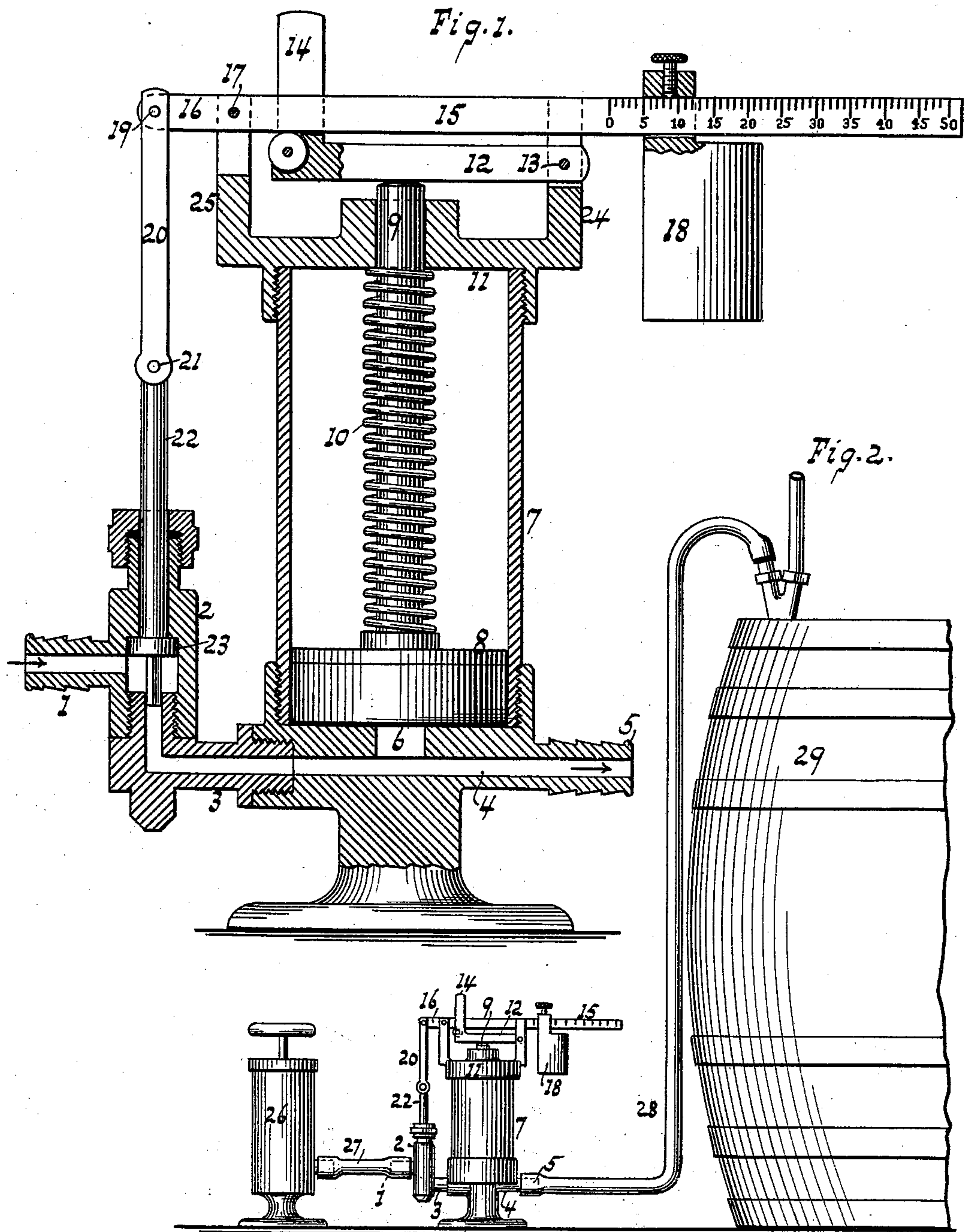


(No Model.)

R. H. RUDOLPH.
PRESSURE REGULATOR.

No. 547,742.

Patented Oct. 8, 1895.



WITNESSES:

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INVENTOR:

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UNITED STATES PATENT OFFICE.

RAYMOND H. RUDOLPH, OF CHICAGO, ILLINOIS.

PRESSURE-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 547,742, dated October 8, 1895.

Application filed July 25, 1895. Serial No. 557,141. (No model.)

To all whom it may concern:

Be it known that I, RAYMOND H. RUDOLPH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Automatic Pressure-Regulators for Beer and Like Beverages, of which the following is a specification.

The object of this invention is to provide an automatic pressure-regulator for such beverages as beer, porter, ale, and such as are dispensed in bar-rooms and like places, so that a certain amount of air or pressure can get onto the beverage, after which the pressure-supply will be shut off, so that not only safety is assured and the labor of having to observe the beverage or a pressure-indicator is dispensed with, but the beverage is also kept in a uniformly acceptable condition and the consumption or waste of ice caused by the application of unnecessary or excessive pressure or air is avoided; and the invention resides in the novel features of construction set forth in the following specification and claim, and illustrated in the annexed drawings, in which—

Figure 1 is a sectional elevation of the regulator. Fig. 2 shows the regulator applied to use.

The pressure from a suitable tank or pump or other supply enters through inlet 1 and passes through valve-chamber 2 and passages 3 and 4, through outlet 5, whence it is led to a desired point—as, for example, into a beer-keg. The passage 4 communicates by passage 6 with the interior of cylinder 7, in which is piston 8, about the rod 9 of which is coiled spring 10, braced against cylinder-head 11. The rod 9 passes through head 11 and acts against lever 12, fulcrumed at 13 and having the arms or fork 14 engaging arm 15 of the lever 15 16, fulcrumed at 17. The lever-arm 15 has an adjustable weight 18, which can be set according to the degree of pressure to be maintained. The lever-arm 16 is linked by the connections 19, 20, and 21 to stem 22 of valve 23 in chamber 2. When the pressure in the receptacle communicating with outlet 5 has reached the required intensity, such pressure, acting through passage 6 on piston

8, will actuate the latter to cause lever 12 to swing lever-arm 15 against the action of weight 18, so that lever-arm 16 causes valve 23 to close the passage 3. No more pressure can then pass from inlet 1 to passage 3 until the pressure in cylinder 7 has fallen below the required degree, when the piston 8 moves away from cylinder-head 11 and the weight 18 actuates lever 15 16 to open valve 23, when the pressure is again free to pass through channel 4 and outlet 5 to the required point. The fulcrums 13 and 17 are readily formed on arms 24 and 25, carried on cylinder-head 11.

For beer-pumps the device is connected between the pump and the barrel by means of hose. The air is pumped through inlet 1, where the valve 23 is, going through outlet 5 onto the beer, and when the required pressure is obtained further pressure is automatically shut off, as explained, and as soon as the beer is drawn off and the pressure falls the valve 23 is reopened. A hand-pump 26 is shown in Fig. 2; but of course any other suitable pump or source of pressure can be connected by hose 27 to inlet 1, while the outlet 5, connected by hose 28 with a cask or receptacle 29, will transmit pressure to the latter with its contents.

What I claim as new, and desire to secure by Letters Patent, is—

An automatic pressure regulator, comprising in its structure a conduit having at one end means to connect with a source of liquid supply and at the other end means to connect with a cask containing beer or other liquid under pressure, a valve arranged in the conduit in juxtaposition to the inlet end thereof and adapted to close said inlet, a cylinder rising from and in communication with the conduit at a point between the said inlet controlling valve and the said outlet which connects with the cask or receptacle, a piston arranged in the cylinder and normally covering the communication between said cylinder and said conduit, a rod rising from the piston and projecting through the upper end of the cylinder, a spring acting on the piston to depress the same, a pivoted weight-lever having at one end portion an adjustable weight and at the other end portion a link connection

with the valve which opens and closes the inlet end of the conduit, and a pivoted lever engaged with the weight-lever and resting against the upper end of the piston-rod, all
5 substantially as and for the purposes herein set forth.

In testimony whereof I have hereunto set

my hand in the presence of two subscribing witnesses.

RAYMOND H. RUDOLPH.

Witnesses:

P. G. DAHL,

J. V. SMIDLE.