing the said plate *f* against the stopper *b*. The plate *f* is provided with two holes *i* and *k*, arranged in such manner in relation to the said pipes *d* 60 and *e* that the latter in a certain position of the plate *f* will communicate with the atmosphere by means of the said holes *i* and *k*. In the one *i* of the latter is inserted a drop-pipe *l*. 65

It is obvious that a stopper of the kind described, provided the plug *b* be made of sufficiently-elastic material and from the outset sufficiently compressed, will always be able to close the bottle air-tightly, inasmuch as the 70 wearing of the surfaces bearing against each other will be compensated by the elasticity of the plug *b*.

Though the stopper illustrated in the drawings is provided with a drop-pipe having a 75 tongue-shaped extension, it is obvious that the said drop-pipe may be dispensed with—for instance, in the case that the liquid in the bottle is to be poured out in the usual manner through the stopper or the bottle is to be used 80 for inhaling purposes or the like.

No claim is herein made to the tongue-shaped extension of the drop-pipe, since the same is claimed in an application filed by me July 10, 1902, of which this application is a 85 division.

Having now described my invention and in what manner the same may be performed, what I claim as new, and desire to secure by Letters Patent, is— 90

A closure for bottles and the like consisting of, a stopper of elastic material, two channels in the said stopper, a turnable body on the latter provided with two holes corresponding to the said channels, a shaft for the said body 95 fixed in the said stopper, means for pressing

the said turnable body against the said stop-
per and simultaneously compressing the said
stopper, a drop-pipe in the one of the said
holes, and an air-pipe in the one of the said
5 channels, substantially as and for the purpose
set forth.

In testimony whereof I have signed my name

to this specification in the presence of two sub-
scribing witnesses.

MÅRTEN ELFSTRAND.

Witnesses:

JOHN DELMAR,
EINAR GELESTREN.