W. KENNISH.

ATOMIZER.

No. 186,208. Patented Jan. 16, 1877.

Fig. 1.

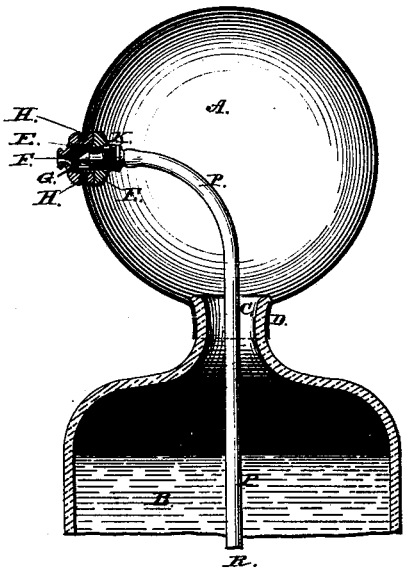

Fig. 2.

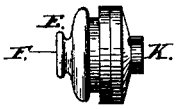

Fig. 3.

Fig. 4.

Attest:

C. B. Duckinson

Miles. H. Mott

Inventor:

Wm. Kennish

UNITED STATES PATENT OFFICE.

WILLIAM KENNISH, OF NEW BRUNSWICK, NEW JERSEY, ASSIGNOR TO CHARLES B. DICKINSON, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN ATOMIZERS.

Specification forming part of Letters Patent No. **186,208**, dated January 16, 1877; application filed November 14, 1876.

To all whom it may concern:

Be it known that I, WILLIAM KENNISH, of the city of New Brunswick, in the county of Middlesex and State of New Jersey, have invented certain new and useful Improvements in Atomizers, which improvements are fully set forth in the following specification, reference being had to the accompanying drawing.

The object of my invention is to supply a compact, durable, and efficient atomizer by a direct union of an elastic bulb with a liquid-receptacle, the atomizing apparatus being all contained within the continuous chamber thus formed.

Figure 1 of the drawing accompanying is a vertical section of the apparatus, A being an elastic bulb, provided with a collar, D, and punctured at the side by a hole for the reception of the metallic frame E. The collar D is expanded over the neck C of the bottle B, dispensing with the use of a cork or stopper. The tube P, rising from the liquid-receptacle through the neck C, connects with the liquid-pipe, which screws into the frame E. A disk of elastic material is placed within the frame, and serves as a valve. A minute hole penetrating the center of this disk-valve also serves as an exit for the atomized liquid, the nozzle of the liquid-pipe being presented at, and close to, this minute hole.

Fig. 2 is a separate view of the frame, showing more clearly the screw-support K, connected by the two arms to the inner flange of the frame and the groove H, into which the edge of the hole in the elastic bulb contracts, thus holding the frame in its place, as shown in Fig. 1.

Fig. 3 is a view of the disk-valve, penetrated at the center by a minute hole. Fig. 4 is the liquid-pipe, provided with screw N, which connects with the frame E by screwing into the support K.

The disk-valve having been first placed within the frame E, the nozzle of the pipe M is brought into juxtaposition with the minute hole in the disk, as shown in Fig. 1. Holes in the frame outside of the liquid-pipe connection allow the air to pass from the bulb into the disk-chamber.

The operation is as follows: The bulb is compressed by the hand, which expels the contained air through the minute hole in the disk past the nozzle of the liquid-pipe, which, by a well-known law, will draw the liquid up from the bottle to the nozzle, where, meeting with the air-current, it is expelled in a vaporous cloud at the discharge-hole F. The pressure upon the bulb being released by the hand, the disk-valve opens to admit air, and the bulb expands to its normal shape.

I claim—

1. The combination, in an atomizer, of a liquid-receptacle with an elastic bulb by expanding the elastic collar of the bulb over the neck of the bottle or other vessel, as described, thus forming a continuous chamber.

2. The combination, in an atomizer, of a liquid-pipe rising in the bulb, with a perforated disk in the side of the bulb, as described.

3. The valvular disk, centrally perforated by the minute hole, which serves, upon compression of the bulb, as an outlet for vapor, and upon expansion of the bulb as an intlet for air in an atomizer, substantially as described.

WILLIAM KENNISH.

Witnesses:
D. P. COWL,
W. E. CHAFFEE.