

(No Model.)

F. M. ELLIOTT.
INSUFFLATOR.

No. 576,437.

Patented Feb. 2, 1897.

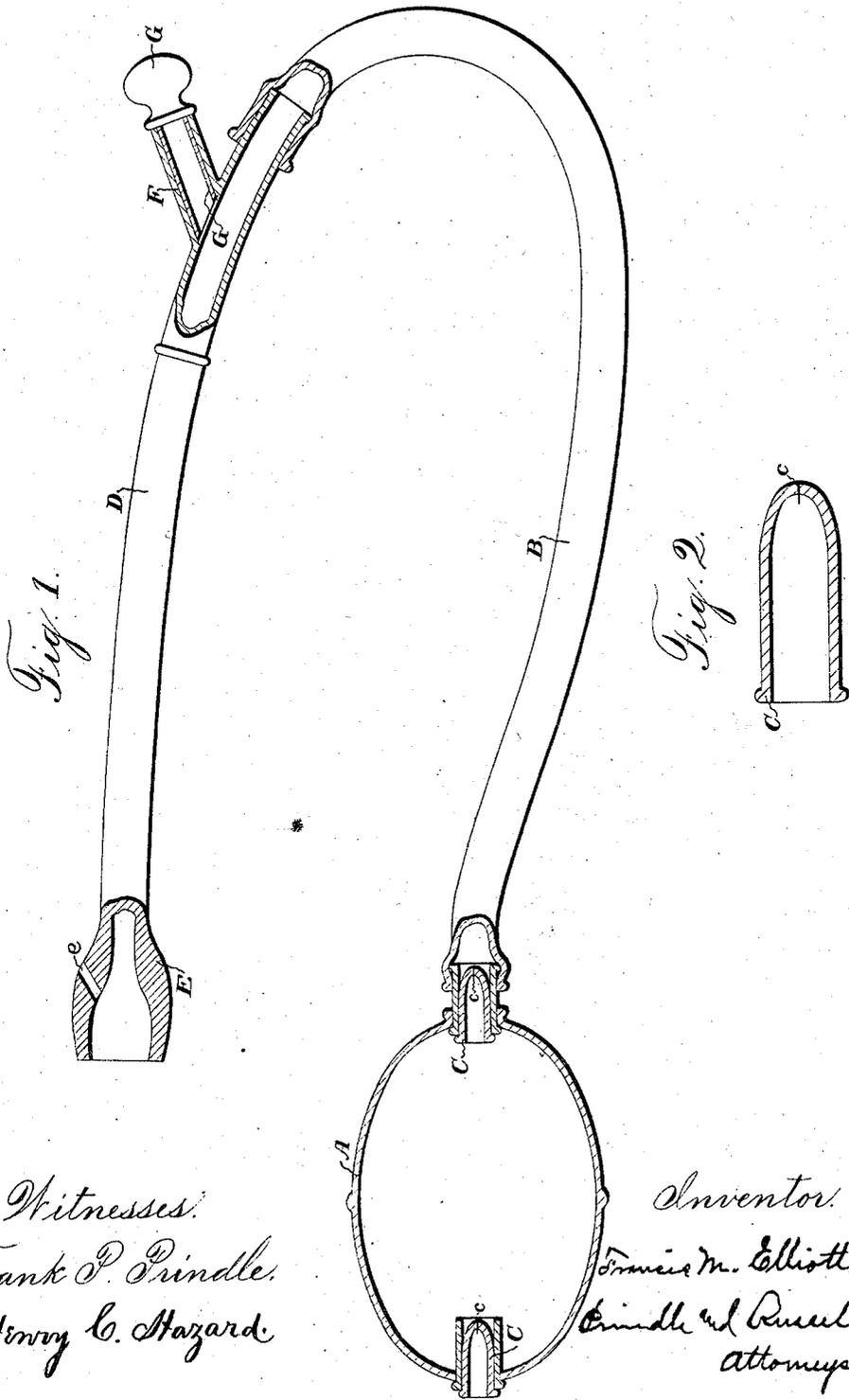


Fig. 1.

Fig. 2.

Witnesses:
Frank P. Prindle,
Henry C. Hazard.

Inventor:
Francis M. Elliott, by
Prindle and Russell, his
attorneys.

UNITED STATES PATENT OFFICE.

FRANCIS M. ELLIOTT, OF AURORA, ILLINOIS.

INSUFFLATOR.

SPECIFICATION forming part of Letters Patent No. 576,437, dated February 2, 1897.

Application filed April 1, 1896. Serial No. 585,818. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS M. ELLIOTT, of Aurora, in the county of Kane, and in the State of Illinois, have invented certain new and useful Improvements in Insufflators; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a view, partly in side elevation and partly in section, of my insufflator; and Fig. 2 is a detail view in section, on an enlarged scale, of the valve I employ.

Letters of like name and kind refer to like parts in each of the figures.

The object of my invention is the provision of an efficient and most convenient and yet simple device for applying medicine in a powder form in the cavities or passages of the human body; and to this end said invention consists in the insufflator having the features of construction substantially as and for the purpose hereinafter specified.

The variety of insufflator in which I show my invention as embodied is the kind wherein a soft-rubber bulb A is employed, having at one extremity a valved inlet for the induction of air and at the other a valved outlet for its eduction, the latter communicating with a section of tubing B. The valves C and C employed consist each of a cup-form piece of soft rubber, whose end has a convexly rounded or arched form and is provided with a slit or cut *c*, that is normally closed, but is adapted to open to internal pressure to permit the passage of air. External pressure, however, upon the arched end serves only to more tightly close the slit. The curved arched form of the end of the valve is important, as it effectually withstands tendency to collapse.

The tube B is preferably flexible, being made of soft rubber, and is detachably con-

nected, as by telescopic connection, to a second tube D, preferably of hard rubber, and provided with a bulb-form enlargement E, that forms the discharge orifice or nozzle. Extending obliquely rearward from the cavity in the enlargement E is a passage *e*, that opens to the exterior of the latter and constitutes a vent for the outward passage of air, from the orifice in which the nozzle may be inserted, should an excessive amount be forced through the syringe. Thus injury or discomfort to the patient from this source is avoided.

To avoid the necessity of passing the powder to be used through the bulb A, the tube D is provided with a short tubular extension F, that preferably inclines inward and forward, and is closed by a hollow removable plug or stopper G. The latter is designed for use as a spoon for the easy and convenient placing of medicine within the syringe. The inclination of the branch or extension F facilitates the full withdrawal therefrom of medicine by the blast of air through the tube D.

The use and operation of my insufflator will be readily understood without further description.

Having thus described my invention, what I claim is—

In an insufflator, the combination of the valved bulb, the tube connected therewith having a discharge-nozzle, the branch of said tube inclining inward and forward, and a removable, hollow stopper for said branch, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of March, A. D. 1896.

FRANCIS M. ELLIOTT.

Witnesses:

A. C. LITTLE,
H. F. COOPER.