

M. Mattson,

Vacuum Cup.

N^o 67,663.

Patented Aug. 13, 1867.

Fig. 1.

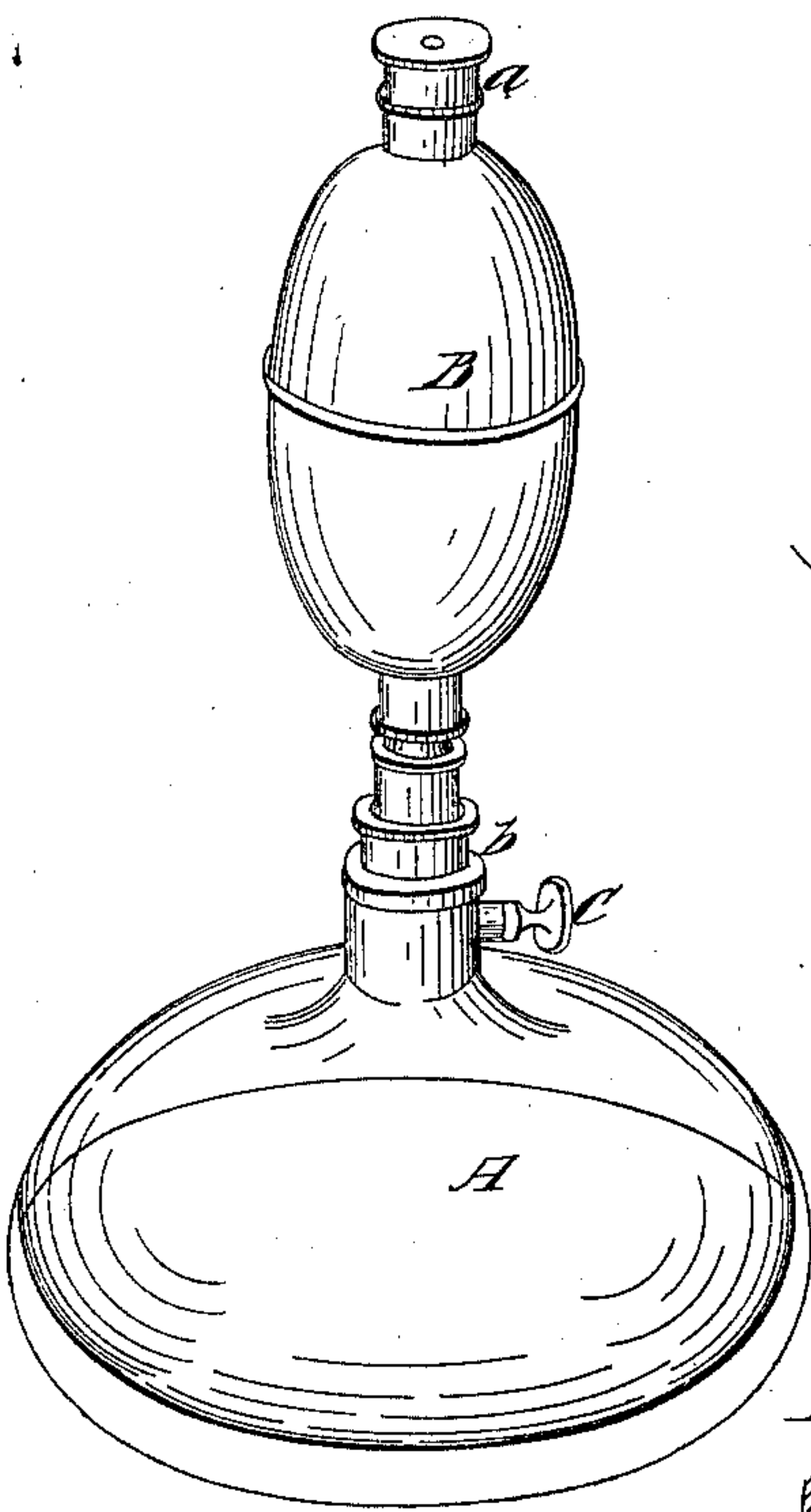


Fig. 2.

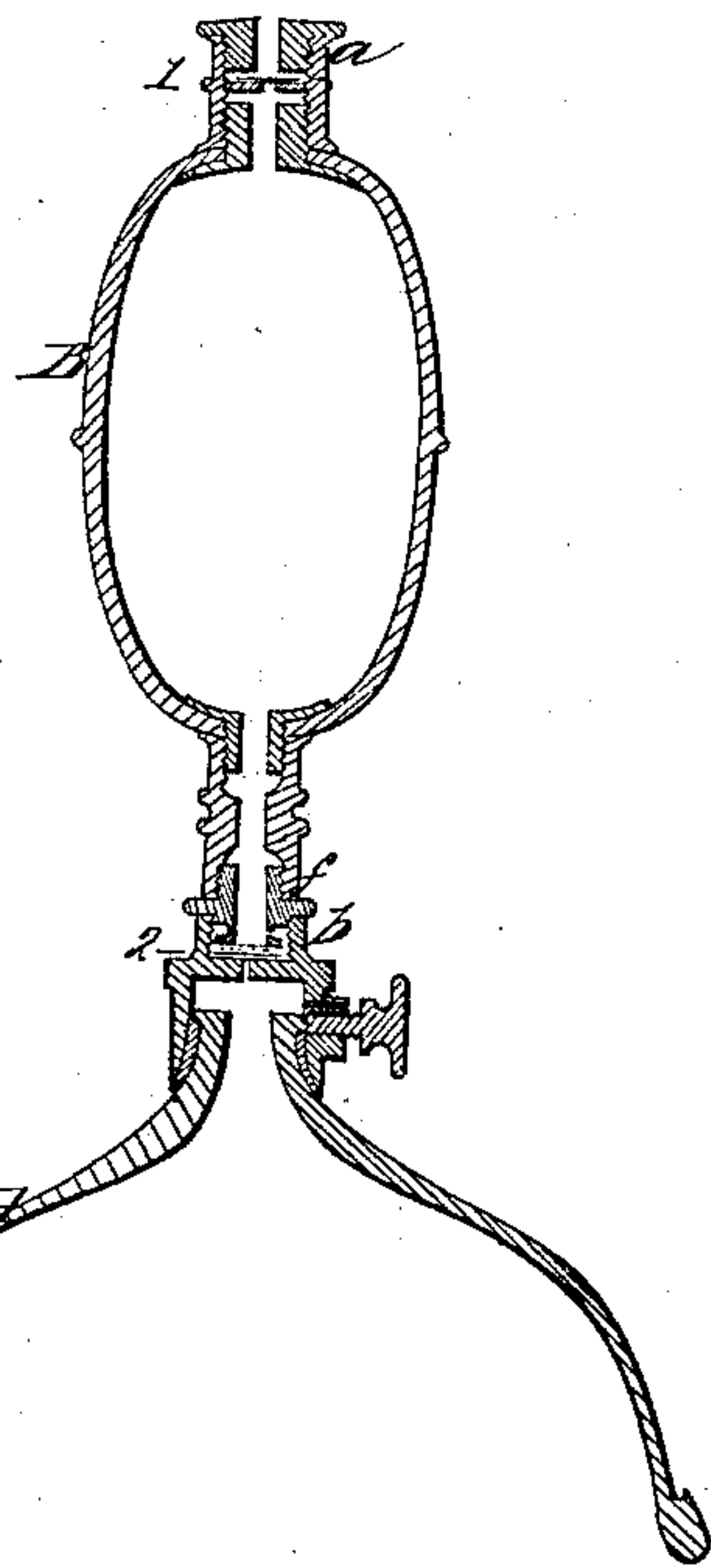


Fig. 3.

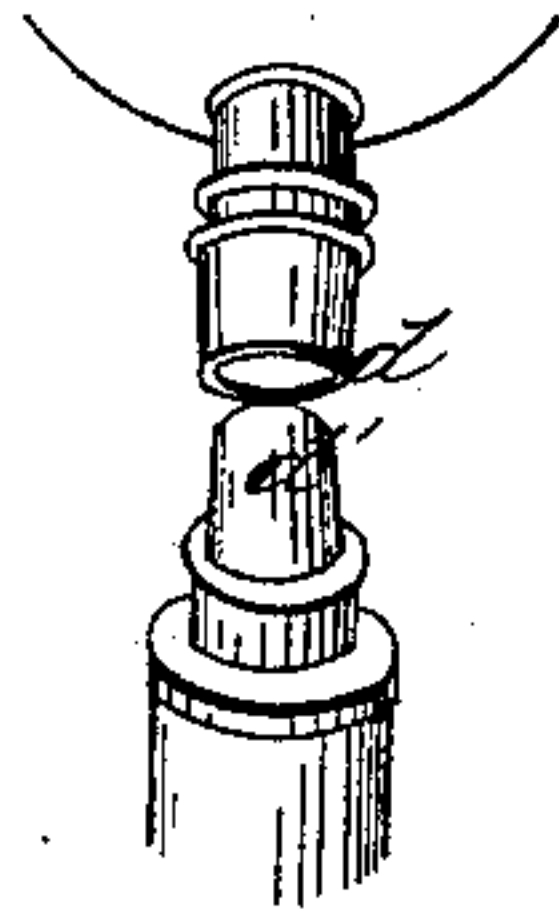
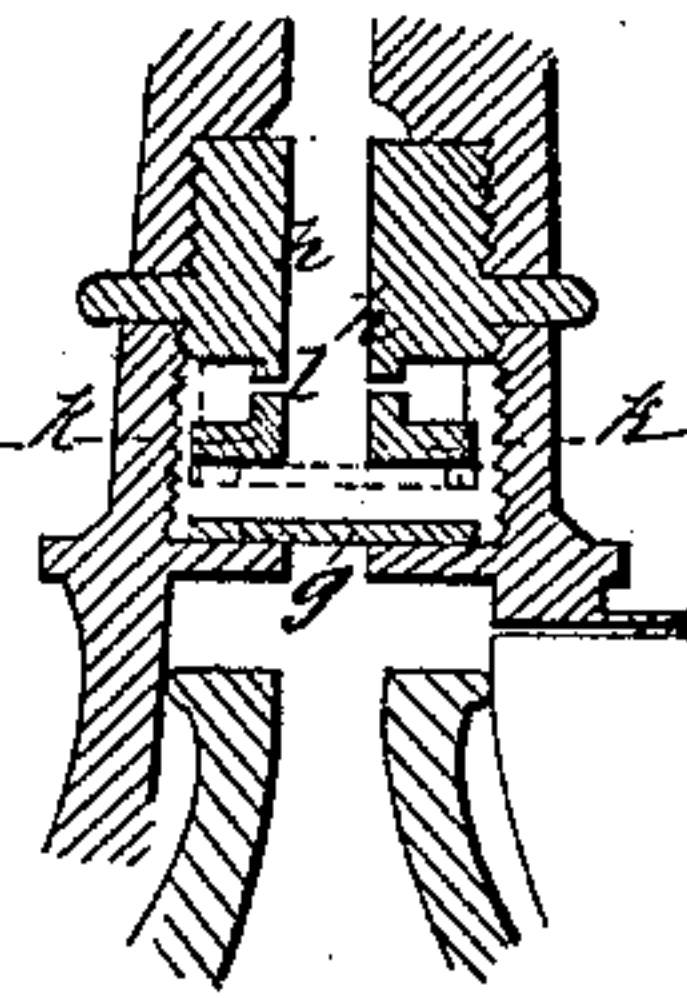


Fig. 4.



Witnesses:

J. D. Shaw
Fred B. Sears

Inventor:

M. Mattson.

United States Patent Office.

MORRIS MATTSON, OF NEW YORK, N. Y.

Letters Patent No. 67,663, dated August 13, 1867.

CUPPING APPARATUS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, MORRIS MATTSON, of the city of New York, in the county of New York, and State of New York, have invented a new and useful improvement in Vacuum-Cups for medical purposes; and I do hereby declare that the following is a full, clear, and exact description thereof, and of its mode or manner of operation, reference being had to the accompanying drawings and to the letters of reference marked thereon, and making a part of this specification.

My invention consists in an improved construction of vacuum-cup, by which it can be applied and used with greater convenience and with greater ease to the patient than is possible with those heretofore used.

My improved vacuum-cups are designed for dry or wet cupping, but chiefly the former, without any reference to the abstraction of blood by scarification. In dry cupping, the blood and other fluids are attracted into the vessels immediately within or under the cup, in a large quantity, in consequence of the partial vacuum which has been produced in the cup; and in various diseases, as those of the spinal cord and other parts of the body, this mode of practice is much esteemed by some physicians.

Figure 1 is a general representation of the cup and the apparatus attached thereto to produce a vacuum.

Figure 2 is a vertical section, *g*, fig. 1.

Figure 3 illustrates another manner of connecting the cup with the exhausting-apparatus.

The cup A may be of any desirable size, varying from an inch to four or five inches in diameter, according to the surface of the body to which it is to be applied. In cupping the abdominal region, for instance, a cup of the larger diameter just indicated may be conveniently and efficiently used. Along the spine, on the extremities, and upon the chest, excepting the female mammal, smaller cups will be required, in consequence of the inequalities of the surface to which they are applied.

Cupping was originally performed by holding the cupping-glass for an instant over the flame of a spirit-lamp, and immediately placing it upon the skin, with the result of causing the skin within the glass to swell or puff up, from the rapid ingress of the blood, &c., into the vessels, just in proportion to the rarefaction of the air by means of the spirit-lamp. As an improvement upon this method, elastic bulbs were attached to the smaller cupping-glasses for the purpose of producing the requisite vacuum; but no arrangement of valves in connection with the elastic bulbs, for the purpose of exhausting the air from a large or small cup by the pumping process, has been devised, so far as I am aware. Another improvement, so far as the larger cups are concerned, consists in the adaptation to the cup of a piston-pump or exhausting-syringe, by which the air is readily abstracted from the cup and the requisite vacuum produced; but the pump is liable to get out of order, and in working the piston the individual or operator must of necessity make more or less pressure upon the cup, which is objectionable in case of any tenderness or instability of the part to which the cup is applied.

My improvement consists in the adaptation to and combination with the cup of an elastic bulb, with suitable valvular arrangements whereby the air can be readily pumped or abstracted from a cup of the largest size, and by an easy, convenient, and attractive method.

The bulb B is fitted in its metallic connections *a* and *b*, with suitable valves 1 2, which act like those in an ordinary air-pump, exhausting the air from the cup A as the elastic bulb is compressed and expands. The bulb is more pleasant to handle than a pump made of brass or other metal or material, and may be rapidly contracted and expanded without making any pressure upon the cup, and thus avoiding all or nearly all pain or suffering in case of any soreness or irritability of the part to which the cup is applied. A bulb with a double neck, such as is in common use for elastic syringes, will answer the purpose very well; but I prefer a bulb, such as is represented in the drawings, and which is described and patented in Letters Patent granted to me November 19, 1861, and reissued October 18, 1864, and which, unlike the ordinary double-neck bulb, will remain free from leakage at the points to which the metal couplings are attached. This I deem a matter of very great importance. In connection with such elastic bulb, the valves which I prefer to use, as working with greater ease and precision, are those cut with a punch out of oiled silk, a thin sheet of rubber, or other equivalent material, and so arranged as to float loosely in the cavity, seen in fig. 2, opposite or against the figures 1 2, in which they are placed, in conformity with Letters Patent issued to me dated April 4, 1854. Such valve is shown more fully in fig. 4, and consists of a small disk, *g*, of rubber, oiled silk, or similar material,

the diameter of which is a little less in diameter than the chamber in which it floats. Above such valve, and connected with the lower end of the part *h*, is a valve-seat, *k*, of a diameter about the same as the valve, and connecting with the part *h* by a short tube, through the sides of which are perforations *l*. By the action or expansion of the bulb *B* the valve *g* is drawn up against the bottom of the valve-seat *k*, and the air from the cup *A* passes up around the edges of such valve-seat, and through the perforations *l* into the bulb. When the bulb is compressed, the valve *g* is forced down against its seat in the bottom of the chamber, closing the entrance into the cup *A*, and forcing the air out through the valve in the upper end of the bulb. A vent-hole in the metallic connection just above the cup, which may be opened or closed by a screw, *C*, or in any convenient and effective manner, is very convenient in favoring the ready detachment of the cup after it has been applied a sufficient length of time.

By constructing the metallic connection intervening between the cup and the exhausting-bulb with a slip-joint, *d d'*, as shown in fig. 3, a series of cups of the smaller size may be rapidly applied, with the use of only one exhausting-bulb; that is, when one cup is exhausted, the bulb may be readily detached by means of the slip-joints, leaving the cup tightly in contact with the body, and the bulb be then attached to another cup, which is applied in turn; and thus any number of cups may be applied in a similar manner. In such cases or for such uses such a slip-joint is superior to a screw, as shown at *f*, fig. 2, which would require too much time in unscrewing the bulb from the cup.

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

The combination with any suitable cup or vessel *A*, adapted for cupping and similar purposes, of an elastic exhausting-bulb, *B*, provided or fitted with a valvular apparatus, constructed substantially as described, and on the principle described in Letters Patent granted to me April 4, 1854.

M. MATTSO.

Witnesses:

S. D. LAW,

FRED. B. SEARS.