(No Model.)

M. E. HERBERT.

STEAM BOILER.

No. 336,315. Patented Feb. 16, 1886.

Fig. 1.

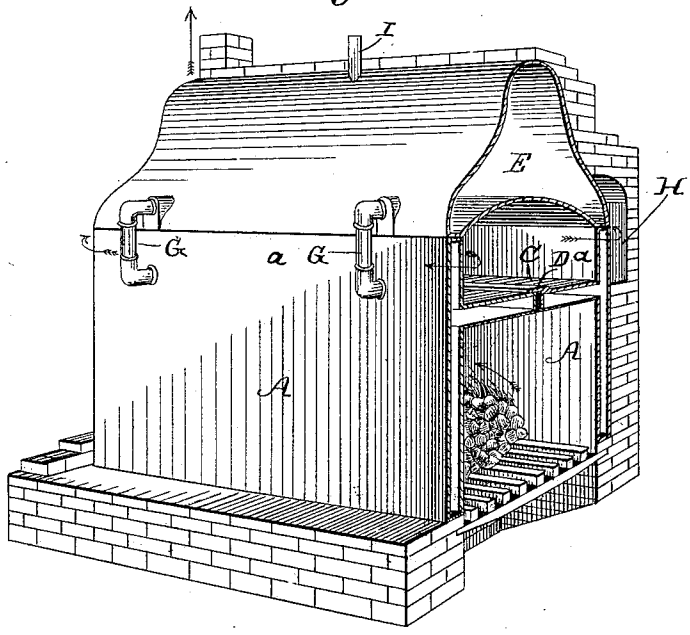
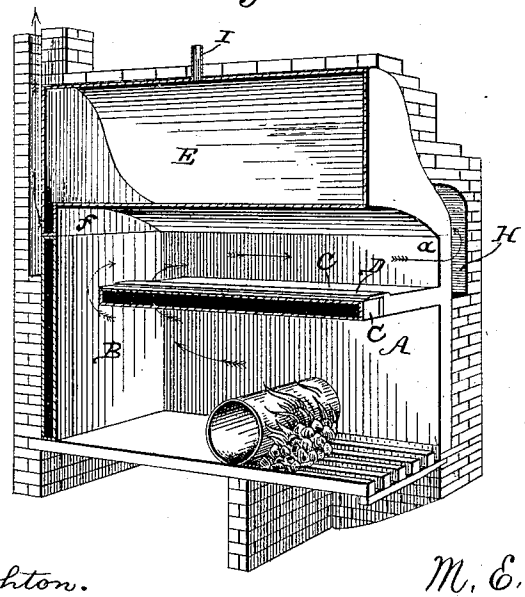


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

MICHEAL E. HERBERT, OF ST. JOSEPH, MISSOURI.

STEAM-BOILER.

SPECIFICATION forming part of Letters Patent No. 336,315, dated February 16, 1886.

Application filed December 4, 1885. Serial No. 184,703. (No model.)

To all whom it may concern:

Be it known that I, MICHEAL E. HERBERT, of St. Joseph, in the county of Buchanan and State of Missouri, have invented a new and useful Improvement in Steam-Boilers, of which the following is a description.

My invention is an improved steam-boiler, and pertains particularly to that class of such inventions in which the water-space is formed of a number of chambers, each of which is subjected to the action of heat—such, for instance, as is shown in the Patent No. 310,423, granted me January 6, 1885.

The invention consists in certain features of construction and combination of parts as will be hereinafter described.

In the drawings, Figure 1 is a perspective view of my improvement, one side of the casing and end of the boiler being removed; and Fig. 2 is a perspective vertical longitudinal section of my improvement, all of which will be described.

The boiler is especially designed to be formed of cast-iron, and is shown as consisting of a top and base portion the latter being formed in two sections. This base portion is supported in practice on a suitable furnace-floor, and its sections may be connected by a tube located at the rear end of the grate-bars and forming the bridge of the furnace. Each section of the base is formed with a side leg-chamber, A, a rear end leg-chamber, B, and a crown-sheet chamber, C, extended horizontally inward from the side chamber and terminating at its inner end short of the end leg-chamber, to permit the passage of the products of combustion in the use of the invention. This crown-sheet chamber is preferably connected with the side chamber at a point below the top of the latter, providing the upwardly-extended portion *a* of such chamber, as shown. One of the sections is provided at its inner edge with plates D, which project over and lap the joint between the sections, forming them practically into one as regards the passage of the products of combustion. The top portion of the boiler is formed with a main or crown sheet water-chamber, E, and a chamber, *f*, depending from such main chamber at its inner end. This top portion, it will be seen, is rested and supported on the base portion, simplifying the arrangement and construction of the casing and rendering the boiler complete in itself, the lower portion supporting the upper, as will be seen. The top and base portions are connected by one or more pipes, G, preferably two, as shown. I form the casing with flues leading alongside the upper portion of the boiler and connecting at the rear end thereof with an uptake. It is preferred to locate the pipes G in the flues H, as they will thus be heated and form additional water-chambers.

It is usual to cast the boiler in three parts which can be easily adjusted into position.

A suitable pipe, I, may connect the boiler and convey the steam to any point desired.

Having thus described my invention, what I claim as new is—

1. A boiler formed of a base portion having a crown-sheet water-chamber and leg-chambers located at the side and rear end of such portion, a top portion supported on the base portion and having a main water-chamber, and a leg-chamber depending from the rear end of said chamber, and pipe-connections between base and top portions, substantially as set forth.

2. A boiler substantially as described and shown, consisting of a base portion formed in two sections, each having crown-sheet and side and end leg-chambers, the top portion resting on the base portion and having a crown-sheet, end leg water-chambers, and pipe-connections, substantially as set forth.

3. A boiler comprising a base portion formed in two sections, each having a crown-sheet and end and side water-chambers, plates projected from one of said sections over and lapping the joints between the two, and a top portion and pipe-connections, substantially as set forth.

4. The improved boiler herein described, consisting of the base-sections, each formed with vertical side and end chambers, a horizontal crown-sheet chamber communicating with the side chamber at a point below its upper end, plates connected with one of said sections and projected over and lapping the joint between the same, the top portion having a crown-sheet chamber and a depending chamber at its rear end and supported on the base portion, and pipe-connections between such base and top portions, substantially as set forth.

MICHEAL E. HERBERT.

Witnesses:
M. W. JACKSON,
C. D. HILL.