

(No Model.)

L. M. ADAMS.
Syringe.

No. 238,477.

Patented March 8, 1881.

Fig. 2.

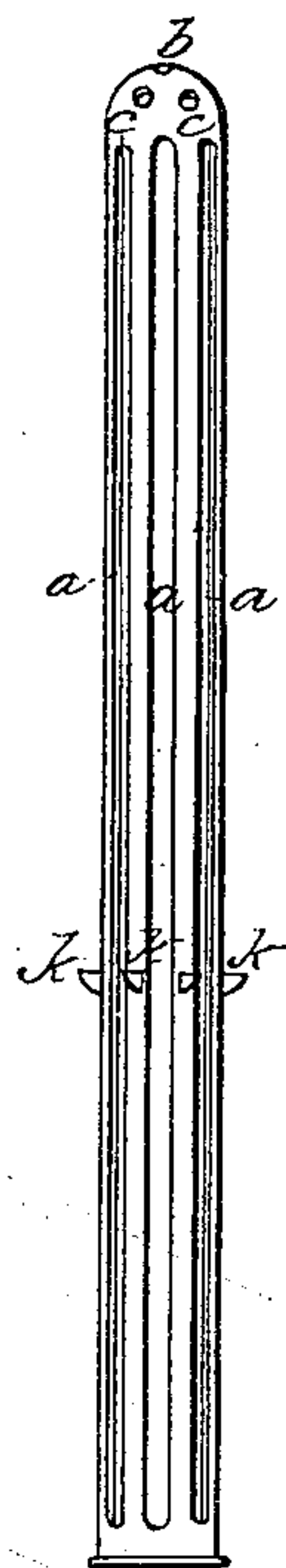


Fig. 3.



Fig. 5.

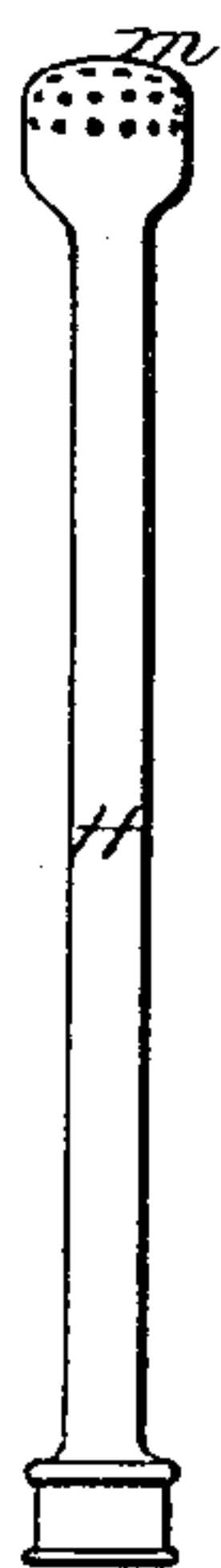


Fig. 1.

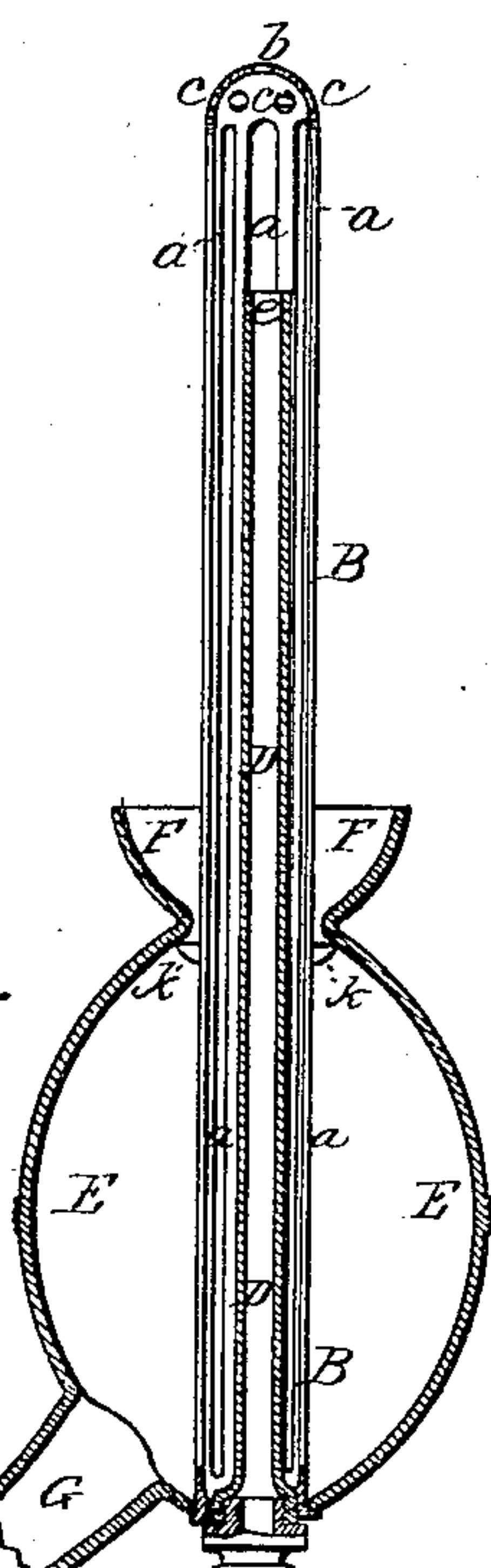
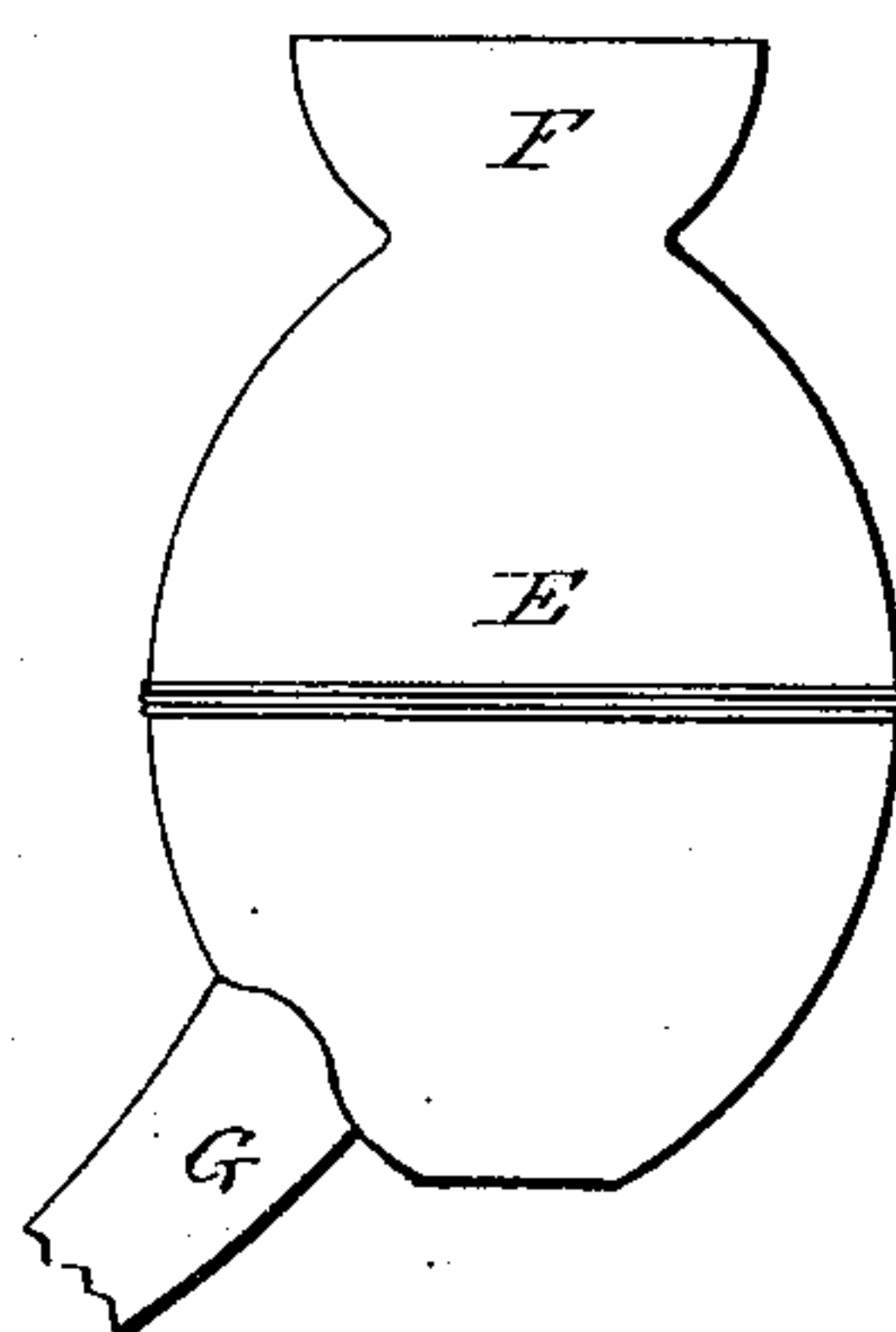


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

LAURA M. ADAMS, OF NEW YORK, N. Y.

SYRINGE.

SPECIFICATION forming part of Letters Patent No. 238,477, dated March 8, 1881.

Application filed November 5, 1880. (No model.)

To all whom it may concern:

Be it known that I, LAURA M. ADAMS, of the city, county, and State of New York, have invented a new and Improved Syringe; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification.

This invention is in the nature of an improvement in syringes; and the invention consists in a syringe constructed and arranged as hereinafter specified and claimed.

In the accompanying sheet of drawings, Figure 1 represents a longitudinal section of my invention; Fig. 2, an elevation of the slotted and perforated exterior tube for my syringe; Fig. 3, an elevation of interior tube for same; Fig. 4, a view of the reservoir, and Fig. 5 elevation of unslotted exterior tube.

Similar letters of reference indicate like parts in the several figures.

The purpose of this invention is to provide means for a thorough interior washing without hurtful force, and also to provide for the injection of hot fluids without discomfort to the patient, and to permit the use, for the purpose of injection, of iodine or other fluids that would, from their nature, stain the garments, and so that the surplus fluid, after it is discharged in the person, will be caught and used again without loss.

To this end I attach to the discharge end of an ordinary flexible syringe, A, an injection-tube, B. This tube may be of any suitable length and diameter, and its sides are slotted with vertical openings *a*, extending around the tube and substantially its full length. The crown *b* of this tube is rounded and closed, with the exception of perforations *c*, formed therein. Within the interior of the tube B is fitted a tube, D, this tube being screwed into the base of the tube B and extending upward within the latter to nearly the crown *b*. This interior tube, D, has an opening only at its top, as at *e*. The base of the tube B is provided with screw-threads, by means of which it is screwed into the base of a reservoir, E. This reservoir may be made of hard vulcanized rubber, and to its top is fitted a soft-rubber cup, F. The tube B, when screwed into the base of the res-

ervoir E, with the interior tube, D, fixed within it, extends upward through this reservoir and through the cup F, as shown in Fig. 1. To the reservoir E, at its base, and in continuation of the tube B, is screwed the ordinary flexible injection-tube *g* for the syringe. The reservoir E also has fixed to it an outlet-pipe, G.

Now, my syringe, constructed substantially as hereinbefore described, is operated in this wise: When the tube B, with its interior tube, D, fixed within it, is screwed within the reservoir E, that portion of the tube B which projects beyond the cup F of the reservoir E enters into the person of the patient, the cup F, in the case of older persons, being folded about the tube B, and also inserted in the person of the patient, after which it will expand in cup-form, as shown in Figs. 1 and 4. The fluid to be injected being placed in a vessel, the suction-tube *h* of the syringe is placed in the fluid, and by the alternate compressing and relaxing of the gland *i* of the syringe the fluid is forced through the gland, the pipe *g*, and through the interior of the pipe D, out of its orifice *e*, some of the fluid in its exit passing through the perforations *c* in the crown *b* of the pipe B, and some of it impinging against the non-perforated part of the crown, finding ready exit through the vertical slots *a* to the parts of the patient that are to be drenched, without undue force, the surplus fluid within and surrounding the tube B finding exit through the slots *a*, and also down the exterior of the pipes B and D into the cup F, thence into the reservoir E, and out of the outlet G into the receptacle which contained the fluid, to be again returned through the suction-pipe *h* of the syringe in the manner before described. The surplus being in this way caught and preserved it is not permitted to soil or wet the garments of the patient, which is a matter of some importance when iodine and other fluids that will stain are used. The reservoir E also acts in another useful manner, that is, when heated fluids are used for injection. In that case, the reservoir being made from hard vulcanite—a non-conductor of heat—it can be grasped by the hand and the hot fluid used without inconvenience to the hand, either from the heat imparted to it by

the fluid or by the dripping of the surplus fluid, which is caught in the manner before described.

5 In the case of young persons, the cup F need not be inserted within the person, but be brought in contact only with the body, when it will be nearly or quite as effective as when inserted.

10 To steady the cup F about the pipe B and insure its retaining its proper position, lugs *k* are secured to the exterior of the pipe B, on which the cup F, at its base, may rest, as in Fig. 1.

15 Instead of employing the slotted pipe B within the reservoir E, a tube, H, with a perforated crown, *m*, may be used, when the application of the injection is designed for some particular spot, in which case the fluid is injected only from the perforations in the crown.

20 Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. The improved syringe comprising the reservoir E, its flexible rubber cup F, adapted for use both interiorly and exteriorly, as described, 25 the outlet G, the open tube B, secured in said reservoir, and having lugs *k* to retain said reservoir in position, and the injection-tube D, open at its upper end and arranged within the tube B, all constructed and arranged to operate substantially as specified. 30

2. A syringe combined with reservoir E, provided with a flexible cup, F, adapted for use interiorly or exteriorly of the person, substantially as and for the purpose described.

LAURA M. ADAMS.

Witnesses:

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