

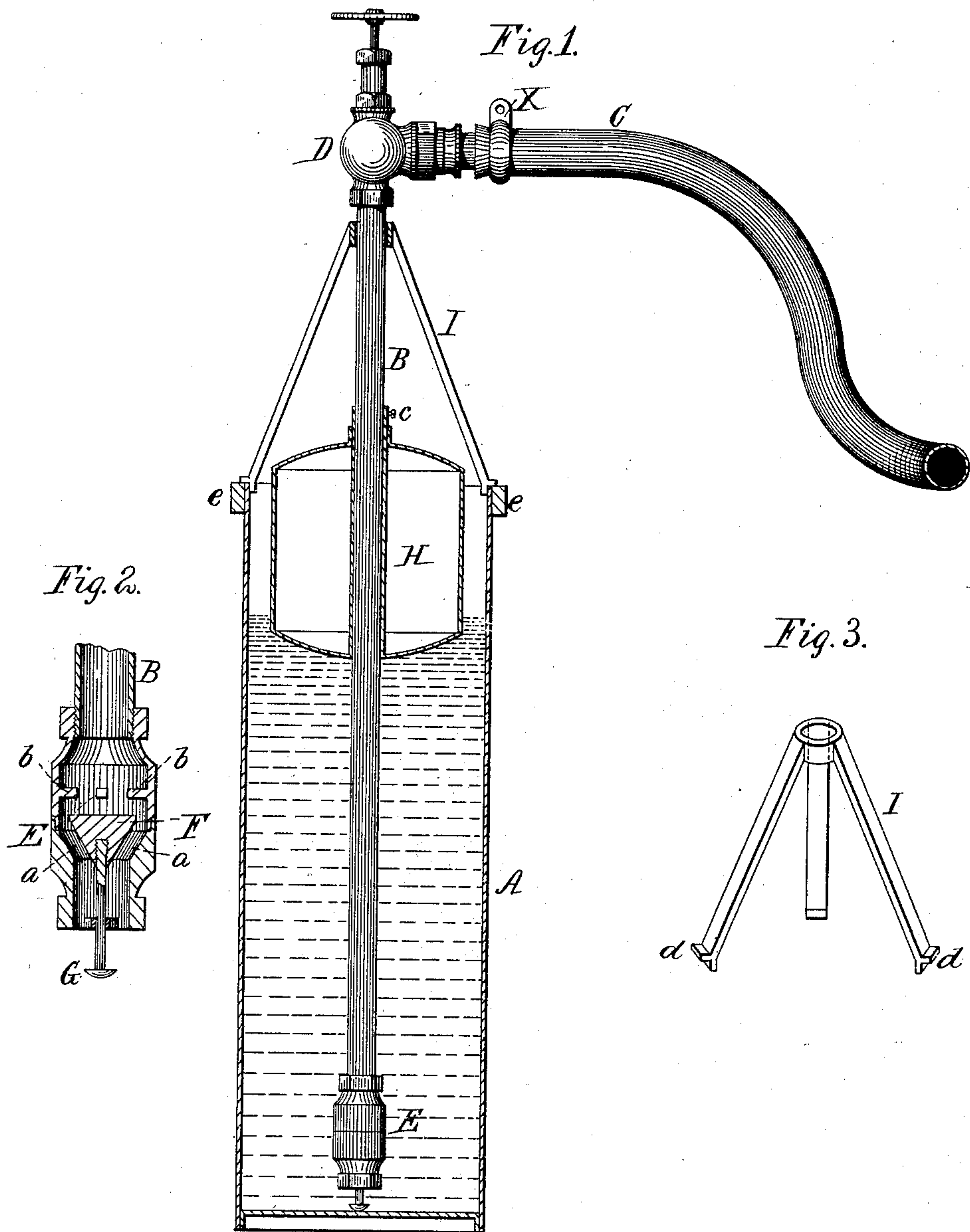
(No Model.)

F. V. DE COPPET.

AUTOMATIC CAN FILLER FOR ICE MACHINES.

No. 375,926.

Patented Jan. 3, 1888.



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AUTOMATIC CAN-FILLER FOR ICE-MACHINES.

SPECIFICATION forming part of Letters Patent No. 375,926, dated January 3, 1888.

Application filed September 25, 1886. Renewed December 10, 1887. Serial No. 257,555. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS VT. DE COPPET, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Automatic Can-Fillers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My improvement is especially adapted for use in the operation of ice-machines, where it is desired to fill each of the ice-cans in the brine-tank with a given quantity of water in order that the blocks of ice may be of an equal size and weight. Heretofore it has required careful watching in filling these cans, particularly at night, to get an equal amount of water in all of them, and also prevent some of them being filled to overflowing and the water passing into the brine-tank.

The object of my device is to overcome these difficulties and obviate the necessity of any watching of the cans while they are being filled; and to that end it consists in the combination, with the filling-pipe, of a valve interposed therein and regulated by means of a float upon the surface of the water in the can, whereby when the water in the can rises to a given height it comes in contact with and raises the float, and thereby automatically closes the valve and cuts off the supply of water.

The novelty of my invention will be herein set forth, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side elevation, partly in section, of an ice-can and filling-pipe with my improvement applied thereto. Fig. 2 is an enlarged sectional view of the valve in the lower end of the filling-pipe. Fig. 3 is a perspective view of a bracket for guiding and supporting the filling-pipe.

The same letters of reference are used to indicate identical parts in all the figures.

A is the ice-can partially filled with water.

B is the filling-pipe, entering the top of the can and extending down nearly to the bottom thereof.

C is a rubber or other flexible supply-pipe

connected to the top of the filling-pipe, which may be supported by a bracket or any convenient rest which permits a small upward play or movement. The tube C may rest on any convenient support, or when the cans are filled at a low level, as is often the case, it may rest on the floor.

In the drawings, I is a bracket, the legs of which are provided with flanges *d*, which rest upon the edge of the can at *e*. The upper part of this bracket embraces loosely the pipe B, and serves as a guide, and permits the free movement of the pipe B up and down.

D is a globe or any other suitable valve for admitting or cutting off the supply of water when the filling-pipe is put in the can and when it is removed therefrom.

At the bottom of the filling-pipe is a valve-chamber, E, containing a check-valve, F, having a lower pendent stem, G, extending below the bottom of the chamber. The chamber is shown in this instance composed of two halves screwed together, the upper half being screwed onto the threaded lower end of the filling-pipe, and the lower half, containing the tapering valve-seat *a*, to receive the valve F. The upward travel of this valve may be limited in any suitable manner, as by projecting lugs *b* on the interior surface of the upper half of the valve-chamber, as shown in Fig. 2, and any suitable guide, *d*, for the valve-stem is provided in the bottom of the chamber.

H is a hollow air-tight float having a central vertical tube which fits snugly around the filling-pipe B, and is provided with a set-screw, *c*, bearing against the filling-pipe, so that the float can be adjusted up and down on said filling-pipe, and secured thereto in any of its adjusted positions.

The operation of the device is as follows: When the can is empty, the filling-pipe extends down almost to the bottom thereof, and is supported upon the valve F, which bears against the lugs *b* in the valve-chamber, the valve-stem G resting upon the bottom of the can and holding the valve open. The valve D at the top of the filling-pipe being then opened, the water flows down into the can. When it rises to a height which brings it into contact with the float H, it carries the float up with it, and thereby lifts the filling-pipe B

until the valve F is seated in the valve-seat *a* and the flow of water thereby cut off, whereupon the upward travel of the float and filling-pipe stops, and the valve remains closed 5 until the pipe is removed from the can. In this manner, as will be readily seen, the float can be so adjusted on the filling-pipe as to automatically close the valve and cut off the supply of water at any desired predetermined point, so 10 that the exact quantity of water desired can be put in each can without any care or watching whatsoever, and without disturbing or agitating the water in the can. If desired, the upper part of the filling-pipe may have a register 15 or gage cut on its surface above the float, indicating the quantity of water or the weights of the blocks of ice to be formed in the can, and the float adjusted up or down by this gage.

While my invention is particularly adapted 20 to use in the operation of ice-machines, where it is desired to place exactly the same quantity of water in a number of cans, it is of course applicable to any vessel which it is desired to fill with a liquid to a certain predetermined point 25 without the necessity of watching while the vessel is being filled.

I am aware that valves have been operated by floats which closed the valves as they were raised by various mechanisms. I am also 30 aware that valves have been constructed with depending stems which hold the valves open when pressed against a resisting substance, and do not claim, broadly, such devices.

The pipe C is provided with a loop or clamp, 35 X, at the point of connection with the nipple, extending laterally from the pipe B, for the purpose of making the connection perfectly tight. A handle may be attached to this loop for facilitating the movement of the filler from 40 place to place or lifting it out of the can.

Having thus fully described my invention, I claim—

1. In an automatic can-filler, the combination, with the movably-supported filling-pipe extending nearly to the bottom of the can, and 45 having a valve in its lower end, of a float secured to the upper part of said filling-pipe and operated by the water in the can to lift said pipe, and thereby allow said valve to drop and automatically cut off the supply of water 50 at a desired predetermined point, substantially as described.

2. In an automatic can-filler, the combination, with the movably-supported filling-pipe extending down nearly to the bottom of the 55 can, and having a valve interposed in its lower end, of an adjustable float secured to the upper part of said filling-pipe and operated by the water in the can to lift said pipe, and thereby allow said valve to drop and automatically cut 60 off the supply of water at any predetermined point desired, substantially as described.

3. In an automatic can-filler, the combination, with the movably-supported filling-pipe extending down nearly to the bottom of the 65 can, and having at its lower end a valve-chamber containing a valve provided with a pendent stem, which extends below the bottom of the valve-chamber and bears against the bottom of the can to hold the valve open while the can 70 is being filled, of an adjustable float secured to the upper part of the filling-pipe and arranged to be raised by the water in the can, and thereby lift the filling-pipe to allow said valve to drop and automatically cut off the 75 supply of water at any predetermined point desired, substantially as described.

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