

(No Model.)

2 Sheets—Sheet 1.

H. L. ROWE & G. W. McDONALD. WASHING MACHINE ATTACHMENT.

No. 480,037.

Patented Aug. 2, 1892.

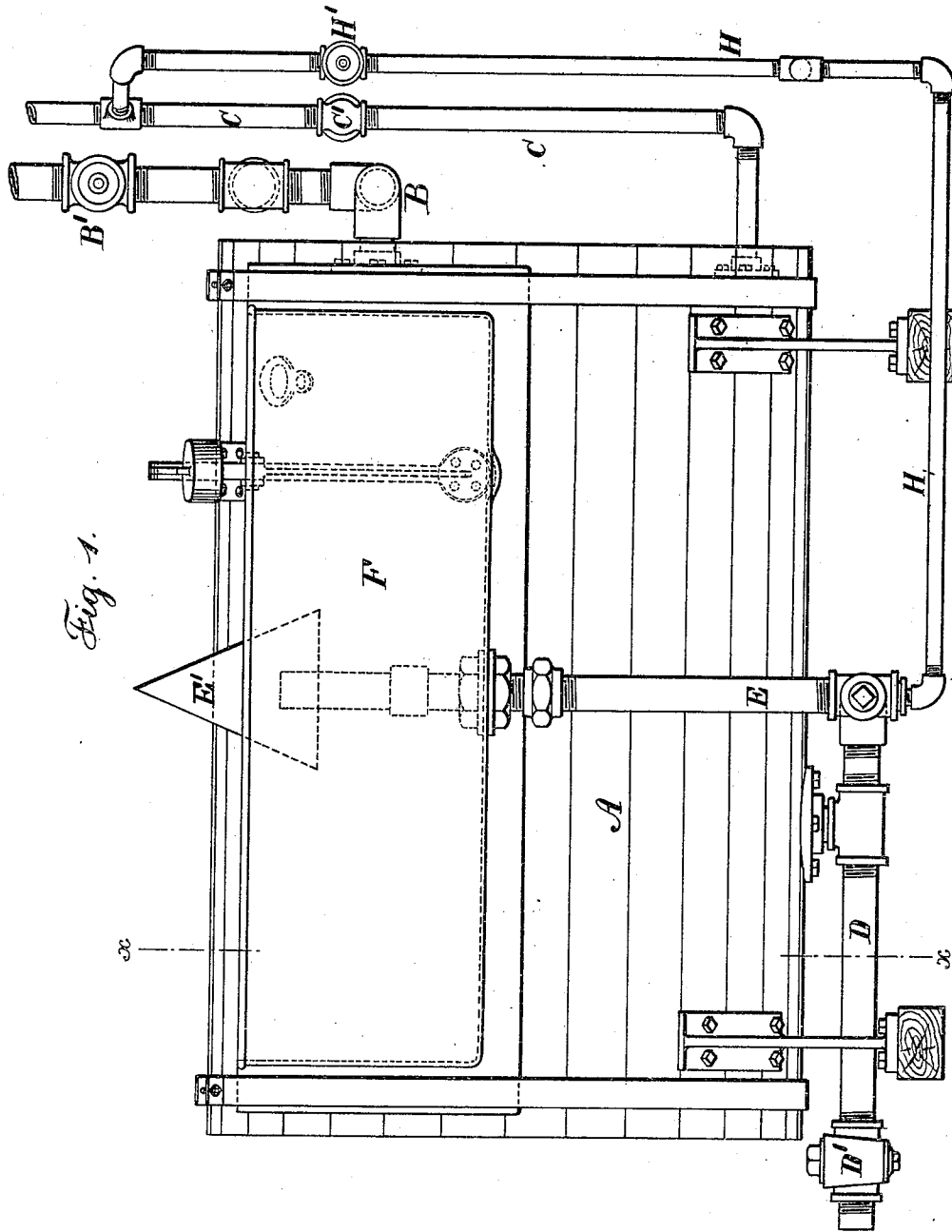


Fig. 1.

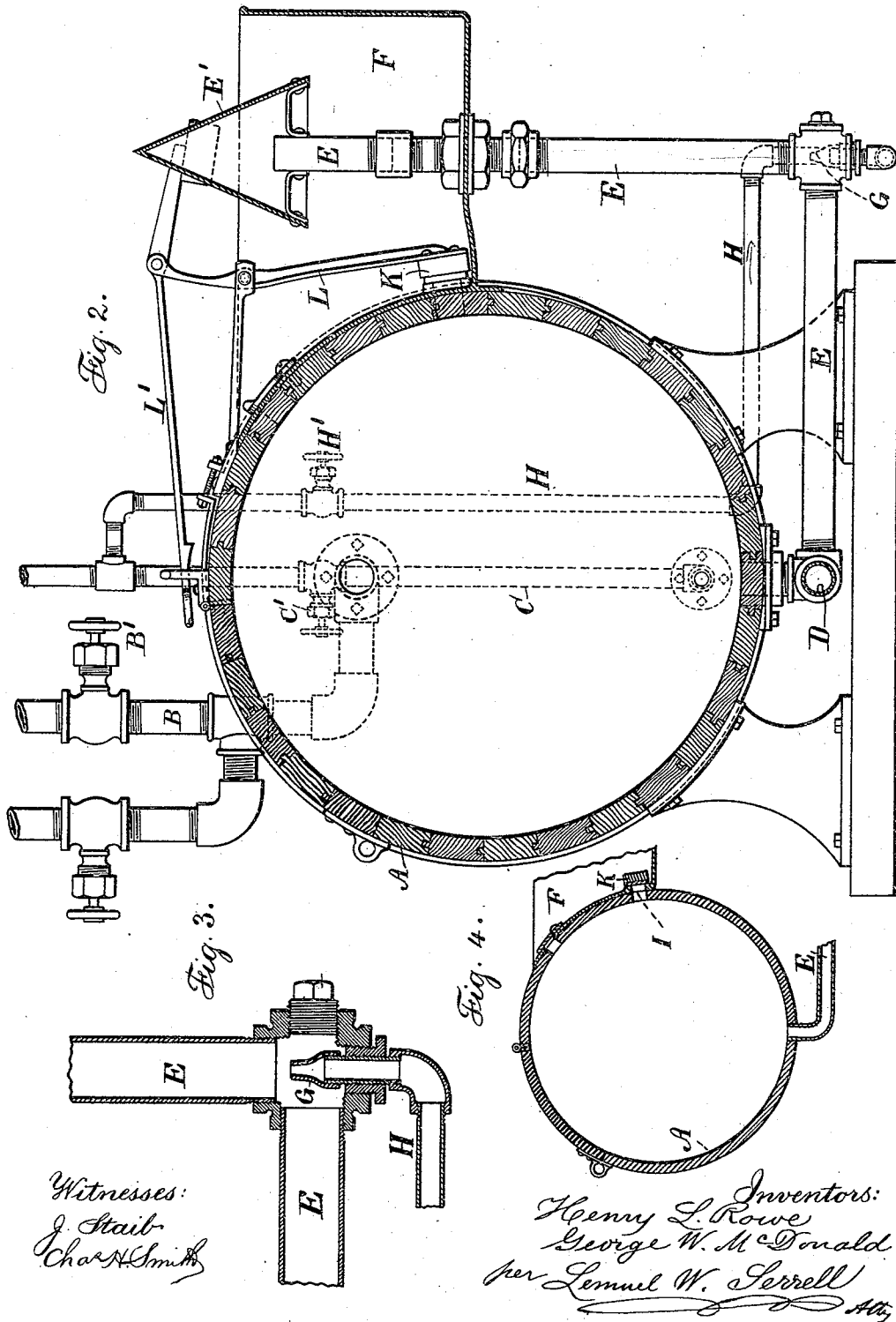
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 per *Lemuel W. Ferrill* *Atty*

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UNITED STATES PATENT OFFICE.

HENRY L. ROWE, OF NEW YORK, N. Y., AND GEORGE W. McDONALD, OF FRANKLIN, NEW JERSEY.

WASHING-MACHINE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 480,037, dated August 2, 1892.

Application filed February 27, 1892. Serial No. 422,974. (No model.)

To all whom it may concern:

Be it known that we, HENRY L. ROWE, residing at the city and State of New York, and GEORGE W. McDONALD, residing at Franklin, in the county of Essex and State of New Jersey, citizens of the United States, have invented an Improvement in Washing-Machine Attachments, of which the following is a specification.

Washing-machines have been extensively employed in which there is a horizontal cylinder having within it rotary or reciprocating dashers, and the clothes to be washed have been introduced into this cylinder and subjected to agitation, and at the same time the water has been highly heated by the direct admission of steam into such washing-machine; but in order to remove the articles that have been washed it is necessary to draw off the water through a suitable strainer or grating, and this has usually flowed off directly to a sewer, thus involving considerable expense for the water as well as loss of heat.

Our present invention is made with reference to economizing the water and also the steam heat, and for facilitating the washing operation.

In the drawings, Figure 1 is an elevation illustrating the present invention, and Fig. 2 is a section at the line *xx*. Fig. 3 is a section showing the ejector and the discharge-pipes in larger size, and Fig. 4 is a diagram on a smaller scale showing the openings from the reservoir into the washing-machine.

The washing-machine A is of any suitable character. It is represented as a cylinder which may be provided with revolving beaters or agitators, and water is supplied by the pipe B and cock B', and steam is supplied by the pipe C and cock C' to heat the water in the washing-machine in the usual manner.

The pipe D and cock D' lead to a sewer or other discharge, as usual; but we connect with the pipe D a branch E, leading up to a reservoir F, and in this pipe an ejector G is placed in the form of a nozzle with a branch pipe H and cock H' to the steam-pipe C, and this branch pipe E passes, preferably, through the

bottom of the reservoir F and is provided with a deflector E', so that when the cock H' is opened a rush of steam through the ejector G carries with it the water from the washing-machine A and delivers the same into the reservoir F, thereby allowing the water to be used over a second time; and in the transfer the water is additionally heated, and between the reservoir F and the washing-machine A there is a branch or opening I, with a valve K, preferably actuated by a lever L and rod L', so that after the water has been drawn off from the washing-machine A and delivered into the reservoir F the clothes that have been washed are removed from the machine A, and the valve K is then opened and the water rushes back from the reservoir F into the washing-machine, and it is in a highly-heated condition so as to be well adapted to act upon a second lot of clothes or other articles introduced into the washing-machine.

It is to be understood that in using the washing-machine it often happens that sheets and other fabrics require but little washing and the water is but little soiled, and hence it could be safely used more than once, and often fabrics and garments after being washed for their cleansing are washed a second time in blue water, and this water can be used a second time in the washing-machine after having been thrown up into the reservoir by the ejector. Hence by the present improvements a considerable saving is effected in the water, and less steam is required in properly boiling and cleansing the fabrics.

If desired, an overflow from the reservoir may be provided, either into the washing-machine or to the sewer, so as to prevent the water running over the top of such reservoir in consequence of any accumulation therein.

We claim as our invention--

1. The combination, with a washing-machine and the discharge water-pipe therefrom, of an elevated reservoir, a pipe leading to the same, and a steam-injector in such pipe for discharging the water from the washing-machine into the reservoir, and a branch or connection between the reservoir and the wash-

ing-machine and a valve and cock in the same, substantially as and for the purposes set forth.

2. The combination, with the washing-machine and the discharge water-pipe therefrom, of an elevated reservoir, a pipe leading from the bottom of the washing-machine to the reservoir and a deflector thereon, a steam-pipe and cock for supplying steam to the washing-machine, an ejector-nozzle, and a pipe and

cock therewith connected for supplying steam to eject the water from the washing-machine into the reservoir, substantially as set forth. Signed by us this 23d day of February, 1892.

HENRY L. ROWE.
GEO. W. McDONALD.

Witnesses:

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