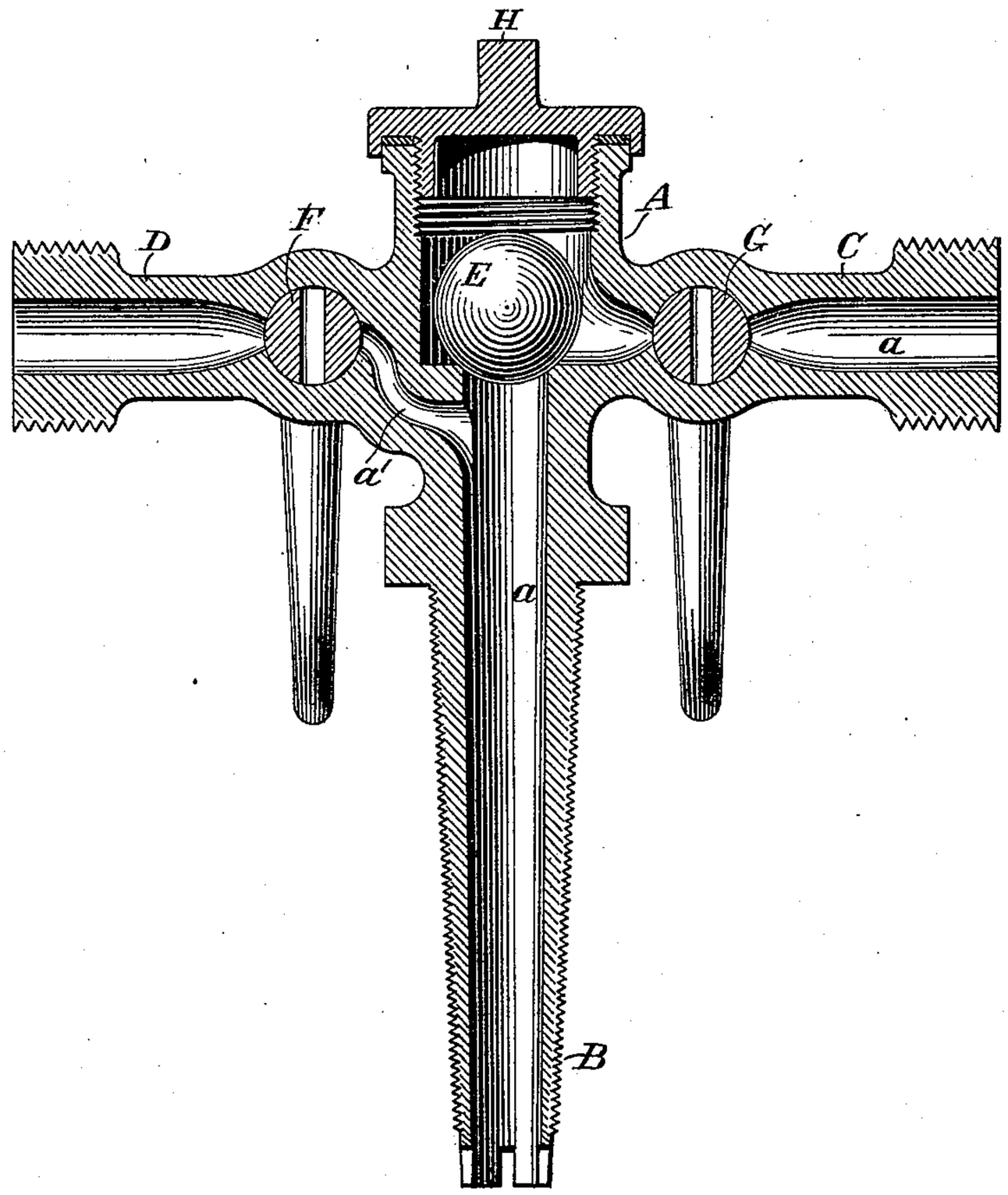
(No Model.)

M. WARREN.

CHECK VALVE AND RACKING OFF COCK.

No. 441,727. Patented Dec. 2, 1890.



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UNITED STATES PATENT OFFICE.

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CHECK-VALVE AND RACKING-OFF COCK.

SPECIFICATION forming part of Letters Patent No. 441,727, dated December 2, 1890.

Application filed April 26, 1890. Serial No. 349,610. (No model.)

To all whom it may concern:

Be it known that I, MARION WARREN, a citizen of the United States, and a resident of the city of Rochester, county of Monroe, and State of New York, have invented a certain new and useful Improvement in Check-Valve and Racking-Off Cocks; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming part of this specification.

My invention relates to faucets used on casks employed in the manufacture of beer and other fermented liquids, and which are connected up in series or by what is commonly known as the "connected system." In such system when any one of the casks is newly filled the pressure therein is at first much lower than that of the general system, and if communication between such cask and the other casks of the system be immediately established the higher pressure of the other casks will enter the new cask and produce what is technically known as "surface-pressure" therein, thereby checking the progress of the natural fermentation therein and greatly retarding the refining of the liquid.

The object of my invention is the provision of a faucet which will automatically exclude the pressure of the general system from the cask on which it is used until such time as the fermentation therein is sufficiently advanced to generate a pressure of carbonic-acid gas very slightly in excess of that normally maintained on the general system when communication between such cask and the system will be automatically established and maintained, and which after such communication has been thus established will automatically cut the cask out of communication should the pressure therein fall below the standard pressure of the system.

A further object of my invention is the provision of means which will permit the contents of such a cask to be "racked off" without necessitating a separate faucet for the connection of the air-hose and without disturbing or in any way interfering with the fermentation going on in the other casks of the system.

To this end my invention consists in the novel construction and combination and arrangement of parts herein shown and described, and specifically pointed out in the claims.

The accompanying drawing represents a sectional view of my invention in elevation.

A is a faucet embodying my invention. Said faucet is provided with a spigot B, which enters the cask and with two arms C and D, the arm C being adapted and arranged for connection with the main hose or piping of the system, and the arm D being adapted and arranged for connection with the air-hose by which air is supplied to the cask when racking off. A ball-valve E, preferably of rubber or other light material, is arranged in the passage *a*, which establishes communication between the interior of the cask and the main hose, said valve being adapted to fall to its seat and close communication, while the pressure in the cask remains below the normal pressure of the system. Between said valve E and the cask is arranged a passage *a'*, which communicates with the air-hose, and which is closed by a cock F when the air-hose is not in use. A cock G may, if desired, be arranged in the passage *a*, so that communication between the cask and the remainder of the system can be completely closed when racking off under a higher pressure than is maintained on the general system. The faucet is preferably provided with a removable top or bonnet H to enable the valve E to be conveniently inserted and removed, and a packing or gasket I, of any suitable material, may, if desired, be inserted between the body and bonnet of the valve.

The operation of my invention will now be readily understood. The faucet is inserted in the cask, which is preferably so filled as to leave an air-space between the lower end of the spigot and the surface of the liquid. Connections having been made between the arm C and the main piping of the system the cock G (if used) is opened. Until the fermentation in the cask is sufficiently advanced the higher pressure on the outlet side of the valve E will hold the same tightly to its seat. When,

however, the liquid in the cask has fermented sufficiently to generate a pressure therein very slightly in excess of that maintained on the general system, the valve E will be lifted from its seat, and the cask will be thus automatically put into communication with the other casks of the system. Should a leak occur in the cask, or should the pressure therein from any cause fall below the normal pressure of the system, (which is usually regulated by an automatic safety-valve or equivalent device,) the valve E will automatically close and prevent any loss of pressure on the other casks of the system and also prevent the higher pressure on the other casks from entering and disturbing the liquid in the cask. When it is desired to rack off the contents of the cask, the cock G (if used) is closed, the cock F is opened to admit air under pressure to the interior of the cask, and the liquid is then racked off without in any way disturbing or interfering with the other casks of the system.

For convenience I have described my improved faucet as applied to one cask of the system; but it is of course to be understood that it is preferably and usually applied to all the casks of the system.

It is not essential that the cocks F and G should be arranged in the body of the faucet, since either or both of them may, if desired, be applied to the hose and effect the same result.

Having thus described my invention, I claim—

1. In a faucet, the combination of the arm C, adapted for connection with the main piping of a connected-system apparatus, the arm D, adapted for connection with the racking-off hose, the passage *a*, the ball-valve E, located therein, the passage *a'*, communicating with the passage *a* below the valve E, and the cock F, controlling the passage *a'*, substantially as and for the purposes set forth.

2. In a faucet, the combination of the arm C, adapted for connection with the main piping of a connected-system apparatus, the arm D, adapted for connection with the racking-off hose, the passage *a*, the ball-valve E, located therein, the passage *a'*, communicating with the passage *a* below the valve E, and the cock F, controlling the passage *a'*, and the removable bonnet H, substantially as and for the purposes set forth.

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