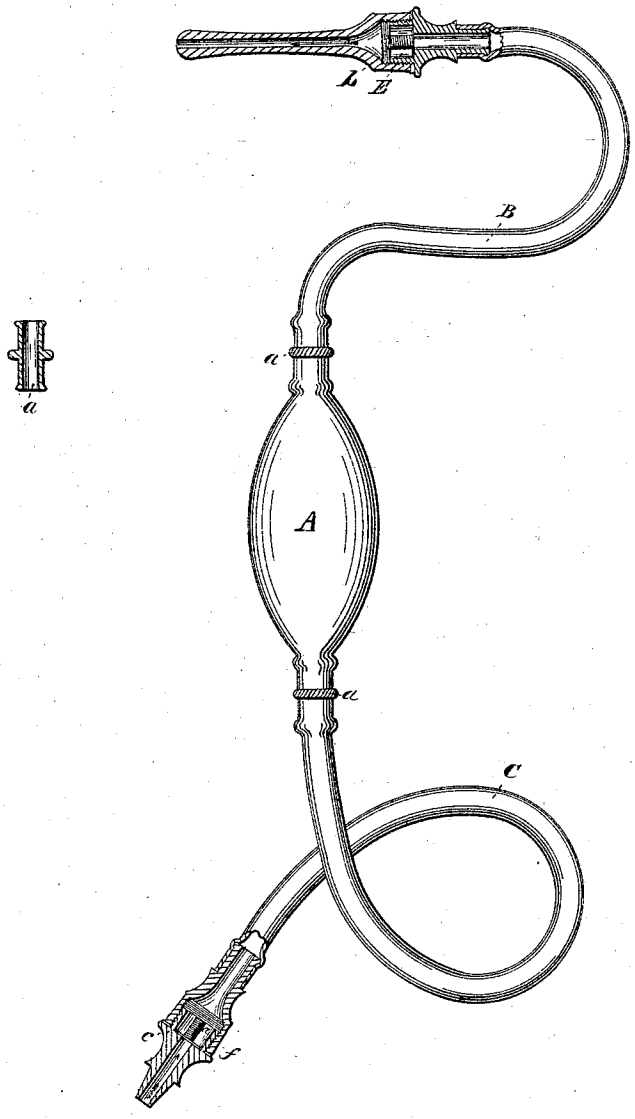
C. H. & H. E. Davidson,

Syringe,

No. 16,956. Patented Mar. 31, 1857.



Witnesses
A. C. Lombard
J. B. Crosby
A. Prefson
C. Hayes

Inventors.
Chas. H. Davidson
Harman E. Davidson

UNITED STATES PATENT OFFICE.

CHAS. H. DAVIDSON, OF CHARLESTOWN, AND HERMAN E. DAVIDSON, OF GLOUCESTER, MASSACHUSETTS, ASSIGNORS TO CHAS. H. DAVIDSON.

ENEMA-SYRINGE.

Specification forming part of Letters Patent No. 16,956, dated March 31, 1857; Reissued April 25, 1865, No. 1,940.

To all whom it may concern:

Be it known that we, CHARLES H. DAVIDSON, of Charlestown, in the county of Middlesex, and HERMAN E. DAVIDSON, of Gloucester, in the county of Essex, both in the State of Massachusetts, have invented a new and Improved Syringe; and we do hereby declare the following to be a clear, full, and exact description thereof, taken in connection with the accompanying drawing, which is a view of our improved syringe with the valve boxes represented in section.

Similar letters on the drawing refer to similar parts.

The nature of our invention consists in the combination of a hollow elastic bulb of a prolate spheroidal shape with flexible tubes and metallic valve boxes containing valves arranged for the purpose of eduction and ejection when the elastic tubes and metallic valve boxes are all attached to such an elastic bulb or sack in or nearly in its greatest axial line. The prolate spheroidal form of sack is the one best adapted to produce the greatest effect from the grasp of the hand by which this instrument is operated; by so combining it with the tubes and valve boxes that they shall be in or nearly in the greatest axial line of the sack the fluid is passed through the instrument in the most direct manner and with the least loss of effect possible by friction.

To enable others, skilled in the art, to make and use our invention, we will proceed to describe its construction and operation.

A is a hollow bulb or sack made of india rubber or any suitable material of sufficient elasticity to recover its form when compressed; the ends of this bag or sack are coupled to long flexible tubes B C, to the outer extremities of which the valve boxes E F are attached. The valve box E contains a valve *b* opening outward and the other F a valve *c* opening inward.

The terminations of the valve boxes may be of any shape adapted to the service required of them; the termination of the valve box F is arranged for the eduction and that of the valve box E for the injection pipe of a pump or syringe for administering an enema.

The operation of this instrument is as follows: Immerse the end of the eduction tube in the enema, compress the bulb with the hand which will expel the air from within; then releasing the grasp of the hand, the bulb will recover its form by virtue of its elasticity, and the partial vacuum thus formed will be filled by the enema. Now insert the injection pipe and repeat the operation of compressing the bulb until the required quantity of the enema is administered.

We prefer the spheroidal shape for the bulb as with that shape a better effect is obtained from the grasp of the hand than with any other.

The advantages of our invention are, that its parts are all easily accessible for cleaning and repairs; any required form of injection or eduction pipe can be fitted to the instrument; any person not physically disabled can use the instrument without assistance from a second person. To those cases where patients cannot be moved without causing them great pain, this instrument is peculiarly adapted as its flexibility and construction allow it to be used in any position of the patient, instrument, or vessel containing the enema. The strains or wrenching which cannot be avoided even by the most careful operator when a rigid syringe is used, with the pain occasioned thereby to the patient, are by the use of our instrument avoided.

Having described our invention what we claim as new and desire to secure by Letters Patent of the United States is—

The combination of the prolate spheroidal shaped elastic sack with flexible tubes terminating in valve boxes containing valves arranged for the purpose of eduction and ejection when the sack tubes and valve boxes are in or nearly in the same axial line the whole operating together substantially in the manner and for the purposes set forth.

CHAS. H. DAVIDSON.
HERMAN E. DAVIDSON.

Witnesses for C. H. D.:
J. B. CROSBY,
N. C. LOMBARD.
Witnesses for H. E. D.:
A. PRESSON,
C. HAYES.

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