

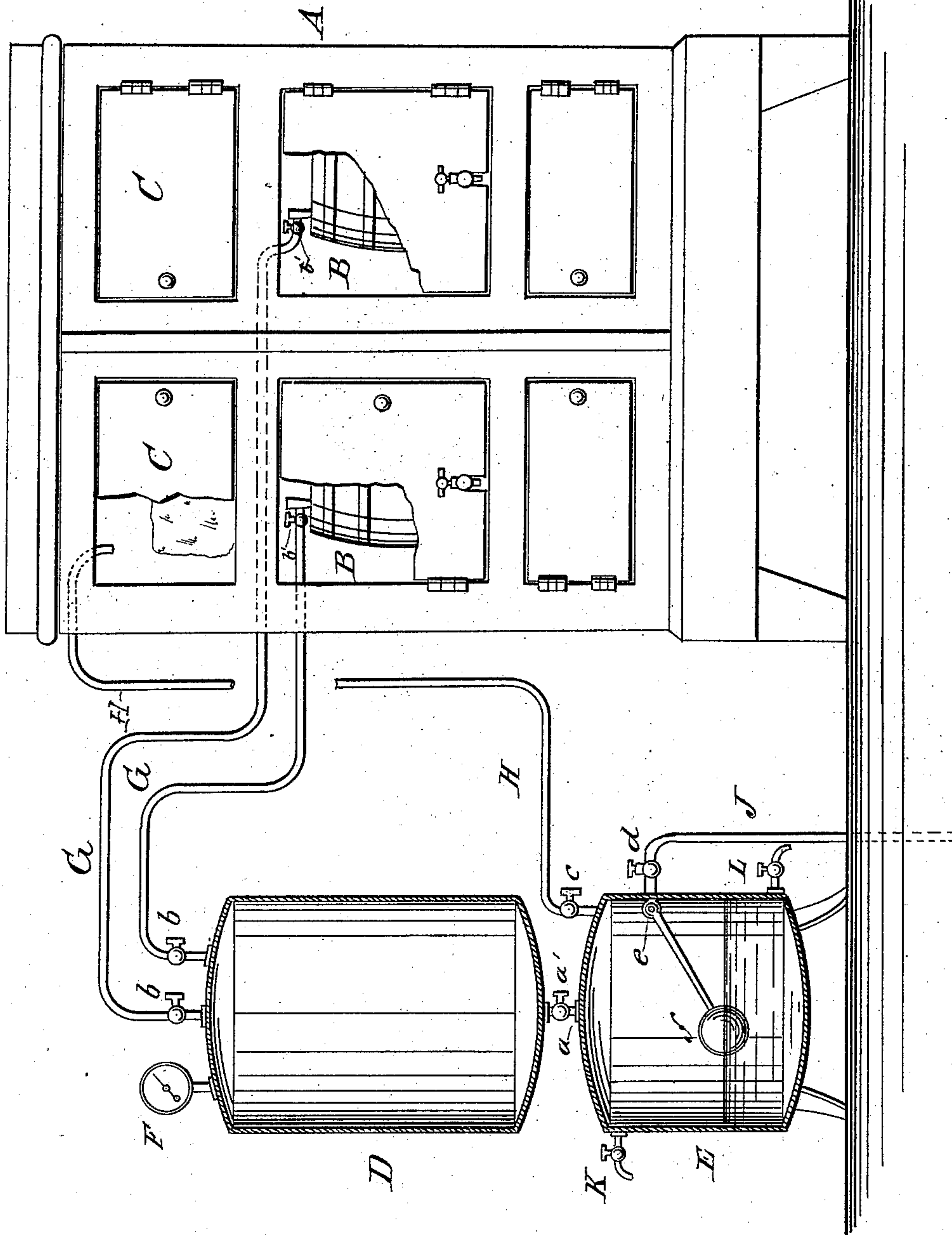
(No Model.)

C. & G. M. HEINTZ & A. DOTTERWEICH.

# AIR PRESSURE APPARATUS FOR BEER KEGS, &c.

No. 294,230.

Patented Feb. 26, 1884.



**WITNESSES :**

WITNESSES:  
Chas. Nida  
C. Sedgwick

**INVENTOR:**

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# UNITED STATES PATENT OFFICE.

CHRISTIAN HEINTZ AND GEORGE M. HEINTZ, OF BUFFALO, AND ANDREW DOTTERWEICH, OF DUNKIRK, NEW YORK.

## AIR-PRESSURE APPARATUS FOR BEER-KEGS, &c.

SPECIFICATION forming part of Letters Patent No. 294,230, dated February 26, 1884.

Application filed February 14, 1883. (No model.)

*To all whom it may concern:*

Be it known that we, CHRISTIAN HEINTZ and GEORGE M. HEINTZ, both of Buffalo, in the county of Erie and State of New York, and  
5 ANDREW DOTTERWEICH, of Dunkirk, in the county of Chautauqua and State of New York, have invented a new and Improved Air-Pressure Apparatus for Beer-Kegs, Refrigerators, &c., of which the following is a full, clear, and  
10 exact description.

Reference is to be had to the accompanying drawing, forming part of this specification, in which the figure is a sectional front elevation of our invention.

15 A represents a refrigerator, in one compartment of which are placed the beer-kegs B B, with the ice-boxes C C above them.

D is an air-tank arranged, preferably, above the water-tank E, with the short pipe, *a*, having the cock *a'* connecting them.  
20

Upon the air-tank D is placed the pressure-gage F, and leading from the air-tank to the beer-kegs B B are the pipes G G, which are provided with the cocks *b b*.

25 Leading from the water-tank E to the ice-box C is the pipe H, which is provided with the cock *c*, and leading into the water-tank E is the water-pipe J, which is connected with some water-pipe of the building, and this pipe  
30 J is provided outside of the water-tank with the cock *d*, and inside of the tank with the automatic cut-off cock *e*, which is operated by the float *f* for automatically cutting off the supply of water when it has reached a sufficient height in the water-tank.  
35

K is a vent-cock for the water-tank to admit air to the tank while the tank is being emptied of water, and L is the draw-off cock.

In use for supplying a pressure of air to the  
40 beer-kegs B B, the air-tank D is first charged with a pressure of air by first closing all of the cocks in the apparatus, except the cock *a'* in the pipe between the water and air tanks, and the cock *d*, which, being open, will admit a flow  
45 of water under pressure from the pipe J into the water-tank. As the water-tank fills with water, the air therein will be forced through the pipe *a* into the air-tank D, creating a pressure of air therein. The water-tank having  
50 become full up to the valve, which is auto-

matically closed by the action of the float *f* and the rise of the water in the water in the water-tank E, if the pressure in the air-tank is not sufficient, the cocks *a'* and *d* will be closed, the draw-off and vent cocks K L opened, 55 and the water-tank emptied. These latter cocks will then be closed, and the cocks *a'* *d* again opened, and the water-tank again filled with water, forcing its volume of air into the air-tank; and this operation will be repeated 60 until the required pressure in the air-tank is attained, or until the pressure of air therein balances the water-pressure. The cock *a'* is now closed, to prevent the return of the air into the water-tank E, and the cocks *b b* will 65 then be opened, which will admit the pressure of air to the beer-kegs for forcing out their contents as desired. The cocks *b' b'* in the pipes G will be turned so as to prevent the beer entering the pipes when the kegs are first tapped. 70

It is designed to place upon the ice in the ice-box a small quantity of ammonia and salt, and to force a current of air into the ice-box, for creating a circulation of air in the refrigerator, causing the ammonia and salt to greatly 75 reduce the temperature in the refrigerator. The supply of water to the water-tank E through the pipe J is slightly greater than the discharge of water from the water-tank E through the cock L. 80

In order to force a current of air with our apparatus from the water-tank E into the ice-box, it being supposed that there is no water in the water-tank E, the cock *d* is opened, and also the discharge-cock L, to allow the constant 85 discharge of water. The supply of water through the supply-pipe J being slightly greater than the discharge through the cock L, the water will gradually rise in the water-tank E and compress the air in its upper end, and by 90 opening the cock *c* the air will be forced into the ice-box. In consequence of the area of the water-supply pipe being slightly greater than the discharge, some time must elapse before the float is carried up by the rising of the wa- 95 ter, and in this rising of the water the float is raised and the valve *e* partially closed, so that the supply of water will be equal to the discharge, and this may be continued as long as desired. By this construction all the air origi- 100



nally in the water-tank, together with the air brought into it in the supply-pipe, is forced into the ice-box.

5 The water-tank is so arranged as to be used separate from the air-tank—that is, it may be detached and used for family purposes for cooling refrigerators, &c., without the air-tank D.

10 Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The superposed air-chamber D, having a pipe, G, leading to the beer-chamber, and provided with a cock, *b*, in combination with the water-chamber E, connected to the chamber 15 D by a pipe, *a*, having a cock, *a'*, and supply-pipe J, having a cock, *d*, and leading to the head of water, substantially as and for the purpose set forth.

2. The combination, with the ice-box C and

pipe H, of the water-tank E, water-pipe J, 20 having valve *e* and cock *d*, and float *f*, substantially as shown and described.

3. The combination, with the ice-box C and pipe H, having cock *c*, of the water-tank E and discharge water-cock I, and the supply- 25 pipe J, having valve *e*, cock *d*, and float *f*, the supply-pipe J having a greater area than the discharge-cock, and first partially filling the water-tank until the rise of the float causes the supply and discharge pipes to be equal in area, 30 substantially as shown and described.

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Witnesses:

HENRY SMITH,

HENRY H. DANIELS.