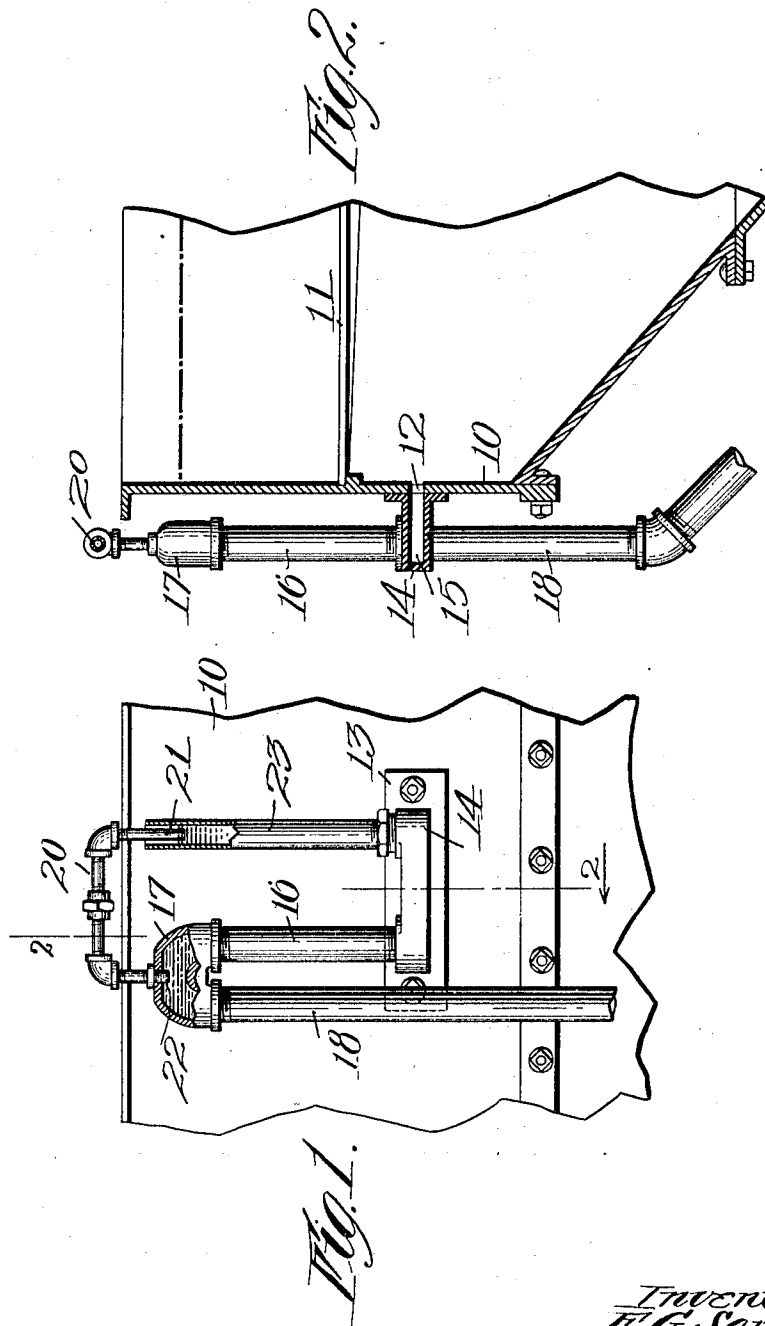


F. G. SARGENT.
SIPHON OVERFLOW FOR WOOL WASHING MACHINES.
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1,053,537.

Patented Feb. 18, 1913.



Witnesses:
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UNITED STATES PATENT OFFICE.

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SIPHON-OVERFLOW FOR WOOL-WASHING MACHINES.

1,053,537.

Specification of Letters Patent.

Patented Feb. 18, 1913.

Application filed August 8, 1912. Serial No. 713,949.

To all whom it may concern:

Be it known that I, FREDERICK G. SARGENT, a citizen of the United States, residing at Westford, in the county of Middlesex and State of Massachusetts, have invented a new and useful Siphon-Overflow for Wool-Washing Machines, of which the following is a specification.

The principal objects of this invention are to provide a practical siphon overflow for machines which are frequently supplied with water, as for example, a wool washing machine; to so arrange it as not to interfere with the screen or false bottom with which said machines are provided; and to provide a construction which will take up very little room and will work automatically, quickly and effectively in practice.

Further objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings in which,

Figure 1 is a side elevation of a portion of a wool washing machine showing a preferred embodiment of the invention applied thereto in side elevation and partially in section, and Fig. 2 is a sectional view of the same on the line 2—2 of Fig. 1.

The invention is shown as applied to a wool washing bowl 10 having a screen or false bottom 11 therein. This screen or false bottom extends from side to side of the bowl and affords no convenient place through which a siphon can be passed. At the same time it is desirable to have the liquor drained off from a point below the screen to prevent the scum from passing through the siphon and choking it up and therefore so that the level of the liquor will be kept constant.

In the embodiment of the invention shown in the drawings, a passage 12 is provided in the side of the bowl below the screen and this is covered on the outside by a plate 13 having a horizontal projection 14 in which is a chamber 15 communicating with the passage 12. This passage preferably extends throughout the length of the chamber to permit free entrance of liquor.

The siphon itself is of a simple form having an upright pipe 16 communicating with one end of the chamber 15 and provided with a return bend 17 at the top communicating with a draft pipe 18 which runs off

the liquor at a rate varying in accordance with the length of the draft pipe. The automatic arrangement for controlling the siphon to keep the level of the liquor at a constant point in the bowl, even under greatly varying conditions, is shown in the form of an air pipe 20 entering into the top of the return bend 17. This passes over and has its outer end 21 lower than the end 22 which is in the return bend. This end 21 extends into an upright pipe 23 extending up from the other end of the chamber 15 to a point above the level of the liquor in the tank. This pipe 23 is in direct communication with the liquor in the tank at the bottom and is open to the atmospheric pressure at the top. Therefore the level of liquor therein is always the same as that in the bowl. Under normal conditions this seals the end of the pipe 21 and consequently whenever the liquor rises so as to overflow materially in the draft pipe 18, no air coming into the return bend except through the pipe 20, it will be obvious that the reduction in pressure in the draft pipe is provided and eventually liquor will be drawn over through the pipe 20 into the siphon and the entire return bend will be filled. Then the members 16, 17 and 18 act as a true siphon and they continue to do so until the level of the liquor in the bowl, and consequently in the pipe 23, descends below the bottom of the pipe 21. This admits air into the siphon and breaks the siphonic action. Consequently this overflow is stopped whenever the level of the liquor is reduced below a certain minimum. This has a material advantage over a weir overflow because in this class of machines, water is run into the bowl frequently and with a weir the water flow from the bowl becomes faster or slower, according to the amount flowing in, and the normal level is not restored as quickly. The siphon, when once started, continues to flow at its full capacity until the normal level is restored, but with a weir the flow would diminish as the normal level was approached. The siphon, therefore, more quickly restores the normal level. The siphon is also located at the side of the bowl where it does not interfere with the false bottoms and takes up very little space. It will be understood that the bottom of the chamber in the return bend and

the bottom of the pipe 21 may be substantially of the same level.

Although I have illustrated and described a specific embodiment of the invention, I am aware of the fact that it can be carried out in other forms without departing from the scope of the invention as expressed in the claims. Therefore I do not wish to be limited to all the details of construction herein shown and described, but

What I do claim is:—

1. In a wool washing bowl, the combination of an external chamber communicating with the side of the bowl, a siphon connected with said chamber, a regulating pipe extending into the siphon and a tube extending upwardly from said chamber outside the bowl and open to the air at the top, the end of said regulating tube extending into the last named tube.

2. The combination with a wool washing bowl, of a horizontal chamber on the outside

of said bowl and communicating with the interior thereof, a siphon extending upwardly from one end of the chamber and having a return bend at the top, a pipe extending upwardly from the other end of the chamber outside the bowl and open to the air and in free communication with the liquor in the bowl, and a regulating pipe extending down into the return bend at one end and into the upwardly extending pipe at the other, the end of said regulating tube which extends into the pipe being substantially on the level of the bottom of the space in the return bend.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

FREDERICK G. SARGENT.

Witnesses:

FRED W. SWAIN,

FRANK COLLINS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."