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Patented Dec. 27, 1898.

C. CHRISTIAN.
PRESSURE REGULATOR FOR BEER.

(Application filed July 28, 1898.)

(No Model.)

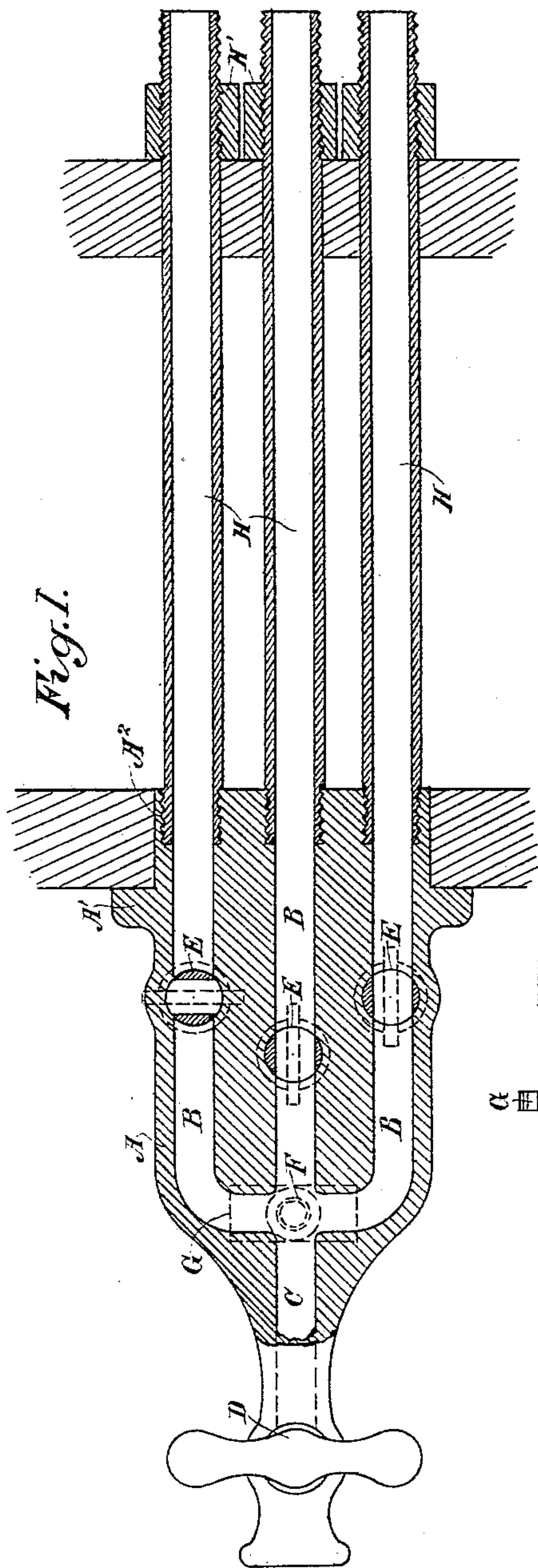


Fig. 1.

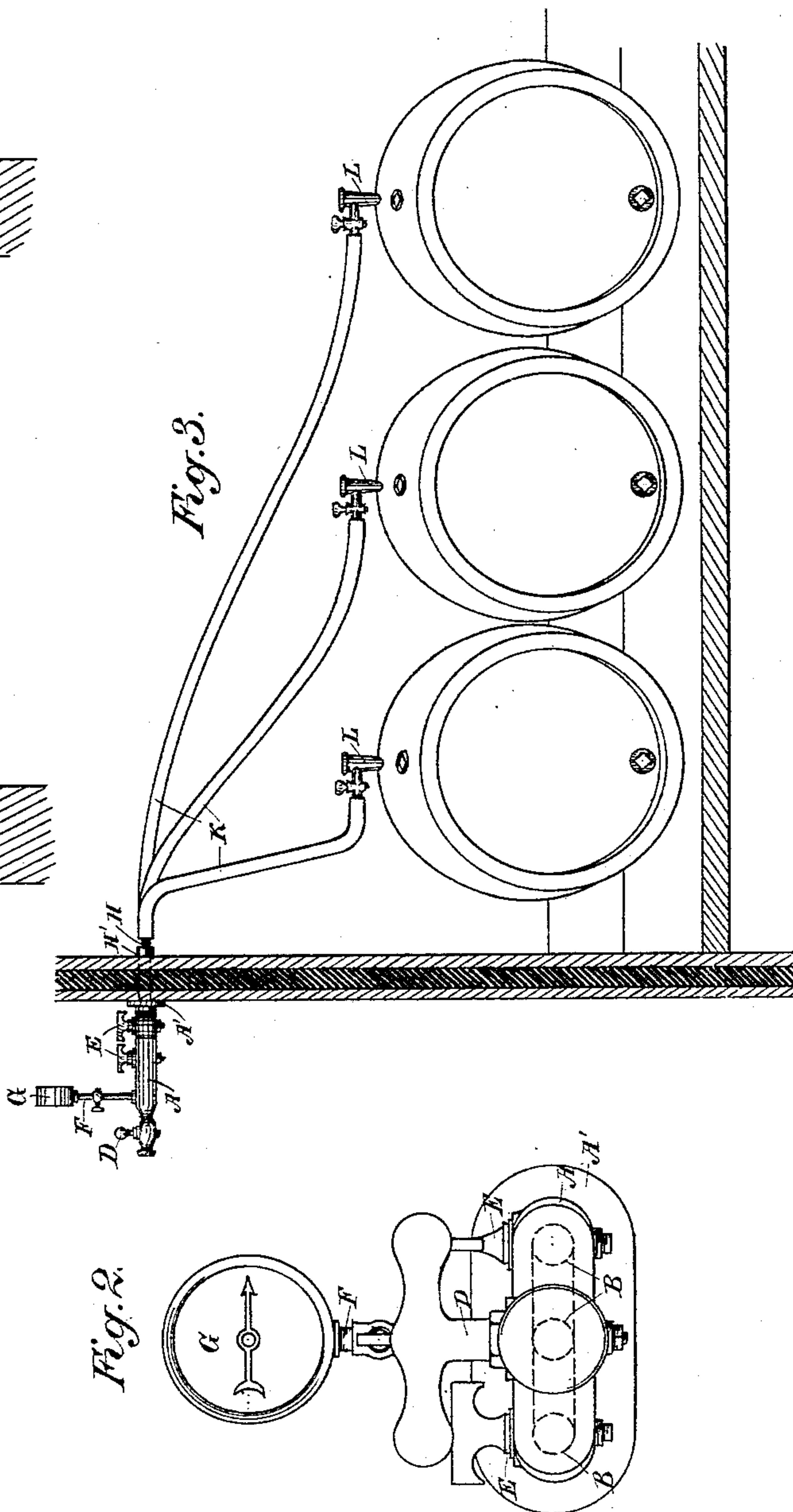


Fig. 2.

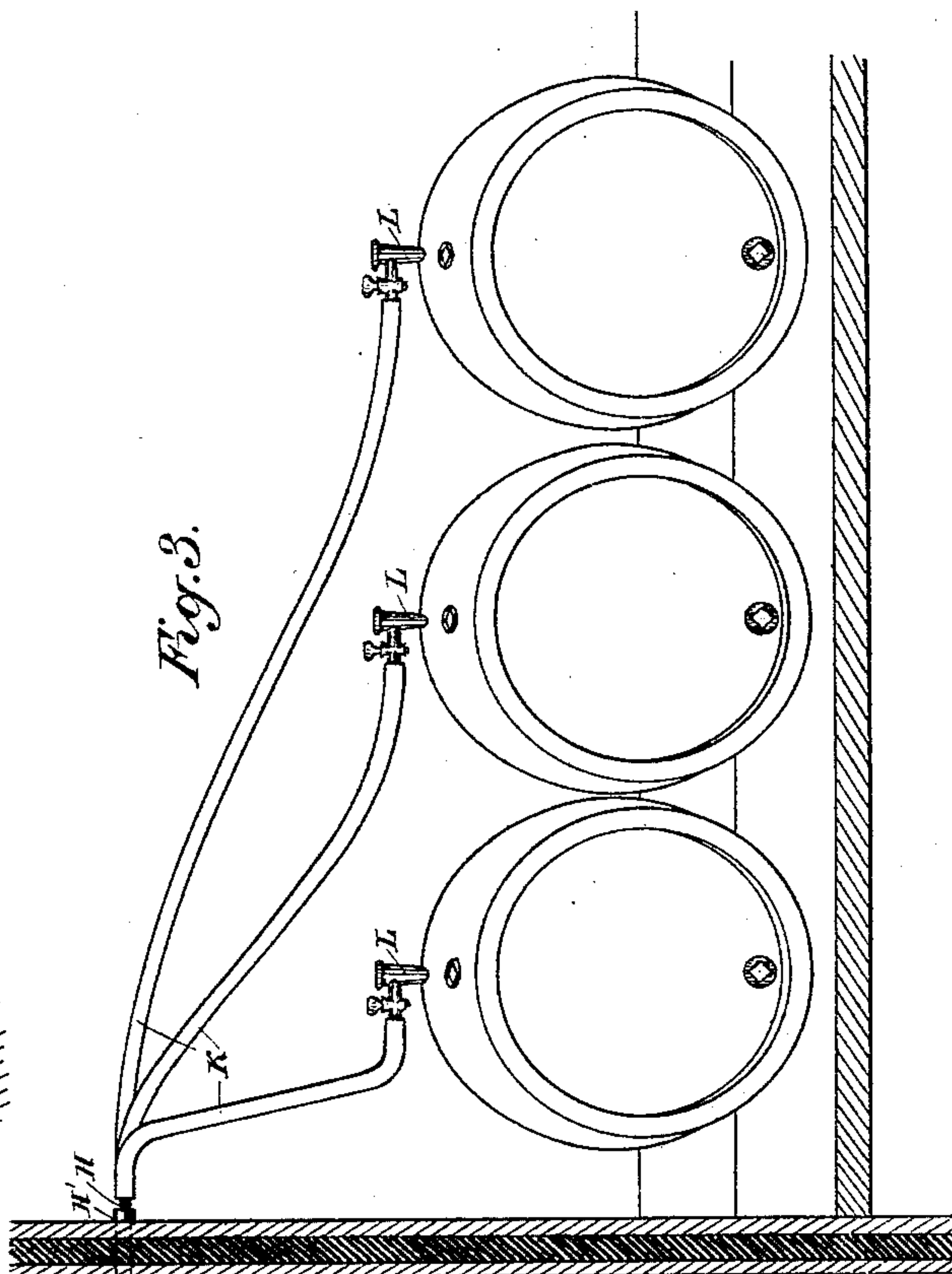


Fig. 3.

Witnesses,
J. H. Morse
J. F. Aschbeck

Inventor
Crawford Christian
By Dewey Strong & Co.
attys

UNITED STATES PATENT OFFICE.

CRAWFORD CHRISTIAN, OF ORLAND, CALIFORNIA.

PRESSURE-REGULATOR FOR BEER.

SPECIFICATION forming part of Letters Patent No. 616,604, dated December 27, 1898.

Application filed July 28, 1898. Serial No. 687,060. (No model.)

To all whom it may concern:

Be it known that I, CRAWFORD CHRISTIAN, a citizen of the United States, residing at Orland, county of Glenn, State of California, have invented an Improvement in Pressure-Regulators for Beer; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a device for regulating and controlling the pressure of gas in effervescent liquids.

It consists in details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a horizontal section through the regulating device. Fig. 2 is an end view of the same. Fig. 3 shows its application to casks.

The object of my invention is to provide a means for connecting a plurality of casks or other receptacles in which a liquid is contained under pressure of carbonic-acid gas and which it is desirable to draw under such pressure.

The most common form of apparatus to which my invention would be applied would be casks in which beer is contained. When these casks containing what is known as "steam-beer" are first set up, the pressure of gas is too great to allow the beer to be properly drawn, and it is usual to allow some of the gas to escape to reduce the pressure; but after the beer has been considerably reduced in the cask the pressure of the gas is then found to be not enough to keep the beer in good condition and give it the proper taste.

My invention enables the user to transfer a portion of the pressure from one cask which has a surplus to one or more casks in which there is not sufficient pressure or to allow a portion of the gas to escape entirely and to regulate and control its passage or escape and to indicate the exact amount of pressure in either of the receptacles.

A is a body portion which is preferably made of metal bored out to have passages B B made through it. These passages unite near the outer end into a single passage C, which is controlled by a cock D. Each of the three passages B is also controlled by an independent cock E, so that any two or more of the passages may be connected either with

each other or with the outlet-passage C. At the junction of these passages I have shown a pipe F, connecting with an indicator G, which serves to show the pressure within any pipe or receptacle which is at that time connected with it.

If it is desired to know the pressure in the part connected with either of the passages B, the cocks E of the other two are closed, and the discharge-cock being also closed the pressure will be shown at once by the indicator G, and in like manner the pressure in either of the passages B and its connections can be determined.

The body A is preferably made with a flange A' and a short extension A² to the rear of said flange. This extension may be made of any suitable or desired shape and is intended to pass through the outer side of the containing refrigerating-box in which beer-casks are usually placed when set up for custom use. These boxes are generally made with double sides at a distance apart and a filling of charcoal or other non-conducting material, which prevents the too rapid melting of the ice in the refrigerator. The part A² being fitted, as before described, into the outer side of the box connection is made between it and the inner side of the box through pipes H, holes being bored through the inner wall of the box in line with the openings B of the metal body A. The pipes H are here shown as coupled to the part A², and holes of sufficient size being bored to receive them they pass through the inner wall of the box and may be there secured by nuts H', which screw upon them, thus locking the device A firmly to the side of the box. Within the box the casks are placed in any suitable number, as two or three.

For service of customers it is desirable to have at least two casks of steam-beer and one of lager-beer, which has a much less pressure than the steam-beer.

When a new cask is placed in the refrigerator, it is connected with one of the pipes H by means of a flexible hose K and a cock or faucet L, which is fixed in the cask at any suitable point and with which the opposite end of the connecting-pipe is united. When this cock is opened, pressure from the new cask is admitted into the passage B, with

which it communicates, and when the cock E, controlling that passage, is opened the indicator G will at once show what the pressure is within the cask. By means of a second
5 flexible pipe and connections a second cask may be connected with one of the passages B, and in the same manner a third, and so on to any desired number.

10 If it is desired to ascertain the pressure in a cask which has already been partly used, the cocks E of all the others are closed and a cock connecting with that particular cask is opened, and the indicator will at once show the amount of pressure in that cask.

15 If it is found that the cask which has been on tap for some time has lost its pressure and the beer is becoming flat, it is only necessary to open the cock E, connecting with it, and the cock connecting with the cask having a
20 full head or pressure of gas, and as much gas may be allowed to pass into the partially-empty cask as may be found necessary to bring the beer up to the proper life and taste. This pressure can at once be shown by the
25 indicator, so that it can easily be regulated at all times.

The pressure of gas in what is known as "lager-beer" is very much less; but it is still well to keep it up until the beer has all been
30 drawn from the cask, and I therefore make the device A with connections sufficient to allow the transfer of gas into a plurality of casks which may contain different kinds of beer, as steam-beer and lager-beer.

35 If the pressure in any cask is found to be too great, it can be easily relieved directly by

opening the cock E, connecting with that particular cask, and the exterior cock D, so that the surplus pressure may escape into the atmosphere.

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

1. A gas pressure and regulator for beer in casks consisting of a body having a plurality
45 of independent passages opening out through the rear and each connecting at its forward end with a transverse passage, and a passage leading forward from the transverse passage and it and the other passages provided with
50 controlling-cocks, and connections between the inner ends of the first-named passages and corresponding casks.

2. A device for transferring and controlling the pressure of beer in casks consisting of a
55 body having a stop-flange and rear extension, said body having passages opening into the rear and leading to a point near the front, and each connecting with a single transverse passage at the front, a passage forward of the
60 transverse passage, independent cocks mounted in said body and controlling the passages, a pressure-indicator connecting with the transverse passage, pipes fitted into the rear
65 ends of the passages and connections from said pipes to independent casks.

In witness whereof I have hereunto set my hand.

CRAWFORD CHRISTIAN.

Witnesses:

S. H. NOURSE,

JESSIE C. BRODIE.