

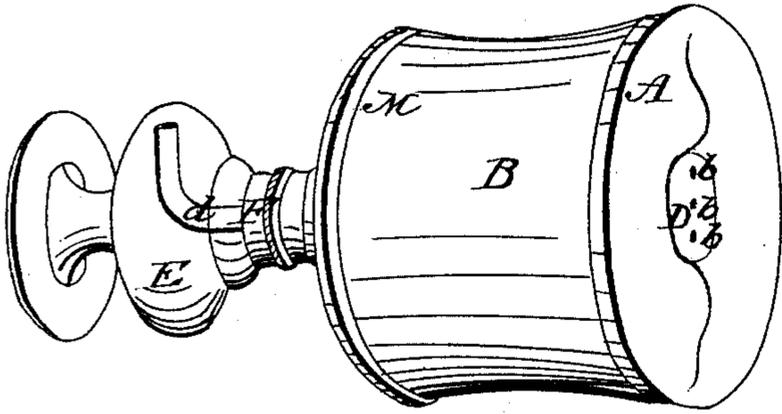
*E. Waters,*

*Breast Pump,*

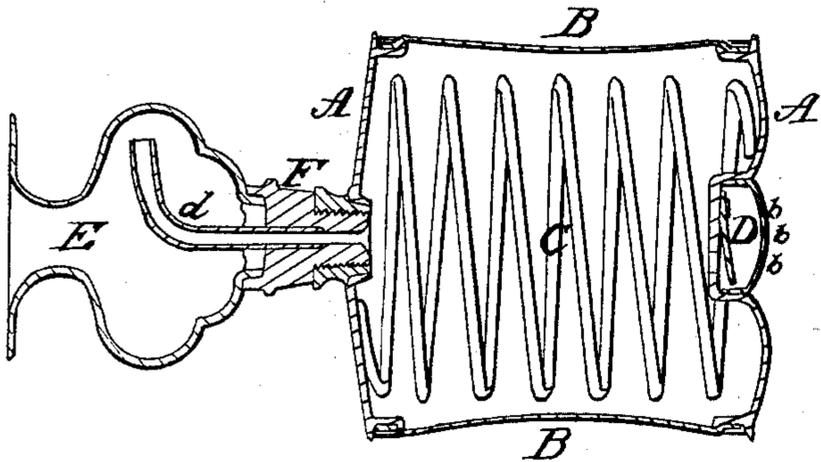
*No 11,623,*

*Patented Aug. 29, 1854.*

*Fig. 1.*



*Fig. 2.*



# UNITED STATES PATENT OFFICE.

E. WATERS, OF TROY, NEW YORK.

## BREAST-CUP.

Specification of Letters Patent No. 11,623, dated August 29, 1854.

*To all whom it may concern:*

Be it known that I, ELISHA WATERS, of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Breast-Cups, which can be also Applied to Cupping and Leeching Glasses; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the breast cup and Fig. 2, is a longitudinal vertical sectional view taken through the center of the cup (the spring being represented in full) the same letters having reference to like parts in both figures.

The nature of my invention consists in the arrangement of a diaphragm pump, provided with a curved tube attached to the socket of a glass breast cup and projecting into it a sufficient distance to prevent the milk from flowing into the cylinder, or diaphragm, while it also forms a passage for the suction of the air from the glass cup into the cylinder or diaphragm in operating the instrument.

The construction and operation, is as follows viz: To the cylinder or diaphragm heads (A A) is attached firmly a sheet of india rubber cloth or other air tight flexible substance (B) which forms the diaphragm or cylinder, within which is arranged the spiral spring (C). When the heads are pressed together, the air contained in the diaphragm or cylinder is expelled through the valve (*a*) and escapes through the vents (*b b b*) in the valve cover (D). The air being expelled; the pressure is removed from

the heads, and the spring (C) being permitted to act, presses against the two heads, and expands the cylinder or diaphragm, in doing which the valve (*a*) closes, and prevents the admission of external air; consequently there is a sufficient vacuum produced in the cup (E) and diaphragm or cylinder (B) for the purposes required; communication is had through the curved tube (*d*) attached to the socket (F) of the glass cup, for the suction of air from the cup into the diaphragm or cylinder; said tube being extended into the cup sufficiently and curved, when used the end of the tube in the cup is held uppermost, in order to prevent the milk from flowing into the diaphragm or cylinder.

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

1. Connecting the chamber of the diaphragm pump with the breast cup E, by means of the curved exhaust tube *d*, by which the said breast cup can be nearly filled with milk from the breast, without allowing any portion of its contents to flow into the chamber of the pump; which prevents the necessity of frequently removing the cup from the breast, whilst using the instrument, substantially as herein set forth.

2. I also claim the arrangement of the said breast cup and curved exhaust tube, with the within described diaphragm pump, substantially as set forth, by which the patient is enabled to use the instrument without the aid of an assistant.

E. WATERS.

Witnesses:

JNO. J. SAVAGE,  
A. SNYDER.