(No Model.)

J. C. PARKER.

SYRINGE TUBE HOLDER.

No. 489,544. Patented Jan. 10, 1893.

Fig. 1.

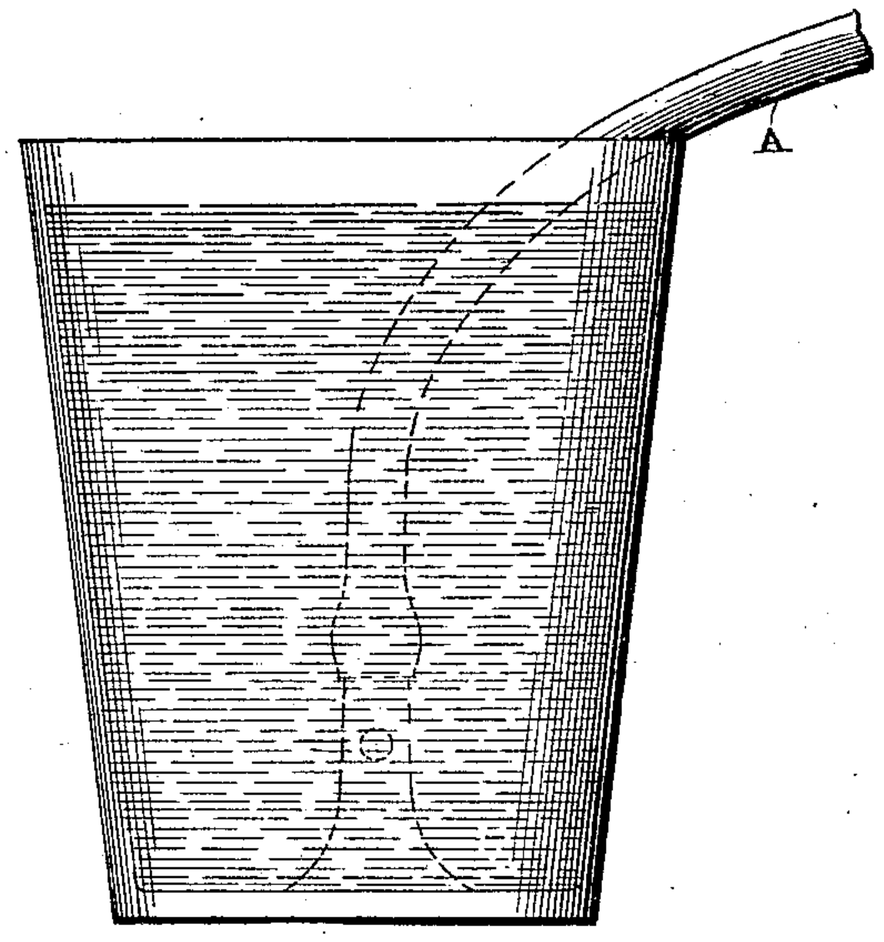


Fig. 2.

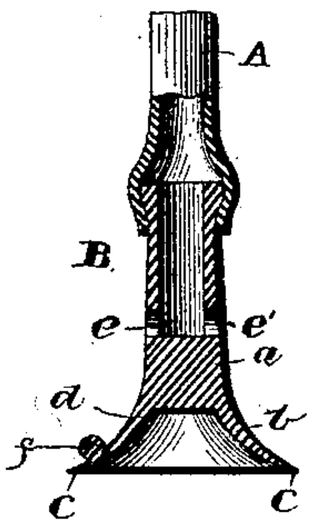
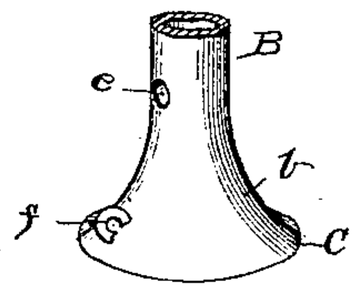


Fig. 3.



Witnesses
Chas. G. Ford.
F. R. Harding.

Inventor
James C. Parker.

By his Attorneys,
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

JAMES CONNELL PARKER, OF WOODSTON, ASSIGNOR OF ONE-HALF TO WILLIAM ROSEGRANT, OF ALTON, KANSAS.

SYRINGE-TUBE HOLDER.

SPECIFICATION forming part of Letters Patent No. 489,544, dated January 10, 1893.

Application filed June 20, 1892. Serial No. 437,290. (No model.)

To all whom it may concern:

Be it known that I, JAMES CONNELL PARKER, a citizen of the United States, residing at Woodston, in the county of Rooks and State of Kansas, have invented a new and useful Vacuum-Holder for Syringes, of which the following is a specification.

My invention relates to a pneumatic or vacuum holder or anchor for maintaining the suction or induction port of any article such as a syringe hose or pump underneath the surface of a fluid to be educed in such manner that said suction port will be steadily held in the prescribed immersed position without necessitating the constant care and attention of an operator or assistant to hold the said tube under the fluid surface. Wherever it is required to withdraw a fluid from any open receptacle such as a basin bowl or glass into a syringe pump, hose or the like, experience has demonstrated that the annoyance and inconvenience incident upon the necessity of having an assistant to hold the mouth or tube of the instrument in the requisite position underneath the fluid, is exceedingly great; and especially has this been the cause of irritation in the case of those inexperienced or unexpectedly called upon to act by the exigency or emergency of the occasion, as for example a physician suddenly called to use a syringe without the attendance of an assistant.

Consequently, it is the essential object of my invention to provide a novel device whereby the inconvenience above mentioned can be obviated and avoided, and to that end, my invention consists, in brief, of an elastic or yielding or vacuum cup or anchor so arranged and constructed that it can be attached in a suitable manner to the mouth or suction end of any desired article, so that the same can be held securely against the smooth surface of the sides or bottom of the receptacle containing the fluid, and contemporaneously permitting free suction of the liquid into the mouth of the suction tube thus held in an immersed position.

My invention further consists in certain other details of construction and in certain other auxiliary parts more fully described hereinafter, and specifically pointed out in the accompanying claims.

I have shown in the accompanying drawings forming a part of this specification my improved device attached removably to the suction tube or mouth of a flexible hose which can be supposed to extend to or from a part of any kind of instrument such as a syringe, pump or other similar device—consequently, it will be manifest that I contemplate its use and employment in conjunction with any instrument having a suction terminal or inlet designed to be immersed and held in a fluid substance.

Referring to the accompanying drawings:—Figure 1 is a view in side elevation diagrammatically illustrating my invention as attached to the inlet mouth of a flexible hose and serving to hold the same in an immersed position; and Fig. 2 is a detail sectional view of the vacuum holder showing an approved manner of attaching the same to the aforesaid suction hose, and also illustrating the lateral induction ports therein to permit the entrance of the fluid therethrough. Fig. 3 is a detail view showing the ring or clip *f*.

Like letters of reference mark the same or corresponding parts in all the views of the drawings.

A indicates the tube and B the rubber vacuum holder comprising the neck or shank *a* and the head *b*, which is substantially bell shaped, being concavo convex in cross section as clearly seen by reference to Fig. 2. The margin or edge *c* of the said head is gradually tapered and beveled to almost a knife edge for the purpose of permitting the same to spread and yield under quick action or pressure of the hand which will serve to expel the air from the concave chamber underneath, thus causing the said thin edges *c c*, of the head to seemingly adhere in an air tight manner to the surface of any smooth surface holding the fluid; the said holder being held against said smooth surface, in fact, by the exterior fluid or indirect air pressure.

From the point *d* up to the ports *e e'*, the neck *a* is formed solidly of elastic substance, preferably rubber, while that portion above the said ports is tubular or hollow, being util-

ized as a duct to carry the fluid that is drawn through the ports into the tube A.

Any form of fastening may be employed to connect the tube A with the holder or anchor B such, for instance, as that shown the construction of which can be seen at a glance—furthermore any number or kind of ports may be provided.

In practice, all that is necessary is for the operator to quickly and forcibly immerse the head *b* in the fluid contained in the vessel, the force of contact of the same with the liquid, forcing the air out of the concave chamber; thus when the edges of the head *b* are brought quickly into contact with the smooth surface of the bottom or sides of the said vessel, the fluid pressure upon the exterior of the head *b* will hold the same fixedly in an anchored position as shown in Fig. 1, and consequently holding the attached tube or suction end of any attached article underneath the fluid so that when necessary suction is established the ports *e e'* will admit and feed the fluid into and through the tubular duct into the tube A.

By reference to Fig. 2, the exterior edge of the head *b* has formed integral thereon a ring or clip *f* designed to aid in the removal of the adherent holder, since the operator can remove the latter from its anchored position, simply by grasping the ring *f* and pulling off the device from the smooth surface with which it is held in contact.

It will be understood that it is not essential that the sucker be attached to the end of the tube, hose or pipe, as it may be attached to the side thereof, the operation of the sucker being entirely independent of the operation of the syringe or pump whose feeder it holds in place.

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

1. A holder for the feed tubes of syringes, pumps, &c., comprising an elastic bell-shaped sucker attached to the inlet ends of such tubes, as specified.

2. In combination with the suction-tube of a syringe, or similar article, a holder comprising a hollow shank, communicating with the suction-tube and having induction or inlet apertures, and a subjacent, hollow, bell-shaped sucker adapted to be held in contact with the bottom or side of a vessel by atmospheric pressure, substantially as specified.

3. In combination with a tube for syringes, &c., a rubber vacuum holder such as B having a ring or clip *f* formed integral thereon for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES CONNELL PARKER.

Witnesses:

JOHN HUNTLEY,

E. M. SMITHER.