

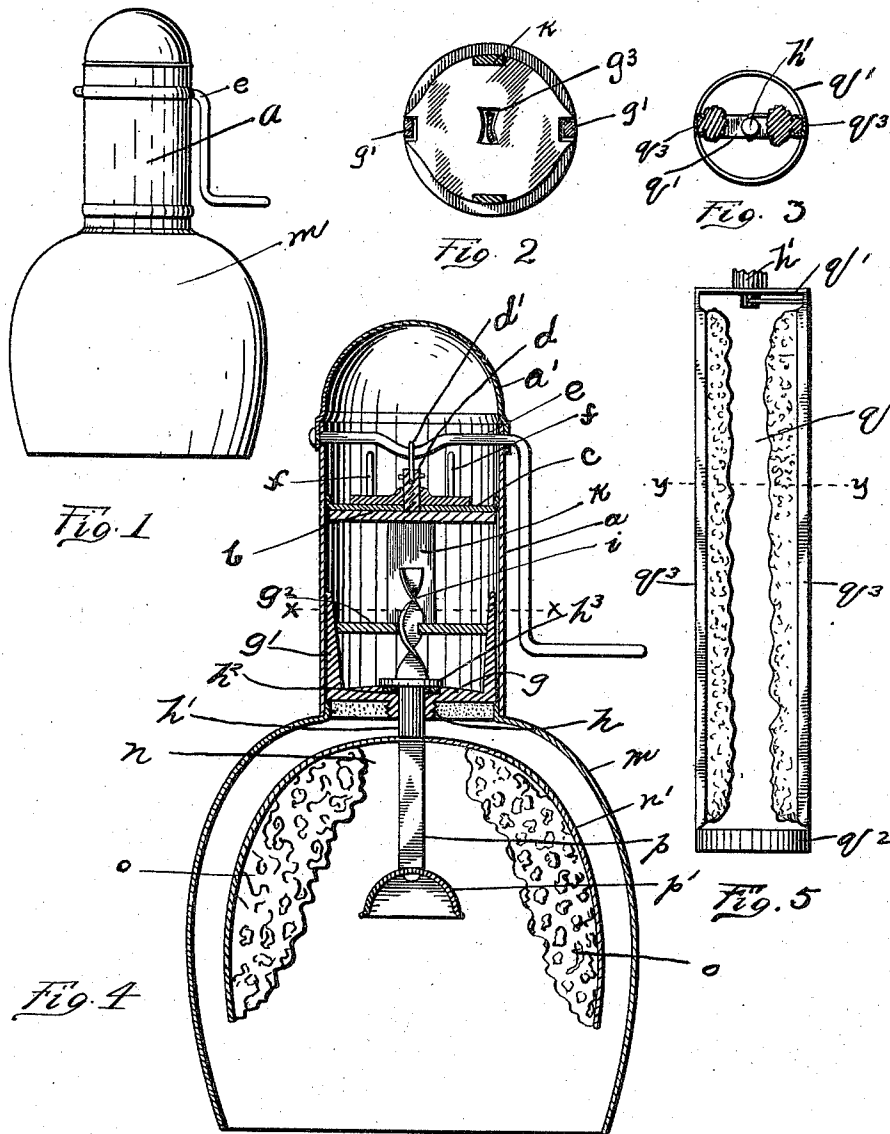
(No Model.)

2 Sheets—Sheet 1.

J. H. BEVINGTON.
CUPPING DEVICE.

No. 576,337.

Patented Feb. 2, 1897.



WITNESSES:

Lawrence L. Barnard
A. L. Phelps

INVENTOR

James H. Bevington
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ATTORNEY

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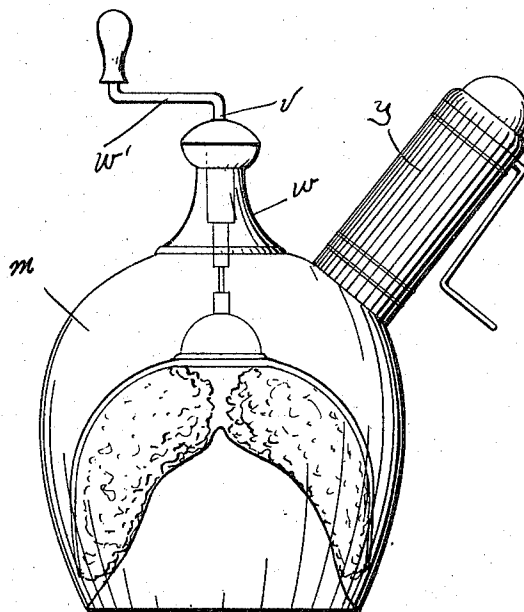


Fig. 6.

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UNITED STATES PATENT OFFICE.

JAMES H. BEVINGTON, OF COLUMBUS, OHIO.

CUPPING DEVICE.

SPECIFICATION forming part of Letters Patent No. 576,337, dated February 2, 1897.

Application filed September 14, 1896. Serial No. 605,686. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. BEVINGTON, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Cupping Devices, of which the following is a specification.

My invention relates to the improvement of cupping devices of that class which are adapted for use in developing, enlarging, and strengthening the parts of the human body.

The objects of my invention are to provide an improved device of this character of such construction and arrangement of parts as to greatly facilitate its effective use and operation, and to produce other improvements which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a view in elevation of my improved cupping device. Fig. 2 is a transverse section on line *xx* of Fig. 4. Fig. 3 is a similar section on line *yy* of Fig. 5. Fig. 4 is a central vertical section of my device enlarged from that shown in Fig. 1. Fig. 5 is a view in elevation of a modified form of cup-frame, and Fig. 6 is a view in elevation of a modified form of cupping device.

Similar letters refer to similar parts throughout the several views.

In the construction of my device I employ a pump-cylinder *a*, which also serves as a stem for the cup and which is closed at its outer end with a suitable cap *a'*. Within the cylinder *a* I employ a piston or plunger head *b*, which is of slightly less diameter than said pump-cylinder and which carries, as shown, a cup or valve leather *c*, the latter being of a disk form and of such size as to cause its outer edge portion to turn up against the inner wall of the cylinder. The plunger-head thus formed is provided with a central vertical stem *d*, which, extending upwardly, is jointly connected by means of a link or arm *d'* with the outturned or crank portion of a transverse arm of a crank *e*, said crank being journaled in the upper portion of the cylinder and having its handle portion projecting, as shown, on the outer side thereof.

As indicated at *f*, the plunger-head is preferably provided on its upper side with up-

wardly-projecting guide-pins, said pins being arranged adjacent to the periphery of said plunger-head. *g* represents the bottom disk of the pump-cylinder, the same serving to close the bottom of the cylinder, with the exception hereinafter noted. This bottom disk is provided at diametrically opposite points with upwardly-projecting arms *g'*. *g*² represents a guide-plate or plunger-disk which, through the medium of arms *k*, which depend from the plunger *b*, is supported below said plunger-body. This plate *g*² is provided with a central slotted opening *g*³. The under side of the bottom disk *g* is provided with a downwardly-extending boss or neck portion *h*, and through this central portion of said bottom disk is formed an opening which is adapted to receive a rotating stem or shaft *h'*. About the mouth or inner end of the shaft-opening which passes through said bottom disk is formed a depression or seat which, as indicated in the drawings, is adapted to receive a flexible valve-ring *h*², the latter being formed of leather or other suitable material. On the outer side of this valve-ring *h*² bears the peripheral flange *h*³ of the shaft *h'*. The shaft *h'*, on the outer side of its head or flange portion *h*³, is provided with a twisted or spiral screw-stem extension *i*, the latter passing loosely through the slotted opening *g*³ of the plate *g*².

As indicated in the drawings, the lower end of the pump-cylinder has connected therewith the short neck portion of a cup-body *m*, the latter being preferably formed of glass, although it is evident that other materials may be employed. That portion of the shaft *h'* which projects within the cup is designed to carry a sponge-frame, which in the form illustrated in Fig. 4 of the drawings is indicated at *n* and which consists of outwardly-projecting fingers *n'*, which conform to the curvature of the cup *m*. These fingers carry on their inner sides sponges or other suitable absorbents *o*. The shaft *h'* is provided with a central extension *p*, which projects within the sponge-carrying frame formed as above described, and on the extremity of this arm or extension *p* is secured or formed a substantially cup-shaped nipple-shield *p'*.

In utilizing the herein-described device the mouth of the cup *m* is designed to be pressed

against the body over the part to be treated, and when the form of cup indicated in Fig. 4 of the drawings is employed said cup is designed to cover a female breast, the sponges being thus made to embrace the breast and the nipple-shield to receive the nipple. Previous to putting the cupping device into use the sponges or other absorbents are saturated with alcohol or other suitable material or composition.

In operating my device the rotation of the handle of the crank *e* results, as will readily be seen, in a reciprocating motion of the plunger within the cylinder and through the connection of the plunger with the plate *g*² in a rotation of the screw-shaped stem *i* of the shaft *h'*, this latter motion being caused, as will readily be seen, by the contact of the sides of the slotted opening *g*³ with the twisted or thread portions of said stem *i*. It will thus be seen that the upward and downward or outward and inward pumping action of the plunger must result in a corresponding backward and forward or oscillatory motion of the sponge-carrying frame within the cup.

In the pumping action above referred to the outward movement of the plunger and the consequent following movement of the air of the cylinder results in the volume of air which is contained in the cup being drawn outward along the shaft *h'*, and thence into the cylinder. This escape of the air from the cup is, as will readily be seen, admitted by the natural rising of the edges of the valve-ring *h*², which occurs through the air-pressure from below. In the inward movement of the plunger the edge of the cup-leather *c* is, by the pressure of air contained in the inner portion of the cylinder and previously drawn from the cup, forced inward sufficiently to allow the air to escape about said plunger into the outer end of the cylinder or cup. In this inward movement or back stroke of the plunger it is also obvious that the valve-ring *h*² will, by pressure of the air of the cylinder, be retained in a closed or normal position.

In the manner above described it will readily be seen that not only is the air withdrawn from the cup-body and a vacuum created therein, but that at the same time an oscillatory motion is imparted to the sponge-carrying frame.

As is well known, the formation of the vacuum within the cup results not only in the distention or enlarging of the part or parts covered by said cup, but in drawing the blood through the vessels leading to these parts and in the opening of the pores of the skin. In this enlarged and distended condition the breast or other part of the body on which the cup is used is subjected to the rubbing action of the sponge, and thereby allowed to take up, to a greater or less extent, alcohol or other substance with which the sponges have previously been saturated. As is well known, the above-described operation and application to

parts which heretofore have been weak, clogged, or but partially developed result in a clearing of the blood-vessels leading to said parts, in the uniform flow of the blood through the same, and to the consequent enlargement and restoration of the same to a healthy and natural condition.

In case other parts of the body than the breasts are intended to be treated by my improved cup device other forms of sponge-carrying frames and cups may be employed than those shown in Fig. 4. As indicated in Figs. 3 and 5, I may employ an elongated frame *q*, consisting of bottom and top rings *q'* *q*², these rings being connected by sponge-holding bars *q*³, which extend between them. It is evident that a cup may be made to surround said frame of corresponding form therewith. This elongated cup-cylinder is designed to receive a corresponding-shaped part of the body and admit of its being treated in the manner described for the breast and for the purposes set forth.

As indicated in elevation in Fig. 6 of the drawings, I may employ a sponge-holding shaft *v*, which passes through and is suitably journaled in a neck or stem portion *w* of the bulb *m*, this shaft carrying on its outer end a suitable crank *w'* and on its inner end portion within the cup a sponge-holding frame, as shown. In case this latter construction is employed I provide a pump-cylinder *y*, which leads from the upper portion of the cup *m* at a point to one side of the stem *w*. This cup-cylinder I provide with an air-pumping mechanism similar to that employed in the cylinder *a*. In utilizing this last-described device, the vacuum is first created within the cup by the action of the pump within the cylinder *y*, after which the crank-handle *w'* may be rotated to produce the desired frictional action of the sponge within the cup.

From the construction and operation which I have herein shown, and described it will readily be seen that a simple, reliable, and effective device is produced for the purposes set forth which is of such construction and arrangement as to admit of its being readily and effectively operated by persons unskilled in the use of devices or instruments of this character.

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

1. In a cupping device the combination with a cylinder or stem portion *a* and a cup projecting from and communicating therewith, of a sponge-carrying frame depending within said cup and means for imparting an oscillatory or rotary motion to said sponge-frame, substantially as and for the purpose specified.

2. In a cupping device the combination with a cup, a stem portion projecting therefrom and a shaft journaled in said stem portion, said shaft carrying a sponge-holding frame within said cup and a crank on its outer end

portion, of a vacuum-pump mechanism also connected and communicating with said cup, substantially as and for the purpose specified.

3. In a cupping device the combination with
5 a pump-cylinder, a plunger-head contained therein and means for imparting a reciprocating motion to said plunger-head, of a cup connecting and communicating with said cylinder and a sponge-carrying frame rotatably
10 supported in said cup, substantially as and for the purpose specified.

4. In a cupping device the combination with
a cylinder, a reciprocating plunger contained therein and means for operating the same, of
15 a cup communicating with and supported from said cylinder, a shaft journaled in the lower portion of said cylinder and projecting within said cup and cylinder, a sponge-carrying frame on said shaft within said cup and
20 means whereby an oscillatory or rubbing movement is imparted to said sponge-frame

when said pump-plunger is operated, substantially as and for the purpose specified.

5. In a cupping device the combination with
a pump-cylinder, a reciprocating pump-plun- 25
ger arranged therein, a plate *g*² supported from said plunger and a slotted opening in said plate, of a cup supported from and communicating with said cylinder, a shaft journaled
30 in the bottom of said cylinder projecting within said cup, a sponge-carrying frame supported on the lower end of said shaft within said cup and a spiral or screw extension on said shaft which passes through said plate-
35 slot and means for imparting a reciprocating motion to said plunger within said pump-cylinder, substantially as and for the purpose specified.

JAMES H. BEVINGTON.

In presence of—

LOUIS B. LINDENBURG,
C. C. SHEPHERD.