(No Model.)

J. G. MUELLER.

PRESSURE REGULATOR FOR BEER APPARATUS.

No. 354,482. Patented Dec. 14, 1886.

Fig. 1.

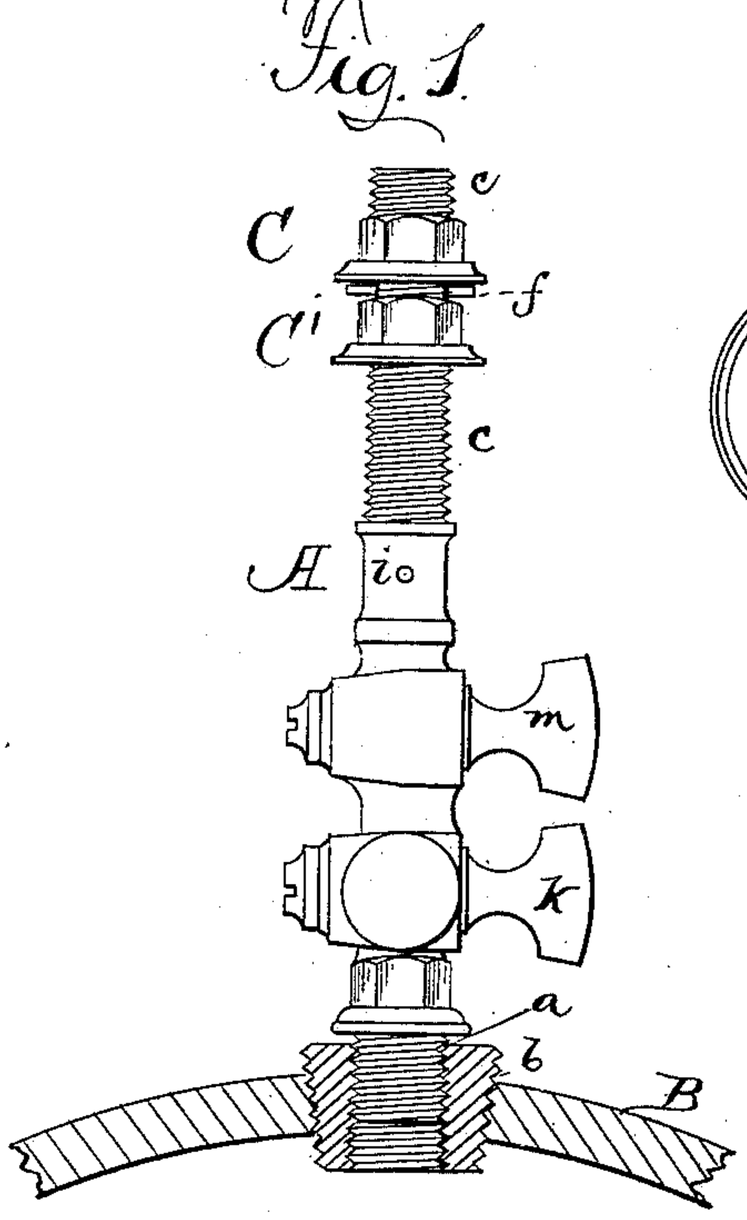


Fig. 2.

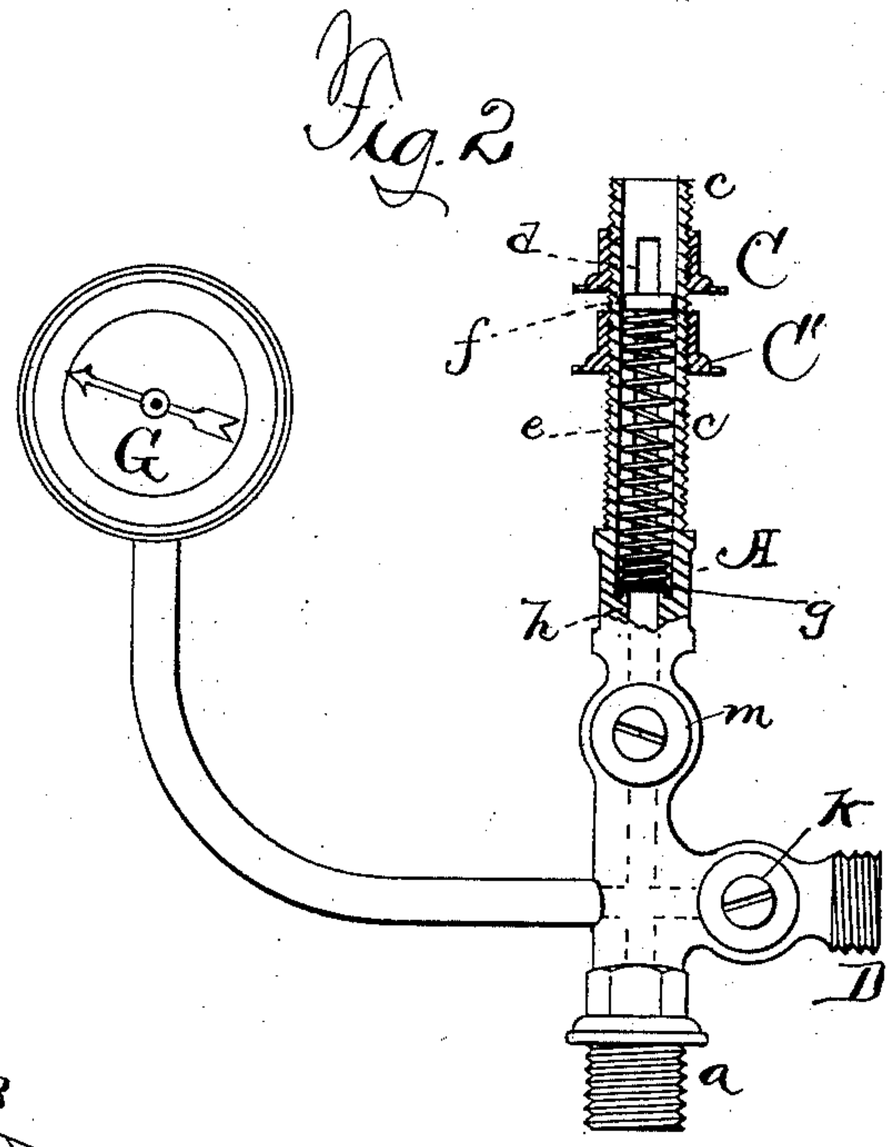


Fig. 3.

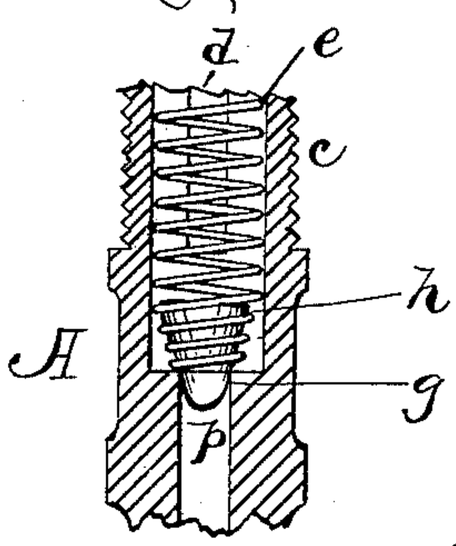
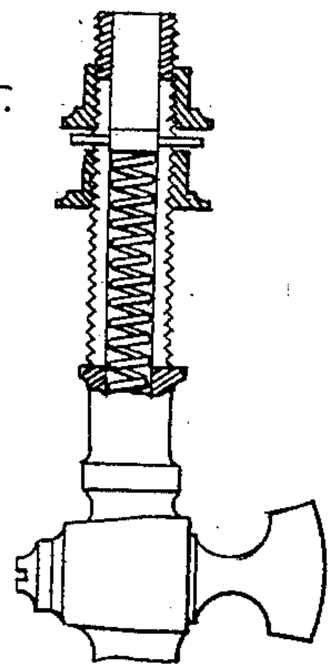


Fig. 4.



Witnesses:
T. H. Parsons.
J. R. Drake.

Jacob G. Mueller,
INVENTOR,
by J. R. Drake,
Atty.

UNITED STATES PATENT OFFICE.

JACOB G. MUELLER, OF BUFFALO, NEW YORK.

PRESSURE-REGULATOR FOR BEER APPARATUS.

SPECIFICATION forming part of Letters Patent No. 354,482, dated December 14, 1886.

Application filed February 24, 1886. Serial No. 193,030. (No model.)

To all whom it may concern:

Be it known that I, JACOB G. MUELLER, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Pressure-Regulators for Beer; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The object of this invention is to simplify the construction of pressure-regulators, doing away with diaphragms and air-escape pipes, my whole device being confined in a single L-shaped pipe with a gage attached.

The invention as constructed and applied will be understood by reference to the following specification and claims.

In the drawings, Figure 1 is an elevation looking at the back, showing its position in a beer-puncheon; Fig. 2, an elevation side view, partly in section, showing the spring and vertical openings in the stem; Fig. 3, a detail showing spring and a plug valve and seat. Fig. 4 is a view, partly in section, of a portion of the device shown in Fig. 2, in a plane at right angles to the same.

A represents a vertical pipe, threaded at the lower end, *a*, which screws either directly into the puncheon or into a permanent metal screw-bung, *h*, having a removable plug. I supply each cask or puncheon with this screw-bung. The upper part or stem, *c*, of the pipe A is threaded on the outside, as shown in all the figures, on which are screwed open nuts C C′. The stem has vertical cuts or openings *d d* opposite each other, and inside the stem is a strong spiral spring, *e*, the top resting against a cross-bar, *f*, the ends projecting through openings *d d* and resting against the upper nut, C.

Below the bar *f* is the second nut, C′, which is screwed against the under side of bar *f*, and this keeps the spring from up or down movement after it is set.

The lower end of the spring is fastened to a piece of rubber, *g*, either round, as in Fig. 2, which fits on, closely, the seat *h*, or is in the shape of a plug and fits in the air-opening *p*, as in Fig. 3. This valve prevents the escape of air unless the pressure of gas in the puncheon is such as to raise the valve *g*, when it will "blow off" through the air-holes *i i* in the sides of the pipe A, which are cut through longitudinally and into the pipe just above the valve-seat.

The valve is always set by the gage G, to resist a certain amount of pressure, by screwing down the spring *e* and valve by the upper nut, C, until the point desired is reached. Any pressure beyond that throws the valve up and the gas escapes until the pressure is diminished to the point set; then the valve closes automatically.

The gage-pipe is screwed into pipe A about opposite the air-pipe D, and on which the usual hose is screwed when it is desired to pump air into the barrel to draw off the beer. The cock *m* is shut and cock *k* is opened, or the spring-valve *e g* can be used as a safety-valve (when drawing off the beer) by keeping cock *m* open and screwing nuts C C′ down to such a pressure as desired.

I claim—

A pressure-regulator attachment for beer-puncheons, &c., constructed of a single L-shaped pipe, A, provided with the screw-threaded stem *c*, and nuts C C′ thereon, the vertical openings *d d* therein, the cross bar *f*, in connection with spring *e* and nuts C C′, the valve *g*, attached to lower end of spring *e*, and working in connection with seat *h*, air-holes *i i*, cocks *k m*, and attached gage G, all arranged and operating substantially as specified.

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

JACOB G. MUELLER.

Witnesses:
J. R. DRAKE,
T. H. PARSONS.