

G. A. HYNDS.

Improvement in Wash Boilers.

No. 122,891.

Patented Jan. 23, 1872.

Fig. 1.

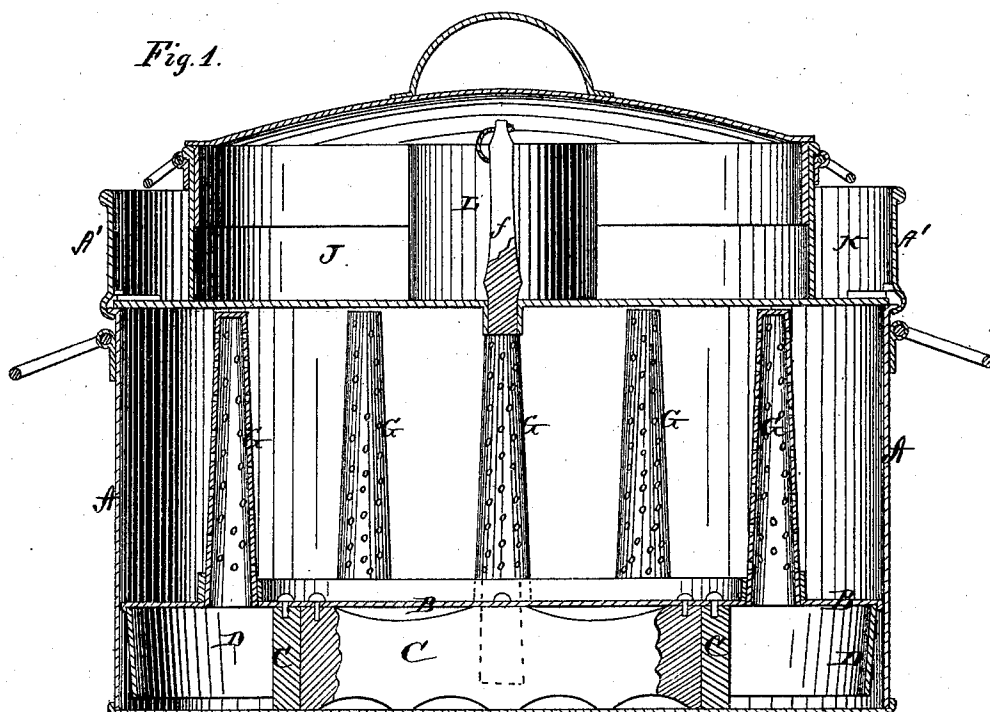
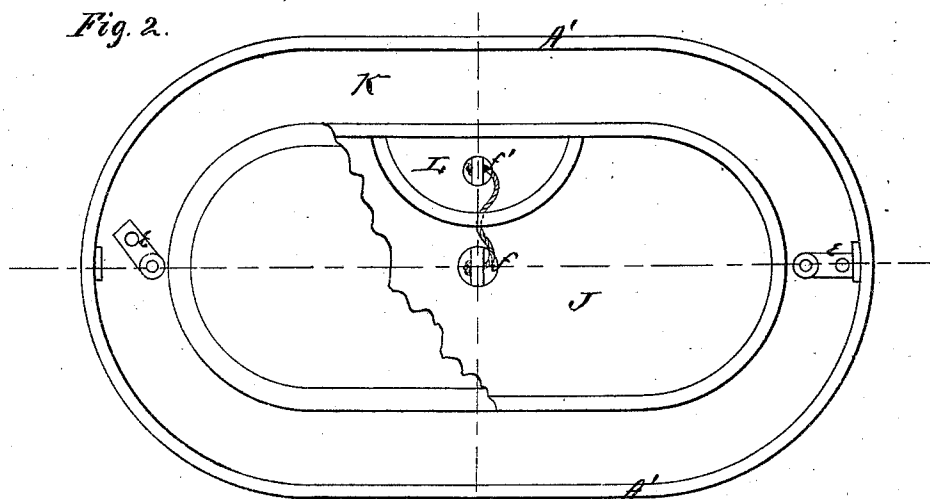
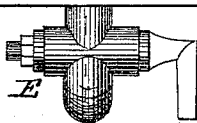


Fig. 2.



Witnesses:

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C. L. Ewert,



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Geo. A. Hynds.
per

Samuel W. Mason
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Fig. 3.

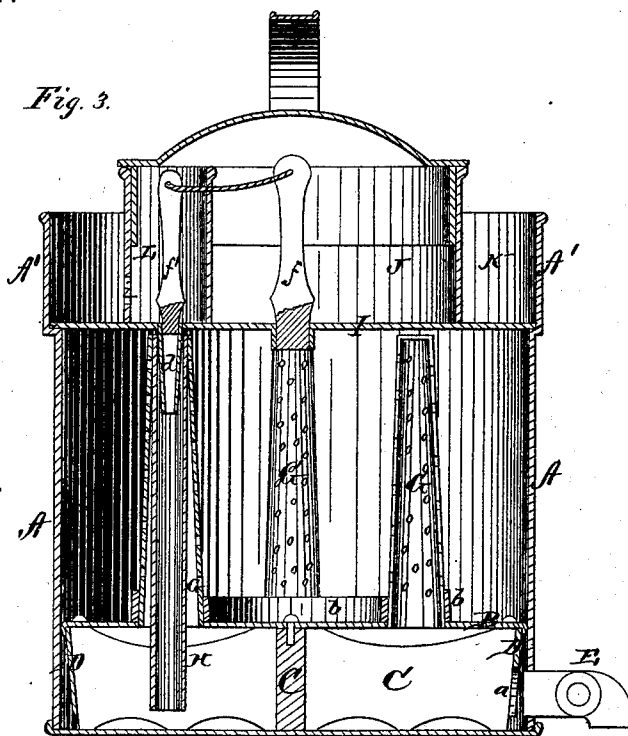
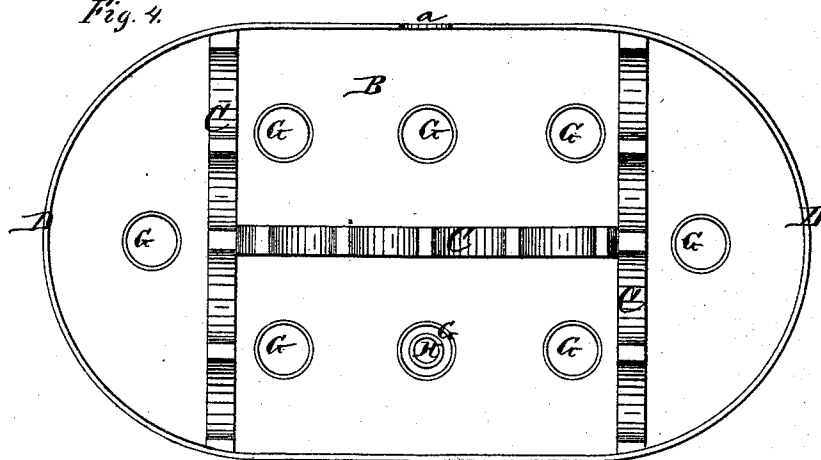


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE A. HYND, OF ROME, NEW YORK.

IMPROVEMENT IN WASH-BOILERS.

Specification forming part of Letters Patent No. 122,891, dated January 23, 1872.

To all whom it may concern:

Be it known that I, GEORGE A. HYND, of Rome, in the county of Oneida and in the State of New York, have invented certain new and useful Improvements in Wash-Boiler; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a "wash-boiler," as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal vertical section; Fig. 2, a plan view; and Fig. 3, a transverse vertical section of my wash-boiler. Fig. 4 is a bottom view of the under side of the false bottom.

A represents the boiler proper, made of any suitable material and of any desired dimensions, and provided on the inside with a false bottom, B. This bottom is secured on top of three cleats, C C, arranged as shown in Fig. 4, one across and near each end, and one connecting the two along the center. The top and bottom of the cleats C C are scalloped, as shown in Figs. 1 and 3, to give free action to the steam above and the water below. I do not confine myself to the specific number mentioned of said cleats, as there may be either more or less than that number. Extending around the false bottom B is a band, D, attached to the ends of the cleats, and with its upper edge in contact with and fastened to the false bottom on the under side or its outside edge, so as to be tight in both cases, and to extend downward to within half an inch or less above the bottom surface of the cleats C C, as shown, for the purpose of giving freedom to the water on its return downward when the boiler is in operation. Also, when the dirty water is drawn off through the faucet in front the band, being raised above the bottom of the boiler, prevents the friction which would otherwise wear and soon rust. In the front side of the band D, corresponding

with the inner end of the faucet E, is a cut or notch, *a*, to give perfect freedom to the faucet. The faucet E, or rather the plug or valve of the faucet, is placed horizontal, instead of vertical, as usual, whereby it can be more readily handled. This faucet is used for discharging the dirty suds from the boiler just before the boiler is replenished from the reservoir. The false bottom B may be movable, as shown, or it may be stationary, when it should be made of tin, copper, or other metal, and soldered to the boiler on the inside, or otherwise affixed tight. From the false bottom B project upward any desired number of perforated pipes G G. These pipes are perforated throughout their entire lengths, so as to discharge steam not only upon the clothes but through them, thereby hastening the cleansing of the clothes and causing it to be more thorough. The pipes G G are strengthened and braced on both sides by means of two continuous metal bands, *b b*. When the false bottom B is made of metal these bands *b b* may be dispensed with, but when the bottom is of wood they must be used. One of the pipes G is open at the top and has an interior tube, H, extending almost to the bottom of the boiler—say within half an inch or less. This interior tube may be either stationary or movable, and is open at both ends. It receives within it, at its upper end a short tube, *d*, which projects downward from the false cover I. This false cover is fastened inside the boiler, on top of or above the pipes G G, by means of catches *e e*, as shown in Fig. 2, and is provided on its upper side with an upward-projecting rim forming a water-reservoir, J, and leaving a chamber, K, around said reservoir, between it and the shell of the boiler. In the water-reservoir J is a passage leading into the clothes-chamber below, said passage being closed by a stop, *f*, or other suitable means, to keep the water back or to let it on the clothes, as desired. This reservoir, as well as the boiler itself, may or may not be provided with a cover, as desired. Within the reservoir J on one side is formed a condensing-cup, L, from which the short tube *d* leads into the pipe H. The cup L communicates with the chamber K through the opening *i*, as shown in Fig. 3, and the tube *d* may or may not be closed by a stop, *f'*, or other suitable means.

If the boiler is unskillfully used the tubes *d* H and passage *i* open, act as a gauge, for as soon as the water rises in the chamber K above the passage *i* it is conveyed through said passage and through the tubes *d* and H to the bottom of the boiler; and if the said passage and tubes have proper dimensions it is impossible for the water to boil over the rim A' of the boiler with the greatest fire. This rim A', or the part of the boiler above the false cover I, may be dispensed with, if so desired, from the fact that the capacity of the boiler can be diminished and yet work as well. The cup L and tubes *d* H also form means to convey cold water to the bottom of the boiler, just before the faucet E is opened and while discharging, for the purpose of condensing the steam, as the boiler in this act will be subject to the same heat as when at work. The chamber K, passage *i*, condensing-cup L, and tubes *d* H, form means to convey the water to the bottom of the boiler after it has been forced upward through the perforated pipes G G and the clothes into the chamber K, where it condenses, forms water, and is held by the great pressure of steam below; not being able to retrace its passage back it finds vent in the cup and tubes, which prevents its boiling over the top of the rim A' of the boiler upon the stove, and acts as a gauge; and as the chamber K fills up with water to the passage *i*, it has a tendency to produce a greater pressure of steam below the false cover I in and among the clothes, as in this case its passage upward between the edge of the cover I and the rim A' is closed, or nearly closed, by the water in the chamber.

The boiler is used as follows: About one-third of a bar of soap is put into the boiler; then the false bottom B. Then water is poured in up to the top surface of the false bottom, or a little above, if desired, and the clothes to be washed placed in and around the pipes G G up to the cover I. The reservoir J is next filled with water; then heat applied; and from the time steam appears in the chamber K continue from ten to fifteen or twenty minutes longer, according to the degree of dirt in the clothes. After this, cold water is poured into the cup L, and the discharge-faucet E is opened to discharge the dirty suds; and after they are discharged the faucet is closed again. The pas-

sage from the water-reservoir J is then opened, and a fresh charge of water, which has been heated by the steam, is let upon the clothes to complete the process by steaming from five to ten minutes longer. It will be observed that the water may be changed as often as desired without removing the boiler from the stove; in fact it can remain from morning till night upon the stove, if desired, without being moved.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The false bottom B, provided with circumferential rim D having notch *a* and the cleats C C, said cleats being scalloped on both the upper and lower edges, all substantially as and for the purposes herein set forth.

2. The combination of the false bottom B, scalloped cleats C C, rim D, with its notch *a*, perforated tubes G G, and the bands *b b*, all constructed and arranged together as one interior attachment to a wash-boiler, substantially as herein set forth.

3. The false cover I, provided with the water-reservoir J, and forming, with the rim A' of the boiler, a chamber, K, around said reservoir, substantially as and for the purposes herein set forth.

4. The condensing-cup L, with the passage *i* and the tubes *d* H, constructed and arranged substantially as and for the purposes herein set forth.

5. The combination of the false cover I, water-reservoir J, and condensing-cup L, with passage *i*, all constructed and arranged together as one interior attachment for wash-boilers, substantially as and for the purposes herein set forth.

6. The combination of the boiler A with rim A' and faucet E, false bottom B, cleats C C, rim D, tubes G G and H, false cover I, reservoir J, and condensing-cup L with passage *i*, and tube *d*, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 9th day of December, 1871.

GEORGE A. HYND. S.

Witnesses:

EDWIN T. BEAL,
CYRUS HAYDEN.