

J. R. Manny.

Wash Boiler.

Patented Aug. 24, 1869.

N^o 94,121.

Fig. 1.

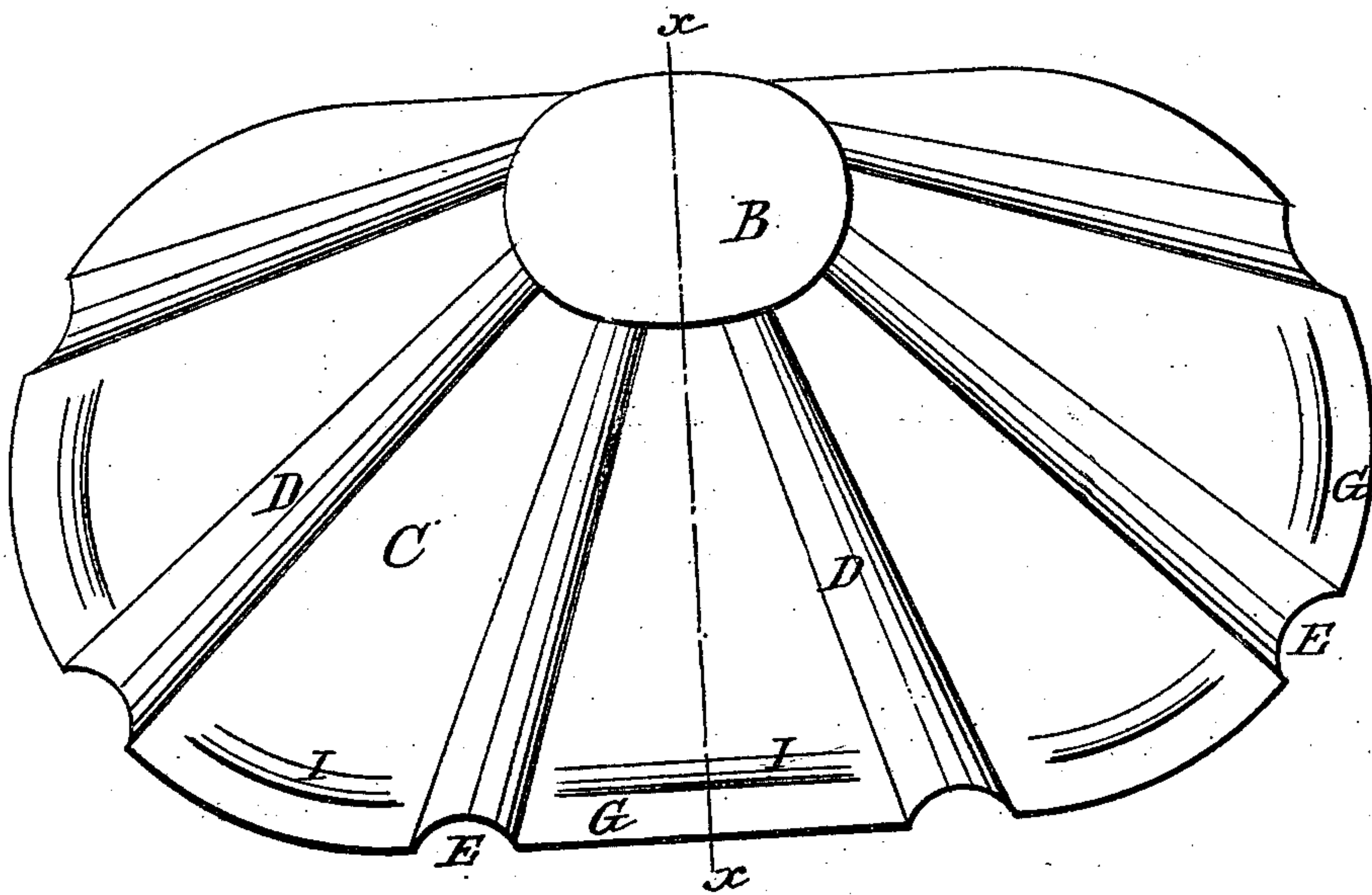
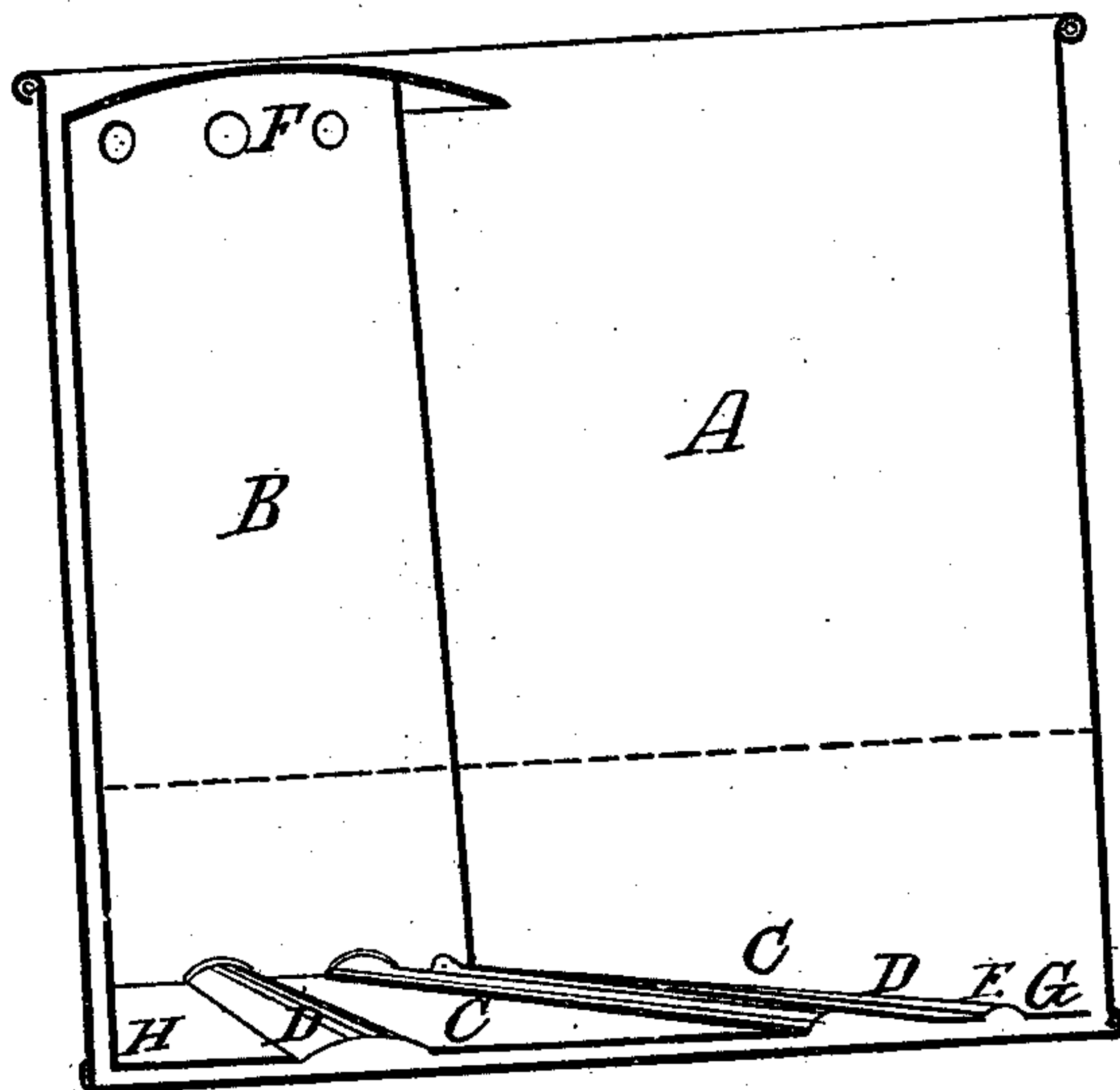


Fig. 2.



Witnesses.

A. C. Sellick.

E. A. West.

Inventor.

Jacob R. Manny.

United States Patent Office.

JACOB R. MANNY, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF
AND ALLEN C. SELLECK, OF SAME PLACE.

Letters Patent No. 94,121, dated August 24, 1869.

IMPROVED DIAPHRAGM FOR 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 I, JACOB R. MANNY, of the city of Chicago, in the county of Cook, and State of Illinois, have invented a certain new and improved Diaphragm for Automatic Wash-Boilers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a top view; and

Figure 2, a vertical cross-section with boiler.

Like letters refer to the same parts in both figures.

The nature and object of my invention consist in constructing a diaphragm for automatic wash-boilers of a single piece or sheet of metal, with corrugations or raised passages for the water, so that the diaphragm can be located near the bottom of the boiler, and economize the space, and also by keeping a thin film of water over the main portion of the heating-surface, so as to produce a more rapid action and circulation of the water. These diaphragms, as heretofore constructed, have had a vertical rim or band around them, or have been so far raised at the centre as to keep them a considerable distance above the bottom of the boiler, where the heat is applied, thus keeping a quite large body of water beneath the diaphragm for the heat to act upon. It is well known that the action of heat on a thin film of water is much more rapid than when the same amount of heat is applied to a body of water; and

My invention consists in a novel mode of applying this principle to automatic wash-boilers by an improved diaphragm.

To enable others skilled in the art to make and use my improved diaphragm—

A represents an ordinary oval wash-boiler;
B, a vertical tube;
C, the diaphragm;
D, the semi-cylindrical or raised water-passages;
E, side-openings, through which water is admitted under the diaphragm;
F, discharging-holes of the tube; and

G, the horizontal portion of the diaphragm.

This diaphragm is made to fit the form of the boiler used, or nearly so, and around its edge the openings E are made, as shown at fig. 1; and these openings are made at the ends of the raised water-passages.

The diaphragm is made somewhat conical, the apex being where the tube or pipe B is attached, and the raised passages D pass from the edge into the tube B.

The outer portion G lies flat, or nearly so, on the bottom of the boiler, and the conical portion commences at the bead or turn I, and is turned up toward the tube with a slight angle, as shown at fig. 2, so as to carry the water into the tube, but not sufficient to make the space contain any considerable body of water between it and the bottom of the boiler.

The principal portion of the diaphragm is near the bottom, so that the water presents only a thin film or body to the action of the heat, which makes its action through the tube B very rapid.

There is but one tube, and that is located at the side of the boiler, and the water is discharged through the holes F at the top.

I contemplate making a portion of the holes lower down on the tube, so as to discharge a portion of the water into and through the clothing.

It will be seen, from this description, that my diaphragm, with the tube, occupies but very little space in the boiler.

Having thus fully described my improvements,

What I claim as new, and desire to secure by Letters Patent, is—

The diaphragm or false bottom C, when provided with the water-passages D and openings E, to furnish sufficient water for the tube, and leave a thin film of water between such passages, for rapid conversion into steam, substantially as specified.

JACOB R. MANNY.

Witnesses:

L. L. BOND,
E. A. WEST.