

No. 835,849.

PATENTED NOV. 13, 1906.

S. H. CHUBB.
SYRINGE.

APPLICATION FILED APR. 19, 1906.

Fig. 1.

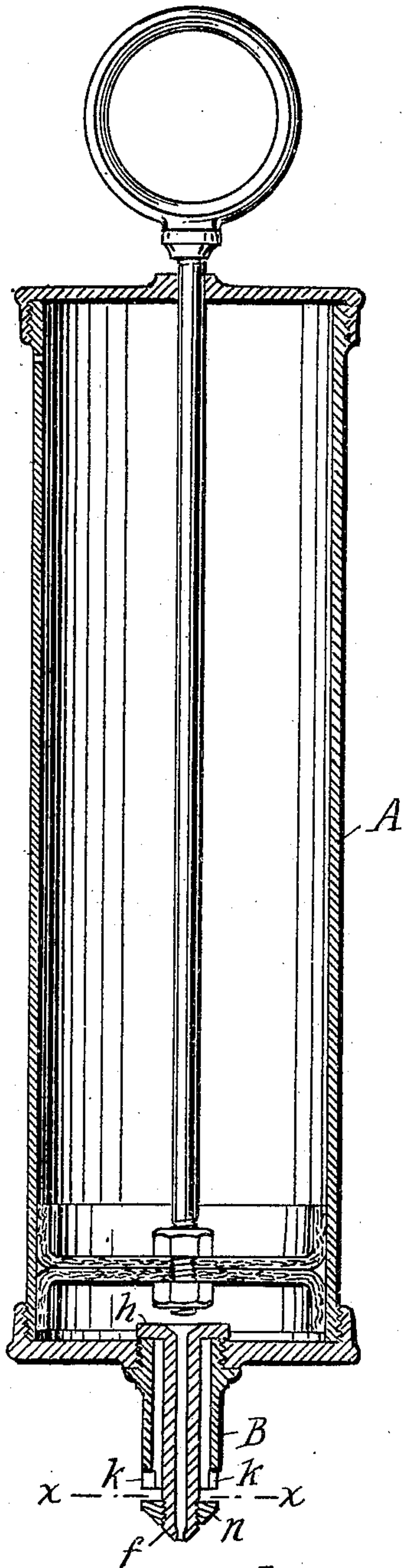
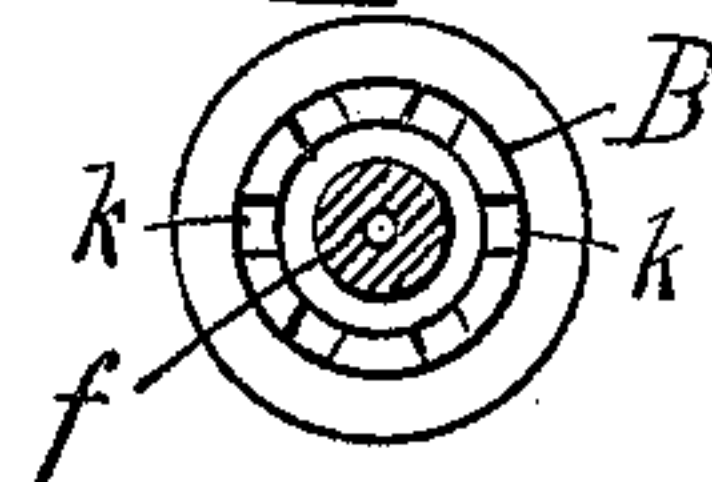


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

SAMUEL H. CHUBB, OF NEW YORK, N. Y.

SYRINGE.

No. 835,849.

Specification of Letters Patent.

Patented Nov. 13, 1906.

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To all whom it may concern:

Be it known that I, SAMUEL H. CHUBB, a citizen of the United States of America, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Syringes, of which the following is a specification.

My invention relates particularly to the construction of the syringe - nozzle. This nozzle is formed in a valve which operates to close a larger opening into the syringe than is afforded by the nozzle, the opening being closed when liquid is being ejected from the syringe and opened to afford ready entrance for liquid when the syringe is being filled. This additional entrance is annular and surrounds the nozzle, whereby when warm liquids are drawn in they are caused to warm the nozzle and will not be chilled by the nozzle when ejected.

In the accompanying sheet of drawings, which forms a part of this application, Figure 1 is a longitudinal section through a syringe embodying my invention. Fig. 2 is a transverse section through the nozzle on the line *xx*.

The syringe A, which may be of any desired construction by which it is caused to draw in and eject liquid by a change in volume, is provided with a pipe B, which affords a comparatively large opening into the syringe. A combined nozzle and valve consisting of a head *h* and stem *f* is arranged with the stem, which is smaller than the inside bore of the pipe, projecting through the pipe and the head arranged to seat against the inner end of the pipe when there is pressure within the syringe, whereby the contained liquid is permitted to pass from the syringe only through the nozzle in a fine stream. To prevent the valve from becoming dislodged and falling into the cavity of the syringe, a suitable stop consisting of a nut

n is secured near the tip of the stem. The exterior end of the pipe which opens into the syringe is notched at *k k* to afford passage-ways for free entrance for the liquid into the pipe when the stop is resting against the outer end of the pipe. The stem is materially smaller than the inside bore of the pipe, so as to leave a free annular passage-way for the passage of liquid. It will be seen, therefore, that while the syringe is provided with a nozzle through which liquid can pass in a fine stream and empty slowly the operation of the valve permits a rapid filling through the opening of an additional passage-way for the liquid through the notches at the end of the pipe and into the syringe through the annular space between the inner walls of the pipe and the valve-stem. Any sticking of the valve-head against its seat is readily overcome if the liquid-pressure is not sufficient by pressing the protruding end of the valve-stem.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

In a syringe, the combination of a pipe opening into the syringe, a combined nozzle and valve comprising a valve-head and a valve-stem, the valve-stem extending through and projecting from the pipe, and a suitable stop secured to the valve-stem near its tip and operating to arrest the inward movement of the nozzle and valve, the parts being provided with passage-ways for free entrance of liquid into and through the pipe and exterior to the valve-stem which are not obstructed by the stop, substantially as described.

Signed by me at New York city, New York, this 12th day of April, 1906.

SAMUEL H. CHUBB.

Witnesses:

CHARLES S. MEAD,
ERWIN S. CHRISTMAN.