

W. AUTENRIETH.
Aspirator.

No. 229,796.

Patented July 13, 1880.

FIG. 2.

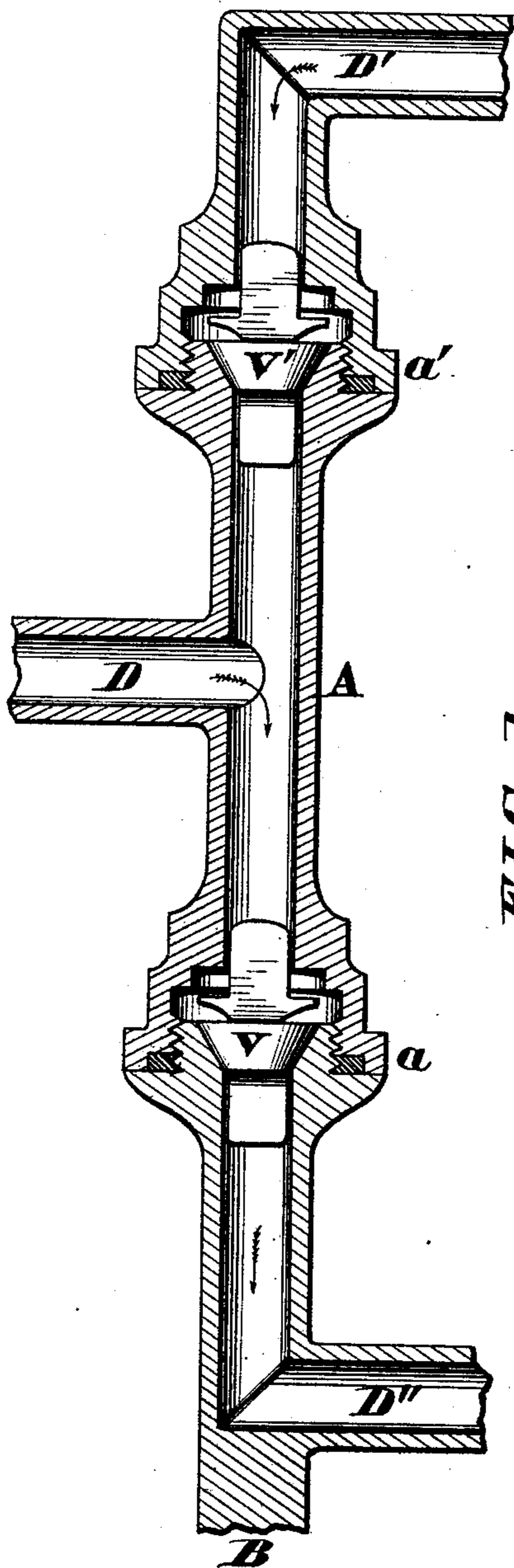
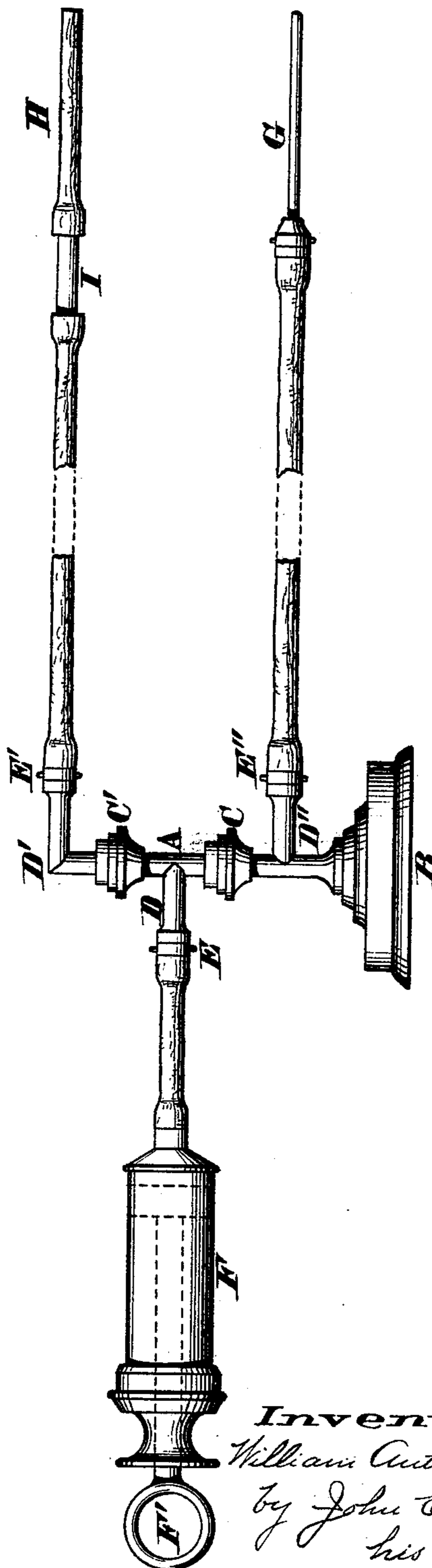


FIG. 1.



Attest.

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Inventor.

William Autenrieth,
by John E. Hatch,
his Atty.

UNITED STATES PATENT OFFICE.

WILLIAM AUTENRIETH, OF CINCINNATI, OHIO.

ASPIRATOR.

SPECIFICATION forming part of Letters Patent No. 229,796, dated July 13, 1880.

Application filed July 25, 1879.

To all whom it may concern:

Be it known that I, WILLIAM AUTENRIETH, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain Improvements in Aspirators, of which the following is a specification.

My invention consists in an improved aspirator for removing the pus from wounds and for other analogous purposes.

The devices heretofore employed for this purpose have been cumbersome and not readily managed. The one most commonly in use consists of a miniature air-pump and air-vessels with the proper connections, and it was operated by first exhausting the air from the air-vessel by pumping with the air-pump, inserting the hollow needle in the wound, then turning the cock, so that by means of the rarefied air in the receiver the pus would be drawn in. It has been found in practice that many persons are not sufficiently expert to operate this device with success. Hence I have constructed the one on which I now desire to secure Letters Patent, for the purpose of obtaining a cheaper device, more simple in its construction, more easily operated, and more efficient.

In order to carry out my purpose, I have a hollow tube placed upon a proper support, having toward the upper part and toward the lower part a valve-chamber, in each of which there is an ordinary stop-valve, both opening upward. Between these valves is a branch tube connected with an ordinary suction piston and chamber, such as used in an ordinary syringe.

Above and below the valves there is the rubber tubing, the lower tubing connected at one end with a small hollow needle to be inserted into the wound, and the other with an appropriate aperture for carrying the liquid to an appropriate receptacle. All these parts are connected to the main device by screws, so that they can be readily adjusted or taken off.

When it is desired to operate it, all that is necessary is to adjust the parts, place the hollow tube or needle in the wound, and draw the suction-piston. The suction closes the upper and raises the lower valve, and allows the pus to flow into the partial vacuum thereby created. By the return stroke of the piston

the lower valve is closed and the upper one opened, and the liquid forced out through the upper duct. The process is continued until the desired effect is reached.

In order to render this description clearer, I will refer to the drawings by letter.

A represents the hollow tube, supported upon the base B. C and C' are the valve-chambers; D D' D'', the branch tubes connected, respectively, with the suction-chamber, the outlet-duct, and the inlet-duct. These, at E E' E'', are connected by screws with their appropriate ducts, which I generally prefer to make of india-rubber or gutta-percha; or they may be made of any flexible material.

F is the piston-chamber, operated by the piston F', which is packed so as to fit closely.

G is a small hollow metal tube or needle, designed to be inserted into the wound, and connected by a screw-joint with the rubber inlet-duct.

H is the outlet-duct. I have shown this made with a piece of glass inserted at I, so that the operator may see what is passing.

The tube A is made in three parts, with screw-joints at a a', so that it may be taken apart in order to examine the valves or to cleanse them.

V and V' are the valves, both opening upward, as heretofore described, and seated in the usual manner.

While I have described this device as intended to be used for the removal of pus, of course it will readily be seen that these principles may be slightly varied, so as to use the device as a stomach-pump or for any other analogous purpose.

I am aware that a piston has been arranged within a cylinder located between two valves opening in the same direction, and that an upright cylinder provided with a piston has been furnished with an inlet and outlet opening, each furnished with a flexible tube and with a cock or valve to be opened and closed by hand; but I am not aware that an instrument of this order has ever been constructed with a rigid upright tube containing the valves and furnished with flexible tubes, as in my device. This construction is advantageous in that, while it permits the tubes to be carried

to any point or in any direction, it in no way interferes with the action of the valves, which, to operate with the best results, should be held in an upright position.

5 Having thus described my invention, what I claim is—

In an aspirator, the combination of the jointed standard A, containing valves V V', and

rigidly supported upon a base, and provided with inlet-duct D'' and outlet-duct D', and a suction-chamber, F, as described.

W. AUTENRIETH.

Witnesses:

WM. L. WRIGHT, Jr.,
JOHN KELLY.