

No. 722,819.

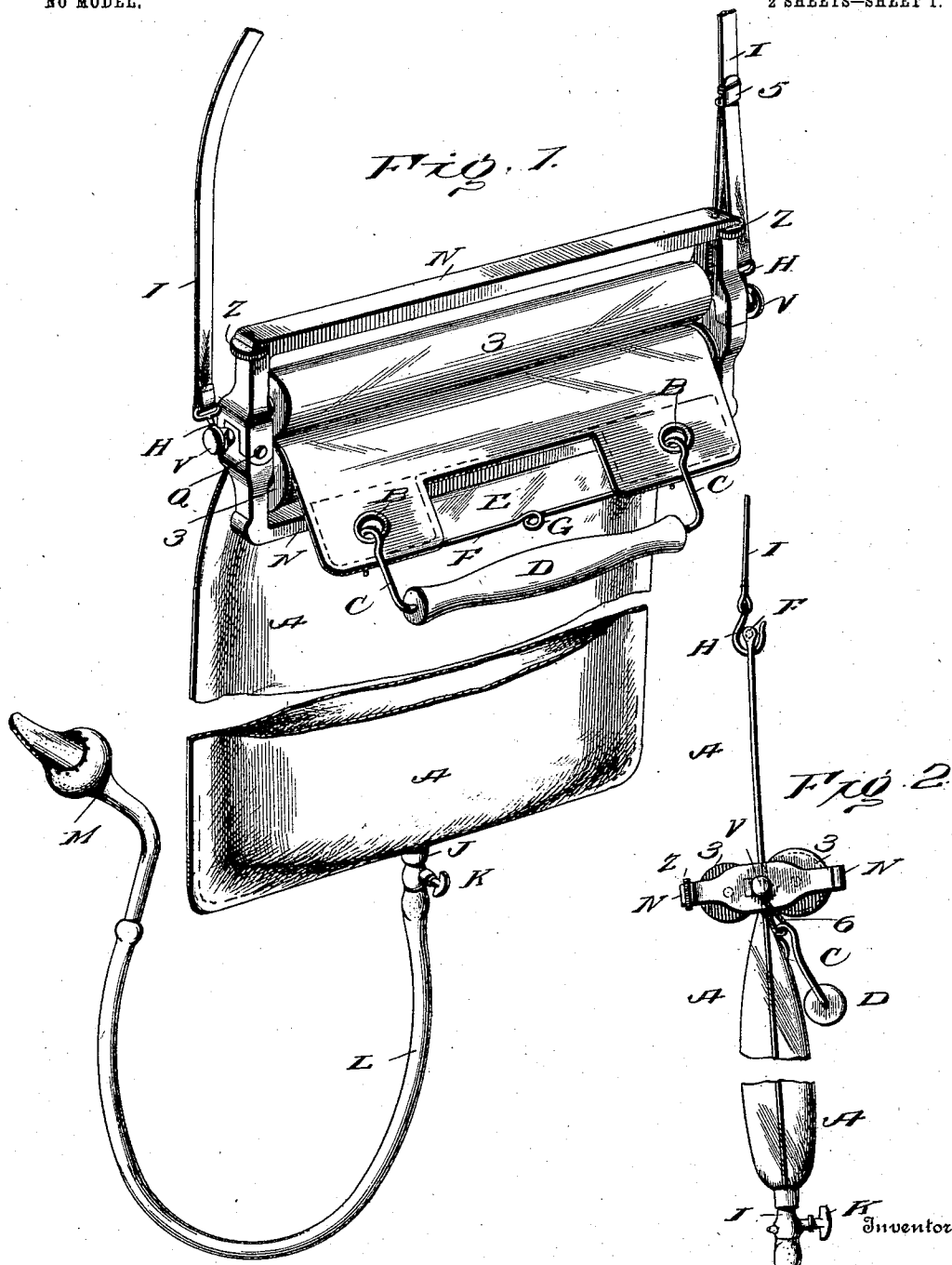
PATENTED MAR. 17, 1903.

W. M. DECKER.
SYRINGE.

APPLICATION FILED JULY 1, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses

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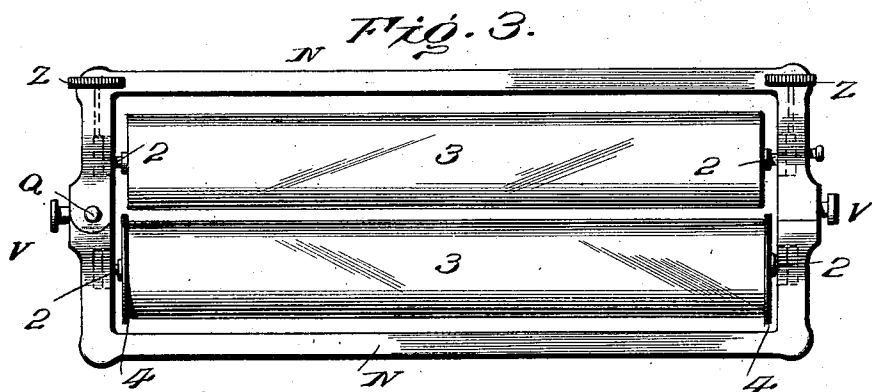
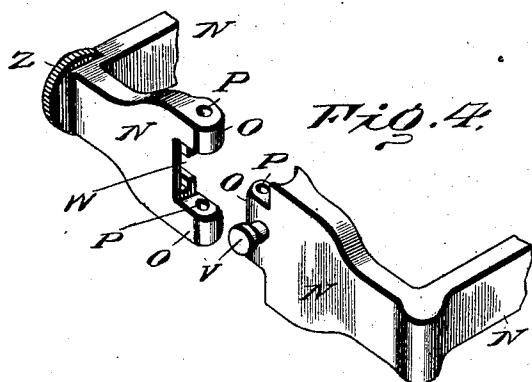
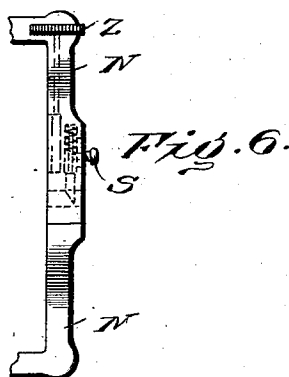
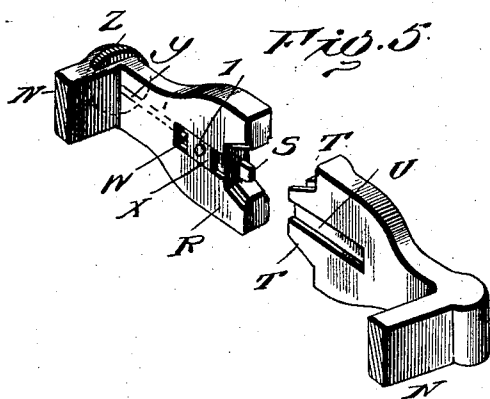
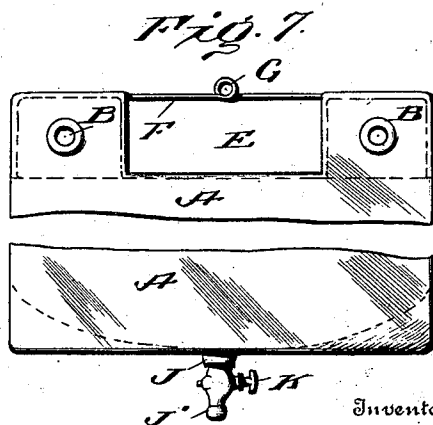
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APPLICATION FILED JULY 1, 1902.

NO MODEL.

2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM MORE DECKER, OF BUFFALO, NEW YORK.

SYRINGE.

SPECIFICATION forming part of Letters Patent No. 722,819, dated March 17, 1903.

Application filed July 1, 1902. Serial No. 113,965. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MORE DECKER, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Syringes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in syringes, and particularly to that class commonly denominated as "water-bag" or "fountain" syringes. In this particular class of syringes the bag is provided with an opening at the upper end, through which the bag is filled, and with a suitable stopper or screw-cap for closing said opening and at the lower extremity with a tip adapted to receive a section of hose or rubber tubing, to which may be secured the usual and various nozzles. This class of syringes cannot be made to operate successfully unless it is held by an assistant or suspended from some suitable support, and its action is at all times dependent upon the force of gravity, and consequently upon the height at which the bag is held or suspended. In hospital use a hook or support is not always convenient, in which case the nurse who may be administering a douche is compelled to hold the syringe in an elevated position, and hence the assistance which the nurse ought to give to a patient is necessarily restricted, and in all cases it becomes necessary to have a comparatively long hose or tube in order that the bag may be held sufficiently high to produce the necessary gravity, for if the bag is held too low it will not operate, because the fluid will be so sluggish and irregular that the results would not be satisfactory.

My invention has for its object to provide a syringe which shall overcome all of the disadvantages named and which may be used by either a patient or nurse to produce a flow independent of gravity, and hence independent of the height at which the syringe may be located, and which shall be entirely under the control of the operator.

With these ends in view my invention consists of a bag-syringe of peculiar construction and having combined therewith a truck

adapted to cooperate with the bag in expelling or forcing the fluid contents of the latter through the hose and nozzle of the syringe, as will be hereinafter more fully described.

My invention further consists in the details of construction of the water-bag or syringe proper and also in the details of construction of the truck designed to cooperate with said bag, all as will be hereinafter more fully described.

In order that those skilled in the art to which my invention appertains may know how to make and use the same and fully understand all of its advantages, I will proceed to describe my invention, referring by characters to the accompanying drawings, in which—

Figure 1 represents a perspective view of my improved syringe and truck arranged in operative relation. Fig. 2 is a side or edge elevation of the same. Fig. 3 is a top or plan view of the truck with the bag or syringe proper removed. Fig. 4 is a detail perspective on enlarged scale, showing the articulative portions of one end of the truck-frame slightly separated. Fig. 5 is a similar view of the opposite end of the truck and showing means for locking the two parts of the frame securely together with the mangles or rollers confined therein in proper position. Fig. 6 is a top or plan view of what is shown at Fig. 5, but in locked position, the lock being shown in dotted lines; and Fig. 7 is a front or rear view of the bag on a decreased scale.

Similar characters of reference denote like parts in the several figures of the drawings.

A is a bag, of rubber or other suitable material and preferably oblong or of rectangular form, the upper end of which is strengthened or reinforced in any manner well understood by manufacturers of rubber goods and as indicated in dotted lines. At each corner of this reinforced upper portion of the bag are provided eyelets or gromets B, adapted to receive suitable hooks C at each end of an operating-handle D. The upper edge of the bag is mutilated or cut away, as shown at E, and is stiffened to prevent corrugation or crimping when traction is made upon the bag by a rod F, in the center of which is formed an eye G. This rod F is secured within the edge or selvage of the upper end of the bag in any suitable manner. The open space E

permits the introduction of the fingers or thumb of the operator to grasp the rod E and operate or pull upon the bag A in the absence of a suitable handle, such as D, and the eye G in the center of the rod provides a means for hanging the bag upon any suitable support, such as a hook or nail, when it may be desired to use the syringe in the ordinary manner without the truck and as a fountain-syringe. The eyelets or gromets B serve not only to receive the hooks C of the handle D when the syringe is operated, as indicated at Fig. 1, to draw the bag between the rollers of the truck, but when it may be desirable to hold the bag stationary and draw the truck down upon the bag, as shown at Fig. 2, the hooks H on the shoulder-strap I are passed through said eyelets or gromets. The lower end of the bag is provided with a centrally-arranged filling tip or nipple J, which may or may not be provided with a valve-cock K, and in the absence of the cock K the hose-tube L may be provided with any of the well-known clamping devices for shutting off the flow of the contents of the bag A. The nipple at its lower extremity is formed with a suitable flange or enlargement J' for proper connection with the hose L, the opposite or free end of which is adapted to receive any suitable nozzle M, the one shown in the drawings representing an improved vaginal nozzle constituting the subject-matter of an application for Letters Patent filed by me July 1, 1902, Serial No. 113,967.

Having described the novel features of construction of the bag or syringe proper, I will now describe the coöperating device, which I denominate the "truck." This truck consists of two sections N N, one end of each of such sections being formed with knuckles O, provided with pintle-channels P, as shown at Fig. 4, to receive a suitable pintle Q, so that they may be articulatively connected, as shown at Fig. 3. The opposite ends of the sections N are constructed as shown at Fig. 5, one with a transverse slot R and a spring or sliding latch S and the other with lugs T and a longitudinal latch recess or keeper U. One of each of the ends of the sections N is formed with a flanged trunnion V, adapted to receive the hooks H on the suspension-trap I, heretofore referred to, and both of the ends of each of the sections N is formed with a longitudinal recess W, as clearly shown at Figs. 4 and 5, to receive an adjustable journal block or box X, (see Fig. 5,) which is provided with a screw-threaded rod Y, adapted to enter the female thread of an operating-nut Z, located within one corner of the section N and by means of which the journal box or block may be adjusted longitudinally within the slot W in an obvious manner. When only one of the sections is provided with the adjustable journal box or block X, the opposite and adjacent end of the other section has the latch-keeper U elongated or extended sufficiently to receive a stationary

journal-box, and each of the four journal-boxes are formed with cylindrical recesses or channels 1 (see Fig. 5) to receive the ends of the journals 2 of the pair of rollers or mangles 3. These journals 2 may be fixed in relation with the rollers 3 and rotate within the journal-boxes X, or the rollers may be free to rotate upon the journals 2. One or both of the rollers 3 may be provided with end flanges 4 (see Fig. 3) to prevent the water-bag A from moving laterally during its progress between the rollers, or any other suitable means may be employed for this purpose.

From the construction shown and described it will be readily seen that before the articulative sections of the frame of the truck are put together the journal-boxes X and rollers 3 may be properly located and that when the two sections are locked together, as shown at Fig. 1, the journal-boxes, with the rollers, are all held in proper position and that one or both of the rollers may be adjusted by the rotation of the nuts Z, as heretofore described, to control the bite or space between the rollers.

In the ordinary use of my improved syringe and truck the bag A is filled or loaded with the fluid douche and the latch or lock S is withdrawn from the keeper-slot U in order that the frame may be suitably opened by articulation upon the pintle Q, so that the upper end of the bag A may be located within the bite of or between the rollers 3 3, after which the frame is closed and securely locked. The truck is then suspended upon the shoulders of the operator, whether the operator be a nurse or a patient, by means of the strap I, passed over the shoulders and adjusted to any desired attitude by means of any suitable adjusting devices 5 on the strap. The nozzle M is then properly adjusted within the person of the patient and then through the medium of the handle D or by grasping the rod F the bag A is pulled between the bite of the rollers 3 3 and the contents of the bag A is forced through the hose L and nozzle M with a force commensurate to the celerity with which the bag is moved between the rollers. If it be desired to expel the contents of the bag by holding said bag stationary and moving the truck over the bag, the hooks H on the ends of the shoulder-strap I are connected with the rod F in the upper edge of the bag and a figure 8 or other loop 6 is passed over the trunnions V of the truck-frame and the hooks C of the handle D passed into the opposite ends of said loops 6, as clearly indicated in Fig. 2. In either case the syringe may be operated under any and all conditions and may be connected with any part of the body of the operator. For instance, if the syringe is operated by the patient who may be upon the back with the knees drawn up or flexed the strap I may be secured about the knees, and the operator then reaching and grasping the handle D or rod F may pull the bag with facility and said bag emptied as rapidly as desired. Likewise the patient may pass the

strap around one or both of the pedal extremities, and the bag lying upon the couch the operator taking hold of the handle D may draw the bag through the rollers.

5 From the construction and manner of using my invention as already described it will be obvious that the hose L may be much shorter than would be required with an ordinary fountain-syringe, because the syringe may be
10 brought much closer to the patient not requiring altitude to secure gravity force.

The bag A may be used as an ordinary hot-water bag when desired by closing the cock K or entirely removing the nipple J and substituting therefor an ordinary cork.
15

For lightness and economy of construction the rollers or mangles 3 3 may be made hollow, and the truck is composed of light castings, which may be nickel-plated or rendered
20 attractive in appearance in any other manner.

While I have shown the truck of rectangular form, it will be understood that its design may be varied without departing from the genus of my invention so long as it is adapted
25 to operate in the manner described to expel the contents of the bag, and it will also be understood that I do not wish to be limited to the particular design shown of the water-bag.

As I have already stated, the results sought
30 to be obtained by my improvements may be secured whether the bag be drawn through the bite of the rollers of the truck while the latter is held stationary or the bag may be held stationary and the truck drawn over the
35 same, and the flow of the contents of the bag are not only delivered with any desired force, but may be entirely suspended by a cessation of the relative movements of the bag or truck.

The rod F in the upper edge of the bag not only prevents the corrugation or crimping while under traction, as hereinbefore explained, but prevents this result at all other times. 40

Having described the construction and operation of my improved syringe and truck and its many advantages, what I claim as new, and desire to secure by Letters Patent, is— 45

1. In a syringe, the combination with a fluid-containing bag, provided with a handle at one end and a hose connection at the opposite end, a truck-frame adapted to open to receive the bag, and provided with rollers, adjustable relative to one another, and adapted to travel over the bag to force the contents thereof through the nozzle, substantially as hereinbefore set forth. 50

2. A water-bag syringe closed at its upper end to form a double-thickness margin from edge to edge, adapted to pass between compressing-rollers, and provided at each corner with an eyelet or gromet, and provided at its lower end with an induction and eduction conduit adapted for connection with a nozzle-hose, substantially as hereinbefore set forth. 55

3. A water-bag closed at its top and provided with a hose connection at its bottom, the top cut away centrally and bridged with a metal rod secured to the top each side of the opening, whereby the rod may subserve the purpose of a handle, substantially as hereinbefore set forth. 60

In testimony whereof I affix my signature in presence of two witnesses. 65

WM. MORE DECKER.

Witnesses:

FRANK A. ROBERTS,
C. D. CHAMBERLAIN. 70