C. B. DICKINSON.

Syringe.

No. 213,979. Patented April 8, 1879.

Fig. 1.

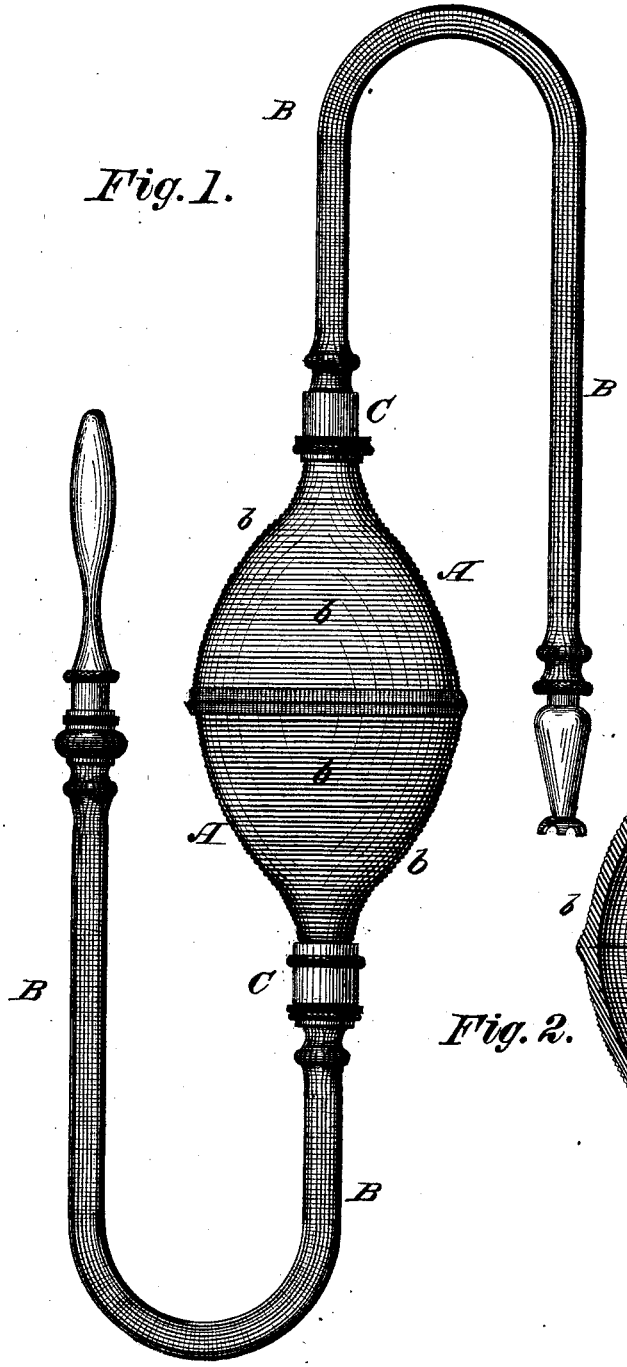
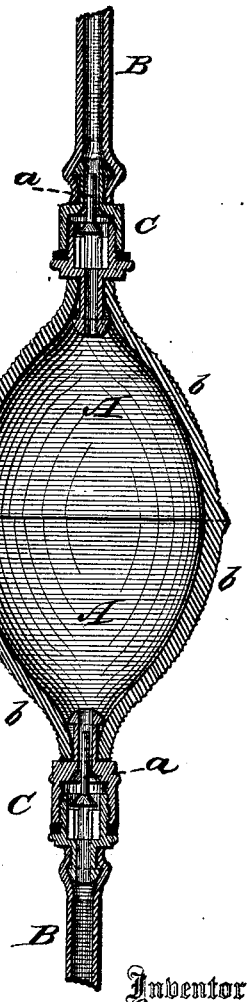


Fig. 2.



Witnesses:

P. C. Dieterich.

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UNITED STATES PATENT OFFICE.

CHARLES B. DICKINSON, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN SYRINGES.

Specification forming part of Letters Patent No. **213,979**, dated April 8, 1879; application filed February 25, 1879.

To all whom it may concern:

Be it known that I, CHARLES B. DICKINSON, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Syringes; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to that class of syringes which have a rubber bulb and rubber-tubing; and it consists particularly in the construction of the rubber bulb, as will be hereinafter more fully set forth, and pointed out in the claims.

In the annexed drawings, which fully illustrate my invention, Figure 1 is a side elevation of a syringe embodying my invention. Fig. 2 is a longitudinal section of the bulb.

A represents the rubber bulb, to which the rubber-pipes B B are connected by couplings C C, constructed in any of the known and usual ways. These couplings are provided with the valves *a a*, arranged to operate in the same manner as in other syringes of this character. The rubber tubing or pipes B B have the usual inlet and outlet nozzles connected thereto.

The rubber bulb A is made ribbed, as shown at *b b*, the ribs running around the bulb, thereby strengthening, and also at the same time ornamenting, the bulb.

I am fully aware that rubber bulbs have been ribbed before; but in such cases the ribs have run lengthwise, and instead of strengthening the bulb it has had the effect of weakening the same, since when a bulb gives out it almost generally does so by cracking lengthwise, and the ribs running lengthwise renders the rubber more liable to crack in that direction. But by my invention of running the ribs around the bulb this difficulty is obviated, giving the bulb more power and strength, and preventing its cracking or breaking, as heretofore.

The bulbs used in this class of syringes have generally been made in oval form, and when compressed by grasping with the hand or fingers, the rubber invariably forms, as it were, shoulders which act as stops for the water or liquid, preventing its free flow from or through the tubing. I obviate this difficulty by making the center of the bulb larger, or, in other words, making it as if it were of two cones placed with the large ends together, whereby when the bulb is compressed the liquid will be forced out in a direct line through the tubing; and by this means I increase the strength and working power of the bulb very materially.

The rubber tubing B is also ribbed longitudinally, which adds to its appearance and prevents cracking. The rubber tubing, as ordinarily used, is smooth, and will soon split or crack; but by my invention of making said tubing ribbed longitudinally this difficulty is obviated, as the tubing is thereby made more strong and durable.

I am aware that a rubber bulb having a single central rib running around the same is not new, and I do not claim such as my invention. In my rubber bulb a series of ribs are used, running around the bulb, and said series extends over the entire bulb, whereby the strength and power are materially increased, and the cracking of the bulb lengthwise is prevented.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a syringe, the rubber bulb A, formed with a series of ribs running around the bulb, and said series extending over the entire bulb, substantially as and for the purposes herein set forth.

2. In a syringe, the rubber tubing B, ribbed longitudinally or otherwise, for the purposes herein set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

CHARLES B. DICKINSON.

Witnesses:

EDWARD A. DOYLE,

WILLIAM HUGHES.