

No. 749,802.

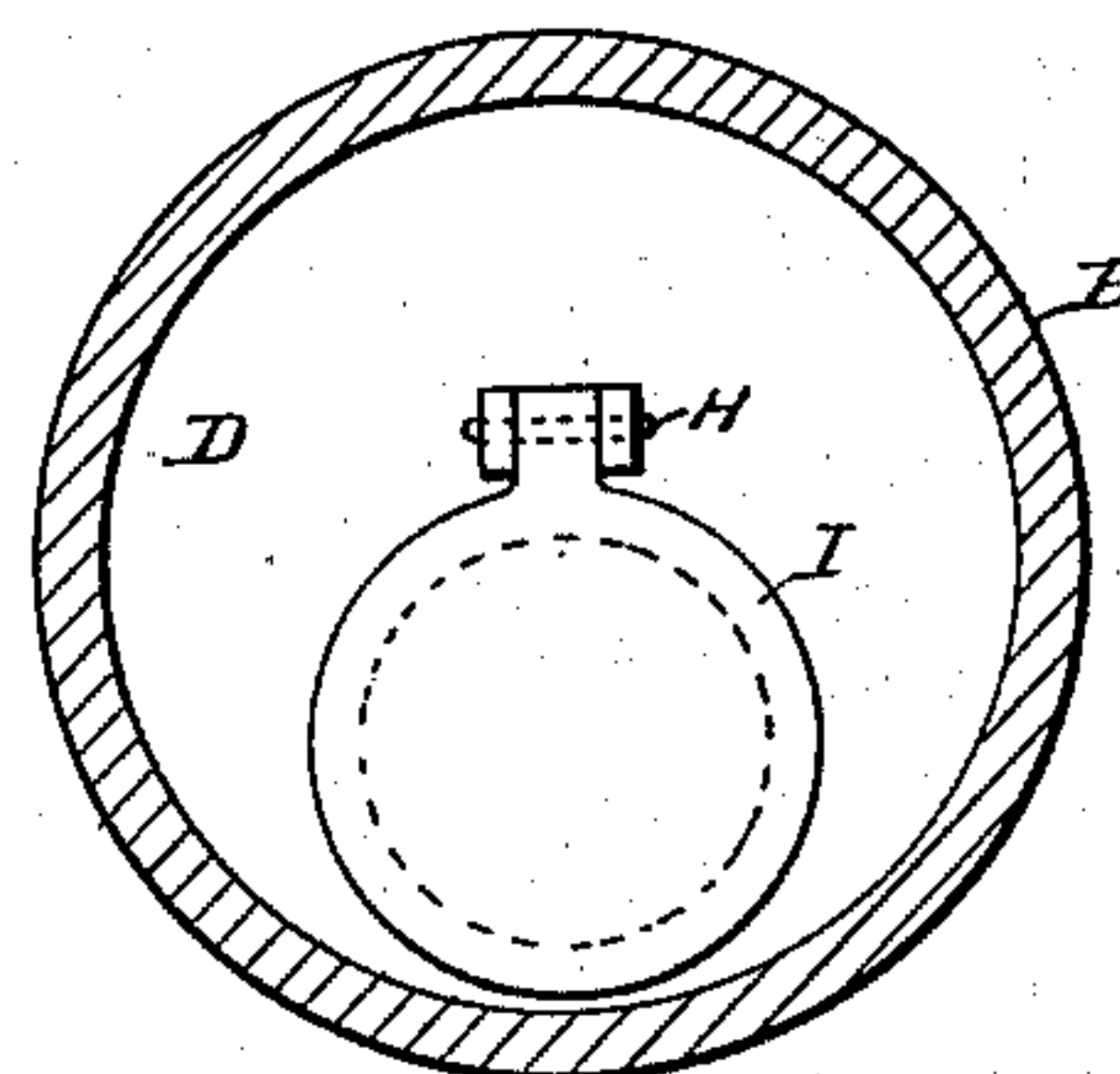
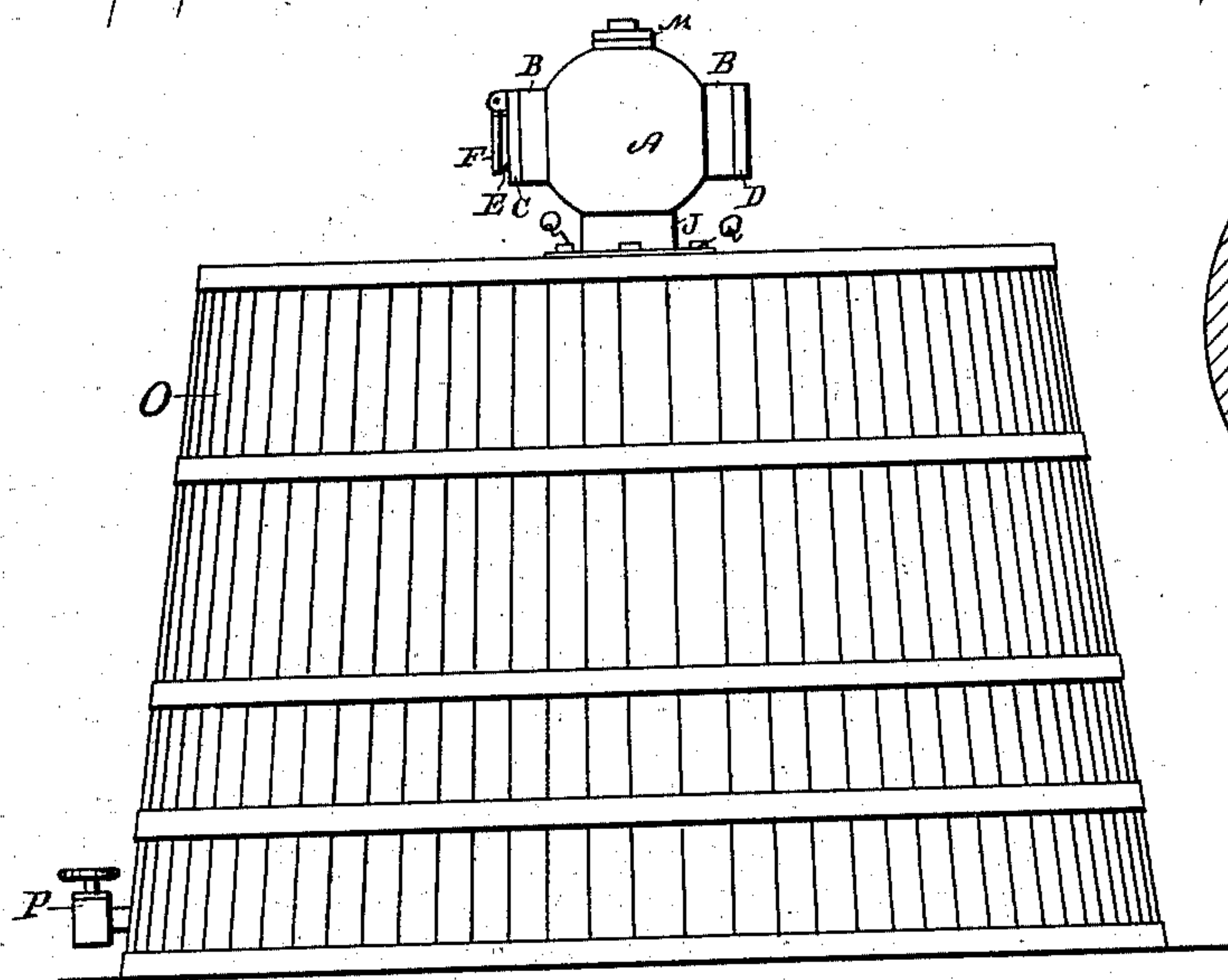
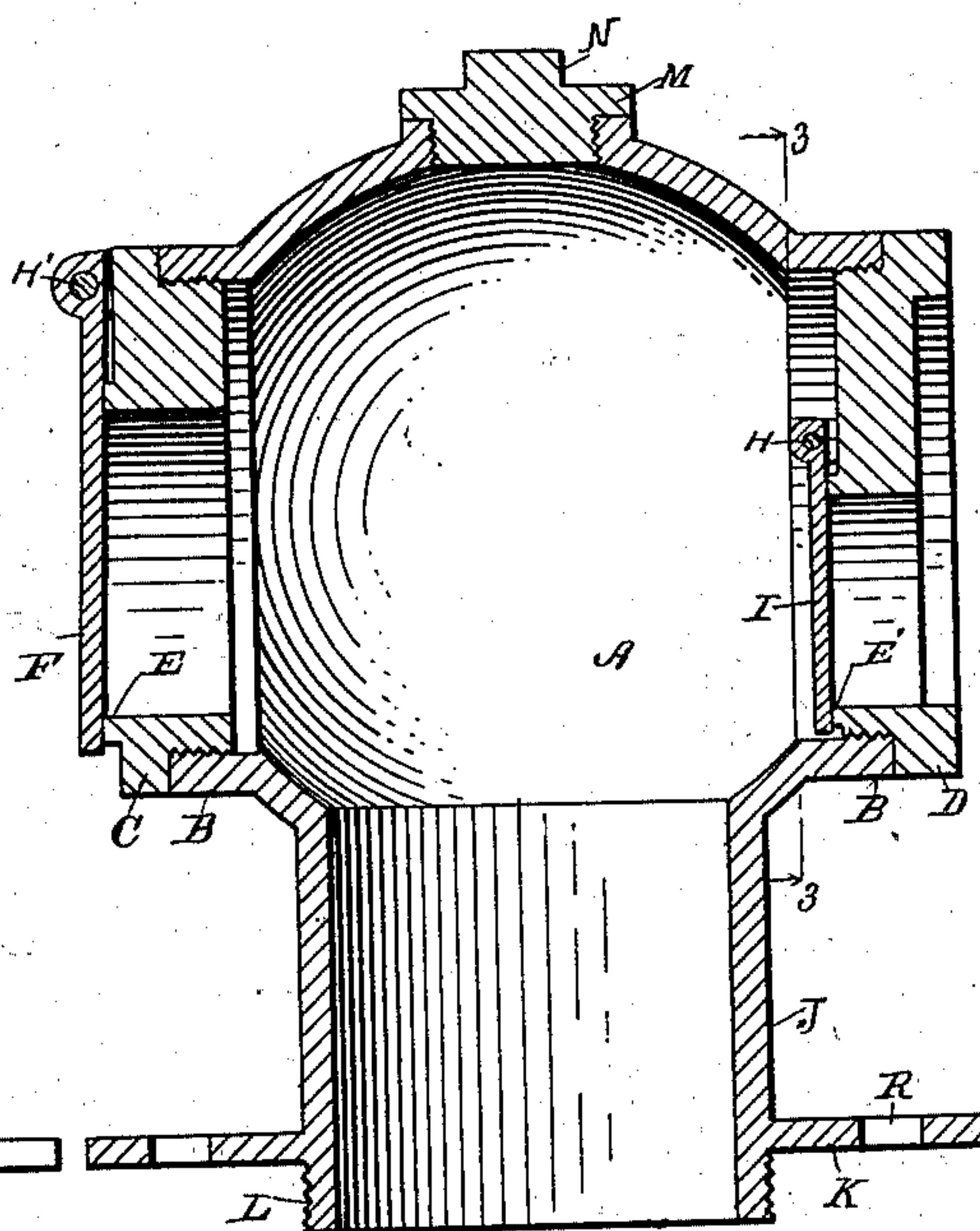
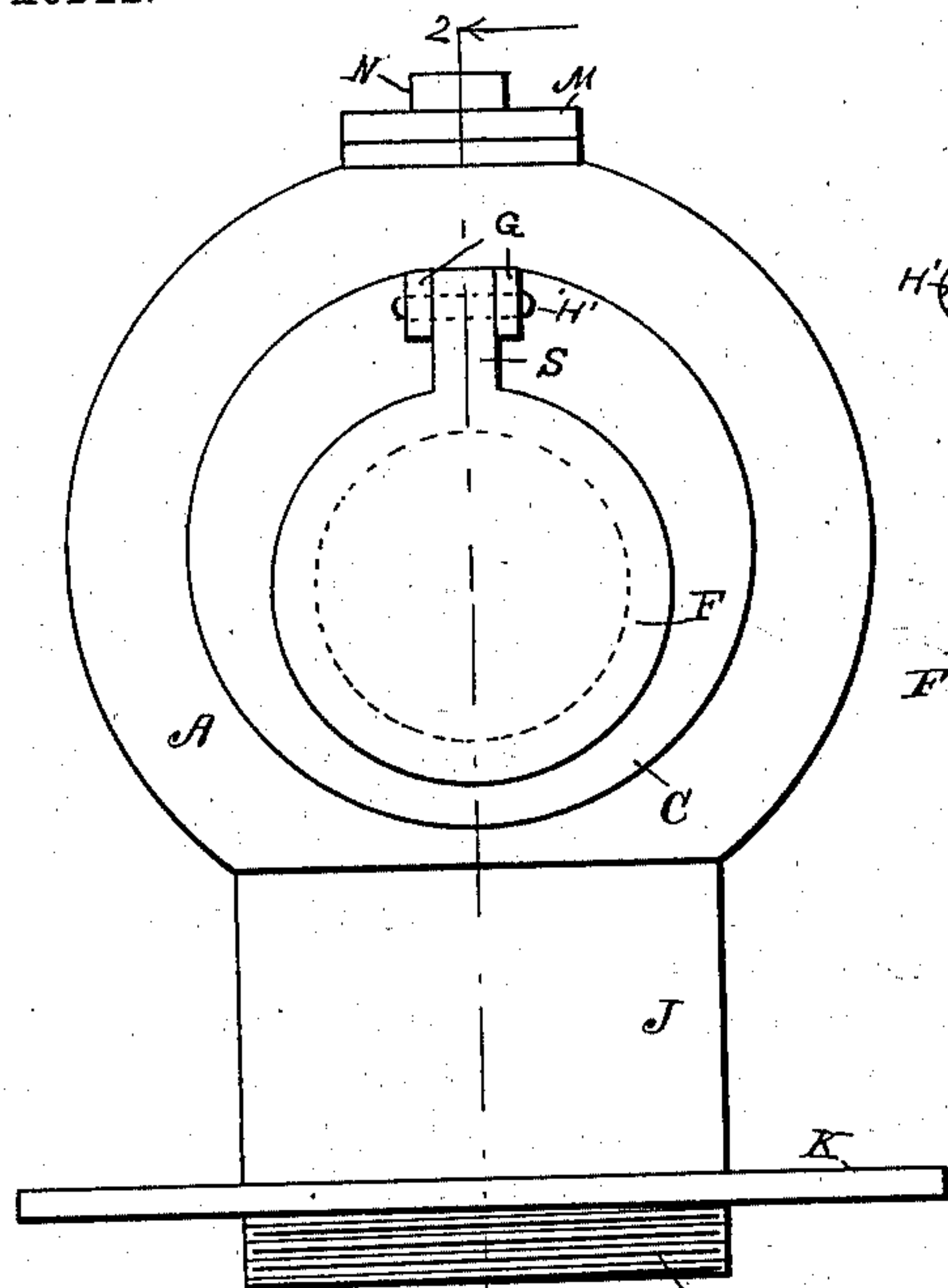
PATENTED JAN. 19, 1904.

C. NOLLER.

# VENTILATING ATTACHMENT FOR TANKS.

APPLICATION FILED SEPT. 15, 1902.

NO MODEL.



Witnesses:

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Ed Robbins.

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## UNITED STATES PATENT OFFICE.

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## VENTILATING ATTACHMENT FOR TANKS.

SPECIFICATION forming part of Letters Patent No. 749,802, dated January 19, 1904.

Application filed September 15, 1902. Serial No. 123,441. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES NOLLER, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Ventilating Attachment for Tanks, of which the following is a specification.

My invention relates to automatic air-regulators for beer-tanks.

The object of my invention is to provide an automatic air-regulating device for beer-tanks that will permit the suction of air into the tank when the liquid contents are being drawn therefrom and allow all surplus air and gas to escape which accumulates in the tank, either from fermentation of the liquid or when said liquid is flowing therein, and also permit gaging its contents.

A further object is to produce a device that is simple in construction, practical, durable, and efficient in service.

Therefore with these objects in view my invention consists of an air-receiver provided with two detachable heads with openings therein controlled by valves hinged to said detachable heads, one of which is employed to permit the escape of air or gas from the tank and the other to permit the suction of air into the tank. A short tube vertically projecting from the under side of the air-receiver is provided at the end with a flange-base, which adapts it to be fastened to a tank by means of screws or said end to be screw-threaded on the outside, permitting it to be attached to a tank by screwing it into an opening therein. In the top of the air-receiver a gage and sight-opening is provided for the purpose of permitting the contents in a tank to be gaged through the said air-regulating device.

In order to enable others skilled in the art to which my invention most nearly appertains to make and use the same, I will now proceed to describe its construction and operation, reference being had to the accompanying drawings, forming a part of this specification.

Figure 1 represents an end view of my device. Fig. 2 represents a sectional view of Fig. 1, taken on dotted line 2 2, Fig. 1, looking from a point toward the left in the direc-

tion indicated by arrow-points, showing the interior of the air-receiver. Fig. 3 represents a sectional view of Fig. 2 on dotted line 3 3, Fig. 2, looking from a point to the right in the direction indicated by arrow-points, showing the air-inlet valve I hinged to the inside of the detachable head D. Fig. 4 represents a tank, showing my device attached to the top thereof.

Describing the parts of the drawings pointed out by letters, A indicates an air-receiver having two integral short tube extensions B horizontally projecting from the sides thereof.

C is a detachable head provided with an air-outlet opening E and is inserted and held in the end of one of the tube extensions B by means of a screw-thread which is provided on a portion of the periphery thereof and engaging a corresponding screw-threaded portion of the interior walls of the said tube extension. F is a valve employed to control the opening and closing of said air-outlet opening E and is attached on the outside to said head C by means of a pin H inserted through a hole in the tongue extensions S of said valve F and supported in the lugs G on the upper outside portion of said head C.

I indicates a valve employed to control the opening and closing of the air-inlet opening E in detachable head D and is attached to the inside of said head D in the same manner as valve F, the head D being inserted and held in the tube extension B in the same manner and by similar means as head C.

J indicates a short vertical tube extension from the under side of the air-receiver A, being integral therewith, and is provided with a flange-base K, adapting it to be fastened to a tank O by means of screws Q, inserted through holes R in said base K and secured into said tank, or the end of said tube J may be provided with screw-thread L on the outside thereof, which adapts it to be attached to tanks by inserting the same in a screw-threaded opening in said tank, in which case the flange-base K may be dispensed with.

M indicates a detachable screw-cap employed to close a sight and gage opening in the top of the air-receiver A and is provided with a wrench-seat N thereon.



O indicates a tank with a faucet P in the side and with my device attached on the top thereof, as shown in Fig. 4.

My device is attached to beer-tanks, preferably over the bung-hole usually therein, the bung being dispensed with, the said bung-hole communicating with the air-channel through the tube J, which channel is continuous through the air-receiver A, thence through the tube extensions B, through the air-inlet and air-outlet openings E, as shown in Figs. 1 and 2. The valve-seats of the air-inlet and air-outlet openings in heads C and D are slightly obtuse and on an angle, as shown in Figs. 1 and 2, which permits of close contact of the hinged valves F and I in closing said openings through the gravity of their own weight except when the same are overcome by the suction and escape of air into and from the tank.

The operation of my device may be explained as follows: When liquid is turned into the tank O through the faucet P by means of a hose-coupling or feed-pipe connected therewith, (not herein shown,) the air thereby accumulating in the tank rises up into the air-receiver A, closes the valve I in the head D, and opens the valve F in head C, passes out, and escapes through the air-outlet opening E therein. Gas accumulating from liquid undergoing or passing through the stage of fermentation in the tank, such as beer or other malt liquors, operates the valve F and escapes from the tank in the same manner as air, as previously described. When liquid is drawn from the tank through the faucet P or other means connected with said tank, the suction caused thereby in the air-receiver closes valve F in head C and opens valve I in head D, permitting air to be drawn into the tank through the air-inlet opening E in said plug D, and thereby facilitating the flow of liquid through the faucet P or other means of drawing same.

The air-inlet opening in head D may be smaller in size than the air-outlet opening in head C, as shown in Fig. 2, which permits and regulates a requisite supply or current of air to be drawn therethrough into the tank by suction when liquid is being drawn therefrom.

By making the heads C and D detachable renders the interior of the air-receiver A to be easily and conveniently cleaned of any formation that may be deposited therein from vapor arising from liquid in the tank.

With my device the liquid in the tank is always kept intact, and all tendency of dust, dirt, and undesirable foreign matter collecting therein is obviated.

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

1. The combination in ventilating attachment for tanks, of an air-receiver provided with a sight and gage opening, the detachable heads having an opening therein, and valves controlling the same attached thereto, substantially as described and for the purposes set forth.

2. In ventilating attachment for tanks, the combination with the air-receiver, the detachably-attached head provided with an air-inlet opening and the detachably-attached head provided with an air-outlet opening therein, valves attached to said heads, the sight and gage opening in said air-receiver, means for attaching said ventilating attachment to tanks, all connected and operated, substantially as described and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES NOLLER.

Witnesses:

MABEL BARNES,  
FANNY BARNES.