A. P. DANIEL.

STEAM CUP.

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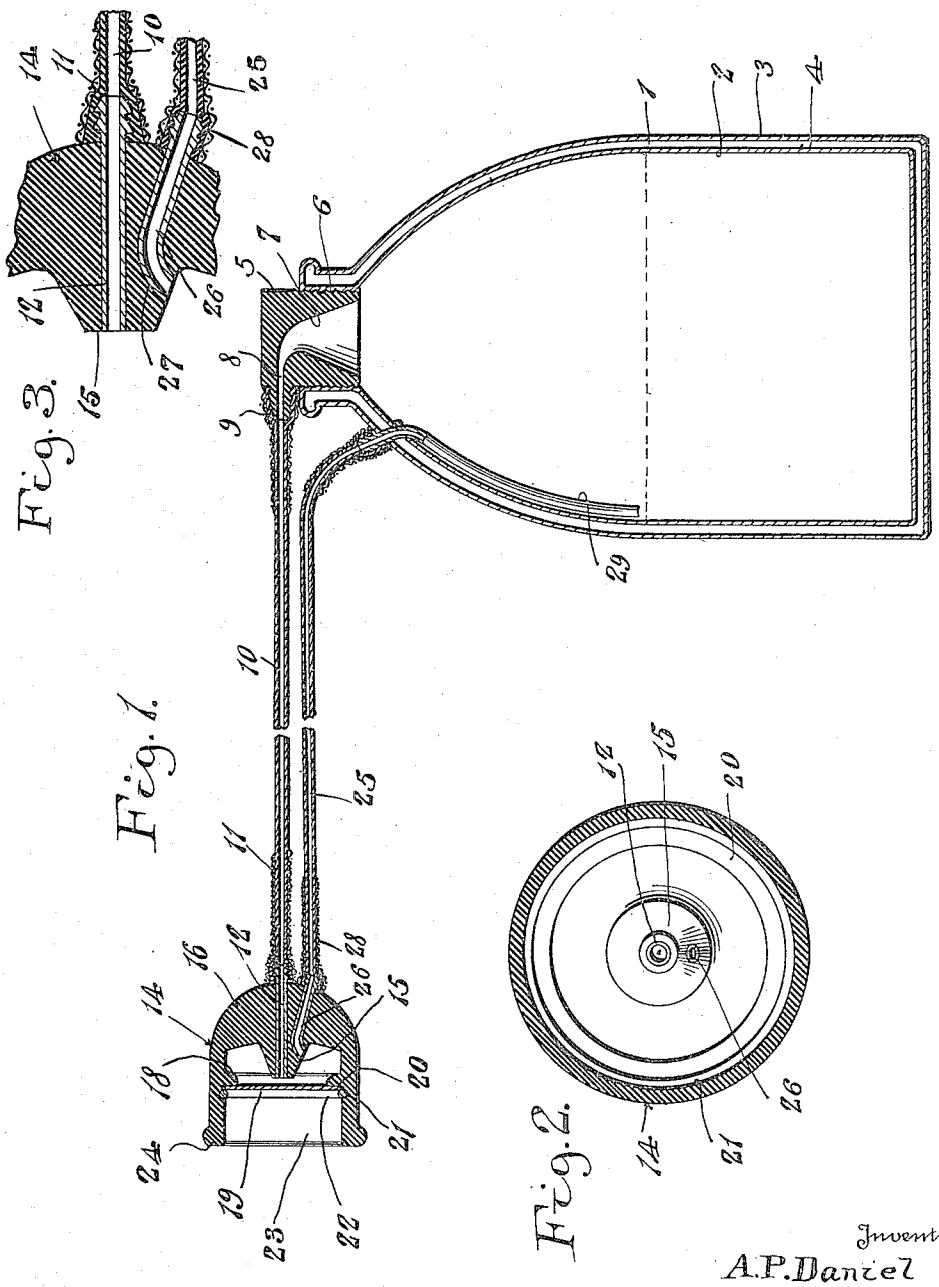


Fig. 3.

Fig. 1.

Fig. 2.

Witnesses

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STEAM-CUP.

1,226,473. Specification of Letters Patent. Patented May 15, 1917.

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To all whom it may concern:

Be it known that I, Mrs. ALVA P. DANIEL, a citizen of the United States, residing at Commerce, in the county of Ottawa and State of Oklahoma, have invented certain new and useful Improvements in Steam-Cups; 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.

This invention relates to a steam cup for applying heat to any part of a person's body, for the purpose of relieving pain.

An object of this invention is to provide a container for boiling water, which is constructed of vacuum walls so as to keep the boiling water hot for a comparatively long time, to provide a cup which is connected to the container through the medium of flexible conduits so that the steam generated within the container will travel through the flexible conduit to the cup, for the purpose of heating the air within one portion of the cup.

Another object of this invention is to provide a cup as specified which has diaphragm dividing the interior of the cup into compartments, one of which has communication with the interior of the container, and the other of which compartment is adapted for containing the hot air and confining it about any desired spot of a person's body.

With the foregoing and other objects in view this invention consists in such novel features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings and claimed.

In describing the invention in detail reference will be had to the accompanying drawings wherein like characters designate like and corresponding parts throughout the several views, and in which:—

Figure 1 is a vertical section through the improved steam cup.

Fig. 2 is a section through the cup with the diaphragm removed, and

Fig. 3 is an enlarged detail section through the cup taken at right angles to the section illustrated in Fig. 2.

Referring more particularly to the drawings, 1 designates the container for the boiling water, which container is constructed of spaced walls 2 and 3 having a vacuum 4 positioned therebetween, which prevents the escape of the heat from the container, and also prevents the action of the air surrounding the container on the boiling liquid contained therein. The container 1 has a screw plug 5 detachably mounted in the mouth 6 of the same, which plug is provided with a substantially frusto-conically shaped recess 7 formed centrally therein, communicating with the interior of the container. A substantially horizontally positioned duct 8 communicates with the apex of the frusto-conically shaped recess 7 and it extends through a nib 9 formed upon the plug 5. A flexible conduit or hose 10 is connected to the nib 9 and it is covered with a fabric covering 11. The tube or conduit 10 has its end remote from the end which is connected to the nib 9, and it is covered with a fabric covering 11. The tube or conduit 10 has its end remote from the end which is connected to the nib 9, mounted over the outer corrugated end of a sleeve 12 which extends through the bottom of the cup 14. The cup 14 is preferably constructed of hard rubber, and it has a substantially frusto-conically shaped portion 15 projecting into the same from the center of its bottom 16. The tube 12 extends through the projection 15 and is provided for guiding the steam from the tube 10 into the compartment 18 formed in the cup rearwardly of the diaphragm 19. The diaphragm 19 is constructed of any suitable thin metal such as aluminum or the like, and it rests against a shoulder 20 formed within the interior of the cup 14. The sides of the cup 14 are provided with an annular groove 21 in which is seated a spring ring 22. The spring ring 22 engages the outer surface of the diaphragm 19 around its edge, and securely holds the diaphragm in place, forming the compartments 18 and 23 within the cup. The outer or upper edges of the sides of the cup 14 are preferably rounded as shown at 24. A flexible tube 25 has communication with the interior of the compartment 18 through a tube 26, to which the flexible tube or conduit 25 is connected as clearly shown in Fig. 3 of the drawings. The tube 26 curves downwardly as shown at 27, so that its open end which communicates with the compartment 18 will be positioned below the open end of the tube 12. The flexible conduit or tube 25 is covered with a fabric coating 28,

and it is connected to a hard rubber tube 29, which extends through the outer walls of the container 1 and downwardly into the same as clearly shown in Fig. 1 of the drawing. The tubes 25 and 29 are provided for carrying the condensed steam from the compartment 18 to the interior of the container 1.

In the operation of the improved steam cup; when the plug or cap 5 is removed from the opening 6, and the container is half filled with boiling water, after which the plug or cap is inserted in the mouth 6, forming an air tight closure therefor. The steam arising from the boiling within the container will pass upwardly through the opening 7, duct 8, conduit 10 and tube 11 into the compartment 18 of the cup 14. The cup 14 is positioned so that the outer open end of the same will be in engagement with the desired portion of a person's body. The steam entering the compartment 18 will heat the air in the compartment 23, and the heated air engaging the body of the person using the device will tend to nullify or relieve pain in the portion of the body acted upon by the heated air. The pressure of the steam entering the compartment 18 will force the condensed steam through the tube 26, flexible tube 25 and the tube 29 back into the container 1.

From the foregoing description taken in connection with the accompanying drawings the advantages of construction and of the method of operation of the improved steam cup will be readily apparent to those skilled in the art to which this invention appertains, and while in the foregoing description, the principle of the operation of this invention has been described together with various features of construction, it is to be understood that certain minor features of construction, combination and arrangement of parts may be altered to suit practical conditions provided such alterations are comprehended within the scope of what is claimed.

What is claimed is:—

1. In a device as set forth, the combination of a container having vacuum walls, and adapted for containing boiling water, of a body engaging cup, a flexible conduit communicating with said container and said body engaging cup for conveying steam from the container to the cup, a partition extending through said cup and dividing the interior of the same into two compartments.

2. In a device as set forth, the combination of a container having vacuum walls, and adapted for containing boiling water, of a body engaging cup, a flexible conduit communicating with said container and said body engaging cup for conveying steam from the container to the cup, a partition extending through said cup and dividing the interior of the same into two compartments, and a second flexible conduit communicating with said cup and said container for conveying condensed steam from the cup to the container.

3. In a device as set forth, the combination, of a container having vacuum walls, of a plug detachably seated in the mouth of said container, a body engaging cup, a diaphragm extending through said body engaging cup and dividing the same into compartments, a flexible conduit connected to said cup and to said plug, said plug provided with a centrally disposed opening for permitting the passage of steam from said container through the plug, said conduit and into one of the compartments of said cup for heating the air in the other compartment of the cup, and means for conveying the condensed steam from said body engaging cup to said container.

4. In a device as set forth, the combination of a container, a body engaging cup, a diaphragm extending through said cup and dividing it into a pair of compartments, flexible tubing connecting said container and said cup whereby steam from the container will be delivered to one of the compartments of said cup, a second flexible member communicating with said steam receiving compartment of said cup and the interior of said container for returning condensed steam to said container, a rigid tube positioned within said container and extending downwardly along one wall of the same, said rigid tube having connection with said second named flexible member for delivering the condensed steam into the container at a point below the point from which the steam passes from the container into the first named flexible member.

5. In a device as set forth, the combination, of a container having vacuum walls, a plug seated in the mouth of said container, a body engaging cup, a diaphragm extending through said body engaging cup and dividing the same into compartments, a flexible conduit connected to said cup and to said plug, said plug provided with a centrally disposed opening for permitting the passage of steam from said container through the plug, said conduit and into one of the compartments of said cup for heating the air in the other compartment of the cup, a second flexible member communicating with the interior of the steam receiving compartment of said cup, a rigid tube positioned within said container and having one end connected to said second flexible tube for returning condensed steam from the cup into the container at a point below said plug.

6. In a device as set forth, the combination of a container having a mouth, a plug detachably seated in said mouth, a body engaging cup, a flexible conduit connected to

said cup and to said plug, said plug provided with a centrally disposed opening for permitting the passage of steam from said container through the plug, said conduit and into said body engaging cup, a second flexible member communicating with the interior of said cup and the interior of said container at a point below the inner end of said plug for delivering condensed steam from said plug to said container.

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

MRS. ALVA P. DANIEL.

Witnesses:

GARNETT BEMAN,

WM. JOHNSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."