

(No Model.)

B. STERN.
ATOMIZER.

No. 507,603.

Patented Oct. 31, 1893.

FIG. 1.

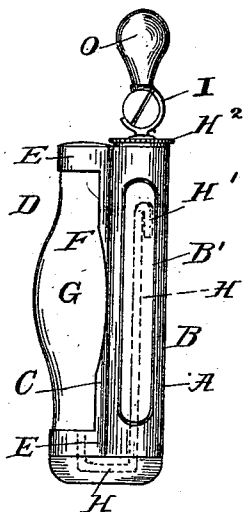


FIG. 2.

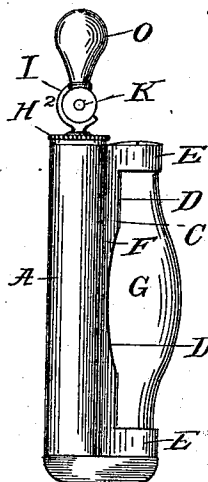


FIG. 3.

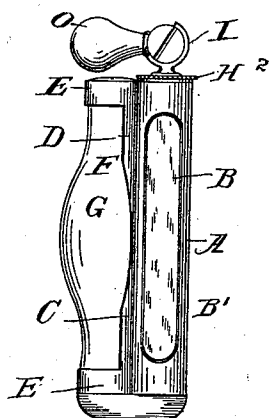


FIG. 4.

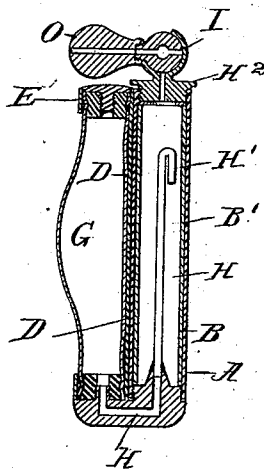
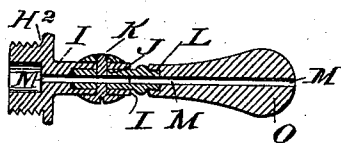


FIG. 5.



WITNESSES:

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BENJAMIN STERN, OF NEW YORK, N. Y.

ATOMIZER.

SPECIFICATION forming part of Letters Patent No. 507,603, dated October 31, 1893.

Application filed December 16, 1892. Serial No. 455,392. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN STERN, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented a certain new and useful Improved Powder-Blower, Atomizer, or Like Instrument, of which the following is a specification.

My invention relates to powder blowers, atomizers and similar instruments, and it consists in a novel construction and arrangement of the several parts of the apparatus, whereby its size is so much reduced that it may be easily and conveniently carried in the vest pocket if desired and it may also be used with but one hand.

My improved apparatus is especially convenient for travelers and those who have occasion to frequently use such an instrument, and it is more convenient and unobjectionable than any heretofore known as far as I am aware.

In the drawings hereof, Figure 1. illustrates an elevation of one side of the instrument. Fig. 2. illustrates an elevation of the reverse side to that shown in Fig. 1. Fig. 3. illustrates an elevation like that shown in Fig. 1, the nozzle however being turned over to reduce the length of the instrument and to prevent the outflowing of the contents of the instrument whatever it may be. Fig. 4. illustrates a vertical section of that which is shown in Fig. 3. Fig. 5. illustrates a detail in section of the nozzle and co-acting parts.

A, is a tubular part which may be of any desired section. It is preferably but not necessarily slotted in one side as at B, and lined with glass so that the glass B' comes opposite the slot after the fashion of an ordinary spirit level.

C, is what may be called another tubular part placed side by side with the part A and attached to it. The part C, is however cut away as at D, so that its tubular character is destroyed and there remains nothing but a frame having ring like end pieces E, E, and a concave central portion F, which the frame thus made, or its equivalent supports an elastic compressible bulb G, preferably of rubber. The ends of the bulb are confined in any suitable manner within the ring like parts E,

E, and its central portion rests in the concave part F of the frame.

H, is a tube which connects with the interior of the bulb and passing around the end of the instrument, enters the tubular part A, and terminates within it in a goose neck H', which preferably is near one end of the tubular part and points toward its medial part.

H² is a cap which is threaded to the end of the tubular part A and is provided with longitudinally extending flanges I, I, (see Fig. 5,) between which a stop cock section J, is pivoted by a pivot or pin K. The outer end of the stop cock section is threaded as at L, (see Fig. 5) and M same figure is a hole or passageway for the air and powder; it extends through the cap, H², also through the stop cock section and through the nozzle, whatever its form may be, and also through the pivot K, if this special form of connection be employed. These parts are nicely fitted to each other water tight so that when the stop cock section is turned on its pivot as seen in Fig. 3, the escape of the liquid, the powder or other material contained in the tubular part A will be prevented.

O is a nozzle shown in this instance as adapted to nasal or aural application. Any suitable nozzle or end piece may however be employed, suitable for an atomizer, injector, douche or the like and sets of different kinds of nozzles may be sold with each instrument as usual in such cases, which may be interchangeably attached to the stop cock section by means of the screw threads as shown, or in any other preferred manner; and if too long to retain attached thereto, they may be detached after each use and placed in a suitable pocket or compartment of a case with which I propose to furnish the instrument.

The operation is as follows: Any desired powder or liquid is put into the tubular receptacle, A by unscrewing the cap H². The amount inserted may be seen through the glass B'. When about three fourths full the cap is screwed on again. When put to use the proper nozzle is applied to the stop cock section and then upon turning the nozzle outwardly into longitudinal line with the tubular part A, the holes through the nozzle and the stop cock section will all register with each other

and a continuous passage will be opened to the interior of the powder or liquid containing chamber. If now sharp, quick pressure be applied to the bulb by the thumb of the operator while the instrument is resting against the side of the first two fingers of the same hand, the air will be forcibly injected into the tubular chamber above the powder or liquid therein, which simultaneously generates air compression within that chamber, and also the forcible quick impact of the air upon the said contents instantly agitates it to such a degree that the upper part of the chamber above the goose neck becomes filled with the flying powder or with the spray of the liquid as the case may be, and this light floating powder or spray is immediately carried through the open passage M outwardly and is blown upon the part or into the organ where desired in a well known manner. After use the nozzle will be swung over into position shown in Fig. 3, the stop cock section swinging with it, consequently cutting off the outlet as an ordinary stop cock operates. If the nozzle be too long to remain attached to the stop cock section, it may be as above stated, detached and in that event the stop cock section will itself be swung over to cut off the outflowing of the contents of the tube. I do not limit myself to the details of construction shown and described. Alterations may be made in them and still the essentials

of my invention be employed, and the instrument may be made of any preferred material.

I claim—

1. The combination of a tubular receptacle and a frame for supporting the bulb, placed longitudinally side by side, a compressible elastic bulb, having a passage connecting it with the interior of the receptacle, a tube within the receptacle connecting with said passage and extending to the upper part of the receptacle, a nozzle also connected with the receptacle and an opening into the receptacle for the introduction of the material, substantially as set forth.

2. The combination of a tubular receptacle and a compressible elastic bulb placed longitudinally side by side and having a passage connecting their respective interiors, a tube within the receptacle connecting said passage and extending to the upper part of the receptacle, a stop cock section connecting with the receptacle and a nozzle adapted to be attached to the stop cock section, substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 13th day of December, A. D. 1892.

BENJAMIN STERN.

Witnesses:

PHILLIPS ABBOTT,
E. SIMPSON.