(No Model.)

E. BARTSCH.

SYRINGE.

No. 443,083. Patented Dec. 16, 1890.

Fig. 1.

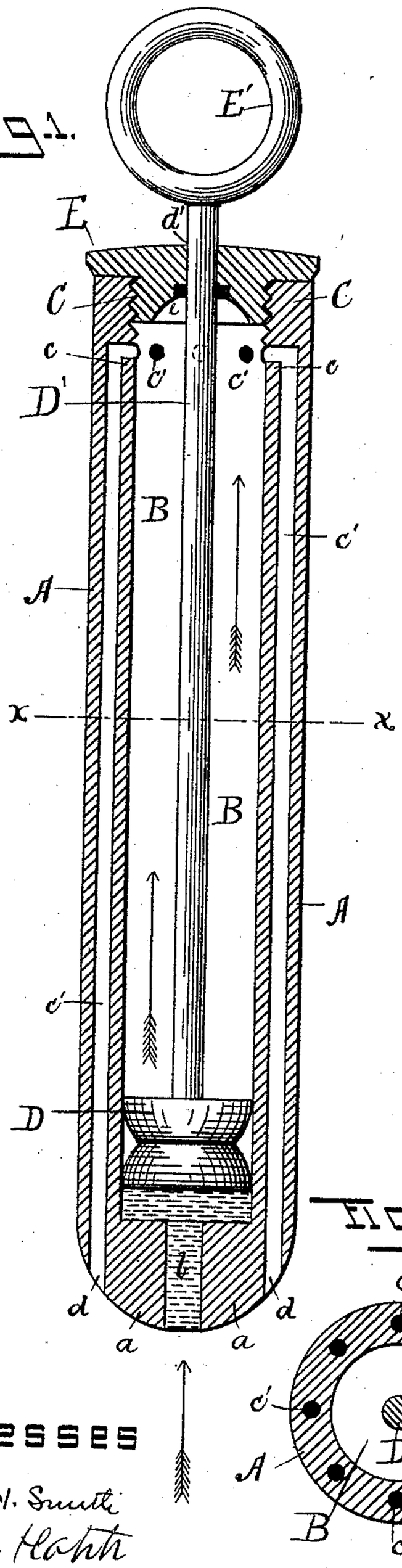

Fig. 2.

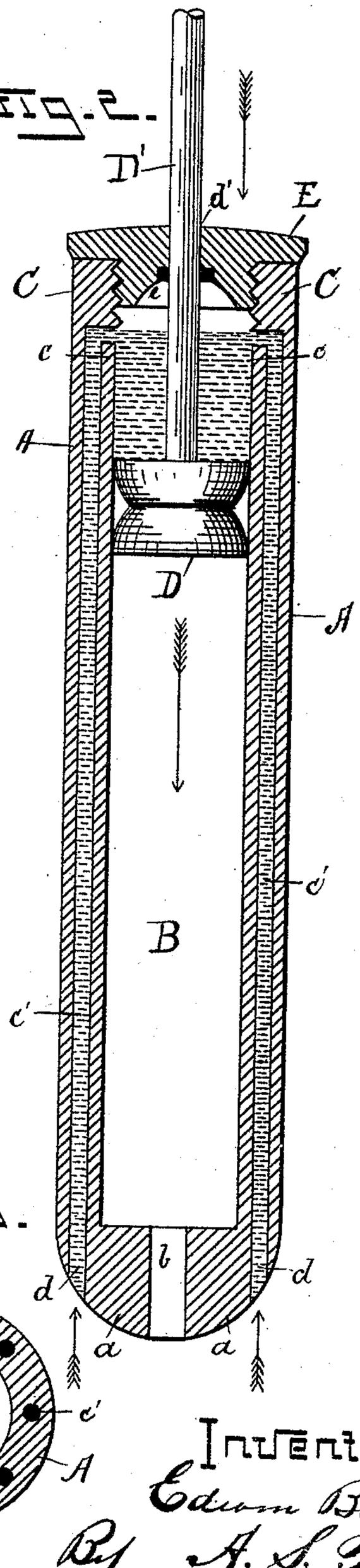

Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

EDWIN BARTSCH, OF SAN FRANCISCO, CALIFORNIA.

SYRINGE.

SPECIFICATION forming part of Letters Patent No. 443,083, dated December 16, 1890.

Application filed March 17, 1890. Serial No. 344,190. (No model.)

To all whom it may concern:

Be it known that I, EDWIN BARTSCH, a citizen of the United States, residing at the city and county of San Francisco, and State of California, have invented certain new and useful Improvements in Syringes; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

My invention relates to certain new and useful improvements in syringes; and it consists of the parts and details of construction, as will be hereinafter more fully illustrated in the drawings, described, and pointed out in the claim.

My improved syringe is more especially adapted for use in the treatment of female diseases; and it consists more particularly in certain improvements upon the patent shown and described in Letters Patent No. 407,934, granted to J. W. Kirkwood July 30, 1889. The invention therein shown consists in forming a syringe adapted to permit of a free discharge of the contents by the downward or upward movement of the piston or plunger rod and at the same instant a perfect withdrawal of whatever material or excretion may be adhering to the mouth of the womb, with an inner and outer cylinder constructed to fit one within the other and to leave a surrounding space between the walls thereof, so as to provide an inner and outer chamber for the retention of the medicated fluid, as fully described, while in my invention the inner chamber of the syringe is surrounded by a series of sub-chambers formed integral with the cylindrical body or shell of the syringe, as fully described hereinafter.

Referring to the drawings forming a part of this application, in which similar letters of reference are used to denote corresponding parts throughout the entire specification and several views of the drawings, Figures 1 and 2 are vertical sectional views of the syringe, showing the inward and outward flow of the medicated fluid by the downward and outward movement of the piston; and Fig. 3, a top plan taken on line *x x*, Fig. 1, showing fully the surrounding sub-chambers.

The letter A is used to denote the body or cylindrical portion of the syringe, which has the rounded bottom *a*, said bottom and body being constructed integral and of any suitable material, preferably of hard india-rubber. Within the body is provided the annular chamber B, which is intersected by the suction-aperture *b*, formed centrally within the bottom *a*. The upper end of the body A is cut away, so as to form the inwardly-projecting annular flange C, which has the inner female threads cut thereon. The surrounding space between the bottom of the flange C and the end of the wall *c* is intersected by a number of sub-chambers *c'*, which surround the inner chamber B. These sub-chambers are bored through and extend the entire length of the cylindrical body of the syringe, thereby forming inlet-ducts *d* in the bottom of the syringe, as clearly shown in the drawings. Any number of sub-chambers may be formed in the wall of the cylindrical body or shell.

I have shown the nozzle or bottom of the syringe as being formed integral with the body or shell thereof; but it is obvious that the same may be made separate therefrom and screwed thereon.

The piston is indicated by the letter D and is operated in the usual manner by the piston or plunger rod D', which passes through the aperture *d'*, formed centrally within the cap or cover E, and is provided with the usual finger-ring E'. Suitable packing is provided within the surrounding space *e*, so as to provide against the escape of liquid from within the chamber upon the withdrawal of the piston. It will thus be observed that my inner chamber proper B and the sub-chambers surrounding the same are made or constructed integral, thereby obviating the necessity of an inner and outer shell in order to constitute an inner and outer chamber distinct from each other, thus providing against a complication of parts.

When using my syringe, the same is charged or filled by pulling out or forcing in the piston D. In the latter case as the piston moves downward a vacuum is created behind the same within the upper portion of the main chamber B and within the sub-chambers *c'*, thus causing the water or medicated fluid to be drawn through the inlet-ducts *d* into the sub-chambers *c'*, over the wall *c*, and into the

main chamber B behind the piston-head, until the latter is completely filled by the inward flow. The syringe thus charged is inserted into the vagina, so that the neck of the uterus will lie in or near the suction-aperture *b* of the nozzle *a*. If so desired, this nozzle may be constructed of any desired shape—as, for instance, in the form of a cup. After the charged syringe has been placed in position the pulling out of the piston D causes the foreign matter which may be adhering to the uterus to be drawn through the suction-aperture *b* into the vacuum in the lower portion of the chamber B behind the piston, while the medicated fluid in front or above the piston-head will be forced from the main chamber into the sub-chamber and out through the inlet-ducts *d* upon the diseased or afflicted portion.

Having thus described my invention, what I claim as new, and desire to secure protection in by Letters Patent of the United States, is—

A medical syringe composed of the cylindrical case or shell having an inner chamber formed therein surrounded by a series of sub-chambers bored out of the cylindrical shell and connected with said inner chamber at or near the upper end and both having opening through the lower end, and of a piston working in the inner chamber so as to create a simultaneous discharge of the medicated fluid and by suction to remove foreign matter from the mouth of the womb, substantially as set forth, and for the purpose described.

In testimony whereof I have hereunto affixed my signature in the presence of witnesses.

EDWIN BARTSCH.

In presence of—
A. S. PARÉ,
J. H. BLOOD.