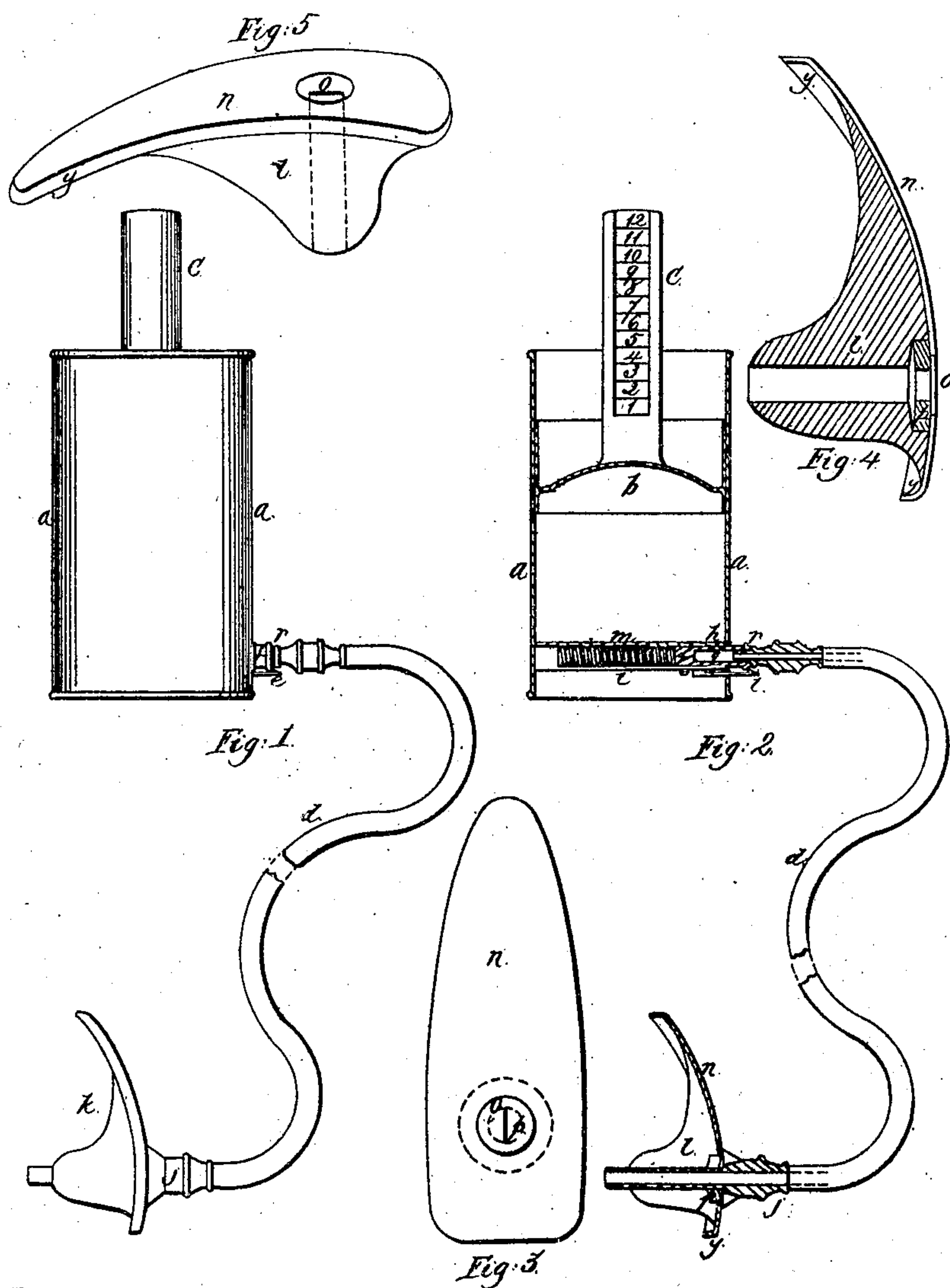


E. G. Sterens,

Syringe.

N^o 29,112.

Patented July 10, 1860.



Witnesses:
Charles A. Shum
James Clark

Inventor:
Elbridge G. Sterens

UNITED STATES PATENT OFFICE.

ELBRIDGE G. STEVENS, OF BIDDEFORD, MAINE.

SYRINGE.

Specification of Letters Patent No. 29,112, dated July 10, 1860.

To all whom it may concern:

Be it known that I, ELBRIDGE G. STEVENS, of Biddeford, in the county of York and State of Maine, have invented a certain new and useful Improvement in Syringes or Apparatus for Administering Injections; and I hereby declare that the following is a full, clear, and exact description of the same, reference being made to the accompanying drawings, of which drawings—

Figure 1, is a perspective view showing the graduated tank or receiver containing the liquid or injection, the tube through which the injection passes, and the sheath or valvular retainer for retaining the injection in the vagina, as combined and arranged when ready for use. Fig. 2, is a transverse section of said tank showing its various parts. Fig. 3 is a front view of the sheath or retainer. Fig. 4 is a transverse section of the sheath or retainer, showing the arrangement and position of its valve. Fig. 5, is a perspective view of the sheath or retainer.

The nature of my invention consists in a new and peculiar method of constructing syringes, the use of a sheath or retainer of a peculiar construction or form for retaining or confining vaginal injection at the option of the physician or patient.

The difficulties attending the present modes of injecting liquid medicines into the female vagina, and causing them to be retained a sufficient length of time to produce the desired results are very many and well known to all practicing physicians. Among the principal ones, however, are the impossibility of causing the injection to be retained in the vagina, and the liability to soil or spoil the patient's wearing apparel or bed, which are entirely overcome by my improvement.

In Fig. 2, *a a* is the tank, made of suitable material and size for containing the injection; *b* is a closely fitting packed plunger, having a graduated piston or rod *c*, by which the injection can be forced through the gutta percha tube *d*, which has a metallic nozzle or mouth-piece *j*, which nozzle has a cup-shaped base for the purpose of retaining the injection without the aid of my sheath or retainer, when injecting into the rectum. Underneath the bottom of the tank *a a*, is arranged a tube or sheath *i*, in which slides a secondary tube *f*, of shorter dimensions. Behind the tube *f* is arranged a coiled spring

e, by which the said tube *f*, when the syringe is not in use is forced forward to admit of attaching the tube *d*. Through the bottom of the tank *m*, and the tube *i*, is an aperture *h*, through which the injection is forced by the plunger *b*. There is also an aperture *g*, through the tube *f*, which tube, when the syringe is not in use is forced forward by the action of the spring *e*, thus closing the aperture *h*. By pushing the tube *f*, in against the spring *e* until the apertures *g* and *h* are brought into a corresponding position with reference to the bottom *m*, a free passage for the liquid is obtained or opened from the tank *a a* to the sheath or retainer *k*, (Fig. 1). The tube *f* is retained in this position by the spring *e*, when the syringe is in use.

In Fig. 5, *l* represents that part of the retainer or sheath which partly enters and opens the vagina, and which is attached to a peculiarly shaped face-plate *n*, forming a part of said sheath, having a raised lip or rim *q*, around its outer border. There is a tunnel-shaped aperture or passage *o*, through the plate *u*, and part *l*, through or into which the nozzle of the pipe or syringe tube is inserted in administering the injection. Across the aperture *o*, between the face-plate *u*, and part *l*, and held in its place by them, is a piece of india rubber or gutta percha (*p*, Fig. 4), so arranged as to entirely close the passage *o*. Through this rubber a perforation or slit is made in such a manner as that by the elasticity of the rubber it will be kept closed water tight when the retainer is not in use, or when not kept open purposely, and through which slit or perforation the nozzle or discharge pipe *j* (Fig. 2) of the syringe can be easily forced. From the above description it will be seen that when it is desired to administer an injection, the requisite quantity of liquid is put into the tank or receiver *a a* (Fig. 2), the tube *d*, is attached to the slide or tube *f*, at *r*, and the nozzle of the tube *d* is forced through the self-acting rubber valve *p* (Fig. 4) of the sheath or retainer, which sheath is then properly adjusted in the vagina; the tube *f* (Fig. 2) is then pressed backward and fastened by the spring *e*, and the injection driven through the tube *d*, and sheath (Fig. 1) by means of depressing the rod *c*. The nozzle *j* can now be withdrawn, when the elastic rubber valve *p* (Fig. 4) will immediately close and the injection be retained for any desired period; or, without with-

drawing the said nozzle, after the proper results have been obtained, by elevating the plunger *b* (Fig. 2) the liquid or injection will be withdrawn or forced back again into the tank *a a*. The rod *c* is graduated in such a manner as to readily determine the quantity of injection use. The face plate *n*, has a lip *q*, (Fig. 4) turned upward and inward around its entire edge or circumference, and is laterally bent or curved the better to retain the labia and parts of the female with which it immediately comes in contact and more perfectly prevent the escape of any part of the injection.

I do not confine myself to the particular mode herein described of constructing or arranging that part of my invention which I denominate the sheath or retainer, as it will be seen that instead of being made of wood with a metallic face plate, as described, it could be entirely constructed of vulcanized rubber and a variety of other substances; its valve could also be made upon an entirely different principle and still perform the same office.

As the described apparatus (Fig. 2) may be used for administering injections into the rectum, where the sheath (Fig. 5) could not be used to retain them, the cup-shaped base of the nozzle *j* (Fig. 2) is of value for that purpose. Neither do I limit myself to the use of the described sheath in combination

with the described apparatus for forcing the liquid or injection into the sheath, or through it, into the vagina, as it could be combined with other apparatus or syringes and a variety of modifications or an entirely different arrangement could be used for that purpose.

I do not claim the use of a sheath or retainer which I am aware forms part of the apparatus patented to Casme Brailley May 9th 1848; but

What I claim as of my invention and desire to secure by Letters Patent is—

1. A sheath or retainer having a lip or flange so as to embrace and compress the external parts with which it comes in contact, said lip being on its periphery and curved upward, and its internal parts shaped as to fit when pressed between the labia and also to penetrate the vagina, said sheath being also fitted with a valve or its equivalent, and said sheath being used either alone or in combination with a syringe of any description.

2. The tank *a a*, plunger *b*, tubes *i* and *f*, spring *x* and spring *e*, when combined and arranged substantially as and for the purposes specified.

ELBRIDGE G. STEVENS.

Witnesses:

CHARLES A. SHAW,
JAMES CLARK.