

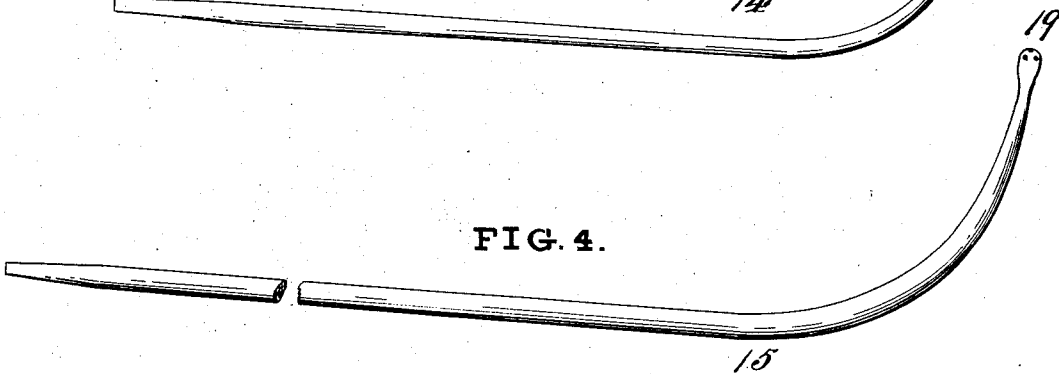
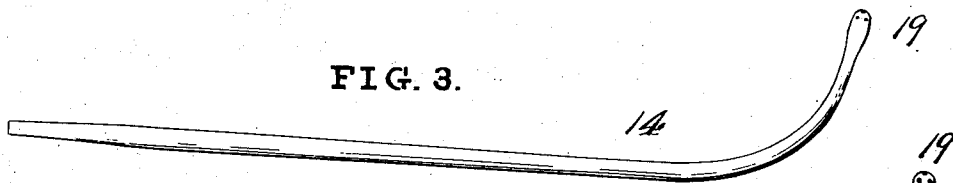
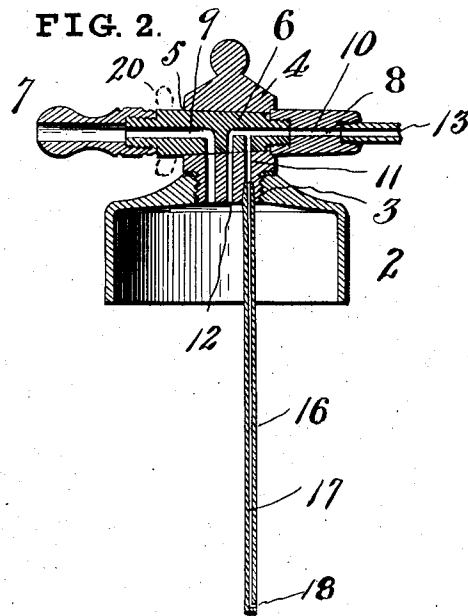
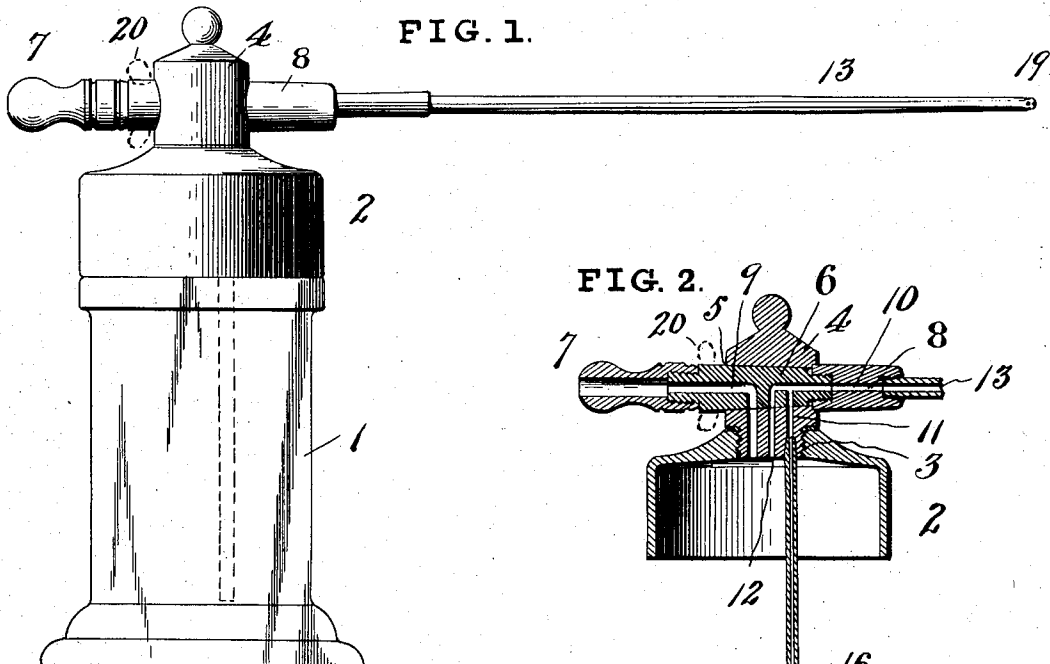
No. 772,802.

PATENTED OCT. 18, 1904.

G. F. HAWLEY.
ATOMIZER.

APPLICATION FILED MAY 3, 1904.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

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ATOMIZER.

SPECIFICATION forming part of Letters Patent No. 772,802, dated October 18, 1904.

Application filed May 3, 1904. Serial No. 206,152. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. HAWLEY, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Atomizers, of which the following is a description.

My invention relates to atomizers.

The improvements consist in the following construction and combination of parts, the details of which will first be fully described and the features of novelty then set forth and claimed.

Figure 1 is a side elevation of an atomizer to which my improvements have been applied. Fig. 2 is a central vertical section of the cap and some of the attached parts. Figs. 3 and 4 are forms of delivery-tubes interchangeable with the form shown in Fig. 1.

In the drawings, 1 represents the liquid-container; 2, the top of the container; 3, a screw-threaded opening therein; 4, a head screwing into opening 3 and provided with a transverse opening therethrough; 5, the transverse conical opening in head 4; 6, a conical plug adapted to seat in opening 5 and having screw-threads at each end; 7, a nipple screwed on the larger end of conical plug 6; 8, a sleeve screwed on the opposite or smaller end of plug 6 and adapted to force plug 6 into fluid-tight contact with head 4; 9, an angular passage in plug 6 and head 4, by means of which air is forced into the container 1; 10, an axial passage in plug 6 and sleeve 8, but not in contact with passage 9; 11, a liquid-passage in head 4 and plug 6 communicating with passage 10; 12, an air-passage in head 4 and plug 6 communicating with passage 10; 13, a delivery-tube removably inserted in sleeve 8; 14, another form of tube adapted to be inserted in sleeve 8; 15, still another form of tube similar to tubes 13 and 14; 16, a removable liquid-tube inserted in passage 11; 17, a central passage in tube 16; 18, a lateral outlet near the bottom of the tube 16; 19, a radial series of spray-openings in the tubes 13, 14, and 15.

The lateral opening in the lower end of tube 16 prevents the introduction of sediment or other extraneous matter tending to clog the tube. The pressure from the usual bulb or other air-compressor entering through the nipple 7 passes down into the container and exerts a pressure upon the liquid therein. This pressure causes the liquid to flow out through tube 16 into passages 10 and 11 for delivery into any one of the tubes 13, 14, and 15 which may be used in connection with the atomizer. At the same time air under pressure passes out through the passage 12 into the delivery-tube and atomizes the liquid at the tips 19 of the tubes.

The rotation of the sleeve 8 serves to register the vertical openings in the plug with those in the head and at the same time form a fluid-tight connection.

Thumb-pieces, such as 20, (shown in dotted lines,) may be formed on the plug 9, by means of which the openings in the head and plug may be registered or thrown out of register for the purpose of forming an air-tight stopper for the contents of the bottle. This is sometimes desirable when highly-volatile liquids are used.

This atomizer is extremely simple in construction and capable of being easily cleaned and kept in repair.

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

1. In an atomizer, the combination of a container, a head having a plug-opening therein, a plug having an axial fluid-inlet, an angularly-disposed passage connecting the container with said inlet, an axial fluid-outlet, and multiple angularly-disposed passages connecting the container with said outlet.

2. In an atomizer, the combination of a container, a head having a plug-opening therein, a plug having an axial fluid-inlet, an angularly-disposed passage connecting the con-

tainer with said inlet, an axial fluid-outlet, multiple angularly-disposed passages connecting the container with said outlet, and a partition between said axial inlet and said axial
5 outlet.

3. In an atomizer, the combination of a container, a head having a plug-opening therein, a plug having an axial fluid-inlet provided
10 to register with an opening in the head, and

an axial fluid-outlet provided with two angularly-disposed openings adapted to register with openings in the head for the outward passage of air and liquid.

In testimony whereof I have affixed my signature in the presence of two witnesses.

GEORGE F. HAWLEY.

Witnesses:

CHARLES F. LOESCH,
EMMA M. LOESCH.