

(No Model.)

N. RUBENSTEIN.

WASH BOILER.

No. 369,299.

Patented Aug. 30, 1887.

Fig. 1.

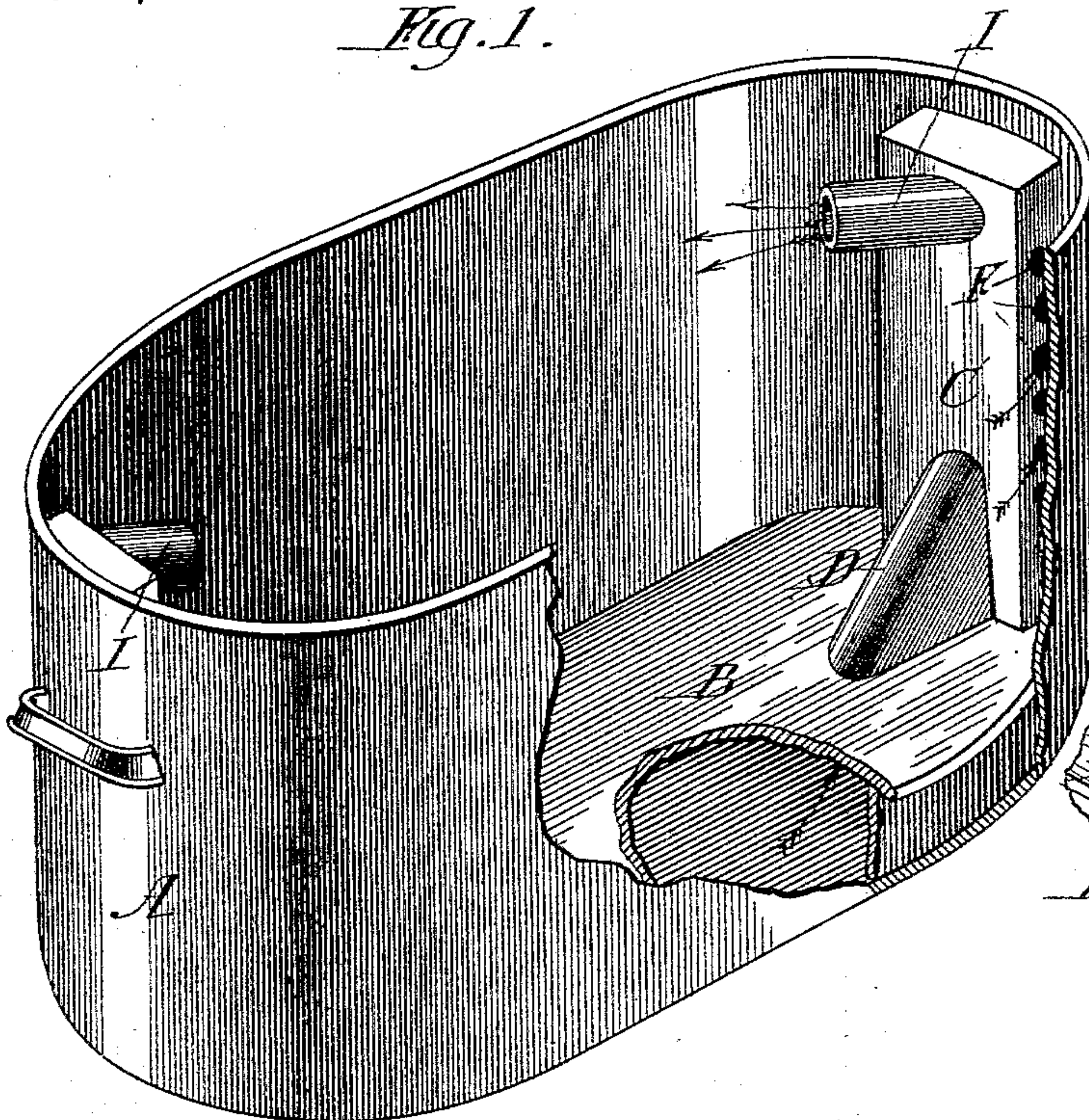


Fig. 5.

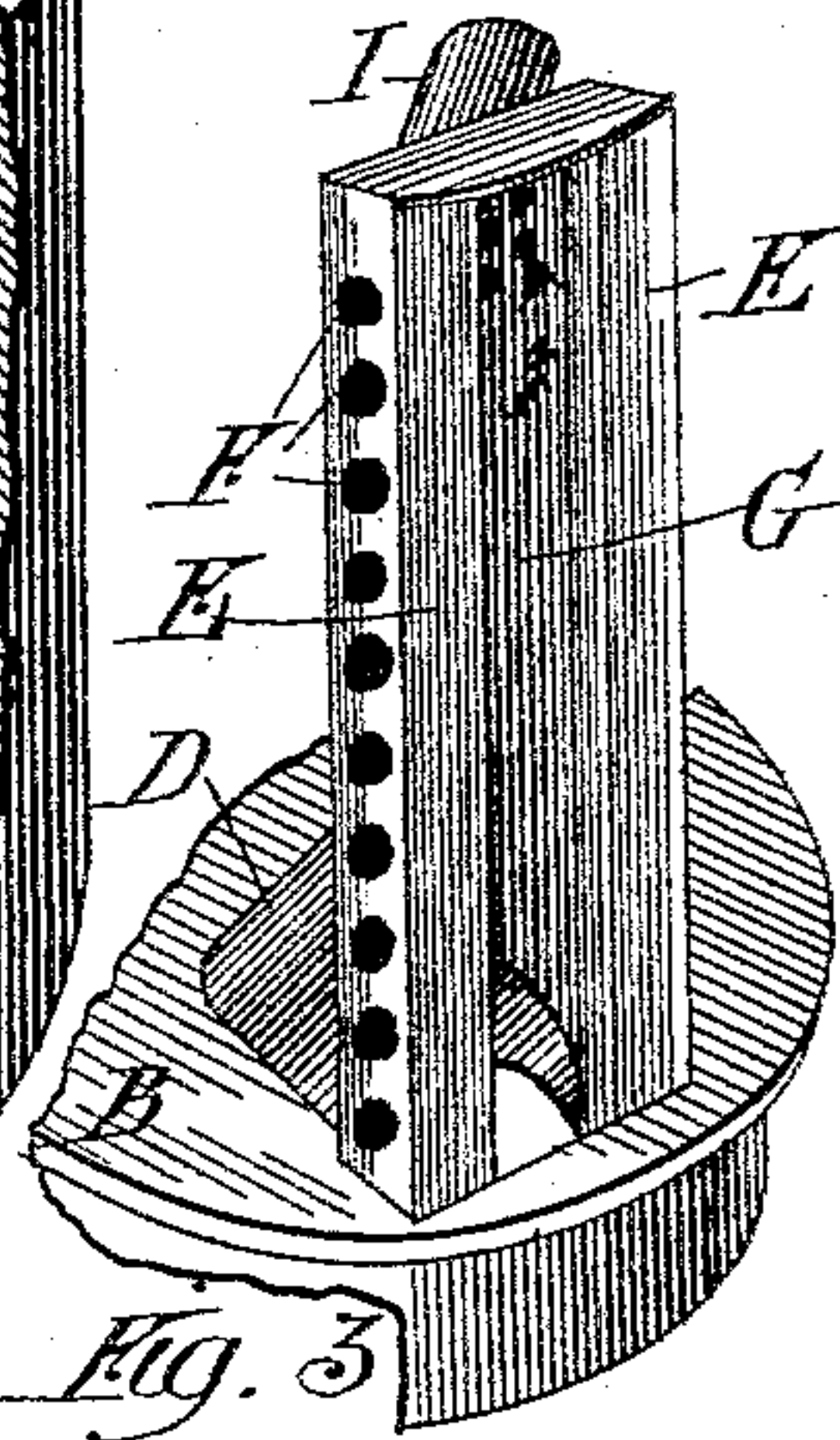


Fig. 3.

Fig. 2.

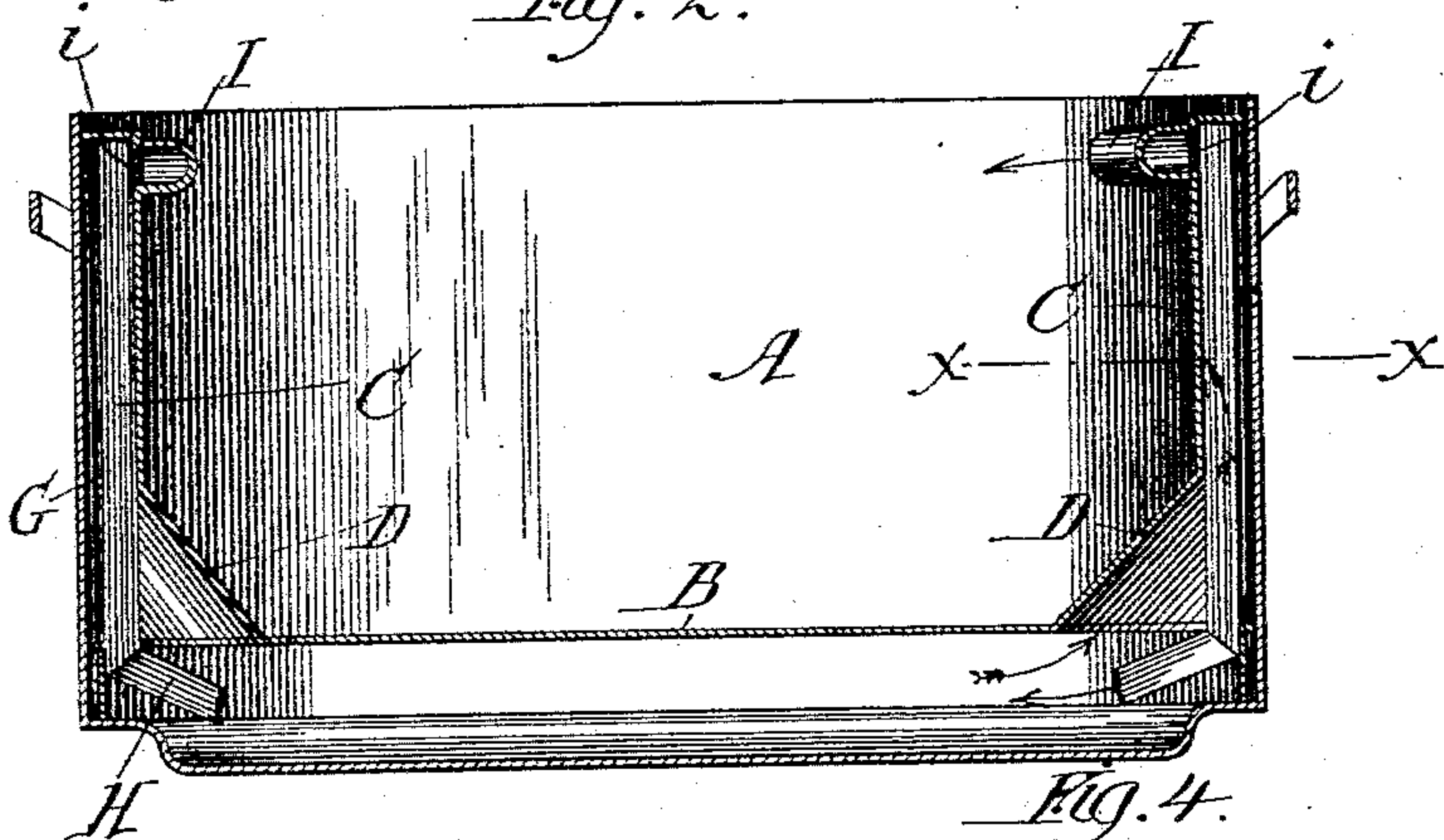
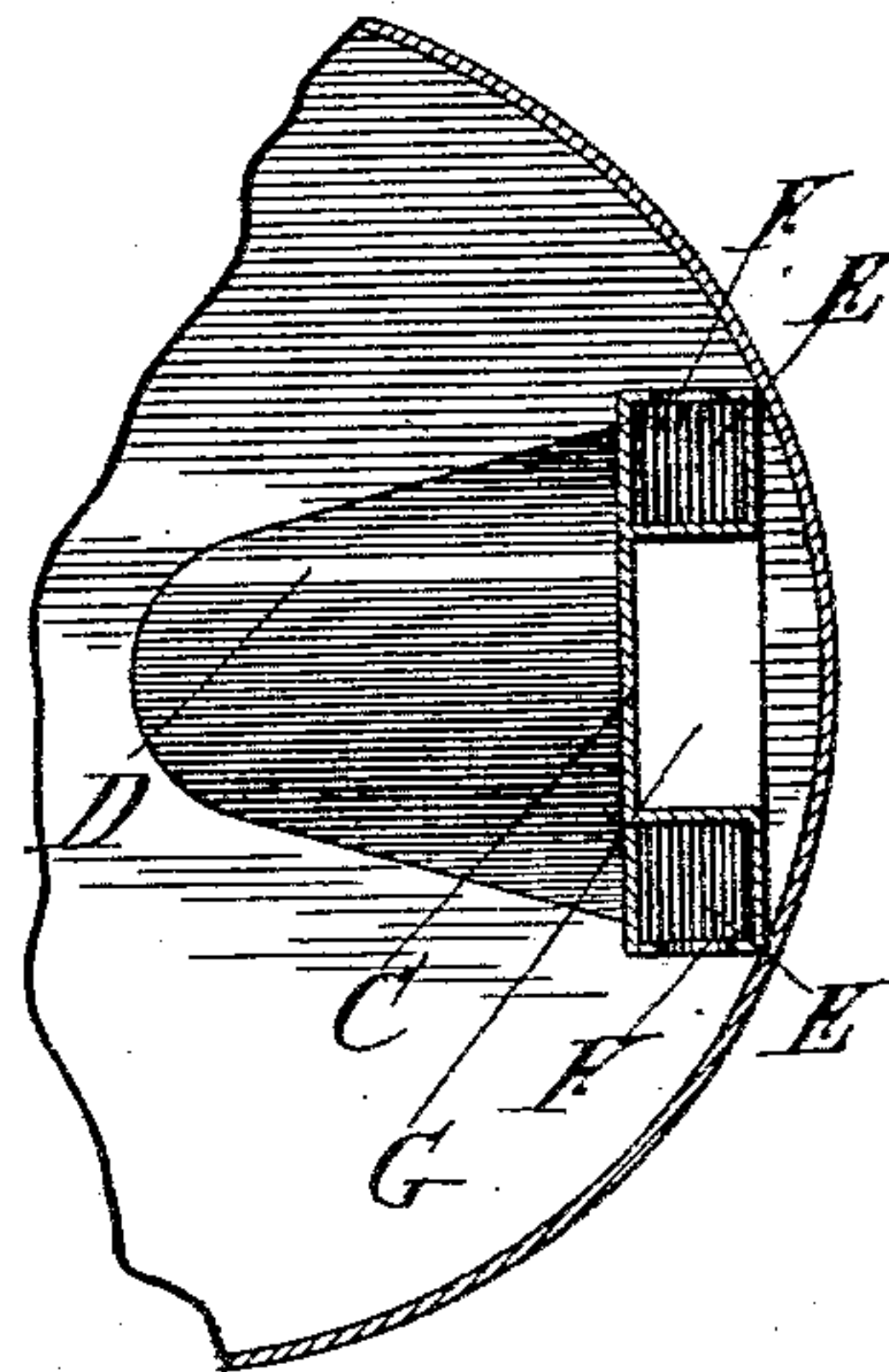
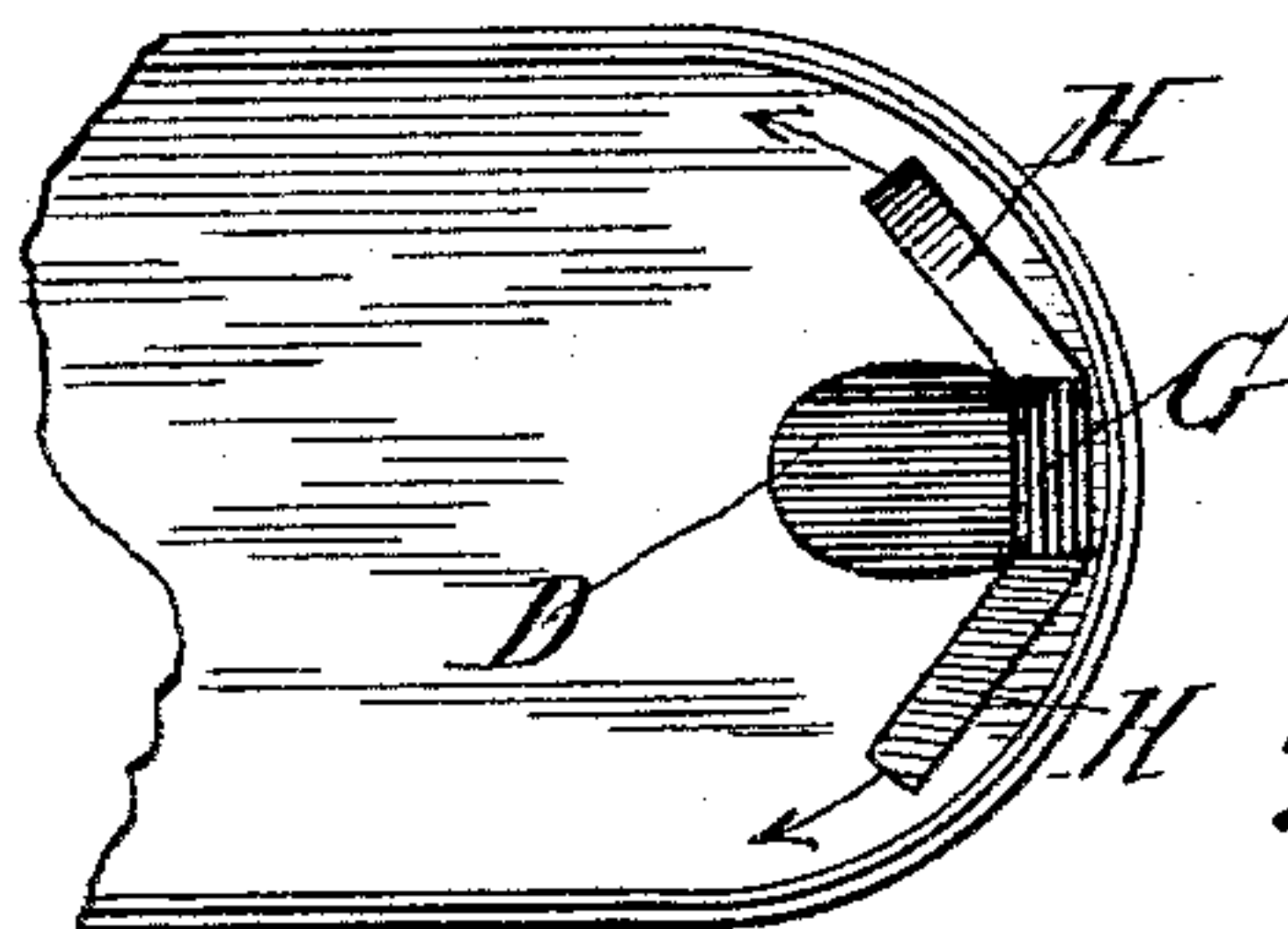


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

NATHAN RUBENSTEIN, OF CHICAGO, ILLINOIS.

WASH-BOILER.

SPECIFICATION forming part of Letters Patent No. 369,299, dated August 30, 1887.

Application filed February 3, 1887. Serial No. 226,430. (No model.)

To all whom it may concern:

Be it known that I, NATHAN RUBENSTEIN, of Chicago, county of Cook, and State of Illinois, have invented certain Improvements in Wash-Boilers, of which the following is a specification.

My said improvement will be fully described hereinafter with reference to the accompanying drawings, in which—

10 Figure 1 represents a perspective view of my device in a boiler of common form, the sides being broken away to display the construction of my device in connection with the boiler; Fig. 2, a longitudinal central vertical
15 section of the boiler and my device; and Fig. 3, a horizontal section of one end of my device, taken as indicated by the broken line *x* in Fig. 2; Fig. 4, a bottom view of an end of the same, and Fig. 5 a detailed view of
20 parts.

A indicates the boiler, and B my device, which consists of a floor or second bottom to the boiler; and it is provided at each end with a hollow standard, C, which is composed of
25 two rectangular tubes, E, and a depression of like form between the two tubes E, the result of which combination is that when the two tubes, as well as the floor, are soldered or otherwise fastened to the inner ends and sides of
30 the boiler, as they must be, a large rectangular tube, G, will be formed between the other two and the end of the boiler, and it should be of about the same capacity of both the smaller tubes added together. The boiler and
35 my said attachment may be made of tin or other suitable sheet metal or other metal.

When the boiler is placed upon any heater, the water on the bottom becomes heated and
40 turned partially into vapor and seeks to escape, and the only channels of escape are the tubes G, and so the hot water and steam rush up through them and are discharged through pipes I, and these pipes are so inclined that the streams of water and steam will strike the
45 clothing to be cleansed near each side of the wall of the boiler and agitate them and force them around and around the boiler. The pipes I are inclined in opposite directions, as shown in the drawings, so that the streams at each

end co-operate in this important work of agitating the clothes and freeing them from dirt.

In order to avoid friction as much as possible in the passage of the hot water and vapor up from the bottom of the boiler, the semi-tubular ways or guides D, of like material with
55 the false bottom B, are placed and fastened in the angles made by the standards with the floor of B, so that the passage will be a covered one. Then, in order that the water and condensed vapor, after their action upon the
60 clothing, and then having been somewhat cooled, may find their way back again to the bottom of the boiler, to be again heated and vaporized, the tubes E are perforated with
65 holes F from top to bottom on their sides next to the walls of the boiler. The having these holes in their outer sides is an important feature in the operation of the device, because
70 then the holes are nearly, if not quite, out of the reach of the clothes, and consequently the clothes cannot come directly against them and
75 stop them up, as they would do if the holes were in the sides which face to the short center of the boiler. The lower ends, H, of these tubes are curved in such a manner as to discharge the water on a level with the bottom of
80 the boiler and touching the same, and their lower ends are each inclined outwardly next to the walls of the boiler, in order that the streams from them may not meet or interfere with the hot water in its passage from the bottom upward through the chambers D G.

In order that the tubes I may not be obstructed by anything that might enter them from the boiler, they are provided with perforated diaphragms *i*, as shown in Fig. 2.

It is believed that my device has been so fully hereinbefore described that its operation will be apparent. The water in the bottom of the boiler is forced by the agency of heat
90 up through the channels D and tubes G, and discharges through pipes I upon the clothing, and effects such an agitation upon them as will render any other friction or rubbing unnecessary to effect the cleaning of them. Instead,
95 however, of fastening my attachment, consisting of the floor B, having its downwardly-projecting flange and water-channels, rigidly to

the sides and ends of the boiler A, it may be attached thereto in such a manner as to be removable when required.

What I claim as my invention, and desire to
5 secure by Letters Patent, is—

The combination of the boiler provided with the flanged false bottom B, provided at each end with an upwardly-inclined guide, D, and the
10 hollow standards C, connected with said guides, each standard consisting of an imperforate central tube, G, provided with a discharge-nozzle, I, and with perforated tubes E on each

side of said tube G, all substantially as shown and described, whereby the water and steam beneath the false bottom are discharged 15 through the imperforate pipes G and the water returned beneath the false bottom through perforated pipes E, as and for the purpose set forth.

NATHAN RUBENSTEIN.

Witnesses:

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