(No Model.)

R. D. SCHROEDER.

BEER PRESSURE APPARATUS.

No. 520,224. Patented May 22, 1894.

Fig. 1

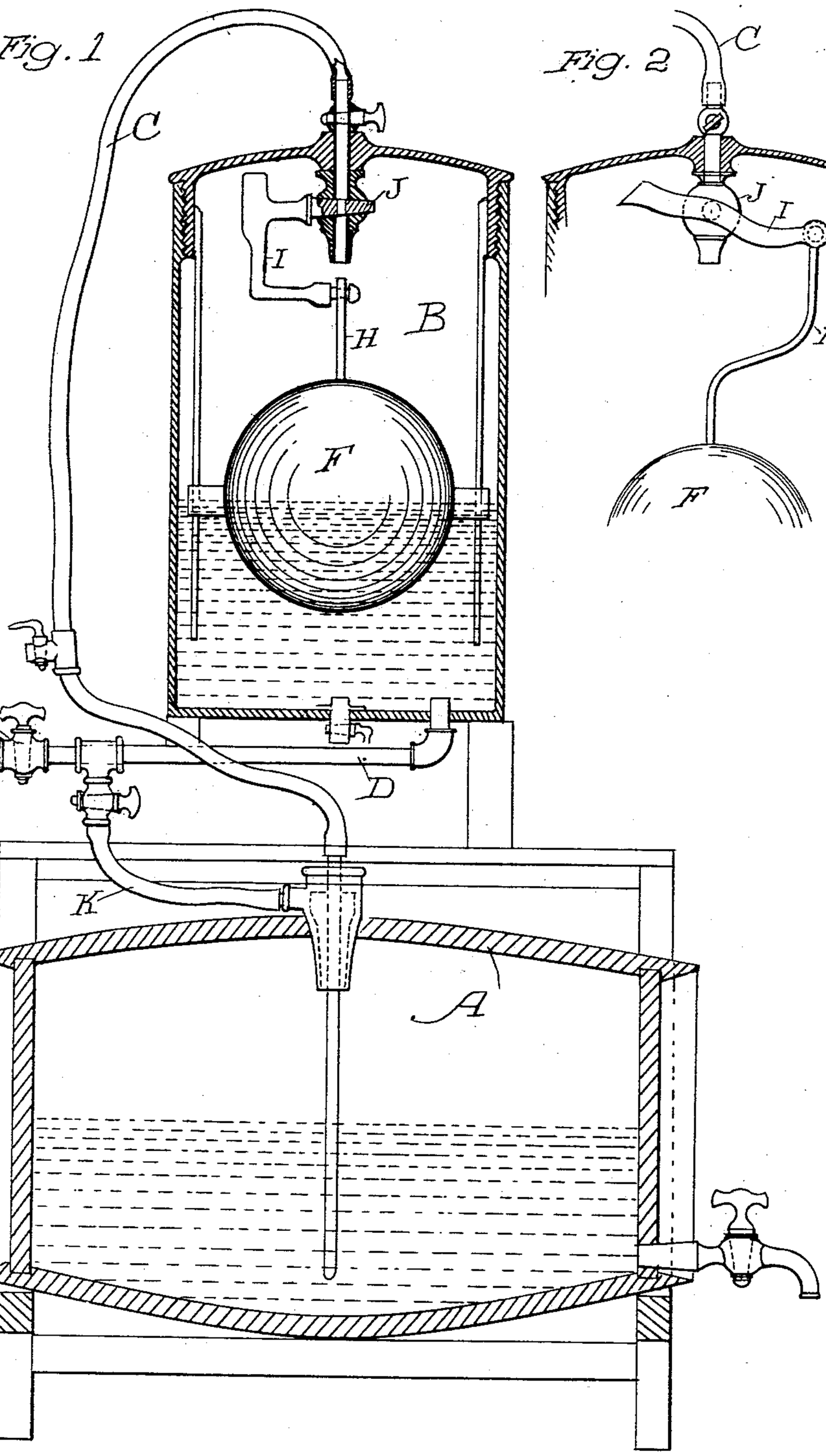

Fig. 2

Witnesses;
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RICHARD D. SCHROEDER, OF SAN FRANCISCO, ASSIGNOR TO W. FRANK PIERCE, OF OAKLAND, CALIFORNIA.

BEER-PRESSURE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 520,224, dated May 22, 1894.

Application filed August 25, 1893. Serial No. 484,065. (No model.)

To all whom it may concern:

Be it known that I, RICHARD D. SCHROEDER, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Beer-Pressure Apparatus; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a device for maintaining the proper pressure upon beer which is sold from kegs after the gas pressure in the keg has become too much reduced.

It consists of an air or gas and water chamber connected with the cask, and with the source of water pressure by which the air or gas is constantly forced into the cask as the beer is drawn and with any desired pressure.

Referring to the accompanying drawings for a more complete explanation of my invention,—Figure 1 is a view of my apparatus. Fig. 2 is a side view of the cut off valve.

A is a beer keg with the usual draw off faucet.

B is a chamber of sufficient strength to stand the necessary pressure, and it is located at any suitable or convenient point with relation to the cask.

C is a pipe connecting the top of this chamber with the top of the beer keg, either through the bung or through any other suitable connecting device.

D is a pipe extending from the bottom of this intermediate chamber B and connecting with any source of water supply which will provide water under a considerable pressure. This may either be an elevated tank or spring in the proper localities, or when used in the city, it is preferably connected with the city water mains.

By means of a cock or valve E, the water pressure may be cut off or turned on as desired.

Within the chamber B, I have in the present case shown a plate F with suitable guides to insure its moving vertically within the chamber. This float is adapted to rise and fall with the water and serves more particularly to prevent the water from passing out of the chamber through the connecting pipe C, and into the beer keg. I have found a convenient means for insuring this result in case of the carelessness of an attendant to connect the rising and falling float by means of a rod H with a crank arm I which actuates a cock J, and this cock is closed when the chamber B is nearly filled with water, and thus closes communication through the pipe C, and prevents any water from passing over in that direction. In this condition the apparatus is sufficient for use with lager beer or any liquid in which there is not a sufficient amount of gas generated at any time to produce its own pressure. When, however, it is to be connected with a keg containing what was known as steam beer or beer in which a considerable quantity of carbonic acid gas is generated, I have provided for preserving the excess of gas pressure with which the beer is charged at first, and returning it into the cask later, when the beer has been drawn down so low that there is not a sufficient pressure in the cask. This is done by means of a pipe K which connects with the pressure pipe D at a point between the water cut off cock and the chamber B. The opposite end of this pipe is connected directly with the beer keg and the water supply pipe cock being closed, the cock in this connecting pipe is opened and the surplus gas from the keg is allowed to pass up through this pipe into the chamber B. Any beer which passes up with it will gradually return through the pipe into the keg, and the apparatus will then remain in this condition, the keg having a correspondingly less pressure by reason of the escape of gas into the chamber B, but as soon as the pressure in the keg becomes too much reduced the cock in the pipe connecting with the keg is closed, and the cock in the water supply pipe D is opened, the water then passing into the chamber B forces the gas out through the pipe C and into the keg, thus producing the necessary pressure in the keg with the gas which was originally contained in the beer itself.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A means for producing pressure within the cask or keg, consisting of an intermediate air or gas chamber, a pipe connecting the top of said chamber with the keg, a second pipe connecting the bottom of the chamber with a

water supply under pressure whereby the air or gas in the intermediate chamber is forced into the keg by displacement, and a means actuated by the ingress of water into the intermediate chamber for cutting off communication between the latter and the keg substantially as herein described.

2. A means for producing a continuous pressure within a cask or keg, consisting of an intermediate chamber, the top of which is connected with the top of the keg, and the bottom with a water supply under pressure, a rising and falling float movable within the intermediate chamber, a cock connected with said float and adapted to close communication between the chamber and the cask when the chamber is filled with water, substantially as herein described.

3. A pressure apparatus for casks or kegs consisting of an intermediate chamber having a pipe connecting its top with the top of the keg, a water supply pipe connecting the bottom of the chamber with a source of water supply under pressure, a cock by which the water supply may be cut off, a second cock between the water supply cock and the chamber, and a passage connecting it with the top of the keg whereby the surplus gas in the latter is allowed to pass into the chamber and be retained there and afterward returned into the cask when the pressure therein has become reduced, by opening the water supply cock, and allowing water to pass into the chamber and displace the gas therein, substantially as herein described.

In witness whereof I have hereunto set my hand.

RICHARD D. SCHROEDER.

Witnesses:
S. H. NOURSE,
J. A. BAYLESS.