

(No Model.)

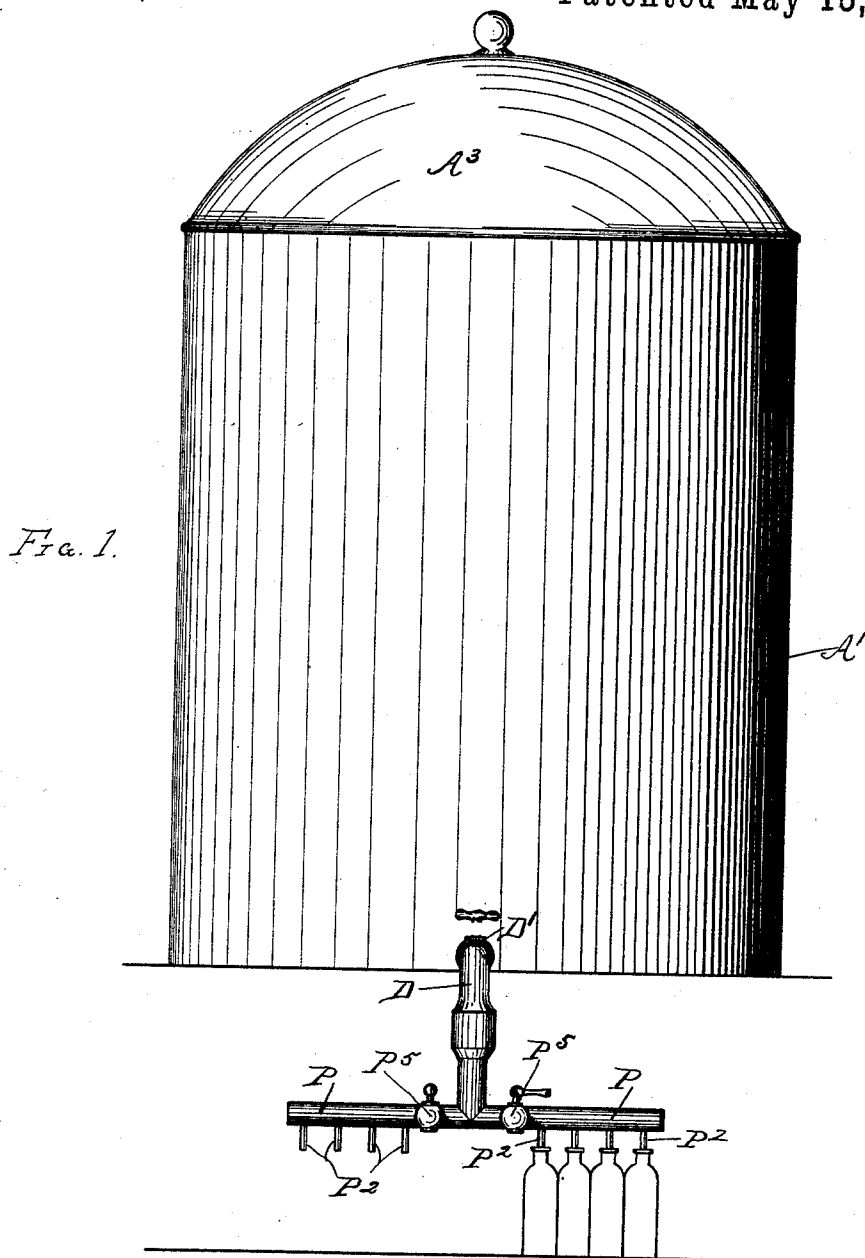
2 Sheets—Sheet 1.

G. W. FARRELL.

BEER CONDENSING AND BOTTLE FILLING APPARATUS.

No. 519,888.

Patented May 15, 1894.



Witnesses:
A. E. Delaney.
Geo. H. Gibson

Inventor:
George W. Farrell
by Mosher & Curtis
Attys.

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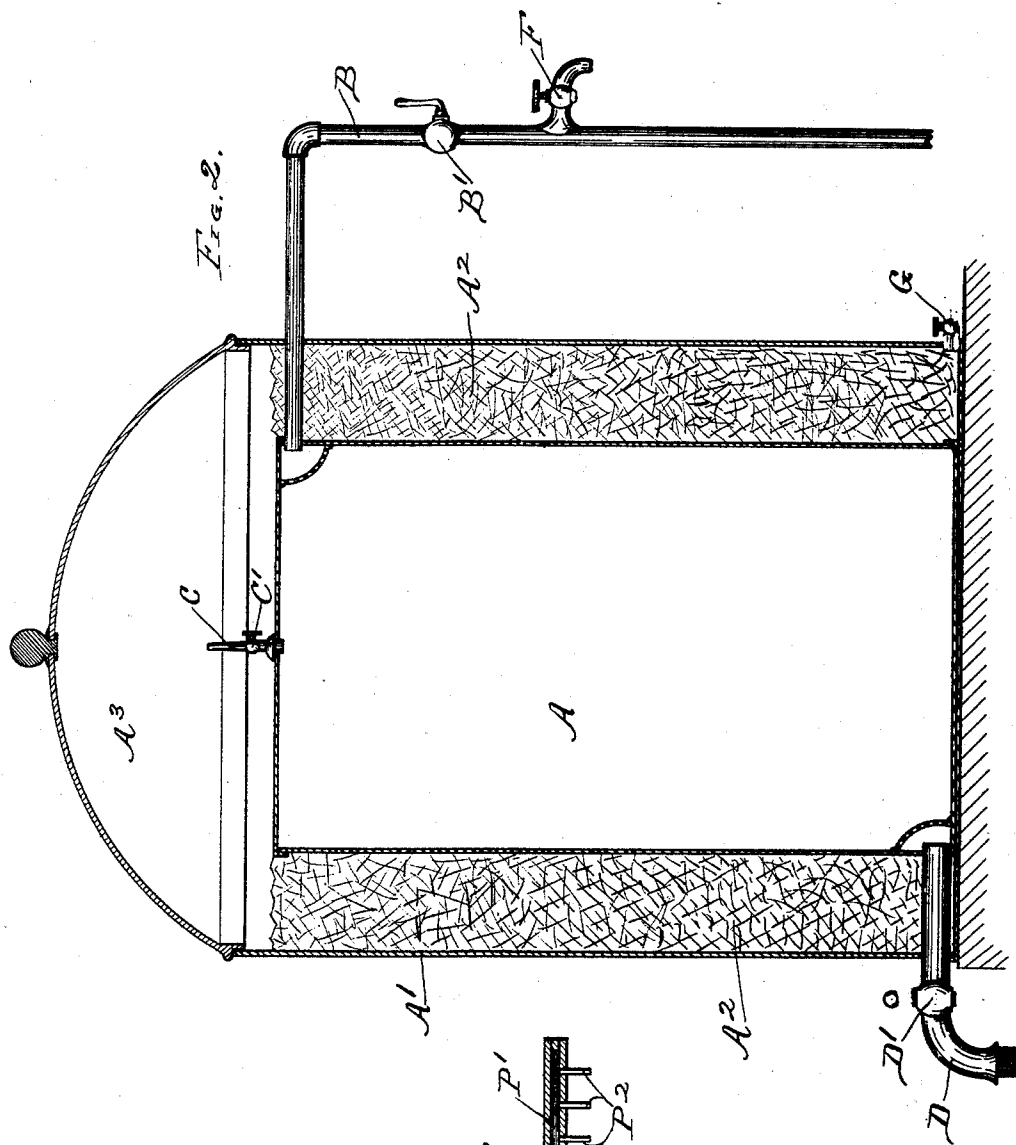
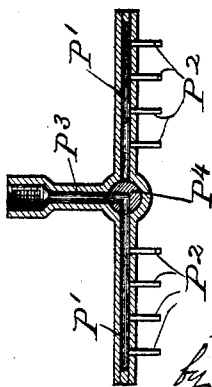


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE W. FARRELL, OF AUSABLE FORKS, NEW YORK, ASSIGNOR TO
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BEER-CONDENSING AND BOTTLE-FILLING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 519,888, dated May 15, 1894.

Application filed August 12, 1893. Serial No. 482,988. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. FARRELL, a citizen of the United States, residing at Ausable Forks, county of Essex, and State of New York, have invented certain new and useful Improvements in Beer-Condensing and Bottle-Filling Apparatus, of which the following is a specification.

My invention relates to such improvements and consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the letters of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts in the several figures therein.

Figure 1 of the drawings is a view in front elevation of my improved beer-condensing and bottle-filling apparatus. Fig. 2 is a central vertical section of same with the bottle-filling attachment removed. Fig. 3 is a central longitudinal section of the bottle-filling attachment detached.

A— is the condensing reservoir surrounded by the refrigerating chamber A'— adapted to be filled with broken ice, A²— inserted from the top when the cover A³— is removed. The condensing reservoir is provided with a supply-pipe B—, leading from a cask of beer, or other source of supply, not shown, to the upper part of the reservoir. This supply-pipe is provided with a valve or cock B'— adapted to control the supply. The reservoir is also provided in its upper end with a vent consisting of the discharging nozzle C— provided with a controlling valve C'—; and at the bottom with the discharge nozzle D— provided with a controlling valve or cock D'—. Bottles or other receptacles may be filled directly from the nozzle D—; but when desired an attachment for filling a plurality of bottles at once may be connected with the nozzle. I have shown modified forms of such an attachment. That shown in Fig. 3 consists of a horizontal receptacle or pipe P— closed at its ends to form end-chambers P'— each chamber being provided with a plurality of laterally projecting nozzles P²—. Intermediately of the

chambers the pipe is provided with an inlet P³— with which the chambers can be alternately or successively connected by means of the two-way valve P⁴—. The inlet is interiorly screw-threaded to fit the similarly threaded nozzle D— with which the filling attachment is connected.

A modified form of attachment is shown in Fig. 1, in which each end chamber is provided with an independent controlling valve P⁵— whereby both chambers can be connected with the inlet at the same time.

When the construction shown in Fig. 3 is employed, a bottle is placed under each nozzle leading from one end chamber and the valve turned to connect that chamber with the inlet opening, which permits an even flow into each of such bottles. While such bottles are filling, the attendant places a bottle under each nozzle of the other end-chamber. When the first set of bottles is filled, he turns the valve until it cuts off communication between inlet P³— and the chamber over the filled bottles, and connects the other chamber with the inlet. While the second set of bottles is being filled he substitutes empty bottles for the filled ones and the operation is repeated as desired.

The preferred number of discharging nozzles in each chamber is such that their combined capacity is equal to that of the inlet P³— which is usually equal to the capacity of the supply-pipe or nozzle when the attachment is connected with a pipe or nozzle. When the filling attachment is used in connection with the condensing reservoir, the reservoir is first filled or charged with live beer by opening valve B'— in the supply-pipe and the vent C— in the top of the reservoir, the discharging nozzle D— being closed. When the reservoir is filled or charged to the extent desired, the supply and vent valves are both closed and the contents of the reservoir allowed to rest until it is cooled and the gases condensed, after which the contents are drawn off through the discharge nozzle into bottles or other receptacles, as before described. The gases being condensed by the low temperature, the bottles or other receptacles can be filled much more quickly

and with comparatively little or no waste. When the condensing reservoir is charged directly from a close cask containing live beer, or in any other known manner, the time interval between closing the vent-valve C'— and supply-valve B'— can be varied as desired. If the vent is closed as soon as the air is expelled from the condensing reservoir and the supply-pipe left open until the internal pressure of the reservoir equals the charging pressure, and then closed, the beer in the reservoir will contain approximately as much gas as that in the cask, and after it has been condensed by reduction of temperature it can be drawn into an open glass or bottle through the discharging nozzle D— with slight agitation of the beer and small loss of the gases. By having the vent open after the supply-valve B'— is closed, the beer can be deprived of much of its gas which will escape from the reservoir, the amount escaping being determined by the time the vent is left open. When desired, the supply-pipe may be provided with a discharge-cock F— through which beer can be drawn directly from the supply-pipe without passing into the condensing reservoir. The refrigerating chamber is provided at its lower end with a drip-cock G— through which the water from the melting ice can be drawn from the chamber.

I am aware that so called three-way faucets adapted to deliver through either of two nozzles having opposite directions, and that a delivery pipe also, with a series of nozzles having the same direction are not new. Neither of these devices are adapted for filling bottles conveniently supported on a table or common plane, the latter being unsuitable for the reason that it is specially adapted by its construction and proportions to provide for the expansion and escape of gases, being furnished with a spout applied to the entire nozzle pipe, which spout constitutes the actual delivery nozzle.

My device is applicable to an ordinary faucet and delivers fluids without material expansion in the delivery pipe and nozzles, and

it constitutes a practical adaptation of a detachable bottle filling device to such ordinary faucet.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a beer-condensing and bottle-filling apparatus, the combination with a condensing reservoir and means for artificially cooling the same, of a valve-controlled supply-pipe having a cock B' and draw-off cock F; a valve-controlled vent leading from the upper part of the reservoir; and a valve-controlled discharge pipe leading from the lower part of the reservoir, substantially as described.

2. In a beer-condensing and bottle-filling apparatus the combination with the discharge-pipe leading from the condensing reservoir, of a detachable receptacle having a plurality of chambers and an outlet from each chamber, said outlets communicating with nozzles consisting of pipes adapted for insertion in bottles standing on the same plane, the nozzles of each chamber having an aggregate capacity about equal to that of the inlet connecting them with the reservoir, an inlet situated intermediately of the chambers; and two-way valve-mechanism for successively connecting the chambers with the inlet, substantially as described.

3. A bottle-filling attachment for bottle-filling apparatus consisting of a pipe having end-chambers with a plurality of discharge nozzles projecting laterally from each chamber, the capacity of the nozzles of each chamber, about equaling that of the inlet leading to said chamber from a reservoir an inlet located intermediately of the chambers and adapted to be connected with a supply-reservoir; and a two-way valve for alternately connecting the chambers with the inlet, substantially as described.

In testimony whereof I have hereunto set my hand this 26th day of July, 1893.

GEORGE W. FARRELL.

Witnesses:

WM. H. HINDS,
ERASTUS D. HILL.