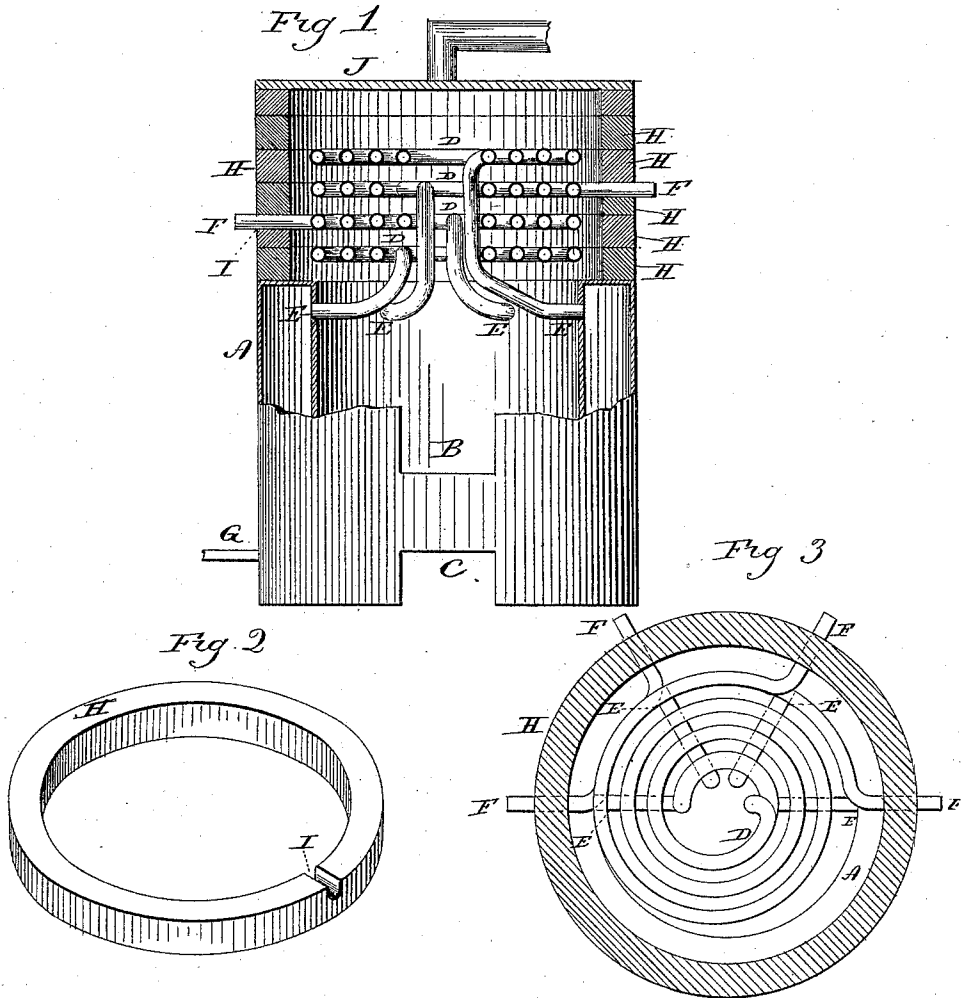


(No Model.)

S. H. JENNINGS.
BOILER.

No. 430,856.

Patented June 24, 1890.



Witnesses:
J. H. Jennings
Fred C. Case

Simon H. Jennings
Inventor
By atty.
Fred C. Case

UNITED STATES PATENT OFFICE.

SIMEON H. JENNINGS, OF DEEP RIVER, CONNECTICUT.

BOILER.

SPECIFICATION forming part of Letters Patent No. 430,856, dated June 24, 1890.

Application filed February 11, 1889. Serial No. 299,357. (No model.)

To all whom it may concern:

Be it known that I, SIMEON H. JENNINGS, of Deep River, in the county of Middlesex and State of Connecticut, have invented new
5 Improvements in Boilers; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same,
10 and which said drawings constitute part of this specification, and represent, in—

Figure 1, a sectional front side view of a boiler embodying the invention; Fig. 2, a perspective view of one of the rings of which the
15 wall above the base is composed; Fig. 3, a horizontal section above the coils, looking downward.

This invention relates to an improvement in the construction of boilers specially designed for heating purposes, in which hot water is the heating medium, the object being
20 the construction of a simple and effective boiler, and in which a large amount of surface carrying the water under circulation may be exposed to the fire within the boiler; and
25 it consists in the construction of the boiler, as hereinafter described, and particularly recited in the claim.

A represents the lower or base portion of
30 the boiler, which is usually of cylindrical character, provided with the usual fire-box opening B and with an ash-pit C, as usual in cylindrical boilers. The base of the boiler extends up above the fire and so as to surround
35 the fire.

Above the base A several flat coils D of tubing are arranged and supported in a horizontal plane. The inner end of each coil is
40 turned downward and opens into the base A, E representing these connections between the respective coils and the base A. These coils lie one above another, and the outer end F of each coil is turned outward through the surrounding wall, and thence led to the radiator.
45 Under this arrangement it is intended that the boiler shall be provided with one coil for each radiator, so that each radiator will have its own independent circuit from the base A. The boiler, the coils, and the several circuits
50 to the radiators are filled with water in the usual manner, the return leading into the

boiler near the bottom, as at G. The heat from the boiler creates the circulation in the usual manner for this class of heating apparatus, each coil deriving its own heat from the
55 fire, and as the water passes from the base of the boiler through the coil the extreme heat comes upon the coils above the boiler, and by such extreme heat at this point increases the circulation over what occurs when the pipes
60 lead directly from the boiler.

The surrounding wall of the coil portion of boiler is made up by a series of rings H, corresponding to the number of coils, the height
65 of the rings being substantially the distance between the coils. One of these rings is shown detached in Fig. 2. The ring is constructed with a notch I radially through it at one point, corresponding to the end of the coil which is
70 to run through it, and so that one ring being laid in place the coil is applied, its end resting in the notch I. Then a second ring is applied with the notch at the point where it is
75 desired that the end of the next coil shall pass through, and so on, successive rings being applied as successive coils are applied and the escape or outlet located accordingly. The wall thus built up is covered with a suitable
80 dome J, through which the products of combustion may escape.

I do not claim, broadly, a boiler embodying within it several flat coils, each communicating independently with the body of the boiler; neither do I claim an independent leader from
85 the respective coils to different radiators; but

What I do claim is—

The herein-described boiler for hot-water-heating purposes, consisting of the hollow base A, surrounding the fire-box, combined with coils of tubing arranged in a horizontal
90 plane above said base, one coil above another, the coils open through the center, the inner ends of said coils passing through said opening downward and opening into the said base, the outer ends of the said coils extending
95 radially through the wall of the boiler, substantially as described.

SIMEON H. JENNINGS.

Witnesses:

JOHN E. EARLE,
FRED C. EARLE.