

*H. W. Fell,*

*Wash Boiler.*

*No. 113,920.*

*Patented Apr. 18. 1871.*

FIG. 1.

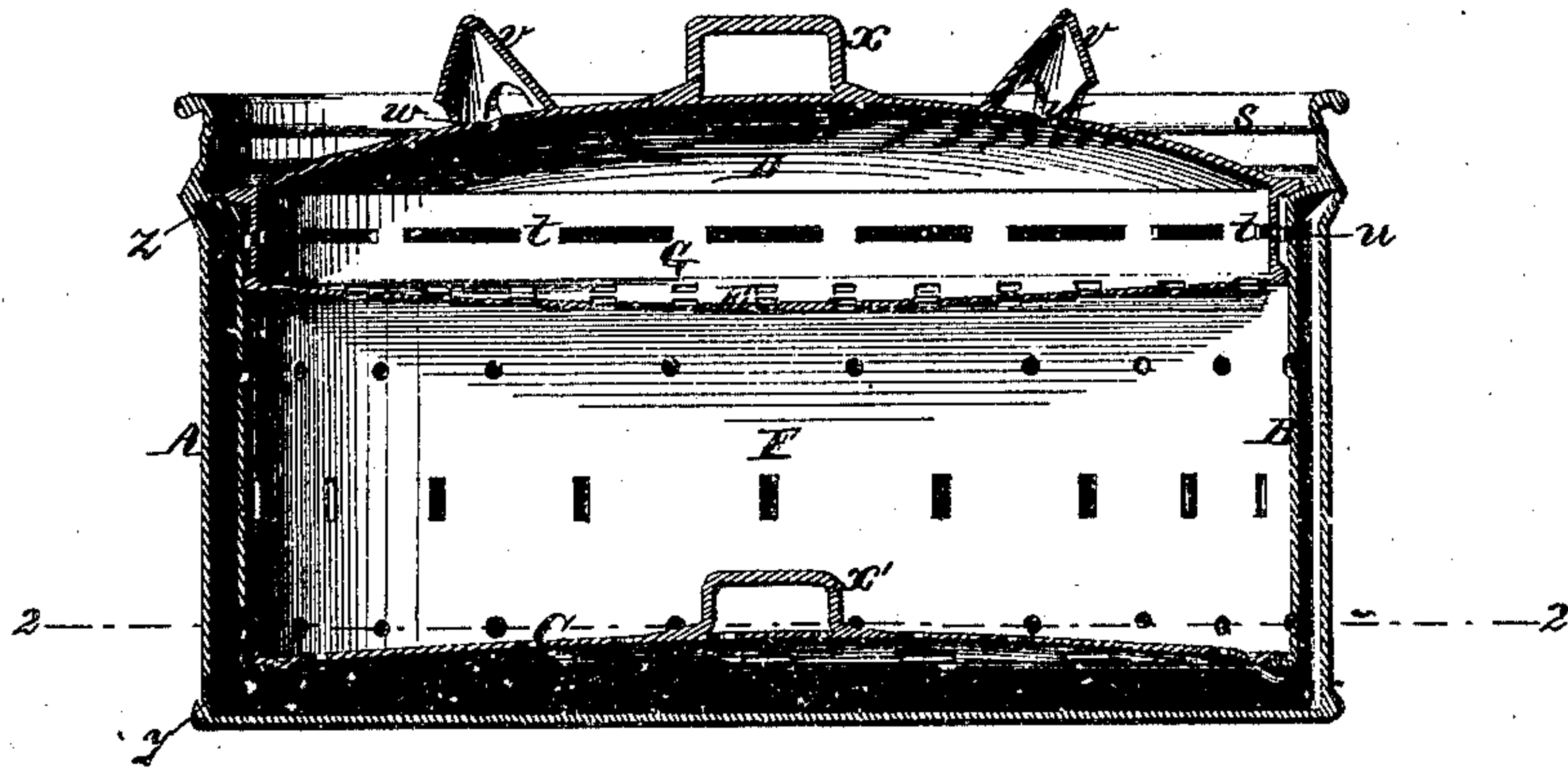


FIG. 2.

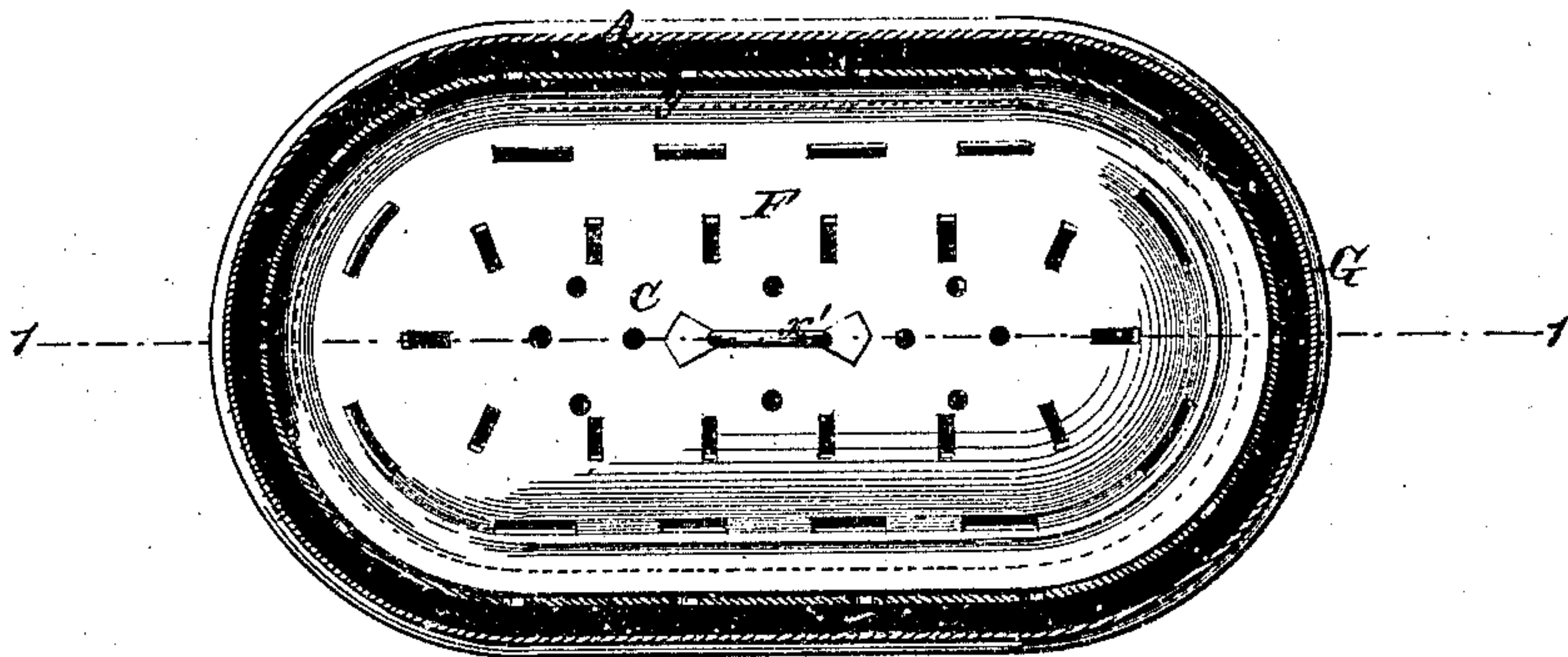
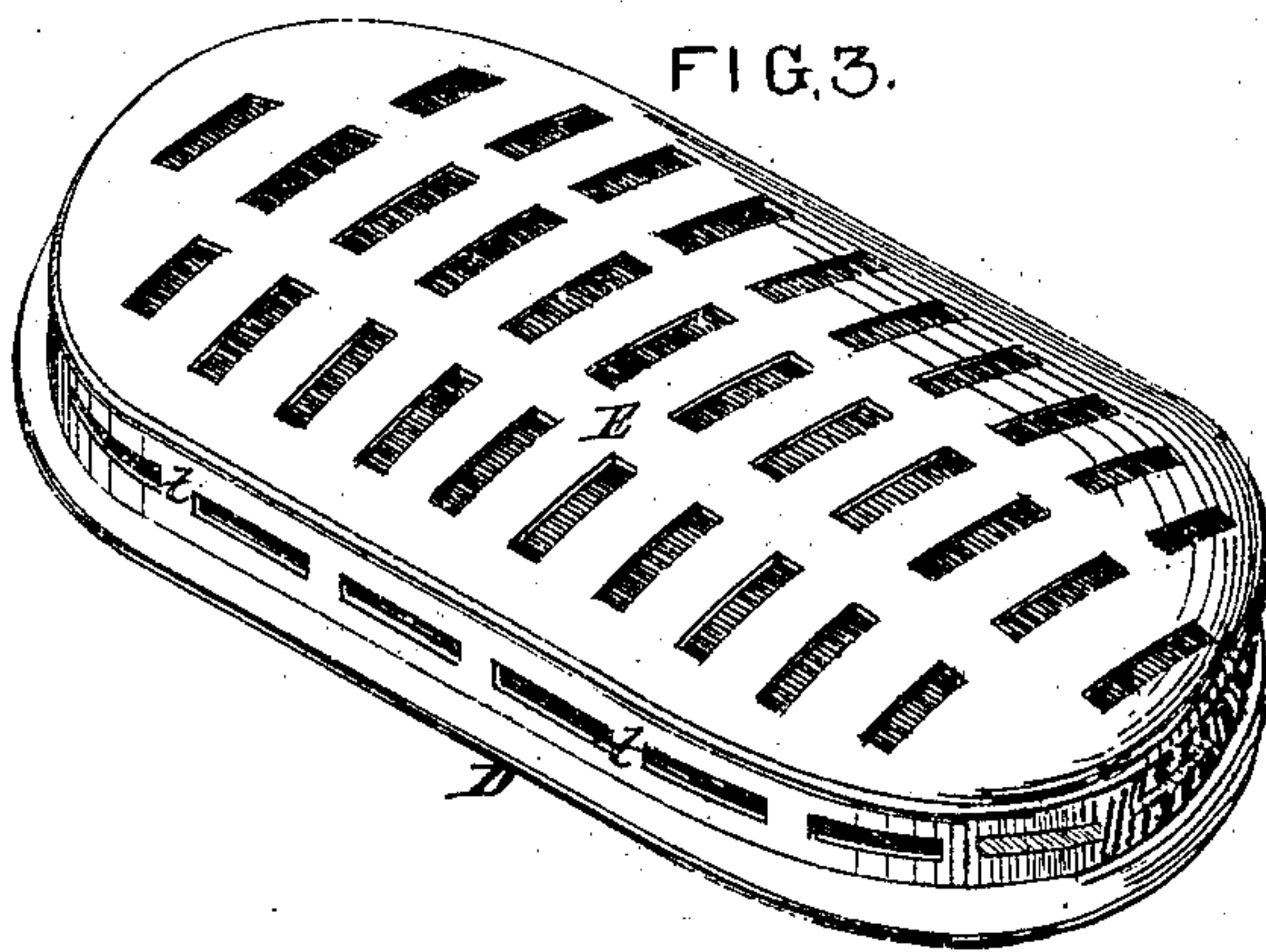


FIG. 3.



WITNESSES.

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# United States Patent Office.

HENRY W. PELL, OF ROME, NEW YORK.

Letters Patent No. 113,920, dated April 18, 1871.

## IMPROVEMENT IN WASH-BOILERS.

The Schedule referred to in these Letters Patent and making part of the same.

I, HENRY W. PELL, of Rome, in the county of Oneida, New York, have invented an Improved Wash-Boiler, of which the following is a specification.

### *Nature and Objects of Invention.*

My invention relates to those boilers in which the water is made to circulate so as to perform wholly or in part the washing operation.

My improved boiler in its closed condition has a perforated lining throughout, forming an "inner boiler," surrounded by a water and steam-space.

The inner bottom and top are both removable, the latter forming a part of the lid.

Hooded holes in the lid give vent to the steam.

The improvements consist in the peculiar construction, specified and hereafter more fully set forth, by which a circulation of superior freedom and effectiveness is secured by simple means.

### *Description of the Accompanying Drawing.*

Figure 1 is a vertical longitudinal section of my improved wash-boiler on the line 1 1, fig. 2.

Figure 2 is a horizontal section of the same on the line 2 2, fig. 1.

Figure 3 is a perspective of the cover removed and inverted.

Like reference letters indicate corresponding parts.

### *General Description.*

A represents the body of a sheet-metal boiler, which may be of any approved general shape.

B C is a perforated lining for the sides and bottom of the same, forming the body of my inner boiler.

D represents a flanged lid for the boiler proper, and

E a perforated plate attached thereto to form a lid for the inner boiler.

The sides B of the inner boiler depend from a ledge, *z*, below the top of the sides of the boiler proper, which ledge also forms a seat for the lid D and is a fixture.

The bottom C of the same is supported on a ledge, *y*, at the lower edge of the inner sides B, and is removable.

*x x'* represent handles by which to lift the lids D E and inner bottom C.

*w w* represent holes in the outer lid D for the escape of steam, and

*v v* condensing hoods covering the same.

F represents the chamber of the inner boiler, and

G a water-circulating space around the same.

*u t* represent coinciding perforations in the inner sides B and the edges of the compound cover D E to continue the circulating space G.

The projecting upper edge *s* of the boiler proper forms a curb to prevent overflow.

The bottom and lid C E of the inner boiler are made convex or arched, as represented, to give them rigidity.

The removal of the inner lid E with the outer cover D gives unimpeded access to the space F.

The removability of the inner bottom C enables the circulating space G in the body A to be cleaned.

### *Operation.*

The clothes or other articles to be washed being placed in the chamber F of the inner boiler, sufficient water or suds poured in, the lids D E applied, and the whole heated to the boiling point, the following action within the boiler ensues:

The particles of water or suds in the circulating space G at the extreme bottom being brought to a state of ebullition rush upward, and finding vent at the sides pass through the side spaces to the top, and into the chamber in the lid D E through the perforations *u t*, and through the perforations in the inner lid E to the washing-chamber F, other particles meanwhile taking their places and in succession following them.

The cooler particles, by gravity, momentum, &c., pass downward and laterally from the inner boiler through the perforations in its sides B and bottom C, carrying with them the separated dirt.

The steam separated during the operation has limited vent through the holes *w*, and is partially condensed in its escape by the hoods *v*.

### *Claims.*

I claim as my invention—

1. The inner boiler B C E, perforated throughout, and surrounded by a circulating space, G, the same being composed of sides B, suspended in the body A of the boiler proper, a removable bottom, C, supported by the sides, and a lid, E, attached to the main lid D and removable therewith, constructed and arranged substantially as described, for the purposes set forth.

2. In combination with the compound lid D E the hooded steam-vents *w v*, as and for the purpose specified.

HENRY W. PELL.

Witnesses:

O. N. CRAIN,

E. R. PELL.