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SIPHON.

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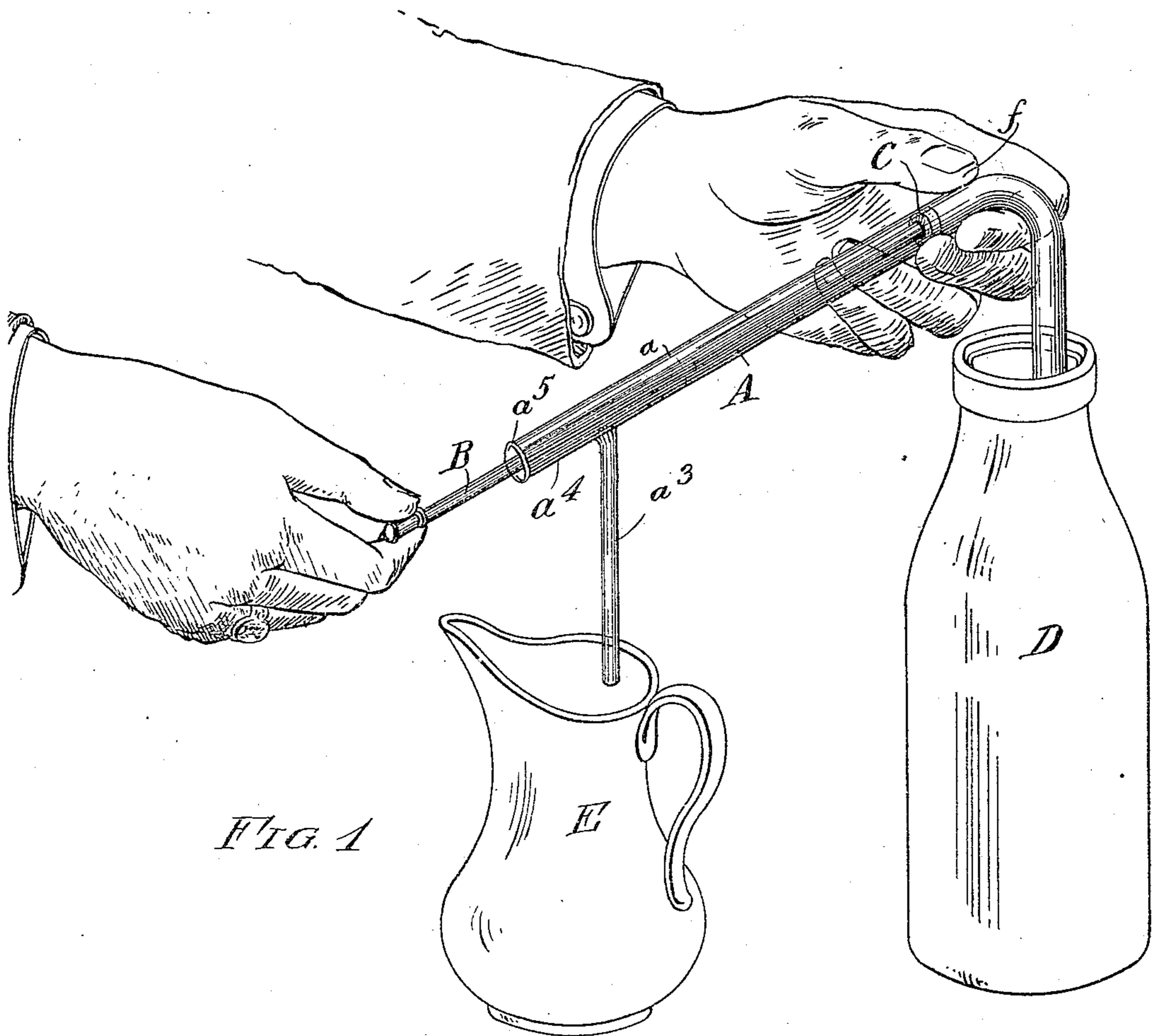


FIG. 1

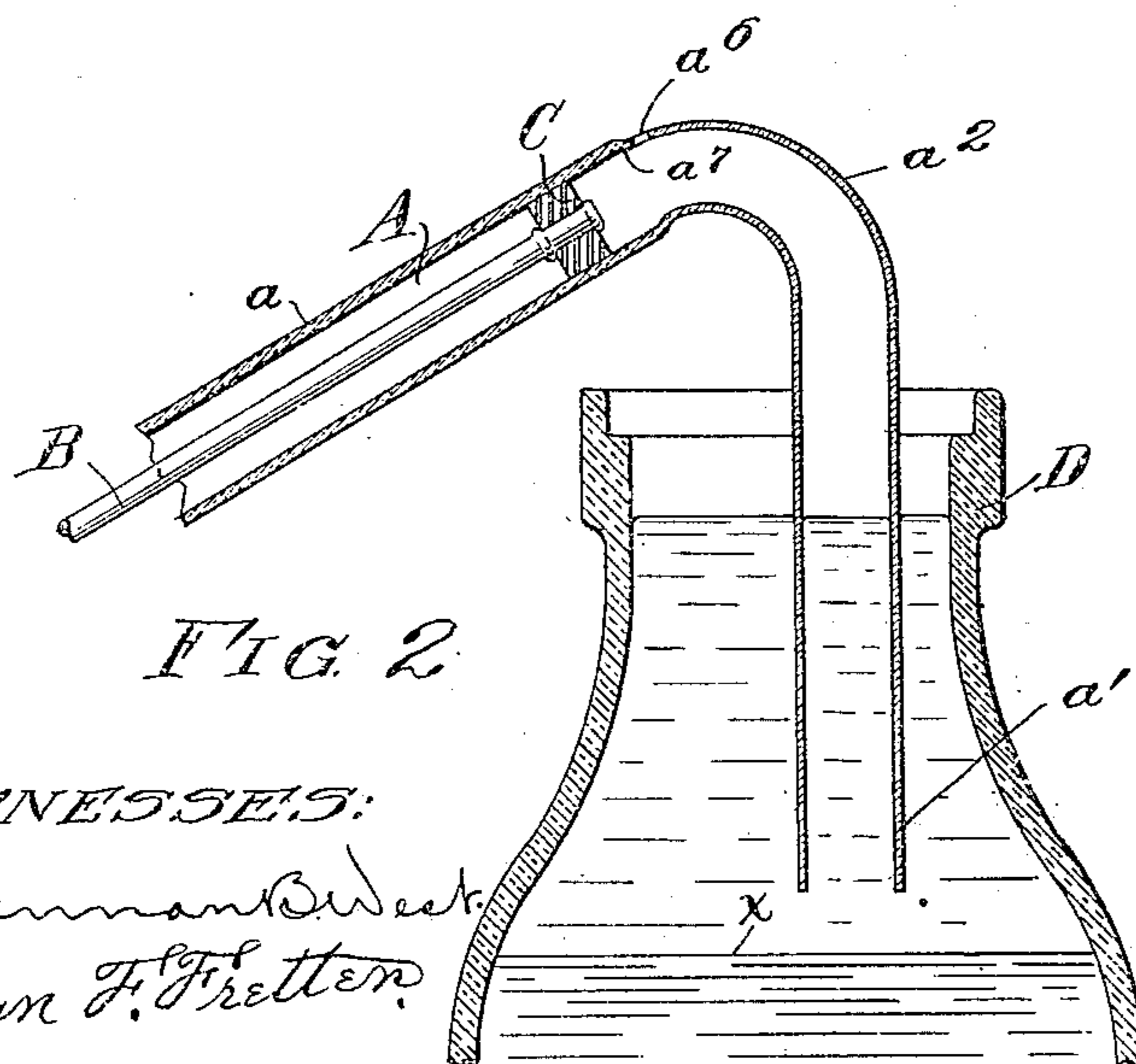


FIG. 2

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# UNITED STATES PATENT OFFICE.

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SIPHON.

958,415.

Specification of Letters Patent.

Patented May 17, 1910.

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*To all whom it may concern:*

Be it known that I, CARL F. MEADE, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Siphons, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

The object of this invention is to provide in an extremely simple form a siphon for use in decanting liquids.

The siphon is particularly well adapted for use in drawing off the upper portion of liquid where it is desired to avoid agitation, as for example cream in the upper portion of a bottle, developer in a photographer's tray, etc.

My siphon is so arranged that the liquid to be drawn may stand within it to the height of the surrounding liquid before the operation begins, thereby reducing the amount of suction required to start the siphon flowing, reducing the consequent agitation and allowing the apparatus to be made much simpler.

My siphon may be made in simply three pieces of material, for example, a tubular member of glass, a glass rod, and a soft rubber packing between the rod and tube. This simplicity allows the device to be very thoroughly and easily cleaned, which is especially advantageous when the siphon is used for decanting cream.

The invention is hereinafter more fully described and its essential characteristics set out in the claim.

In the drawing, Figure 1 is a perspective view of my siphon, illustrating also its method of use; Fig. 2 is a vertical section through the upper portion of the siphon and a vessel containing liquid to be decanted.

As shown in the drawings, A represents the siphon body, B the piston rod, and C the packing or piston. The siphon body A includes, as shown, two straight tubular portions  $a$  and  $a'$  connected by a curved elbow  $a^2$ . The parts  $a$  and  $a'$  bear about the angle to each other shown, so that when the part  $a'$  is vertical the part  $a$  extends laterally and inclines downwardly. Near the lower end of the part  $a$  is a branch tubular portion  $a^3$  leading downwardly. The portion  $a$  continues beyond this branch  $a^3$  a sufficient distance, as shown at  $a^4$ , to accommodate and

guide the piston. The parts  $a$  and  $a^4$  are of the same diameter throughout. The part  $a^4$  has a slightly flaring end  $a^5$  where it is sealed over. This flare allows the easy insertion of the piston C, which piston may be shoved well toward the upper end of the part  $a$  or drawn downward beyond the branch pipe  $a^3$  by the rod B.

Adjacent to the elbow  $a^2$  is a small opening  $a^6$  through the siphon body. This opening is preferably on the upper side and is adjacent to the junction of the elbow  $a^2$  and the tubular portion  $a$ .

It is to be understood that the portions of the body mentioned may be made of glass, the parts  $a$ ,  $a'$  and  $a^2$  being a single tube bent into the form shown, and the part  $a^3$  a glass tube fused to the portion  $a$ .

The bending of the tube to make the elbow  $a^2$  naturally makes a reduction in the size of the bore beginning at  $a^7$ , which makes a convenient stop for the innermost position of the piston.

To use the siphon, the plunger is first pushed inward to its extreme position; then the leg  $a'$  is immersed in the liquid to be decanted. The air in this leg escapes through the opening  $a^6$ , which allows the liquid to stand in the leg the same height as outside of it. While in this position, the hole  $a^6$  is covered by the operator's thumb or finger and the piston is drawn outwardly by its rod, making a partial vacuum in the elbow and diagonal tube and causing the liquid to flow upwardly into the portion  $a$ . As the piston crosses the entrance to the branch pipe  $a^3$  the liquid in the portion  $a$  flows down this pipe, and the piston being left standing in the portion  $a^4$  beyond this pipe blocks any exit except through the discharge pipe. The cream or other liquid accordingly continues to flow out through the pipe  $a^3$  until exhausted or until the opening  $a^6$  is uncovered. When sufficient liquid has been decanted, the thumb or finger is removed from this opening and the liquid in the siphon separates at the elbow and flows in each direction therefrom.

If it is desired to decant from more than one vessel it is not necessary to start the siphon more than once, for it may be lifted filled out of the vessel with which it has been used and transferred to the new vessel and the flow will continue at once.

Fig. 1 illustrates a convenient method

- of holding the siphon. In this view D, for example, represents a bottle which may contain cream, and E a pitcher for receiving it. The operator's left hand is shown as supporting the siphon and his thumb, indicated by *f*, is over the opening *a*<sup>o</sup> and closes it, his fingers grasping the siphon below the body. With the right hand he draws out the piston rod B.
- 10 In Fig. 2, *x* indicates the approximate bottom plane of the cream; as this is ordinarily visible through the bottle D, all of the cream or any desired portion may be drawn off by my siphon.
- 15 It will be seen from the above description that my siphon is extremely cheap and simple in construction and is particularly sanitary in use. The piston rod and piston may be entirely removed from the siphon body and the rubber ring C removed from the piston rod so that each part may be cleaned separately. In its use it is unnecessary for the operator to touch the entrance or exit openings of the siphon.

I claim:

As a new article of manufacture, a siphon for decanting cream and the like comprising a body portion and piston, the body portion being made of continuous glass tubing and having when in operative position an upwardly extending leg, a downwardly inclined leg, and a discharge leg communicating with the downwardly inclined leg adjacent to its free end, the piston being adapted to occupy the downwardly inclined leg and having a rod extending out from the end of that leg, said leg continuing beyond the discharge leg to allow the piston to be moved beyond the discharge leg and remain within the inclined leg, and an air vent into the tube adjacent to the junction of the upward leg and downwardly inclined leg.

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

CARL F. MEADE.

Witnesses:

ALBERT H. BATES,  
BRENNAN B. WEST.