

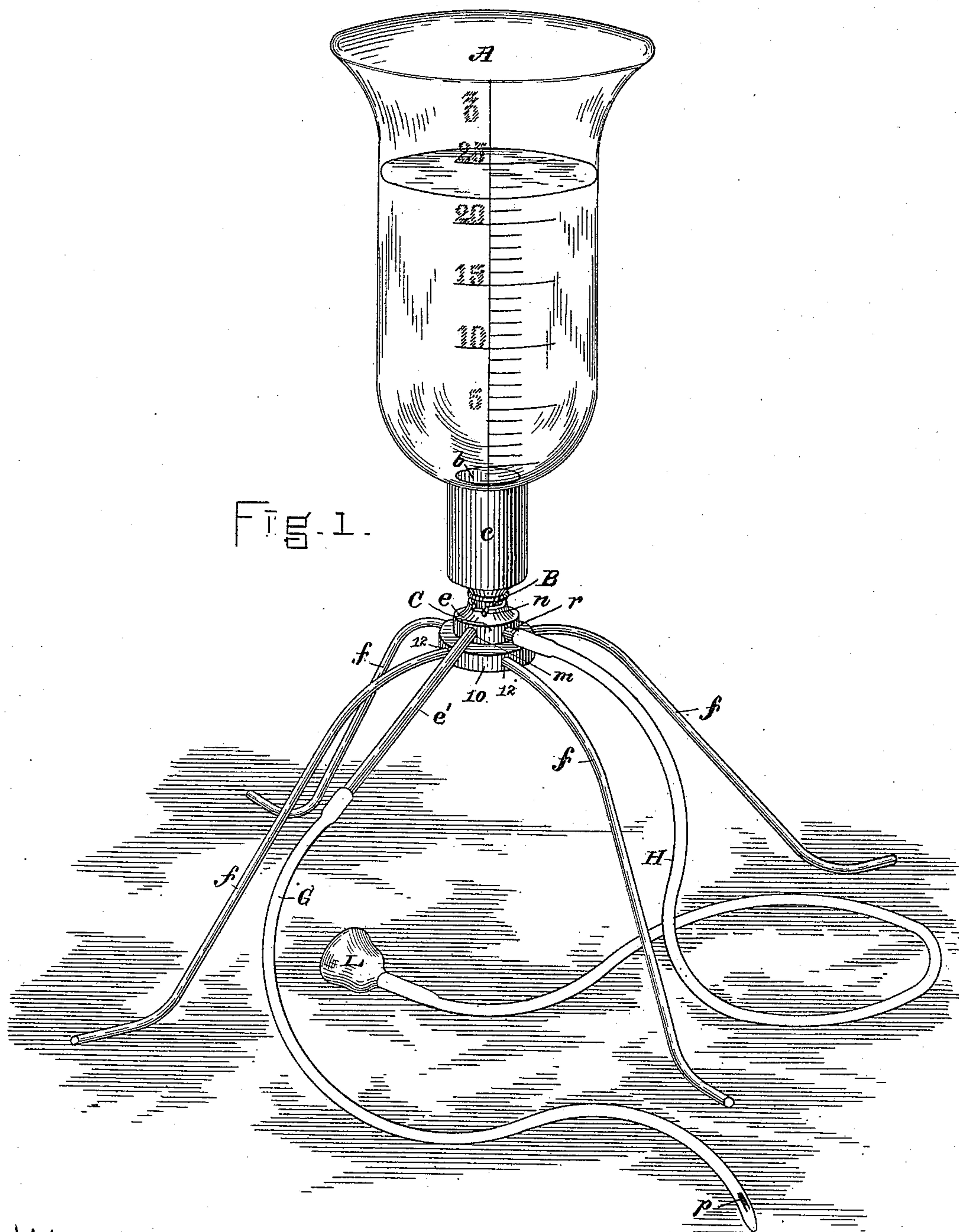
(No Model.)

2 Sheets—Sheet 1.

W. W. GUPTILL.
SYRINGE.

No. 441,239.

Patented Nov. 25, 1890.



WITNESSES.

C. Henry Marsh.
Harry H. Stiken.

INVENTOR.

Winslow W. Guptill
By R. O. Teschemacher *Atty*

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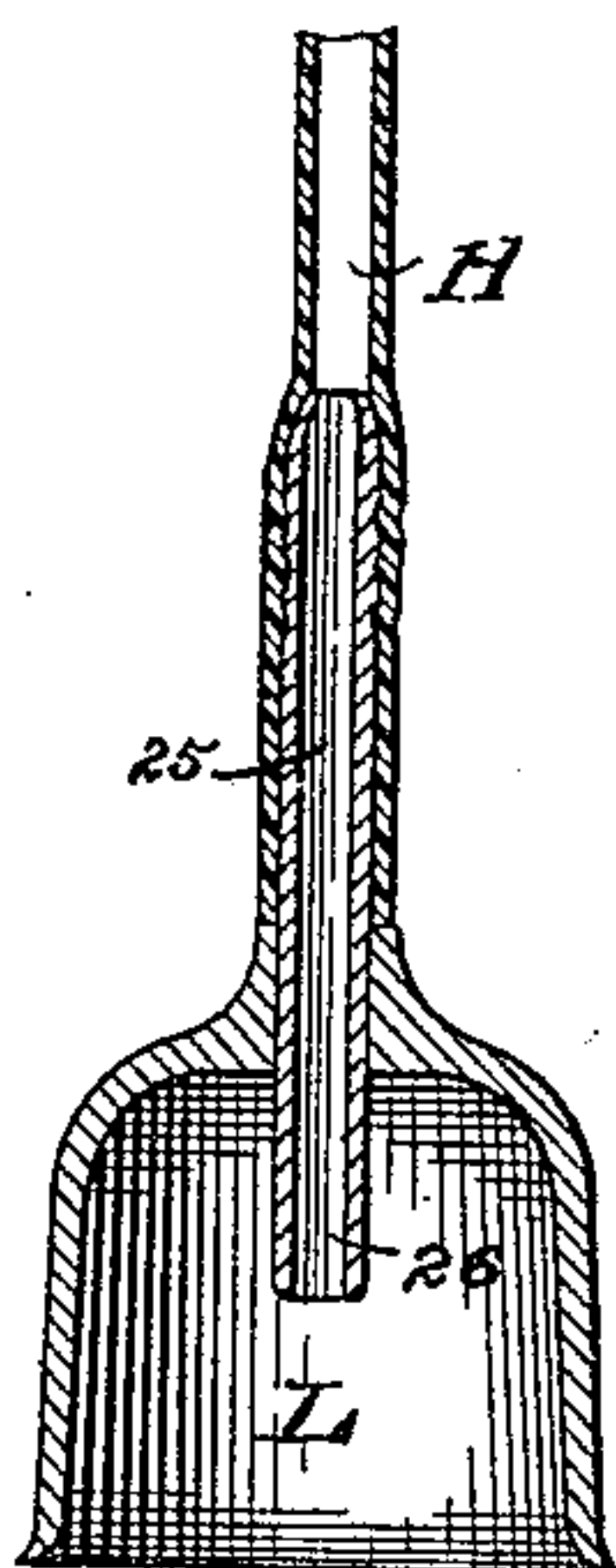


FIG. 4.

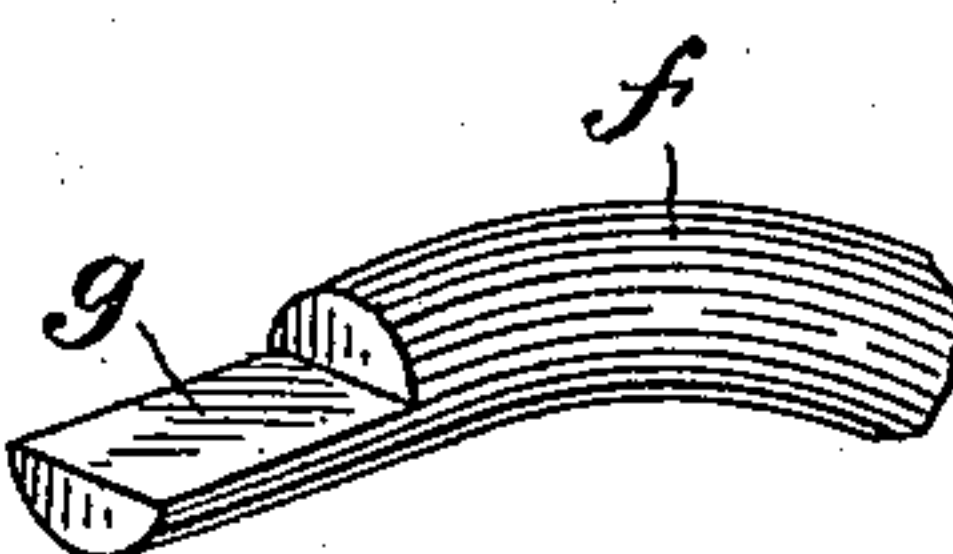
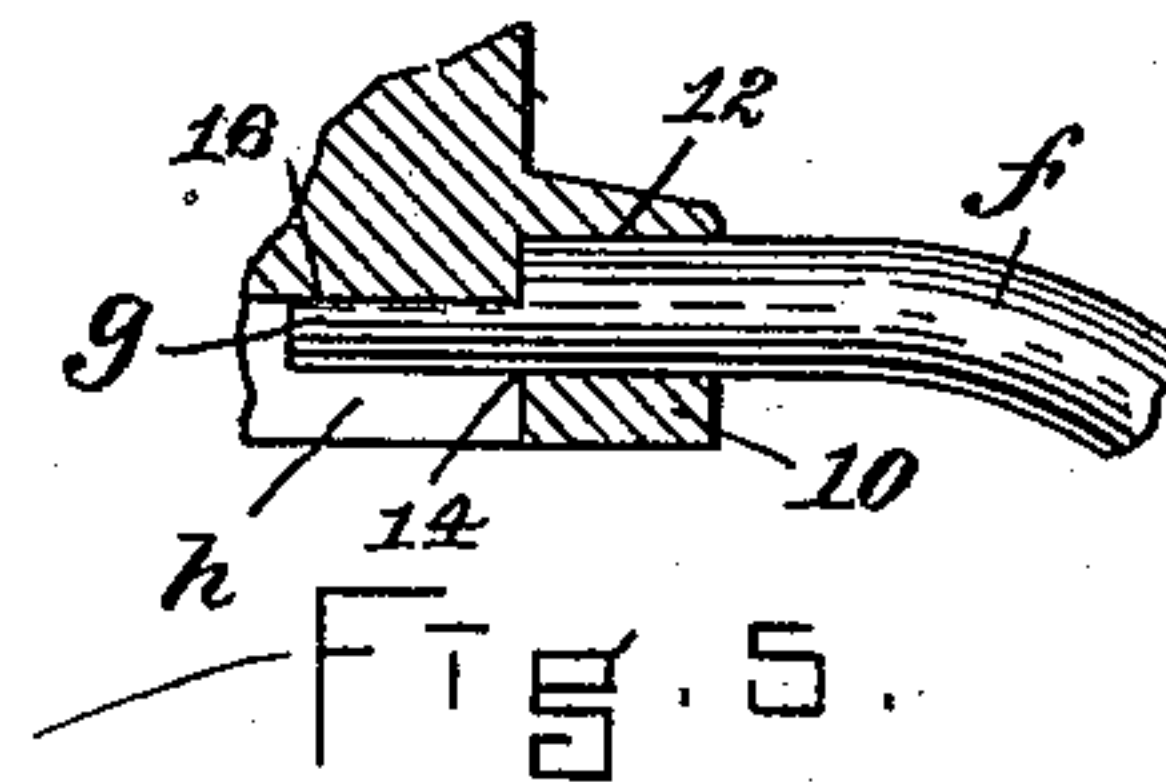


FIG. 6.

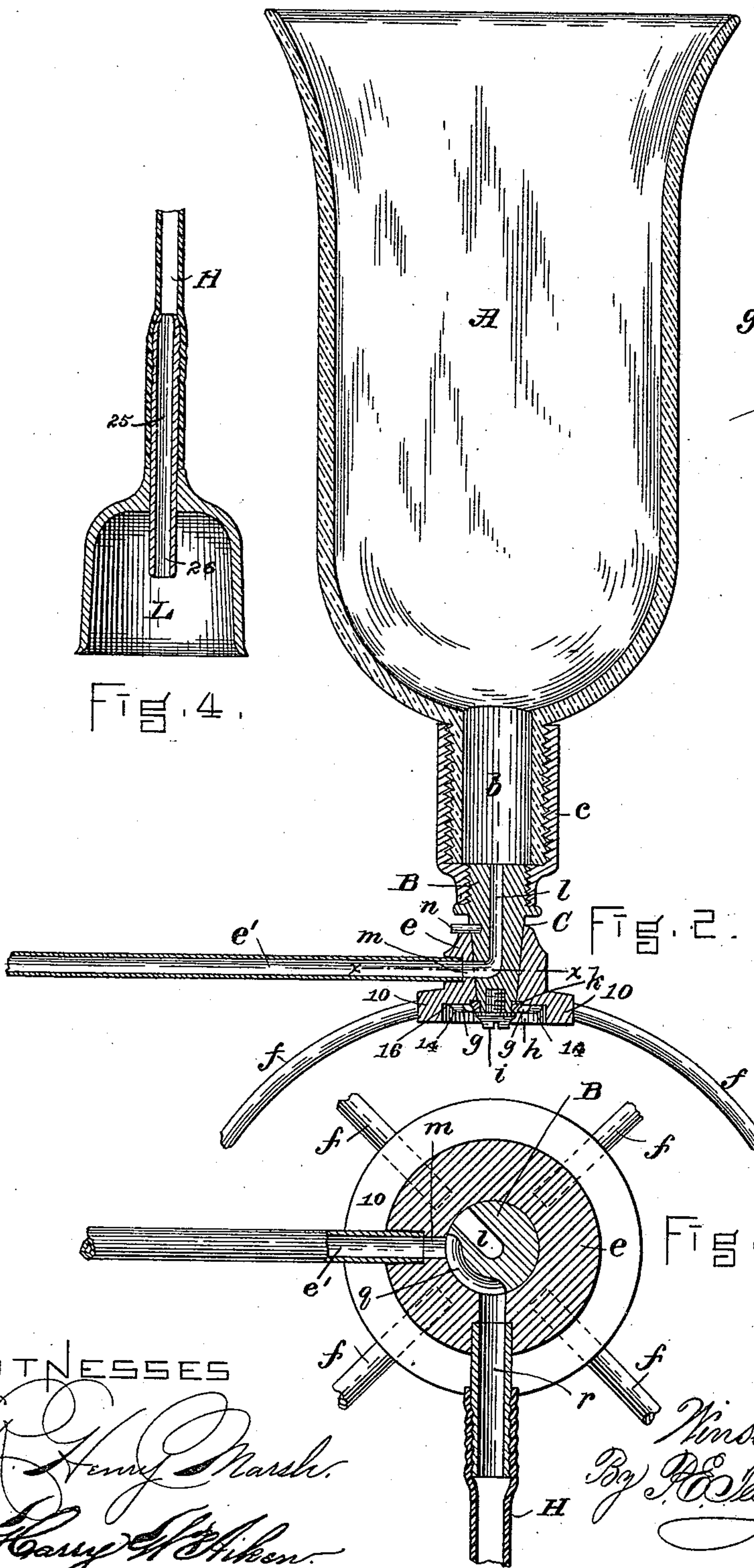


FIG. 2.

FIG. 3.

WITNESSES

R. Henry Marsh.
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Atty.

UNITED STATES PATENT OFFICE.

WINSLOW W. GUPTILL, OF BOSTON, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO CLARENCE W. FOX, OF SAUGUS, MASSACHUSETTS.

SYRINGE.

SPECIFICATION forming part of Letters Patent No. 441,239, dated November 25, 1890.

Application filed March 17, 1890. Serial No. 344,229. (No model.)

To all whom it may concern:

Be it known that I, WINSLOW W. GUPTILL, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a surgical instrument for washing out and cleansing the bladder or other internal organs or portions of the body difficult of access, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of my surgical instrument ready for use. Fig. 2 is a vertical section of the same, taken through the liquid-containing reservoir. Fig. 3 is an enlarged horizontal section on the line *xx* of Fig. 2, the plug of the three-way cock being in a different position. Fig. 4 is an enlarged sectional detail to be referred to. Fig. 5 is a sectional detail of the upper end of one of the removable legs and the socket into which it is fitted. Fig. 6 is a perspective view of the upper end of one of the removable legs.

My invention has for its object to improve the construction of surgical instruments employed for washing out and cleansing the bladder or other portions of the body difficult of access; and it consists in a liquid-containing reservoir or receptacle provided at its bottom with an outlet-opening communicating through a three-way cock or valve with a pipe provided with a catheter adapted to be introduced into the bladder or other portion of the body, said three-way cock having also attached thereto a discharge-tube, whereby when the plug of the cock is turned in one direction the liquid will flow from the reservoir into the catheter, and thence into the body, and when said plug is turned in the opposite direction, communication between the reservoir and the catheter will be closed and the catheter at the same time connected with the discharge-tube, thus allowing the liquid previously forced into the bladder to flow back through said catheter into the discharge-tube, and thence escape into a vessel placed to receive it, as hereinafter set forth; and my invention also consists in certain novel combinations of parts and details of construction,

as hereinafter set forth, and specifically pointed out in the claims.

In the said drawings, A represents an open-mouthed reservoir or vessel, which is preferably composed of glass and is adapted to contain the medicated or other liquid to be used. This vessel A is provided at its lower end with a narrow neck *b*, forming the outlet, said neck, which is threaded on the outside, being screwed tightly into a metallic sleeve *c*, so that it may be removed therefrom when required. The interior of the bottom of the sleeve *c* is provided with an internal thread and is screwed onto the upper threaded end of the plug B of three-way cock or valve C, the shell *e* of which is provided at its bottom with a horizontal flange or base 10, around the edges of which are formed sockets or apertures 12 for the reception of the ends of the removable legs *f*, a stand or support being thus formed for holding the liquid-containing reservoir A in an upright position ready for use, as seen in Fig. 1. The legs *f*, which are preferably composed of round wire, as shown, are each cut away at the upper end, forming a portion *g* of semi-circular form in cross-section, as seen in Fig. 6, and the sockets 12, into which these legs are fitted, as seen in Fig. 5, are bored through the flange 10 until they intersect a circular recess *h*, formed in the bottom of the shell *e* of the valve, the surface 16 of which extends diametrically across the open end of each socket, as seen in Figs. 2 and 5, so that when the end of the leg is pushed into place the portion *g* will project through the semicircular opening 14 at the end of the socket 12 and lie with its upper flat side against the surface 16 of the recess *h*, whereby the leg is held securely in place and prevented from turning around in its socket.

The vertical plug B, which is held in place within the shell *e* of the valve by a screw *i* and washer *k* and is adapted to be operated by turning the reservoir A to the right or left with the hand, is provided with a longitudinal passage *l*, communicating at its upper end with the liquid-reservoir A, said passage *l* extending at its lower end through the side of the plug B in such a position as to coincide

with an aperture *m* in the shell *e*, when the plug is turned in one direction as far as allowed by its stop-pin *n*. To this aperture *m* in the shell *e* is fitted, with a ground-joint, the tapering end of a removable metallic tube *e'*, having attached to its outer end an ordinary flexible catheter *G*, having, as usual, an eye or opening *p* at its outer end, and when the plug *B* is turned so as to bring the lower end of the passage *l* into line with the opening *m*, as seen in Fig. 2, the liquid in the reservoir *A* will flow out through the tube *e'* and catheter *G* into the bladder or other cavity of the body into which said catheter has been introduced. When, however, the plug *B* is turned in the opposite direction as far as allowed by the stop-pin *n*, the lower end of the passage *l* is carried away from the opening *m* to shut off the flow of the liquid from the reservoir *A*, and at the same time an elongated recess *q*, Fig. 3, in the side of the plug *B* is brought into line with both the opening *m* and the inner end of a short tube *r*, projecting from the flange 10 of the shell *e* and having attached thereto a long flexible waste or discharge tube *H*, thereby connecting said waste-tube with the tube *e'* and catheter *G*, when the liquid which has been forced into the bladder for the purpose of washing or cleansing the same will flow back into the discharge-tube *H*, and thence into a vessel placed to receive it.

The discharge-tube *H* is intended to hang over the side of the bed, and to prevent the bed-clothes from becoming accidentally wet I provide the end of the tube *H* with a metallic bell-shaped guard *L*, having a tubular extension 25, over which the end of the flexible tube *H* is fitted, as seen in Fig. 4, said guard being provided on the inside with a short central-nozzle 26, through which the liquid is discharged, the guard thus serving to keep the discharge-orifice out of contact with the bed-clothes, so that the stream will fall directly into the vessel placed to receive it.

The glass reservoir *A* is graduated on the side, as shown in Fig. 1, to enable the physician or surgeon to ascertain and regulate the quantity of liquid allowed to pass into the catheter, which will be found a great convenience and of the utmost importance in some cases.

The above-described instrument can be easily taken apart for cleansing and is capable of being packed into a small compass for transportation. When set up, as seen in Fig. 1, it is placed upon a table or other surface and operated in the following manner: The medicated or other liquid to be used is first poured into the reservoir *A*, care being taken that the latter is turned so as to close the valve and shut off communication with the catheter, which latter is then introduced in the usual manner into the bladder or other cavity to be washed out. The valve is then opened by turning the reservoir *A* with the hand in the proper direction, when the liquid will pass through the catheter into the blad-

der, and as soon as the proper quantity has been administered, which can be ascertained by means of the graduations on the side of the glass, the valve is instantly closed by turning the reservoir *A* in the opposite direction, when the liquid previously introduced into the bladder will flow back through the catheter *G* and tube *e'* into the discharge-tube *H*, and thence into the vessel placed to receive it. This operation can be repeated as often as desired to thoroughly cleanse and wash the parts without removing the catheter from the body, thus saving the patient from much pain and discomfort.

I am thus enabled to introduce any desired quantity of liquid into the bladder or other cavity of the body and allow it to escape therefrom through a catheter-tube of small diameter having a single passage only, and repeat this operation as many times as required without removing the catheter, thereby preventing the introduction of air into the body, and producing the same results as can be obtained with a double catheter having separate inlet and outlet passages, which, on account of its necessarily large diameter, frequently causes much pain to the patient and in many cases cannot be used for this reason.

By providing the instrument with a stand, as shown, it can be operated by a surgeon without any assistance from other persons, which is often a great convenience.

By removing the catheter *G* from the tube *e'* and substituting therefor a flexible tube provided with a T-shaped perforated pipe the instrument can be used as an irrigator for wounds, &c., the reservoir *A* serving as a fountain for containing the liquid to be used.

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

1. In a surgical instrument, the combination, with a liquid-containing reservoir or receptacle provided at its bottom with an outlet-opening, of a three-way cock or valve applied to said opening and having connected therewith a catheter and a waste or discharge tube, whereby the plug of said valve when turned in one direction will permit the liquid to flow directly from the reservoir into and through the catheter into the body, and when turned in the opposite direction will shut off the liquid from the reservoir and permit the liquid previously introduced into the body to flow back through said catheter into the discharge-tube, substantially as set forth.

2. In a surgical instrument of the character described, the combination, with the catheter and the discharge-tube, both connected with a three-way cock or valve and operating as described, of a graduated liquid-containing reservoir or receptacle provided at its bottom with an outlet-opening connected with said cock or valve, whereby the quantity of liquid allowed to pass through the catheter into the body can be ascertained and regulated, substantially as set forth.

3. In a surgical instrument of the character

described, the catheter G and discharge-tube H, both connected with the three-way cock or valve C, having a vertical plug B, provided with the passage *l* and recess *q*, combined with
5 a reservoir A, detachably secured to the upper end of said plug B, whereby the latter can be moved axially in either direction by turning the reservoir A to cause the liquid to pass
10 into the catheter or return through the same into the discharge-tube, substantially as set forth.

4. The combination, with the base having the lateral sockets 12, provided with semicircular openings at their inner ends, of the re-

movable legs *f*, having their upper ends of
semicircular form and adapted to pass through
said semicircular openings and lie with their
flattened faces against the under surface of
the base, whereby the legs are prevented from
turning and are held securely in place, sub-
stantially as described.

Witness my hand, this 15th day of March,
A. D. 1890.

WINSLOW W. GUPTILL.

In presence of—

P. E. TESCHEMACHER,
HARRY W. AIKEN.

