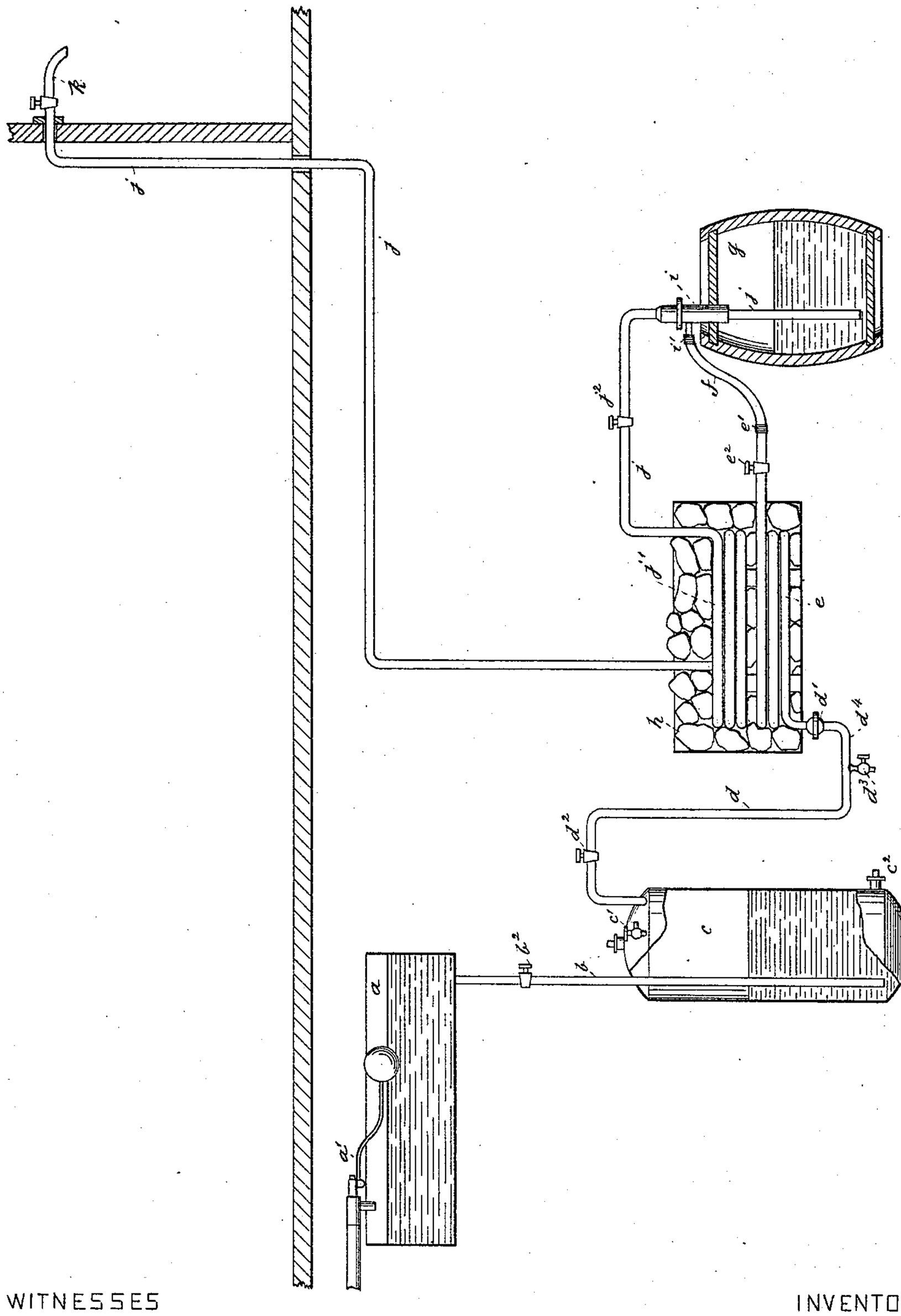
(No Model.)

F. ACKERMANN.

PRESSURE APPARATUS FOR BEER BARRELS.

No. 452,010. Patented May 12, 1891.



WITNESSES

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FRIEDRICH ACKERMANN, OF BROOKLYN, NEW YORK.

PRESSURE APPARATUS FOR BEER-BARRELS.

SPECIFICATION forming part of Letters Patent No. 452,010, dated May 12, 1891.

Application filed September 9, 1890. Serial No. 364,472. (No model.)

To all whom it may concern:

Be it known that I, FRIEDRICH ACKERMANN, of Brooklyn, New York, have invented an Improved Pressure Apparatus for Beer-Barrels, of which the following is a specification.

This invention relates to an apparatus for forcing air that is both compressed and cooled into a beer-barrel, thus keeping the beer under the proper temperature and pressure.

The invention consists in the various features of improvement more fully pointed out in the claims.

The accompanying drawing represents a sectional elevation of my improved apparatus.

The letter *a* represents a water-tank adapted to be filled by a ball-cock *a'* of a water-main and communicating with a reservoir *c* by a pipe *b*, that reaches nearly to the bottom of the reservoir. The reservoir *c* is provided at the top with an air-cock *c'* for replenishing the reservoir with air, and at the bottom with a discharge-cock c^2 for drawing off the water. The upper portion of the reservoir *c* communicates by a tube *d*, coil *e*, and hose *f* with the beer-barrel *g*. The coil *e* is placed in a horizontal position, and its lowermost end is coupled to the pipe *d* at *d'*. Beneath the coupling *d'*, and consequently beneath coil *e*, the pipe *d* is provided with a horizontal section d^4, that receives the products of condensation. These products flow naturally through the inclines of coil *e* back into the horizontal section d^4 of pipe *d*, and may be drawn off from time to time through a cock d^3 in section d^4. Thus the products of condensation can never reach the barrel.

The coupling between the upper end of coil *e* and the hose *f* is made at *e'*. The coil *e* is placed in a refrigerating-vessel *h*, containing ice, that cools the compressed air as the latter flows through the coil. The hose *f* is at its other end slipped over a nozzle *i'* of the hollow plug or socket *i*, that enters the barrel *g*. Through the plug or socket *i* there extends upward the beer-delivering pipe *j*. This pipe is provided with the coil *j'*, which is received by the refrigerating-vessel *h*. From the coil *j'* the pipe *j* extends upward to the discharge-cock *k* at the bar.

In use water is poured into tank *a* to partly fill reservoir *c*. As the beer is tapped from the barrel, the air-pressure on tank *a* will force some water into reservoir *c*. The air displaced by the water will, through the pipe *d*, coil *e*, hose *f*, and socket *i*, enter the barrel *g*. As the air flows through coil *e*, it will become cooled, and thus the beer will be kept under the proper pressure and temperature. The beer discharged from the barrel through pipe *j* will be once more cooled as it passes through the coil *j'*.

The tubes *b d e j* are provided with proper cocks b^2 d^2 e^2 j^2 for regulating the flow of water, air, and beer.

What I claim is—

1. In an apparatus for cooling and compressing beer and other liquids, the combination, with a compressed-air reservoir, a refrigerating-chamber, and a vessel containing beer, of a coil of pipe arranged in the refrigerating-chamber and having one end connected with the beer-vessel and its opposite end connected with the compressed-air reservoir, so as to deliver air under pressure through the refrigerating-chamber and into the vessel containing beer, and a separate coil also arranged in the refrigerating-chamber and having one end entering the beer-vessel and its opposite end leading to a bar or other place of draft, substantially as specified.

2. In an apparatus, substantially as described, the combination, with a water-tank, a compressed-air reservoir, a refrigerating-chamber, and a vessel containing beer or other liquid for use, of a pipe leading from the tank to the compressed-air reservoir, a pipe leading from the top of said compressed-air reservoir to the bottom of the refrigerating-chamber and connected with a coil therein, a pipe leading from the opposite end of said coil to a socket, such as *i*, in the beer-vessel, a separate coil arranged in the refrigerating-chamber and having one end passing through the socket and into the beer-vessel and its opposite end leading to a suitable point of draft, and suitable valves in said pipes for regulating the flow of air and liquid, whereby the beer in the vessel may be subjected to cold-air pressure while in the vessel and forced through one of the coils in the refrigerating-chamber in its passage to the discharge or draft cock, substantially as specified.

FRIEDRICH ACKERMANN.

Witnesses:
F. v. BRIESEN,
A. JONGHMANS.