

No. 633,706.

Patented Sept. 26, 1899.

R. SWARTZ.
WARMING VESSEL.
(Application filed Nov. 25, 1898.)

(No Model.)

Fig. 1.

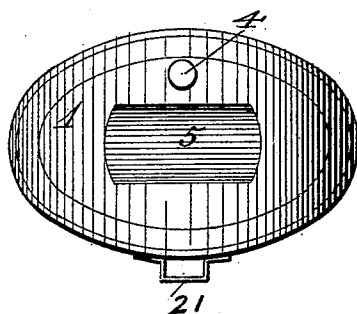


Fig. 2.

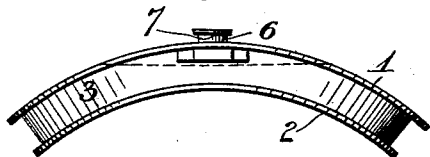


Fig. 3.

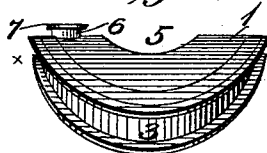
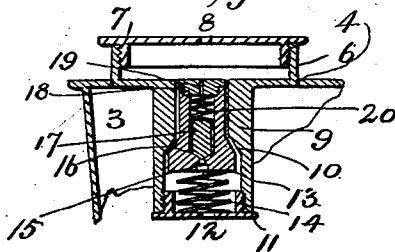


Fig. 4.



WITNESSES:

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WARMING VESSEL.

SPECIFICATION forming part of Letters Patent No. 633,706, dated September 26, 1899.

Application filed November 25, 1898. Serial No. 697,342. (No model.)

To all whom it may concern:

Be it known that I, RICHARD SWARTZ, a citizen of the United States, residing at Pine Bluff, in the county of Jefferson and State of Arkansas, have invented certain new and useful Improvements in Warming Vessels; 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 is a warming vessel; and it consists in the novel construction and arrangement of its parts, as hereinafter set forth in the following specification and claims thereunto attached.

My invention is designed to apply heat to the bodies of sick persons, and is adapted to be used in hospitals and private families. The vessel may be filled with hot water or hot air. While primarily intended as a warming vessel, it may also be used as a cooling vessel, in which case it should be filled with broken ice or cold water. Thus the part to which the application is to be made may be cooled and the inconvenience of dripping towels avoided.

In the accompanying drawings, Figure 1 is a top plan view of my invention. Fig. 2 is an edge view. Fig. 3 is an end view, and Fig. 4 is a sectional detailed view of the stopper and valves used in connection therewith.

My invention is described as follows:

1 is the top wall of my invention, the vessel being elliptical in shape as regards its face. In edge view it represents the arc of a circle, its top and bottom walls being parallel to each other, except as to depression 5, throughout their entire length. 2 represents the bottom wall, and 3 the end and side walls. These parts may be united together in any substantial way that is air or water tight.

In the top of the vessel and near one edge thereof is a perforation 4, through which the vessel may be filled with hot water or hot air or cold water or ice. In the top wall 1 is a curved depression 5, running lengthwise of the wall and wide enough so that a portion of a man's arm or leg may be embedded therein.

The vessel is made circular in shape, so that the concavity of the wall 2 will enable it to be applied closely to the abdomen, to the back, or to any curved portion of the body or large parts of any of the limbs.

6 is a neck fitted in the perforation 4. It may extend a little above the surface of wall 1, as shown in Figs. 2 and 3; but it may be countersunk. The inside of said neck is provided with threads, into which is screwed a cap 7, provided with a central perforation 8. Said neck 6 has extending from its inner end an additional neck 9, provided with a valve-seat 10, and in the lower end of said neck 9 is screwed a cap 11, having a central perforation 12. In this neck 9 is situated a valve 13, having an enlarged part to fit on the valve-seat 10. On the inner face of the cap 12 rests one end of a spiral spring 14, its other end resting on valve 13. This holds said valve up snugly against valve-seat 10. When the water cools in the vessel and contracts, the air on the outside of the vessel forces the valve 13 down, and the air passes through perforation 8 in the cap 7 down around the valve 13 until the vessel is full of air, when the valve again is pressed back into seat 10 by spring 14, the object being to relieve a vacuum in the vessel and prevent the top wall giving way under pressure, one of the purposes of the vessel being to warm the back, the vessel being embedded in the mattress top side down, the patient lying with his back in the curve of the inner wall. Said valve has through its entire center a perforation 15 and a valve-seat 16, and situated in said valve-seat is a steam-valve 17. In the top end of the perforation 15 is a screw-cap 18, having in its center a perforation 19. A spiral spring 20 has one end bearing against steam-valve 17, and its other end rests against the lower end of the cap 18. When the hot water in the vessel makes sufficient steam to endanger its safety, the steam passes up through perforation 12, raises valve 17 from its seat, and passes on up through perforations 19 and 8 until the vessel is relieved from excessive pressure.

A hinged handle 21 is secured to one side of the vessel for convenience in handling the vessel.

My cylinder and valves may be used in connection with any warming vessel when the shape is such that it may be applied thereto; but a warming vessel substantially as above described is most preferable.

Having described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

1. In a warming vessel, substantially as shown and described, a threaded neck 6, secured in perforation 4, of top wall 1; perforated cap 7, screwing into said neck; neck 9, secured to the lower end of neck 6, and extending into said vessel, and provided with a valve-seat 10; valve 13, situated in said neck and provided in its cavity with a valve-seat 16; perforated cap 11, screwing into the inner end of neck 9; spiral spring 14, one end secured to cap 11 and the other to the inner end of valve 13; perforated cap 18, screwing into the outer end of valve 13; valve 17, fitting in valve-seat 16, of valve 13; spring 20, one end secured to the upper end of valve 17, and the other end to the lower end of cap 18, substantially as shown and described and for the purposes set forth.

2. In a warming vessel, substantially as shown and described, a threaded neck 6, secured in the perforation 4, of top wall 1; per-

forated cap 7, fitting into said neck; neck 9, extending inwardly from the inner end of neck 6, and provided in its cavity, with a valve-seat 10; valve 13 situated in said neck and provided in its cavity with a valve-seat 16; perforated cap 11, fitting into the inner end of neck 9; spiral spring 14, one end resting against the inner end of cap 11 and the other against the inner end of valve 13; perforated cap 18, fitting into the outer end of valve 13; valve 17, fitting in valve-seat 16 of valve 13; spiral spring 20, one end resting against the upper end of valve 17 and the other against the lower end of cap 18, substantially as shown and described and for the purposes set forth.

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

RICHARD SWARTZ.

Witnesses:

OLIVER GALBRAITH,
W. F. COLEMAN.