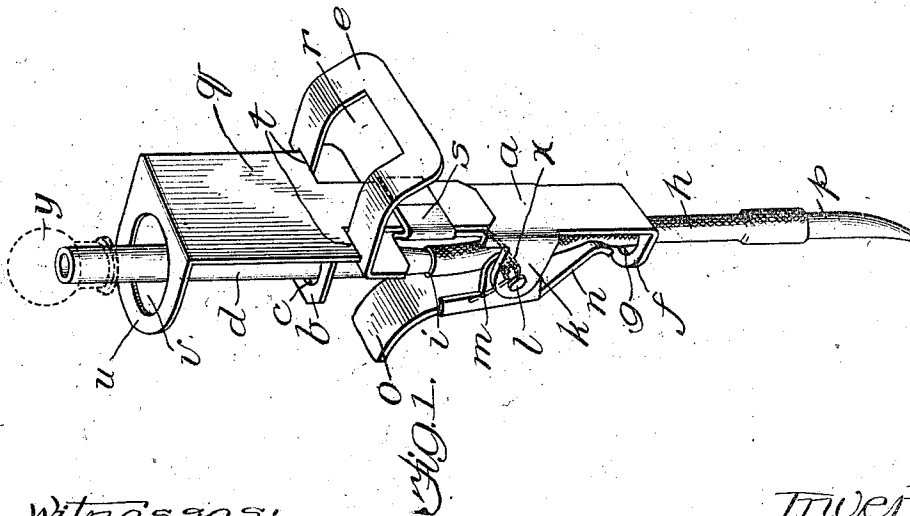
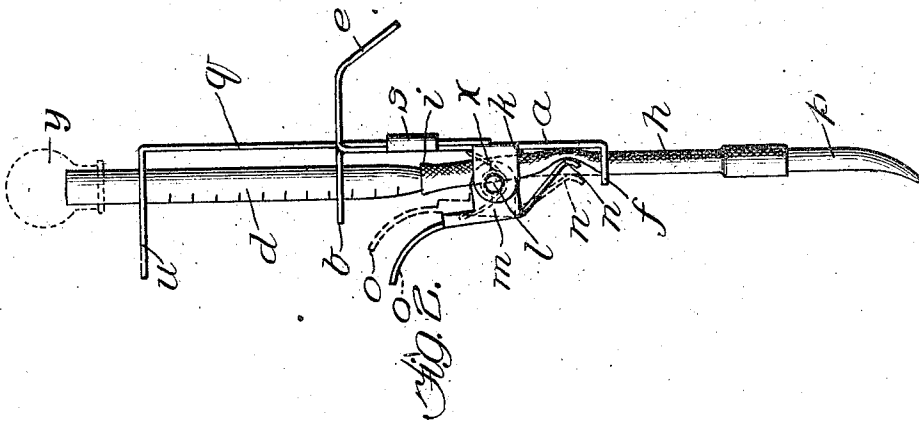


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 COMBINED BURETTE HOLDER AND PINCH COCK.
 APPLICATION FILED AUG. 22, 1910.

989,503.

Patented Apr. 11, 1911.



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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HERMAN E. HILDEBRAND, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Combined Burette-Holder and Pinch-Cock, which are described in the following specification, taken in connection with the accompanying drawings, and are then pointed out in the claims at the end of the description.

The object of my invention is to provide a pinchcock for a burette that will also serve as a holder for the burette, the whole equipment being capable of being held in the hand when in use, so being different from the ordinary stationary burette stand. In many cases of volumetric analysis such portable burette holder and pinchcock will prove a great convenience.

Another function of my device is as a dropper, for which purpose it can be used with far greater accuracy than can the ordinary dropper operated by a rubber bulb.

In the drawings, in which similar letters of reference refer to similar parts throughout the views, Figure 1 is a perspective view of my device, showing one side and the rear, and Fig. 2 is a side view.

A narrow strip *a*, of metal or other suitable material, bears at its upper end, at right angles to it, a shelf-like projection *b*, containing an opening *c*, through which passes the burette *d*. The strip *a* also bears a hook-like projection *e*, extending in the opposite direction from the projection *b*, adapted to be held between the fingers of the operator when the device is in use; it will most conveniently be held between the first and second finger of the inside of the straightened-out hand. At the lower end of the strip *a* is formed another shelf-like projection *f*, also at right angles to *a* and extending in the same direction, and containing the opening *g*, through which passes the rubber tube *h*, which is connected with the burette at *i*. The strip *a* also bears two other projections *k*, one on either side, extending from it at right angles, on the same side of it as the projections *b* and *f* but in a plane at right angles to the planes of *b* and *f*. These projections *k* bear the axis *l* of a two-armed lever *m*, one end of which *n* is held constantly pressed against the rubber

tube *h* by a spiral spring *x* which passes around the axis *l*. Because of this pressure of the end *n* of the lever *m* on the tube *h* no liquid can pass through the tube *h* except when pressure is exerted on the other end, or thumb-piece, *o* of the lever *m*. The rubber tube *h* passes between the axis *l* and the strip *a*. In the lower end of the rubber tube *h* is inserted the glass tip *p*. When it is desired to use a larger burette, the piece *q* may be inserted through an opening *r* formed in the projection *e* into the guide *s* formed to receive it on the back of the strip *a*. This piece *q* is held in place by the shoulders *t* and *u* which bear against the projection *e*. The piece *q* has a shelf-like projection *v* formed at its upper end, similar to *b* and extending in the same direction, but larger and containing an opening *w* larger than the opening *c*, so that a larger burette may pass through it and be supported in an upright position.

On the top of the burette *d* may be attached a rubber bulb *y* for use in filling the burette with liquid, or the liquid may be poured in from the top of the burette.

It will be obvious that the strip *a* and the projections *b*, *e*, *f* and *k* and the guide *s* may all be formed from one piece of metal stamped and bent into the shape required. It will also be obvious that the piece *q* and the projection *v* may be formed in the same manner from one piece, thus rendering the making of my device very easy and inexpensive.

Instead of the hook-like projection *e* as the hand-piece, a ring or loop attached to the back of the strip *a* may be used without departing from the spirit of my invention.

Having now described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is:

1. A portable burette holder consisting of a strip bearing a guide for the burette, a guide for the rubber tube attached to the burette, a hand-piece, and a spring-actuated, two-armed lever, one end of which is adapted to normally press against the rubber tube attached to the burette and the other end of which forms a thumb-piece by pressure on which the pressure against said rubber tube may be controlled, substantially as described.

2. In combination with a burette, a rubber tube attached thereto and a holder therefor, a pinchcock consisting of a spring-actuated,

two-armed lever extending parallel with the axis of the burette, one end of said lever being adapted to normally press against said rubber tube and the other end of which forms a thumb-piece by pressure on which the pressure against said rubber tube may be controlled, substantially as described.

3. In combination with a burette and a rubber tube attached thereto, a strip bearing a guide for the burette, a guide for the rubber tube, a hand-piece and a pinchcock consisting of a spring-actuated, two-armed lever extending parallel with the axis of the burette, one end of said lever being adapted to normally press against said rubber tube and the other end of which forms a thumb-piece by pressure on which the pressure against said rubber tube may be controlled, substantially as described.

4. In a liquid dropper, the combination of a glass tube, a rubber tube attached thereto, a glass tip attached to said rubber tube, and a strip bearing a guide for said glass tube, a guide for said rubber tube, a hand-piece and a pinchcock consisting of a spring-actuated, two-armed lever extending parallel with the axis of the burette, one end of said lever being adapted to normally press against said rubber tube and the other end of which forms a thumb-piece by pressure on which the pressure against said rubber tube may be controlled, substantially as described.

5. A portable burette holder consisting of a strip bearing a plurality of guides for the burette, a hand-piece and a pinchcock, substantially as described.

6. A portable burette holder consisting of a strip bearing a plurality of guides for the burette, a guide for the rubber tube attached to the burette, a hand-piece, and a spring-actuated, two-armed lever, one end of which is adapted to normally press against the

rubber tube attached to the burette and the other end of which forms a thumb-piece by pressure on which the pressure against said rubber tube may be controlled, substantially as described.

7. In a portable burette holder, the combination of a strip bearing a guide for the burette, a guide for the rubber tube attached to the burette, a hand-piece, a pinchcock, and a guide for an extension of said strip, and an extension of said strip, fitting in said guide therefor, and forming another guide for said burette, substantially as described.

8. In combination with a burette and a rubber tube attached thereto, a strip bearing a plurality of guides for said burette, a guide for said rubber tube, a hand-piece and a pinchcock consisting of a spring-actuated, two-armed lever extending parallel with the axis of the burette, one end of said lever being adapted to normally press against said rubber tube, and the other end of which forms a thumb-piece by pressure on which the pressure against said rubber tube is controlled, substantially as described.

9. In a liquid dropper, the combination of a glass tube, a rubber tube attached thereto, a glass tip attached to said rubber tube, a strip bearing a plurality of guides for said glass tube, a guide for said rubber tube, a hand-piece and a pinchcock consisting of a spring-actuated, two-armed lever extending parallel with the axis of the glass tube, one end of said lever being adapted to normally press against said rubber tube, and the other end of which forms a thumb-piece by pressure on which the pressure against said rubber tube is controlled, substantially as described.

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