

C. W. GUENTHER.

WASH-BOILER.

No. 169,902.

Patented Nov. 16, 1875.

Fig. 1.

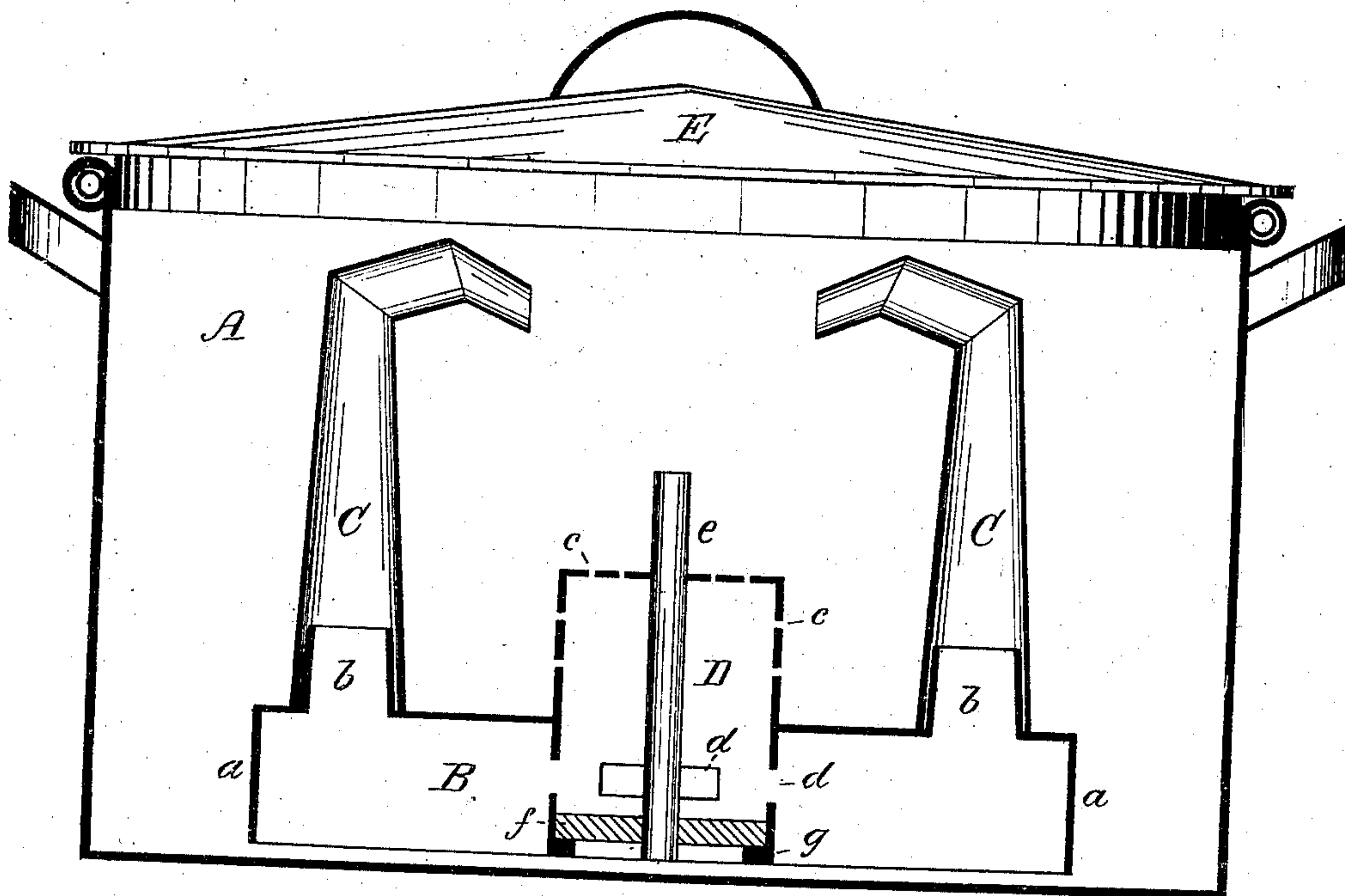
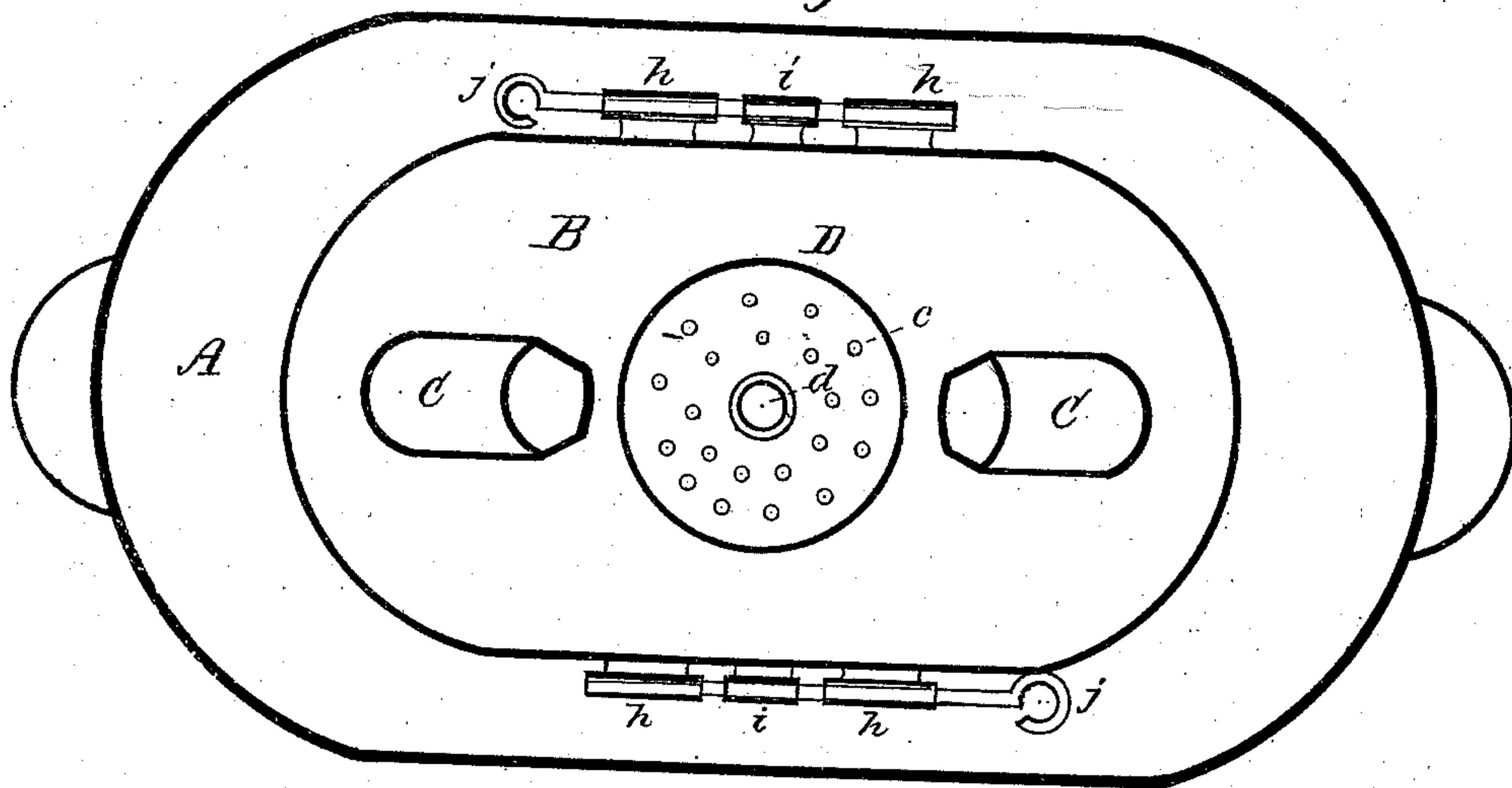


Fig 2



WITNESSES

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN WASH-BOILERS.

Specification forming part of Letters Patent No. **169,902**, dated November 16, 1875; application filed May 1, 1875.

*To all whom it may concern:*

Be it known that I, CHARLES WILLIAM GUENTHER, of Reading, in the county of Berks and State of Pennsylvania, have invented a new and valuable Improvement in Steam Wash-Boilers; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, forming a part of this specification, in which—

Figure 1 is a vertical sectional view of the invention, and Fig. 2 a plan view of the same with the cover removed.

This invention relates to an improvement in steam wash-boilers; and consists of a base provided with fountain-tubes, and a cylinder having its top closed and perforated, and its sides perforated near its top, in combination with a wooden disk rigidly secured to the lower end of a central fountain-tube working as a guide through a central opening in the perforated top of the cylinder; the object of the invention being to increase the force with which the water is circulated through the fountain-tubes, thereby keeping the clothes constantly in motion, and cleansing them in less time than the same operation can be performed in machines heretofore employed for that purpose.

In the drawing, A represents a wash-boiler, preferably of oval form, into which is placed the base B, of suitable size, having around its edge a downwardly-projecting circumscribing flange, *a*, and upon the upper surface of the base, near its ends, the short tubes *b*, upon which are placed fountain-tubes C. The fountain-tubes C are adjustable upon the tubes *b*, and they may be turned to throw the steam and water to any desired point within the boiler A. They may also be removed for cleaning them, or for placing the soap beneath the base B. At the center of the base B, and midway between the fountain-tubes C, is a cylinder, D, having its top closed, and provided with perforations *c*. The sides of the cylinder D have perforations *c* near the upper end of the same, and elongated openings *d* near the lower end. The lower end of said cylinder is flush with the lower edge of the circumscribing flange *a*, is open, and provided

with the seat *g*, on which the wooden disk *f* rests when there is no water in the boiler. The wooden disk *f* is rigidly secured to the lower end of a fountain-tube, *e*, which works as a guide for the disk *f*, through an opening made centrally through the perforated top of the cylinder D. The circumscribing flange *a* is provided with sleeves *i i*, which project slightly below the lower edge of said flange *a*, and when secured between sleeves *h h* on the bottom of the boiler by the rods *j j*, hold the lower edge of the circumscribing flange *a* a short distance above the bottom of the boiler A, and thus permit the water to flow beneath the base B. E is the lid to the boiler A.

The operation of the invention is as follows: Although the invention can be used in any boiler, some means must be provided for securing it to the boiler a sufficient distance above the bottom thereof to permit the water to flow beneath the base B. Remove the fountain-tubes C, and introduce a sufficient quantity of soap to the base B. Replace the fountain-tubes C, and fill with water to a distance that will cover the clothes to be washed, after which secure the lid E in place upon the boiler A. When the water boils, the steam and water are driven through the perforations *c* into the cylinder D, and upon the disk *f*, which has been floated to the surface of the water in the cylinder D. The action of the boiling water upon the disk *f* forces it upwardly and downwardly—not, however, regularly, like a piston, because the action of the water itself is not regular, and every movement or plunge of the disk *f* creates a suction in one direction, and forces the water before it in the other; thus the water is sometimes forced through the fountain-tubes C and *e*, and drawn through the perforations *c*, and at others vice versa. The perforations *c* being small, the steam and water pass through them with great force. The elongated openings *d* permit a ready circulation between the cylinder D and the fountain-tubes C. The central fountain-tube *e* being smaller than the tubes C, the steam and water pass through it with considerable force. It also acts as a stem or guide for the disk *f*.

It will be readily seen that the boiling water keeps the disk *f* constantly in motion, and



that this motion is irregular; that the disk may be suddenly checked while moving in one direction, and be started in the opposite direction, and that this action of the disk upon the water increases the force with which the water and steam are circulated through the fountain-tubes, and thus accomplishes the object for which it is designed in a very perfect manner.

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

In a steam wash-boiler the base B *a*, pro-

vided with the fountain-tubes C C and the cylinder D, the top and sides of which are provided with the perforations *c*, in combination with the disk *f*, rigidly secured to the lower end of the fountain-tube *e*, substantially as and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHARLES WM. GUENTHER.

Witnesses:

F. M. BANKS,  
MILT. R. GEHRY.