

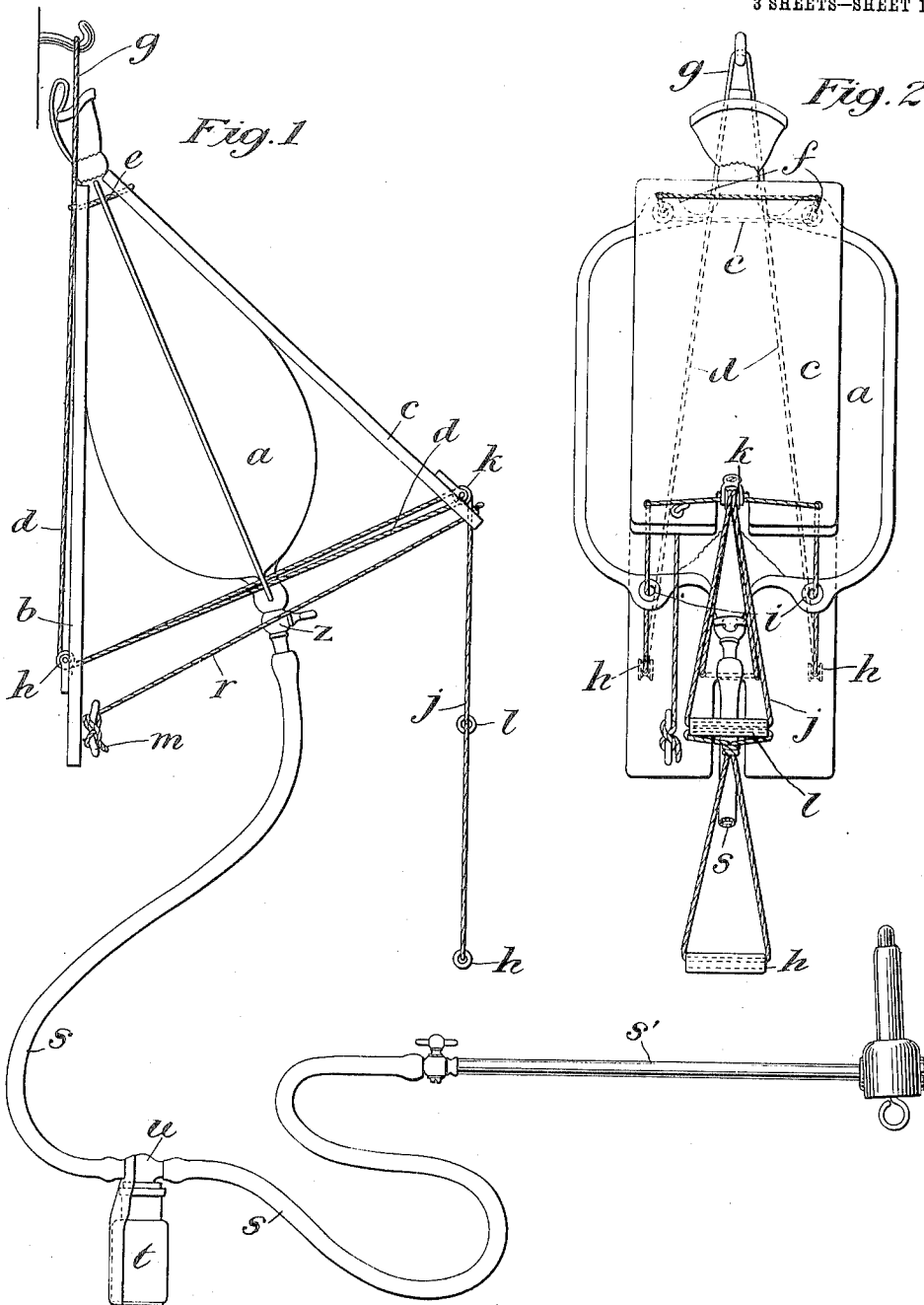
No. 804,407.

PATENTED NOV. 14, 1905.

A. B. JAMISON.
SYRINGE.

APPLICATION FILED MAR. 23, 1905.

3 SHEETS—SHEET 1.



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3 SHEETS—SHEET 2.

Fig. 3

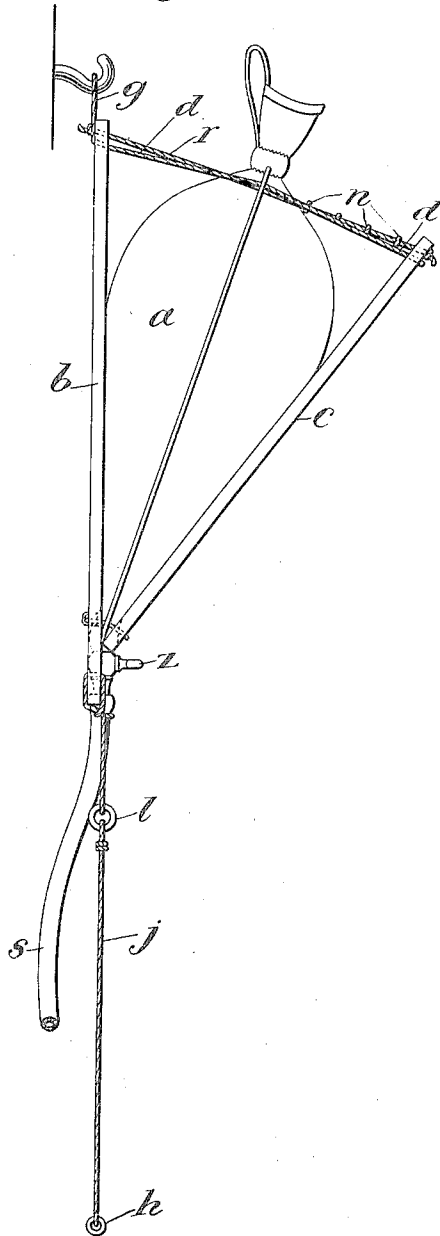
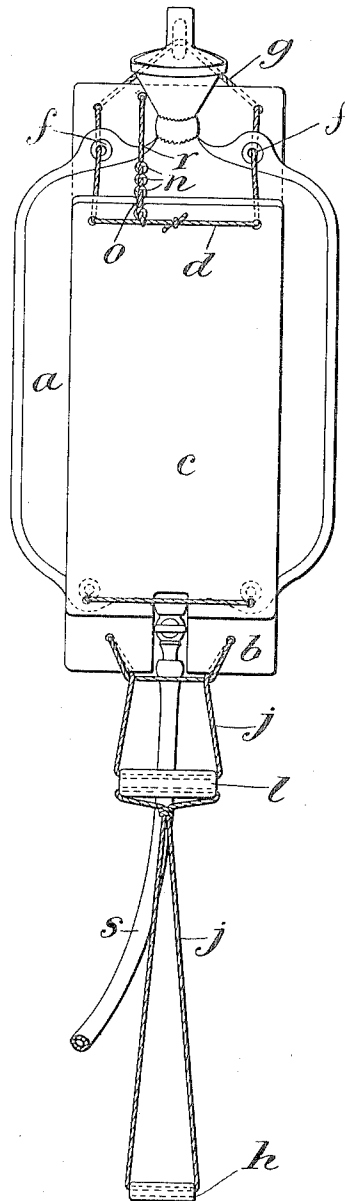


Fig. 4



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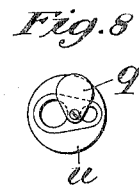
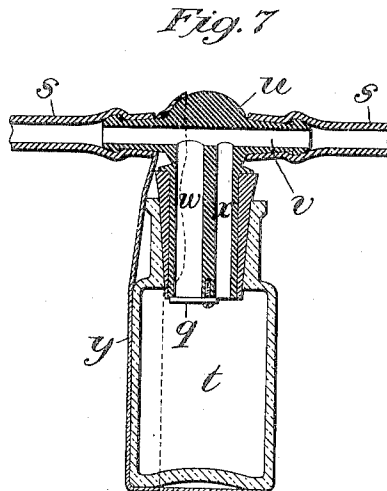
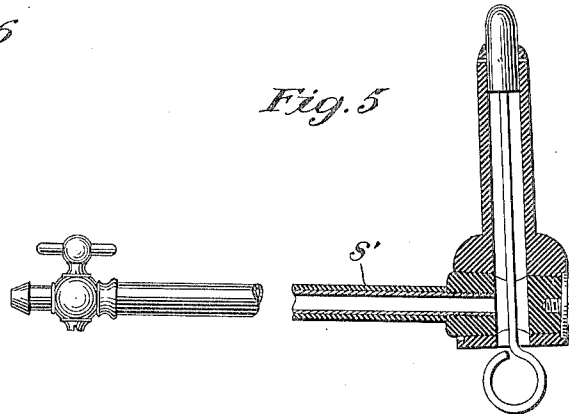
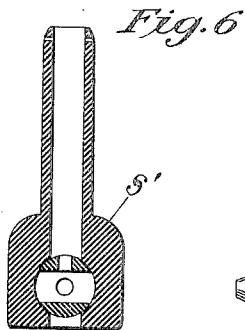
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

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SYRINGE.

No. 804,407.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed March 23, 1905. Serial No. 251,549.

To all whom it may concern:

Be it known that I, ALCINOUS B. JAMISON, a citizen of the United States, and a resident of the borough of Manhattan, in the city of New York, in the State of New York, have invented certain new and useful Improvements in Syringes, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

The weight of the water in the bag of a fountain-syringe is oftentimes found to be insufficient to effect the desired pressure or head at the tip end of the syringe, and it is not always convenient or satisfactory to raise the bag high enough to obtain such desired pressure or head. Furthermore, the weight of the water in the bag, especially when hot water is employed, soon destroys the bag, which in most fountain-syringes is made of soft rubber. Again, when the bag is not wholly filled up with water there is more or less air therein, which is often objectionable in the use of syringes of this type.

It is accordingly one of the objects of this invention to provide a fountain-syringe which will be free from the objectionable features just referred to.

Another object of the invention is to provide means in connection with a fountain-syringe to impregnate the water used therein with oil, antiseptics, and other liquids without placing such liquids in the bag of the syringe and without obstructing the flow of water in the apparatus.

The invention will be more fully described hereinafter with reference to the accompanying drawings, in which—

Figure 1 is an end view in elevation, and Fig. 2 is a side view in elevation, of the bag with improvements applied thereto. Figs. 3 and 4 are similar views, respectively, showing a modification of the improvements. Fig. 5 is a view partly in elevation and partly in section, and Fig. 6 is a sectional detail view of an end piece that may be employed with the syringe. Fig. 7 is a view in central vertical section of a bottle or reservoir for containing oil, antiseptics, and other liquids for impregnating the water in the syringe and the piece or stopper connecting said bottle or reservoir with the syringe; and Fig. 8 is a detail plan view of the under side of the connecting piece or stopper.

In both of the forms of the invention shown in Figs. 1 to 4 the bag *a* is supported in a

frame comprising two side pieces *b* and *c*, preferably flat, fastened together in any suitable manner at one end, and a cord *d*, by which the apparatus is supported and which joins the other or free ends of the pieces *b* and *c*.

Referring to Figs. 1 and 2, in which the preferable form of the invention is illustrated, the pieces *b* and *c* are hinged at the neck of the bag, which is supported at that end by said pieces coming together at the neck and by suitable fastening means, as a cord *e* extending through eyelet-holes *f* in the top of the bag, thus making three supports for the top of the bag. The cord *d* is preferably made endless and forms a loop *g* for supporting the apparatus from a hook or other support, the cord *d* extending down on each side of one of the side pieces of the frame and through said side piece at its lower end, pulleys *h* being provided for the cord to run on. After passing the pulleys *h* the cord extends through eyelet-holes *i* on the bottom of the bag and then passes through the lower end of the other side piece, thus supporting the lower end of the bag at two points. It will be obvious that the weight of the bag, its contents, and the frame, supported as they are by the cord *d*, will tend to draw the lower or free ends of the side pieces together, thus compressing the bag. In order that greater pressure may be put upon the sides of the bag, if desired, a second cord *j* is provided and may be secured to the lower end of the side piece *b*, whence it runs over a pulley *k* on the lower end of the side piece *c*. To this cord a handle *l* and a foot-piece *p* may be attached, whereby a downward pull can be exerted conveniently thereupon to produce a considerable pressure upon the side pieces, thereby causing a compression of the bag. If it is desired to place a particular tension upon the bag above that given by the weight of the apparatus, it may be done by means of a cord *r*, which is secured to the lower end of one of the side pieces and is adapted to be tied around a stanchion *m*, which is secured to the lower end of the other side piece, whereby the two side pieces may be held at a particular angle with respect to each other to exert a certain pressure upon the bag.

In the embodiment of the invention shown in Figs. 3 and 4 the bag is supported directly upon the side pieces, which are hinged at the bottom. The supporting-cord *d* extends from the upper end of one of the side pieces through

eyelet-holes f in the upper end of the bag and thence through the other side piece, forming the loop g . The cord j for the downward pull is attached to one of the side pieces, and the cord r for holding the side pieces together at a particular angle is secured to the top of one of the side pieces and is provided with a plurality of knots n , whereby the cord is adapted to be inserted in a groove o in the other side piece and to hold the side pieces at a particular angle without slipping.

Upon the end of the connecting-tube s an end piece s' of any desired construction is fitted, and such end piece is preferably provided with a tip which will not obstruct the free flow of water or other liquid there-through. Intermediate the tip and the bag is a reservoir, which in the present case is shown as a bottle t , said reservoir or bottle being provided to hold oil, antiseptics, and other liquids with which it may be desired to impregnate the water employed in the apparatus. In order that the water may be thus impregnated without having to flow through a device which would obstruct the free flow of the water, a connecting-piece or peculiarly-formed stopper u is employed, having a passage v for the unobstructed flow of water, and said stopper is interposed in the connecting-tube s , as illustrated in Fig. 1 of the drawings. Communicating with the passage v through preferably two passages w and x , respectively, is the oil, antiseptic, or other liquid contained in the bottle or reservoir. When a bottle is employed, as illustrated in the drawings, a guard-piece y is preferably provided in order to hold the stopper securely upon the bottle. In order to graduate the quantity of oil or other liquid entering the tubes from the bottle, a valve q may be provided upon the under side of the cork, whereby the passages w and x may be so restricted that a dram, ounce, or any desired quantity of oil or other liquid may flow out of the bottle during the passage of a given quantity of water.

The operation of the apparatus, which will be readily understood from the foregoing, may be briefly outlined as follows: The bag a is filled in the ordinary manner, a cock z in the bottom of the bag preventing the escape for the time being of the water into the connecting-tube s . The bag may be filled full or partly full, as is desired. The filling of the bag causes the side pieces b and c to separate, the degree of separation depending upon the extent to which the bag is filled. The bag, together with its supporting-frame, is then hung up by placing the loop in the cord z upon the supporting-hook or other support, and the syringe is then ready to be put in operation. If a particular pressure is desired above that supplied by the weight of the bag, its contents, and supporting-frame, the bag may be compressed between the side pieces, which by means of the cord r can be secured at a cer-

tain angle. When everything is ready, the cock z is opened, and the water flows down the connecting-tube s in the usual manner. When the water reaches the connecting piece or stopper u , part of it will flow through the same and a part into the bottle, thereby causing any oil therein to rise and flow out into the passage v . If it is desired to produce a greater pressure or head of water at any time than is being supplied through the tip, one may grasp the handle l or insert his foot in the stirrup p , thereby effecting a downward pull and a greater compression upon the bag. It will thus be seen that almost any desired pressure or head of water may be obtained at the tip of the syringe. Furthermore, it will be seen that the bag, supported as it is by the frame, does not bear, as is generally the case, the entire weight of water contained therein, and hence is not liable to deteriorate as quickly as in the ordinary syringe. It will be noted also that the pressure established by the compression of the bag is maintained on account of the unobstructed passage from the bag to the tip, while at the same time means are provided whereby oil, antiseptics, and other liquids may be entrained in the water as it flows from the bag to the tip.

It will be understood that the invention is not limited to the construction shown and described herein, but that many departures may be made therefrom without avoiding the spirit of the invention.

I claim as my invention—

1. In a fountain-syringe, the combination with the bag of a flat piece on each side thereof hinged at one end, and a cord secured to one of the pieces at the other end and passing through the corresponding end of the other piece, said cord being adapted to support the bag and its associated parts.

2. In a fountain-syringe, the combination with the bag of a supporting-frame therefor, said frame comprising two pieces secured one on each side thereof and hinged at one end, and a supporting-cord secured to the other end of one piece and passing through the corresponding end of the other piece.

3. In a fountain-syringe, the combination with the bag of a supporting-frame therefor, said frame comprising two pieces, one on each side and hinged at the neck of the bag, and a supporting-cord secured at the other end to one of the pieces, passing through the corresponding end of the other piece and running thence to the hinged end at which the bag is supported.

4. In a fountain-syringe, the combination with the bag of a supporting-frame therefor, said frame comprising two pieces, one on each side and hinged at the neck of the bag, and a supporting-cord secured at the other end to one of the pieces, passing through the corresponding end of the other piece and running thence to the hinged end at which the bag is

supported, said bag being supported at the neck by the hinged pieces, and at the other end by the cord.

5 5. In a fountain-syringe, the combination with a bag having eyelet-holes at the top and bottom thereof, of a supporting-frame therefor, said frame comprising two pieces, one on each side and hinged at the neck of the bag, and a supporting-cord having a loop for hanging it to a support and passing from the hinged end of the side pieces down one piece on each side thereof to the other end, thence through said end, through eyelet-holes on the bottom of the bag and to the other piece.

15 6. In a fountain-syringe, the combination with the bag, of a flat piece on each side thereof hinged at one end, a cord secured to one of the pieces at the other end and passing through the corresponding end of the other piece, said cord being adapted to support the bag and its associated parts, and a second cord whereby the apparatus may be given a downward pull.

20 7. In a fountain-syringe, the combination with the bag of a supporting-frame therefor,

said frame comprising two pieces, one on each side and hinged at the neck of the bag and a supporting-cord secured at the other end to one of the pieces passing through the corresponding end of the other piece and running thence to the hinged end at which the bag is supported, and a second cord extending from one piece at said other end to and through the corresponding end of the other piece, whereby the ends may be urged together by a downward pull on said second cord.

35 8. In a fountain-syringe, the combination with the bag and connecting-tube of an end piece, an intermediate stopper having an unobstructed passage therethrough for the flow of water, a tube communicating therewith for connection to a reservoir and a regulating device or valve for the last-named tube.

This specification signed and witnessed this 21st day of March, A. D. 1905.

ALCINOUS B. JAMISON.

In presence of—

ANTHONY N. JESBERA,
LUCIUS E. VARNEY.