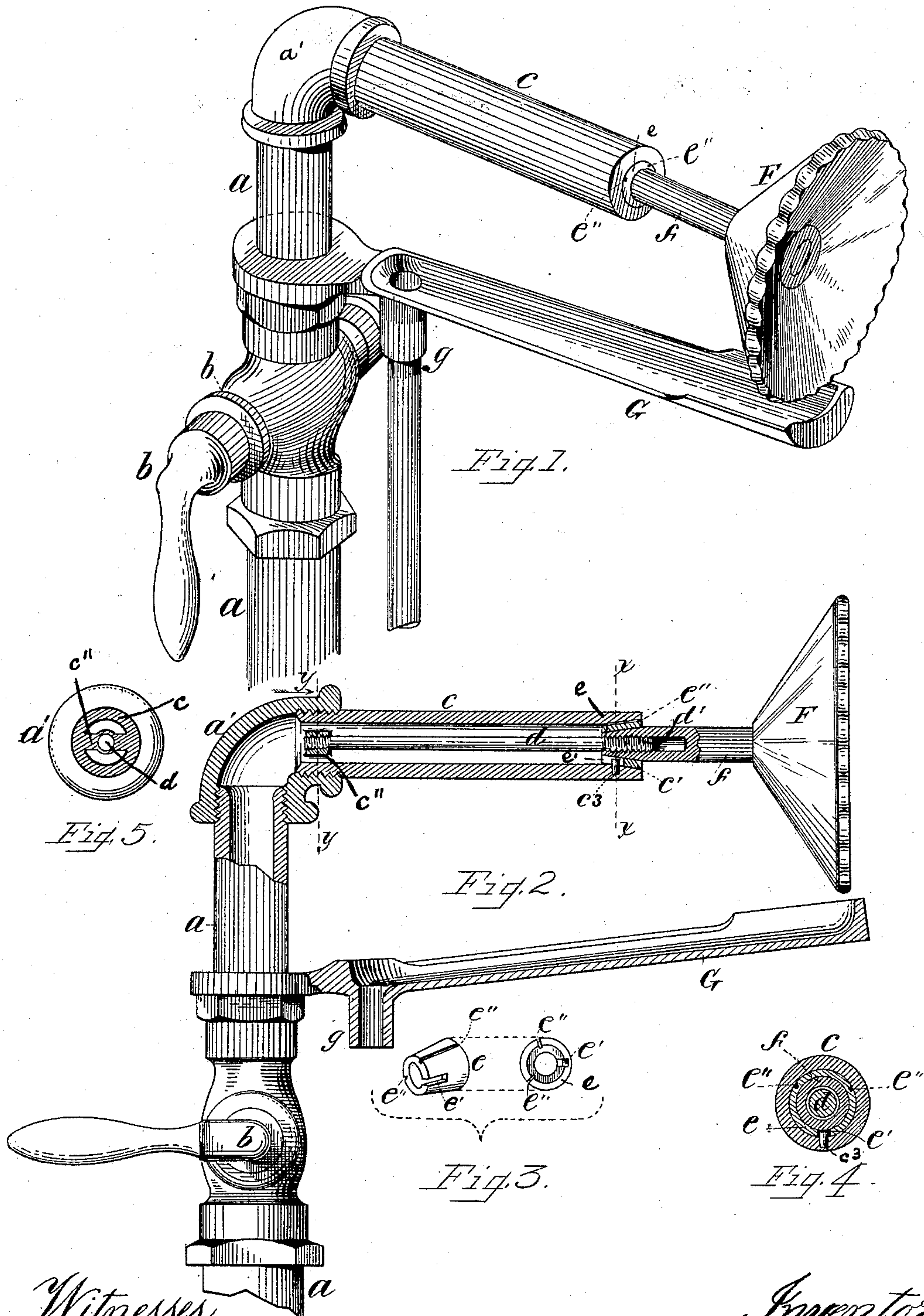


(No Model.)

E. W. PARKER.  
VAPORIZER.

No. 426,512.

Patented Apr. 29, 1890.



Witnesses.  
Geo. W. White  
Emma J. Smith

Inventor.  
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# UNITED STATES PATENT OFFICE.

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## VAPORIZER.

SPECIFICATION forming part of Letters Patent No. 426,512, dated April 29, 1890.

Application filed November 16, 1889. Serial No. 330,583. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN W. PARKER, a citizen of the United States, and a resident of Waltham, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Vaporizers, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in vaporizers for the purpose of moistening the air in mills, factories, dwellings, &c., and it is carried out as follows, reference being had to the accompanying drawings, where—

Figure 1 represents a perspective view of the improved apparatus. Fig. 2 represents a central longitudinal section of the same. Fig. 3 represents a perspective and end view of the tapering, grooved, or scratched shell. Fig. 4 represents an enlarged cross-section on the line X X in Fig. 2; and Fig. 5 represents a cross-section on the line Y Y, also shown in Fig. 2.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

*a* represents a water-supply pipe leading from any suitable source of water-pressure, such pipe being provided with a suitable cock, valve, or cut-off *b*, as is usual in devices of this kind.

*a'* is a bend or elbow secured to the upper part of the pipe *a*, as shown in Figs. 1 and 2. To said elbow *a'* is secured one end of the delivery-pipe *c*, the mouth of which is made internally tapering, as shown at *c'* in Fig. 2. Centrally within the pipe *c* is arranged the rod or spindle *d*, which is secured in its inner end in a suitable manner to the pipe *c*, as shown in Fig. 2.

In practice I prefer to secure to the inner end of the pipe *c* a cross-piece *c''*, as shown in Fig. 5, and to such cross-piece is secured the inner end of the spindle *d*, as shown in said Fig. 2. I wish to state that the spindle aforesaid may be secured in any other suitable manner to the pipe *c* or any other stationary part without departing from the essence of my invention. Within the tapering mouth *c'* of the delivery-pipe *c* is made to fit the externally and internally tapering shell *e*, which

latter is held within the tapering mouth or seat *c'* by means of the nut-spindle *f*, having a tapering end adapted to fit within the shell *e* and having an internal screw-thread adapted to receive the screw-threaded outer end *d'* of the spindle *d*, as shown in Fig. 2.

The shell *e* is held from turning around its axis within the mouth of the delivery-pipe *c*, preferably, by means of a pin, rib, or projection *c<sup>3</sup>* on the interior of the pipe *c* fitting in a slot or groove *e'* in the said shell *e*, as shown in Figs. 2, 3, and 4.

The shell *e* has on its outside one or more fine longitudinal grooves or scratches *e'' e''*, through which the water is forced out from the delivery-pipe *c* in very fine streams against the tapering or conical deflector *F*, which forms a part of the spindle *f*, as shown in Figs. 1 and 2.

It is essential in this device that the scratched or grooved shell *e* should be held from turning within its seat in the delivery-pipe, as hereinabove mentioned, so as to prevent the grinding of said shell and consequent defacement of the grooves or scratches on its surface.

Below the pipe *c* and deflector *F* is located the inclined conductor *G*, for automatically conveying any liquid dripping from said pipe and deflector to the drain-pipe *g*, that is attached to the lower end of said conductor *G*. The grooves or scratches *e''* on the surface of the shell *e* are very minute, and the liquid under pressure in the pipe *c* is forced out through such scratches in the form of a very fine spray or vapor, which in striking the part *F* is deflected and intimately mixed with the air in the room, thereby moistening it, for the purpose set forth.

If the grooves or scratches in the shell *e* should become clogged up, it is only necessary to turn the nut or spindle *f* a little to the left, causing said shell to be released from its seat in the pipe *c*, and by thus allowing the water from the said pipe *c* to be forced out all around the said shell the impurities are removed and forced out. In case the said shell should become worn or damaged it can easily be removed and a new one put in its place at a very small cost, or it may be re-grooved if so desired.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent, and claim—

1. The improved vaporizer consisting of the  
5 delivery-pipe *c*, having a tapering mouth *c'* and screw-threaded spindle *d*, secured within said pipe, combined with the scratched or grooved shell *e* and the screw-threaded spindle *f* and its deflector *F*, substantially as and for the  
10 purpose set forth.

2. The improved vaporizer consisting of the delivery-pipe *c*, having a tapering mouth *c'* and screw-threaded spindle *d*, combined with the scratched or grooved shell *e*, the deflector  
15 *F*, having screw-threaded spindle, as described, and the inclined conductor *G*, substantially as and for the purpose set forth.

3. In a vaporizer, the delivery-pipe *c*, having tapering mouth *c'* and screw-threaded spindle *d*, and a stop-cock or shut-off, as described, combined with the grooved or scratched shell *e*, and the deflector *F*, having screw-threaded spindle *f*, screwed on the end of the spindle *d* and adapted to fit the interior of the said shell *e*, substantially as and  
20 for the purpose set forth.  
25

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 5th day of November, A. D. 1889.

EDWIN W. PARKER.

Witnesses:

ALBAN ANDRÉN,

MARTHA J. JACKSON.