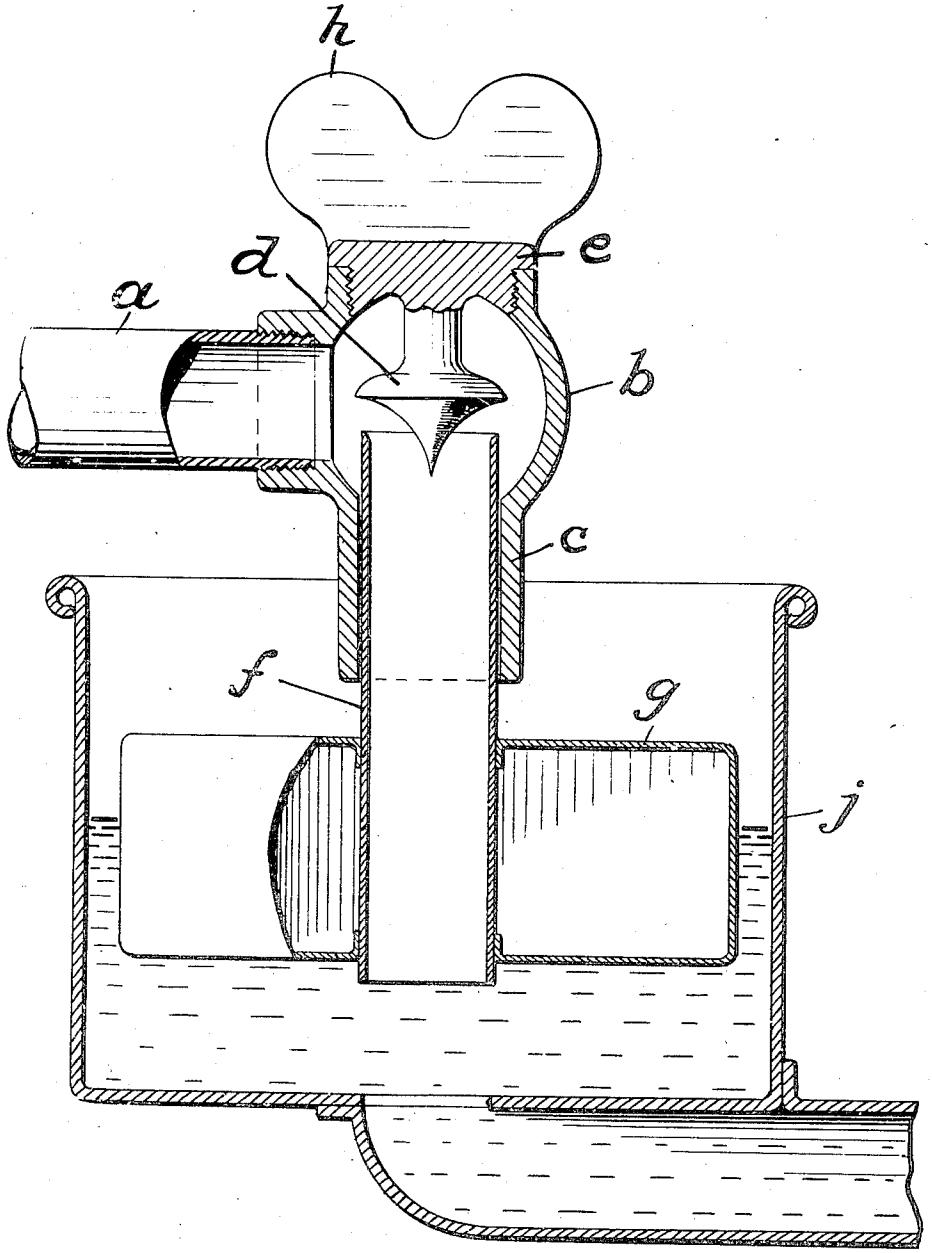
M. LEITCH.

FEED CONTROLLING FLOAT VALVE.

APPLICATION FILED JAN. 28, 1916.

1,219,567. Patented Mar. 20, 1917.



WITNESS:

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MEREDITH LEITCH, OF POUGHKEEPSIE, NEW YORK, ASSIGNOR TO THE DE LAVAL SEPARATOR COMPANY, A CORPORATION OF NEW JERSEY.

FEED-CONTROLLING FLOAT-VALVE.

1,219,567. Specification of Letters Patent. Patented Mar. 20, 1917.

Application filed January 28, 1916. Serial No. 74,738.

To all whom it may concern:

Be it known that I, MEREDITH LEITCH, a citizen of the United States, residing at Poughkeepsie, county of Dutchess, and State of New York, have invented a new and useful Improvement in Feed-Controlling Float-Valves, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

The ordinary automatic valve for controlling the feed to cream separators and similar devices consists of a float that rises when the supply is greater than that desired and presses against the lower end of the supply tube, shutting off the flow of liquid. Unless the supply can is at a very limited elevation or the float is very large, the pressure of the liquid will force the float away from the tube, allowing the liquid to flow faster than desired.

The object of this invention is to provide a simple float valve having sufficient feeding capacity at low supply heads and which at the same time is uninfluenced by great supply heads. A preferred embodiment of the invention is shown in the accompanying drawing, the single figure of which is a cross section on the center line of my improved float valve.

a is a supply pipe from a tank at any convenient location. *b* is a valve body with the float guiding tube *c* extending downward from its lower side and with a button *d* located approximately at the center of the body and supported from a plug *e* screwed into the top of the body. For convenience in removal the plug *e* may be provided with wings *h*. Except for convenience in cleaning, the button *d* might be made integral with the body. A tube *f* is secured to, and passes through the center of, the float *g* and extends upward through the guiding tube *c* toward the under side of the button *d*. On the machine being fed is the cup *j* in which the float *g* operates.

In operation, liquid to be treated flows from the supply tank, not shown, through the pipe *a* to the valve body *b*, and then around the outside of the tube *f* and above and below the button *d*, giving a full supply to the annular opening between the top of the tube and the underside of the button. Liquid flowing down through the tube *f* enters the cup *j*. If the supply is greater than the capacity of the machine, the level of the liquid in the cup rises and lifts the float *g* and with it the tube *f* until the annular opening between the tube *f* and the button *d* is only large enough to supply the liquid required.

It is readily seen that great capacity may be obtained with a float and valve body of small size and that no matter how great the pressure in the valve body, it will not operate to force the float down and open the valve.

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

1. A liquid feed regulating device comprising a valve body having a side inlet, a tubular guide forming a bottom outlet, a removable top, a button depending and spaced from said top to allow the incoming liquid to flow around and above it, a float, and a tube carried by and extending centrally through and above the float into said guide and adapted to seat against said button.

2. A liquid feed regulating device comprising a valve body having an inlet and an outlet, a float, a tube carried by and extending above the float into said outlet, and a fixed button within, and supported from, the valve body and against which the tube is adapted to seat, said button being spaced from the top and side wall of the valve body to allow the incoming liquid to flow around and above it.

3. A liquid feed regulating device comprising a valve body having a side inlet and an outlet, a float, a tube carried thereby and extending vertically through the float and above the same into said outlet, and a button within, and supported from the top of, the valve body and affording, when the

float is unseated, a free and unobstructed annular opening between the end of the tube and the button, said button affording a seat for the upper extremity of the tube and spaced from the top and side wall of the valve body to allow the incoming liquid to flow around and above it.

In testimony of which invention, I have hereunto set my hand, at Poughkeepsie, on this 21st day of January, 1916.

MEREDITH LEITCH.

Witnesses:

CHARLES L. POWELL,

HOWARD A. SNYDER.