Inman & Withington.

Wash Boiler.

No. 88,387. Patented Mar. 30, 1869.

Fig. 1.

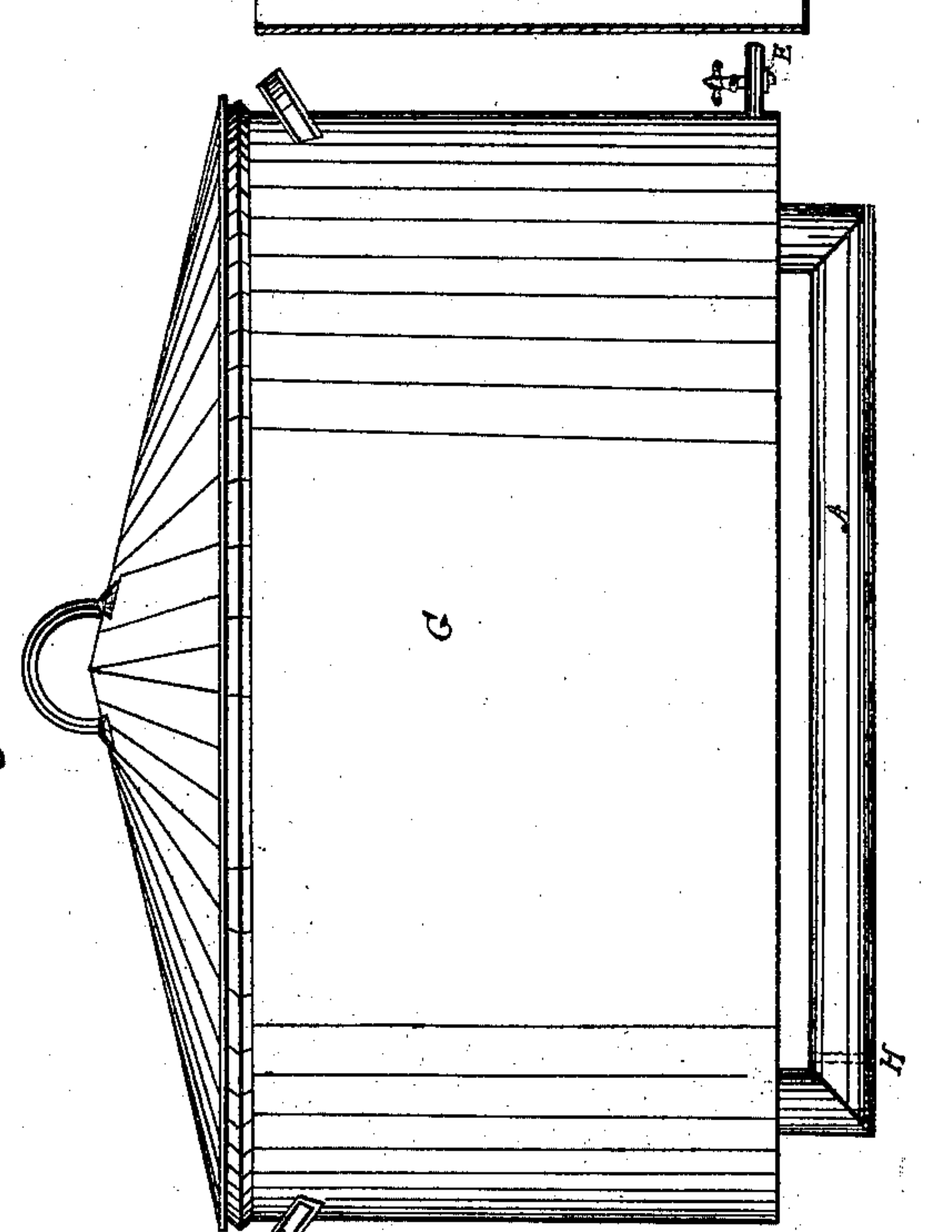


Fig. 2.

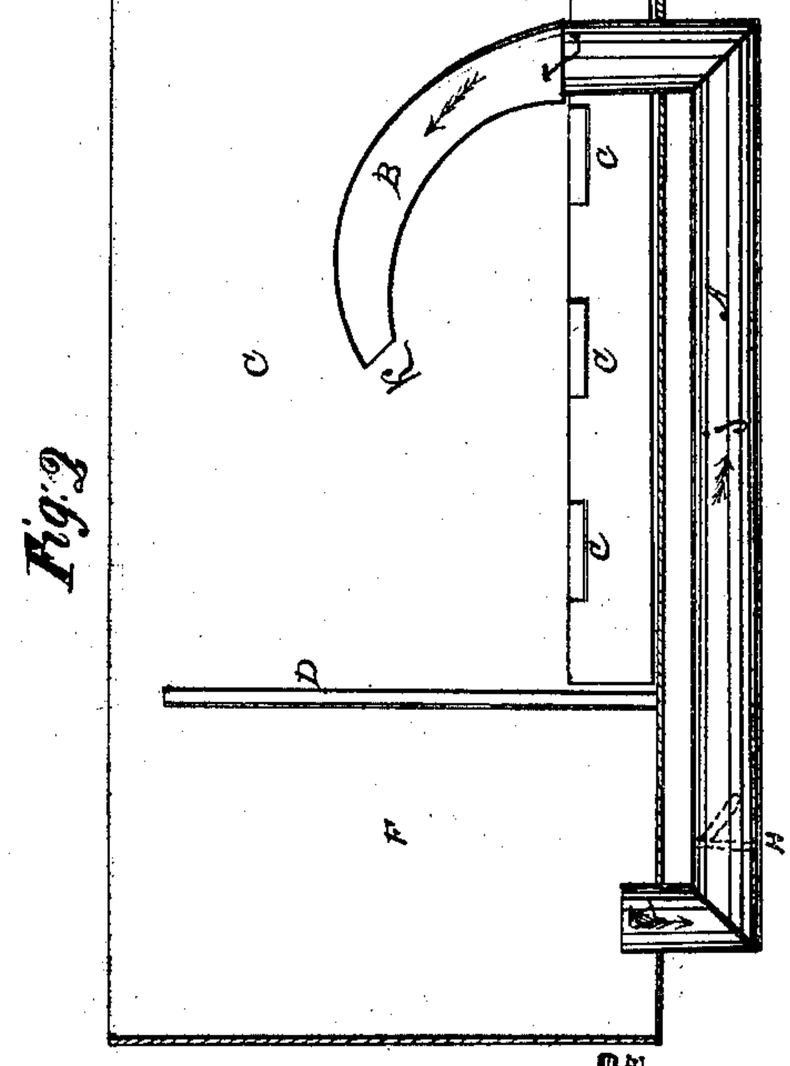


Fig. 3.

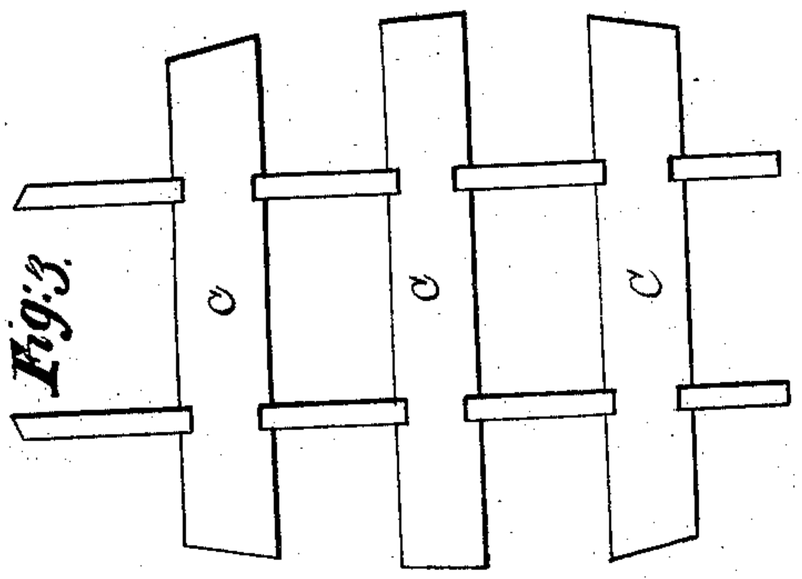


Fig. 4.

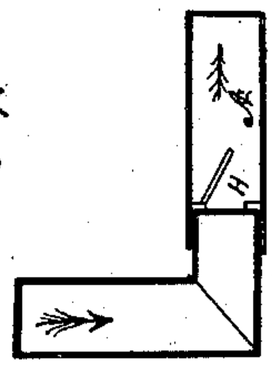
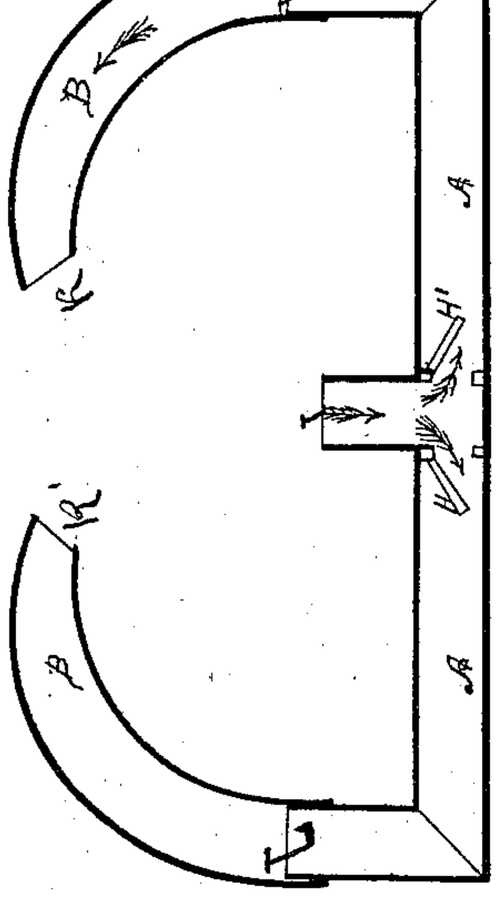


Fig. 5.



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P. H. INMAN AND CHARLES B. WITHINGTON, OF JANESVILLE, WISCONSIN.

Letters Patent No. 88,387, *dated March* 30, 1869; *antedated March* 27, 1869.

IMPROVEMENT IN WASH-BOILERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, P. H. INMAN and CHARLES B. WITHINGTON, of the city of Janesville, in the county of Rock, in the State of Wisconsin, have invented a new and improved Mode of Washing Clothes; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1, in the drawings, is a side view of a common clothes-boiler.

Figure 2 is a vertical longitudinal section of the same.

Figure 3 is a rack, or grate.

Figure 4 is a vertical section of the pipe A.

Figure 5 is a vertical section, also, of said pipe.

The nature of our invention consists in attaching the pipe A to the boiler G, as represented in fig. 1, for the purposes—

First, of preventing the indiscriminate mixture of foul and dirty water with the fresh water in the boiler.

Secondly, for the purpose of producing an intermittent rotary motion among the particles of water within the boiler, as hereinafter described.

Thirdly, for the purpose of producing the rapid generation of heat, and economy of fuel.

Fourthly, for the purpose of elevating the heated water within the pipe A, by means of the valve H, as hereinafter described.

Now, to enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

We construct our said boiler in any of the known forms, and apply thereto the pipe A, aforesaid, as represented in said drawings; to wit, the said pipe is inserted into the bottom of the said boiler, at any desirable point, and is stretched along, in parallel lines, on the out and under side thereof, to any other desirable point, and again inserted into said boiler, as seen in figs. 1 and 2.

Now, it is obvious, that when the said boiler is filled with water, it follows that the said pipe, (being open at either end thereof,) fills, also, with water, and when exposed to heat, will heat more rapidly than the larger body of water in the said boiler; but, with this alone, the desired object could not be attained, to wit, a rotary motion of the said water, on the reception thereof, at the one end of the said pipe, and the discharge of the same at the other end thereof. We therefore insert the valve H at any desirable point in the said pipe, and with this we acquire all that we desire. For it is obvious, that whereas, the water enters the said pipe at the one end thereof, (as indicated by the arrow I,) it strikes and opens the valve H, and, passing along, in the direction of the arrow J, it fills the said pipe, and, when heated, is converted into steam, or superheated water, and discharged at the other end of the said pipe; and it is also obvious, that by contracting the nozzle of the said pipe, or otherwise obstructing the passage of the said steam, or water, a greater or less pressure is exerted upon the said valve H.

Now, it is clear, also, that whereas, the pressure upon the said valve H grows less and less as the water escapes at the nozzle K, the pressure of the water, on the opposite side thereof, preponderates, and opens it, and it follows that the said pipe is again filled with water, and speedily is heated, and discharged, as before; and this alternate action of the said valve produces an impulsive action of the water in the boiler, and is found to be of great value.

The perpendicular line D, in fig. 2, is a movable partition, and when used, divides the water into two compartments, F and G.

F is a reservoir for fresh and clean water.

G is for the said clothes, and the boiling water, as it falls from the said nozzle K on the clothes.

Now, it is obvious, that the water in G speedily becomes thick, turbid, and foul, and is easily extracted, or removed from the said boiler, by opening the faucet E, and filled again by the constantly falling water from the said pipe.

The covered section B, of said pipe, may be turned to any desired point, or detached, at pleasure, it being loosely connected with the lower section at L.

C C C is a rack, that we sometimes use to sustain the boiling clothes at any desired height from the bottom of the said boiler, which we find of great value.

Fig. 5 is a vertical longitudinal section of the said pipe or pipes, (as we do not confine ourselves to a single pipe,) with the point of ingress in the middle thereof, and two valves, H H, by which arrangement it is clear that we acquire a double action of all the primary features described in the foregoing specification, to wit, as the water enters at the point I, it divides into two distinct currents, opening the said valves H H, and passing out at the nozzles K′ K.

In this simple arrangement, a much greater amount of work may be performed, in a given time, and with less fuel. And it is found, by actual experiment, that a very large amount of fuel is saved in this peculiar mechanical combination and arrangement of all the parts described in the drawings. For it is obvious, that the small current of water in the said pipe must heat more rapidly than the larger body of water in the said boiler, and, as it passes from the said pipe, into the said boiler in a heated condition, it speedily heats the entire body of water in said boiler.

We are aware that boilers, used for washing clothes, and other purposes, have heretofore been constructed in such a manner as to enhance the circulation of the liquid particles contained therein.

We are also convinced that the use of tubing, extra-

neously applied for the purpose of rapidly generating steam is by no means, novel. But, as far as we are advised, the use of the valve H, in combination with the tube A, for the purpose of producing an intermittent action, or rotary motion among the liquid particles in the boiler, or for the purpose of elevating the heated water in the said tube A, is entirely new. Therefore,

We claim as new, and desire to secure by Letters Patent—

1. The valve H, constructed and applied to the tube A, as herein described.

2. The tube A, combined with the valve H, and applied to the boiler *e*, as herein described.

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