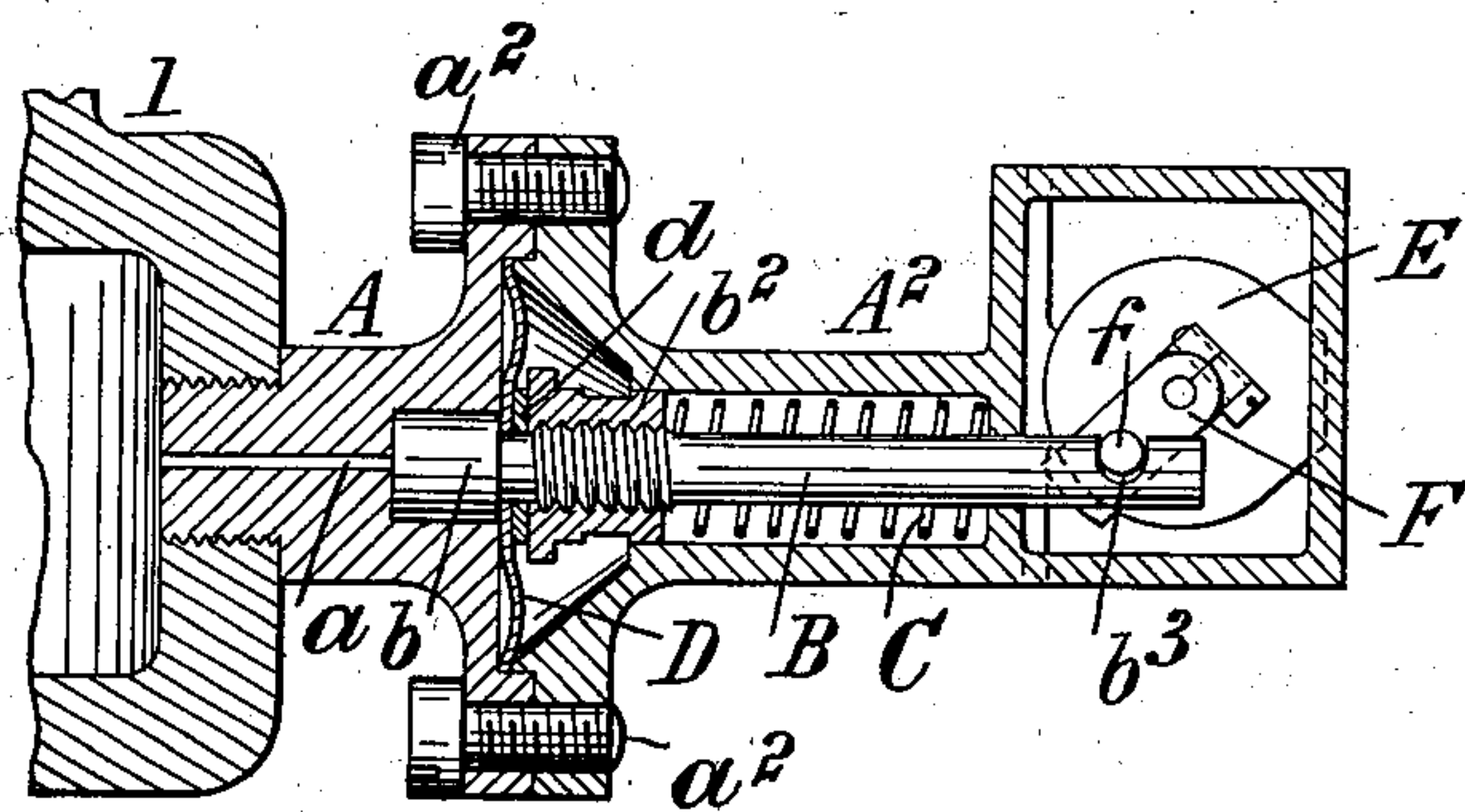


No. 820,197.

PATENTED MAY 8, 1906.

W. HUCKS & W. HUCKS, JR.  
COUNTING DEVICE.

APPLICATION FILED AUG. 8, 1905.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

WILLIAM HUCKS AND WILLIAM HUCKS, JR., OF LONDON, ENGLAND.

## COUNTING DEVICE.

No. 820,197.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed August 8, 1905. Serial No. 273,303.

*To all whom it may concern:*

Be it known that we, WILLIAM HUCKS and WILLIAM HUCKS, Jr., engineers, subjects of the King of Great Britain and Ireland, residing at James street, Camden Town, in the county of London, England, have invented new and useful Improvements in Counting Devices, of which the following is a specification.

Our invention relates to apparatus for aerating liquids or charging them with gas and for supplying aerated liquids or liquids charged with gas, the object of our invention being to cause the pressure of the gas due to the drawing off of successive supplies of the aerated or charged liquid or the pressure of the gas used for aerating or charging successive quantities of liquid to actuate a counter or recorder, so as to denote the number of operations effected.

According to our invention, the passage, casing, or chamber into which the aerated liquid or the aerating gas passes in the successive operations of drawing off or aerating is provided with a movable part which is acted upon by the pressure of the gas and which by its movement is caused by any suitable connection or gear to operate a counter or recorder.

Our invention is applicable, for example, to apparatus of the character described in the specification of Letters Patent No. 18,435, A. D. 1903, granted to Soda Stream Limited and one of us—namely, William Hucks, Jr.—and the following is a description (with reference to the section shown in the accompanying drawing) of a convenient construction of the device according to our present invention as applied to such apparatus, from which its general application will also be understood; but we do not limit ourselves to this particular construction.

In an opening in the casing or chamber, (part of which is indicated at 1,) to which the bottle or the like containing the liquid to be aerated is attached, we fix a body A, having a passage *a* in it and containing the head *b* of a piston or valve B, on which is secured a piece *b*<sup>2</sup>, acting as a guide in a part A<sup>2</sup>, attached to the part A by screws *a*<sup>2</sup>. The piston B is pressed forward by a spring C, bearing at one end on the base of the opening in the part A<sup>2</sup> and at the other end on the piece *b*<sup>2</sup>, so that the face of the piston-head *b* normally bears upon the seat surrounding the orifice *a*, communicating with the casing or

chamber 1. The rear part or rod of the piston B has, preferably, an elastic diaphragm D between the rear of the piston-head *b*<sup>2</sup> and the aforesaid part A<sup>2</sup> to prevent passage of gas to the interior of the said part A<sup>2</sup>, the outer edge of the said diaphragm being pinched between the parts A A<sup>2</sup> and its inner edge being pinched between the rear of the piston-head *b* and a washer *d*, pressed forward by screwing the piece *b*<sup>2</sup> upon the piston B. The said rear part or rod of the piston toward its outer end is provided with a notch *b*<sup>3</sup> for acting upon a pin *f* on a lever F, which actuates a counter or recorder which is secured to the said body, (the casing of this counter or recorder is shown at E,) the said counter or recorder being thus operated once for each aeration of the successive quantities of liquid in consequence of the pressure of gas in the aforesaid casing or chamber 1 moving the piston B outward, the spring C returning the said piston to its closed position when the pressure of gas is relieved.

We claim as our invention—

1. In combination with an apparatus for aerating liquids and the like, means for actuating a counter to denote the number of operations effected, said means comprising a chamber with a connecting-passage into which the aerating-gas passes in drawing off, a piston in said chamber acted on by the pressure of the gas, an elastic diaphragm separating said piston from the connecting passage to prevent the gas from entering the chamber, and a counter actuated by the reciprocations of the piston.

2. In combination with an apparatus for aerating liquids and the like, means for actuating a counter to denote the number of operations effected, said means comprising a chamber with a connecting-passage into which the aerating-gas passes in drawing off, a piston in said chamber acted on by the pressure of the gas, an elastic diaphragm separating said piston from the connecting-passage, a spring for returning the piston to its closed position when the pressure of the gas is relieved, and a counter at the end of the piston-rod and actuated thereby.

In testimony whereof we have signed this specification in the presence of two witnesses.

WILLIAM HUCKS.

WILLIAM HUCKS, JR.

Witnesses:

H. D. JAMESON,

R. F. WILLIAMS.