

F. W. SCHROEDER.
Brewer's Boiler.

No. 221,702.

Patented Nov. 18, 1879.

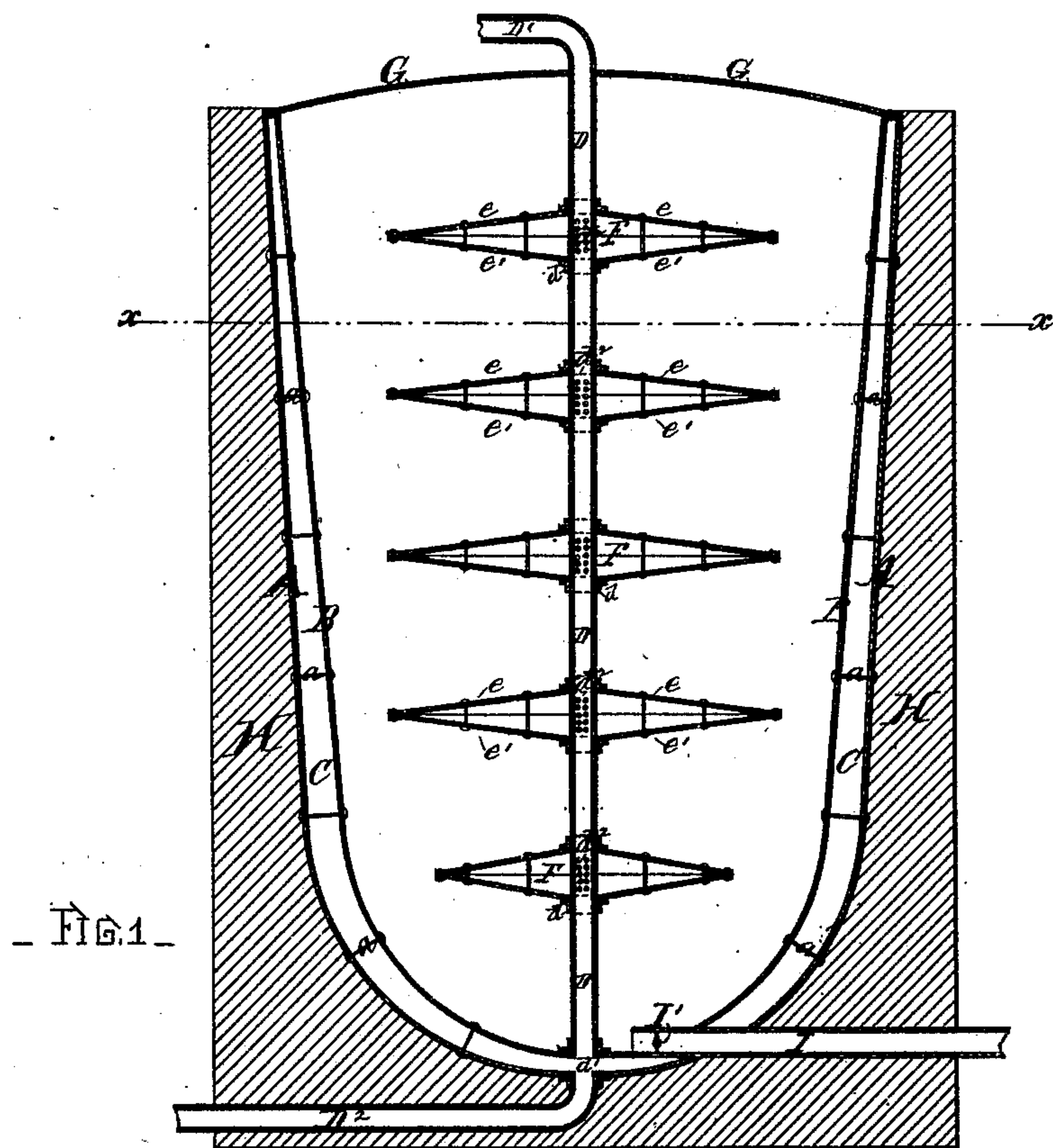


FIG. 1.

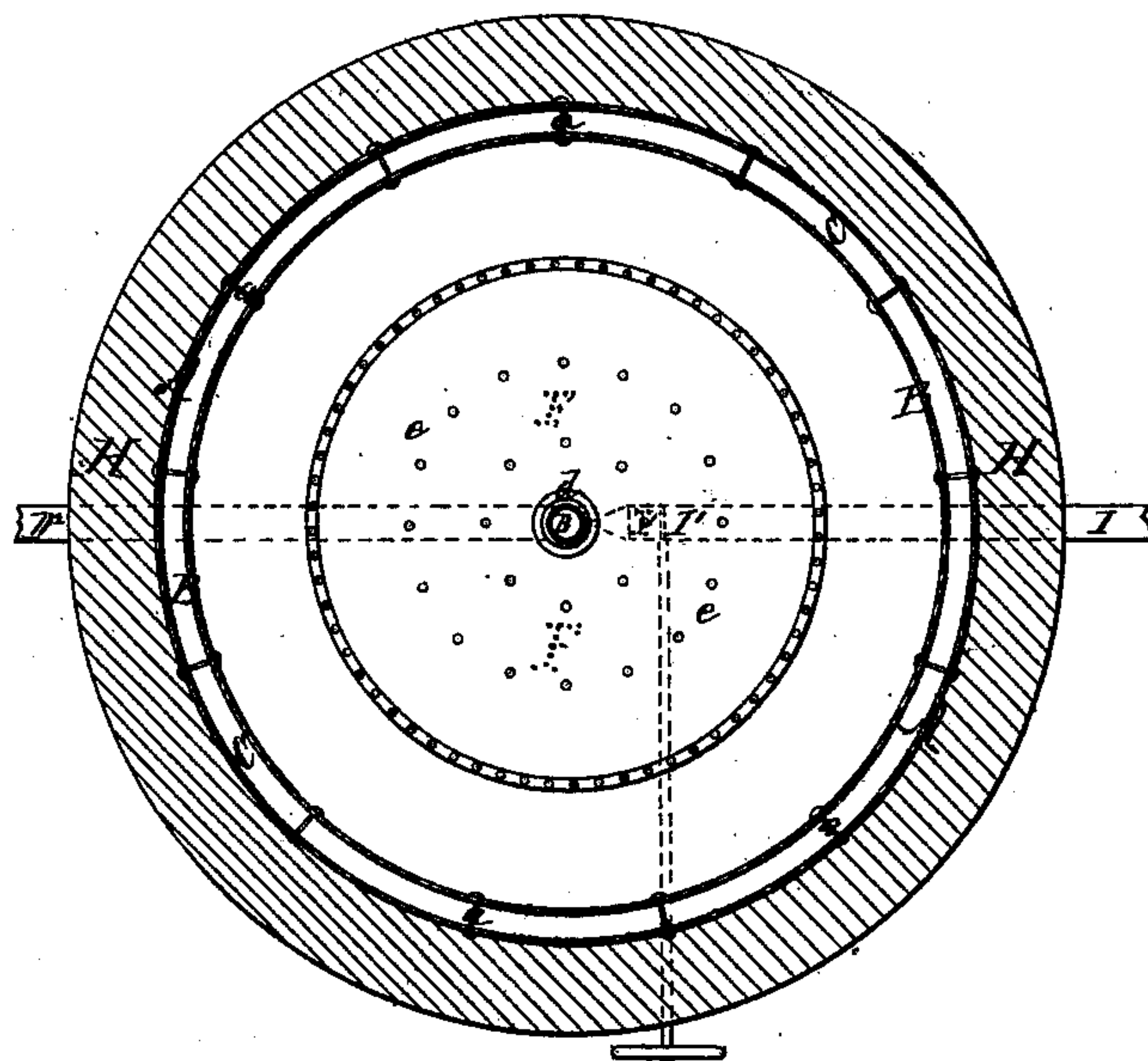


FIG. 2.

— WITNESSES —
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— INVENTOR —
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UNITED STATES PATENT OFFICE.

FREDERICK W. SCHROEDER, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF OF HIS RIGHT TO ADOLFO HEGERVISCH AND DOMINGO M. MONJO, OF SAME PLACE.

IMPROVEMENT IN BREWERS' BOILERS.

Specification forming part of Letters Patent No. 221,702, dated November 18, 1879; application filed March 19, 1879.

To all whom it may concern:

Be it known that I, FREDERICK WILLIAM SCHROEDER, of the city, county, and State of New York, have invented a new and useful Improvement in Brewers' Boilers, of which the following is a specification.

This invention has for its object the construction of a brewer's boiler in such a manner that all parts of the contents of the boiler shall be heated simultaneously, and this is accomplished by making the boiler's heating-surface to entirely surround it, and also by distributing interior heating-surfaces in the center of the boiler, so as to heat all parts of the contents at the same moment.

The invention will be understood by reference to the accompanying drawings, of which—

Figure 1 is a sectional elevation of the improved boiler; and Fig. 2 is a sectional plan of the same, taken on a line, *x x*, of Fig. 1.

The boiler consists of two concentric, or nearly concentric, shells, A B, made of any suitable sheet metal, and united together by stays *a*, so as to form a chamber, C, between them.

A steam-pipe, D, is placed vertically in the center of the boiler, and to this is attached a series of steam-chambers, F, which are secured in place by means of angle-iron flanges *d*, secured to the pipe. These steam-chambers are formed of two disks, *e* and *e'*, of sheet metal, which are united at their peripheries by riveting, and from thence to the central pipe, D, with which they are connected, they are sloped, respectively, upward and downward, so that at the central pipe there will be a vertical height of the chamber F between these disks of, say, one foot, more or less.

By this construction, the top surface of the upper disk, *e*, will slope downward and outward from the center, so as to permit any substance which may lodge thereon to slide off when the boiler shall be emptied. The lower disk, *e'*, will slope in an opposite direction—i.

e., from the periphery down toward the center—so as to allow the condensation to run back into the steam-pipe.

Within each of the chambers F the steam-pipe D will have numerous perforations, *d*², for permitting steam from the said pipe to enter and fill the said chamber F.

The vertical steam-pipe D will receive its steam from the inlet steam-pipe D', and return its condensation and spent steam to the steam-boiler through the return-pipe D². This same steam-pipe will supply steam to the chamber C by means of its connection at *d'*, at the bottom of the said boiler A B, with the said chamber C, and the return steam-pipe D² will connect with the outside shell of the boiler A B and conduct off all the waste-steam and condensation.

The boiler A B will be provided with a suitable cover, G, which will be removably attached to the sides of the boiler.

There will be a masonry setting, H, surrounding and supporting the boiler, and acting to retain the heat.

After the beer-mixture is properly boiled, it will be drawn off through the discharging-pipe I and the shut-off cock I'. After the beer-mixture is thus drawn off, steam will be admitted to the chambers C and F, and the deposits remaining on top of the disks *e* and clinging to the insides of the boiler will be granulated and pulverized by this steam-heat, so that the introduction of fresh water will thoroughly wash out the said boiler and fit it for the next charge.

Having described my invention, I claim—

1. The double boiler A B, provided with a steam-tight cover, G, and a steam-chamber, C, surrounding the sides and bottom of the boiler, and combined with a vertical central steam-pipe, D, as and for the purpose set forth.

2. The steam-chambers F, formed of two sloping disks, *e* and *e'*, united at their peripheries, as described, and combined with the

supporting steam-pipe D and the surrounding boiler A B, as and for the purpose set forth.

3. The detached steam-chambers F, formed with sloping top and bottom plates, *e* and *e'*, in combination with the central supporting and supplying steam-pipe, D, as and for the purpose set forth.

4. The combination of the double boiler A

B, having an inclosed heating-chamber, C, with the heating-chambers F, and the common steam-supply pipe D D', and the waste-pipe D².

FREDERICK WILLIAM SCHROEDER.

Witnesses:

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