

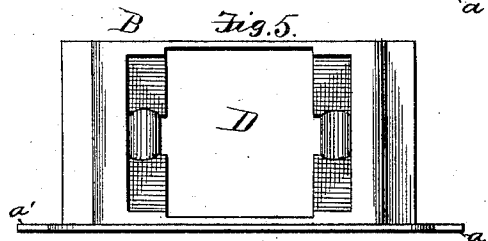
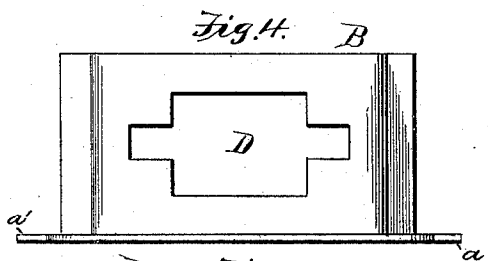
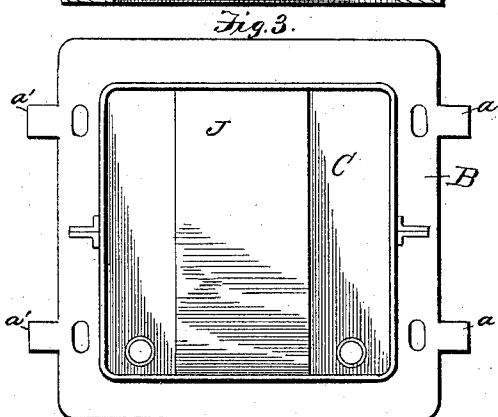
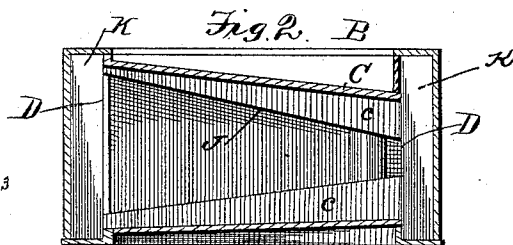
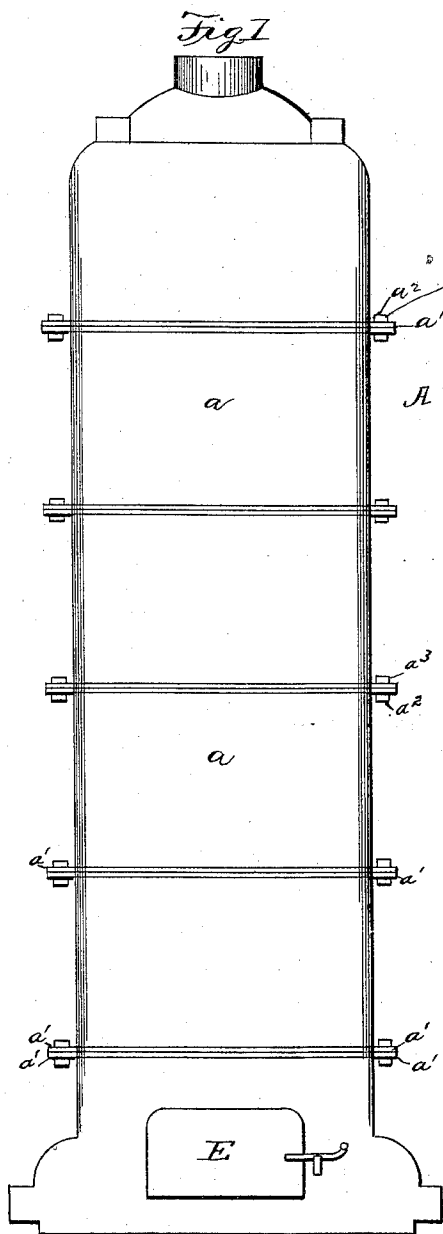
(Model.)

3 Sheets—Sheet 1.

W. SCOTT.
SECTIONAL STEAM BOILER.

No. 468,831.

Patented Feb. 16, 1892.



WITNESSES:

J. M. Fowler Jr.
E. A. Ashiey

INVENTOR

William Scott
BY *Chas. E. Barber*
ATTORNEY.

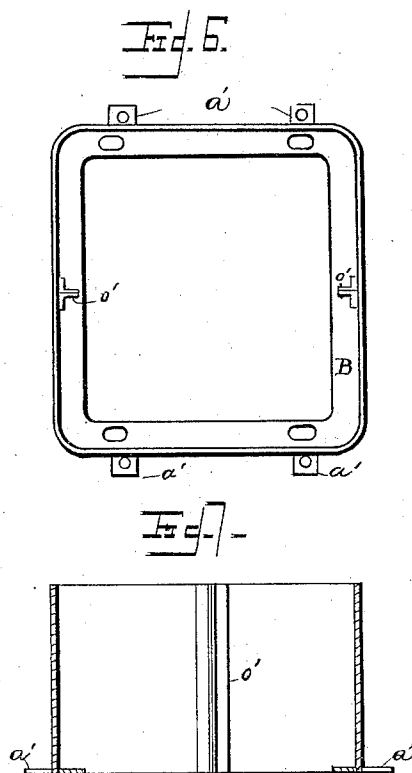
(Model.)

3 Sheets—Sheet 2.

W. SCOTT.
SECTIONAL STEAM BOILER.

No. 468,831.

Patented Feb. 16, 1892.



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John S. Moore

By Chas. E. Barber

Attorney

(Model.)

3 Sheets—Sheet 3.

W. SCOTT.
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Fig. 8.

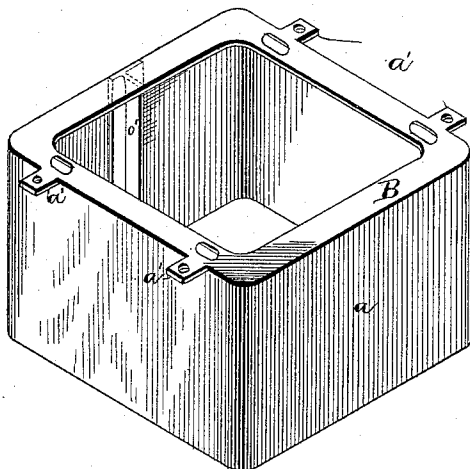
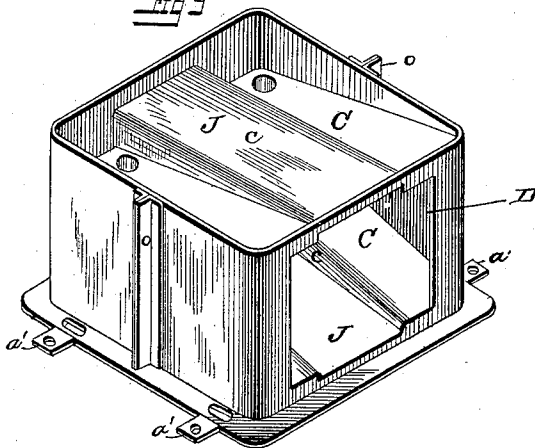


Fig. 9.



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J. M. Fowler Jr.
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Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM SCOTT, OF DETROIT, MICHIGAN.

SECTIONAL STEAM-BOILER.

SPECIFICATION forming part of Letters Patent No. 468,831, dated February 16, 1892.

Application filed September 17, 1889. Serial No. 324,197. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM SCOTT, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Sectional Steam-Boilers, of which the following is so full, clear, and exact a description as will enable others skilled in the art to which my invention appertains to make and use the same.

This invention has relation to sectional steam-boilers; and it consists in certain peculiarities in the construction, arrangement, and combination of the various parts thereof, substantially as will be hereinafter fully set forth, and particularly pointed out in the subjoined claims.

The object of my invention is to construct a simple and inexpensive steam-boiler of the class stated in which the settling of the scale or other impurities on the partitions in the interior thereof will be prevented, thereby providing a boiler the capacity of which will not be decreased by use, and which will accomplish the heating of water in the shortest space of time with the least consumption of fuel.

In the accompanying drawings, illustrating my invention, Figure 1 represents an elevation of a boiler constructed according to my invention. Fig. 2 represents a vertical transverse section through one of the inner sections of the boiler. Fig. 3 represents a bottom view of said section. Fig. 4 represents a side elevation of said inner section. Fig. 5 represents an elevation of the opposite side of said section. Fig. 6 represents a top view of one of the outer sections forming a portion of the outer shell of the boiler with the inner section removed, and Fig. 7 is a vertical transverse section of the same. Fig. 8 is a perspective view of the outer shell of one of the boiler-sections, and Fig. 9 is a similar view of the inner shell.

The same letters of reference are used to designate the same parts in the several views.

A designates the outer shell of the boiler, which is made in sections, (designated by the letter a), the contiguous surfaces of each of which is formed with outwardly-extending lugs a' , through which pass bolts a^2 , having nuts a^3 , serving to secure said sections together. The inner sections are provided with

external vertical ribs or flanges $o o$ on two opposite sides, and the outer sections are provided with internal vertical ribs or flanges $o' o'$ on two opposite sides adjacent to or between the sides of the inner section on which the ribs $o o$ are located, the said ribs on the two sections serving to hold the same in proper position relatively to each other. Located within this section A, at a suitable distance therefrom, is another section B, forming the inner wall of the boiler, and located within this inner section is a series of partitions C. On reference to Fig. 2 it will be observed that these partitions are set at an inclination and that certain of them terminate a short distance from the inner wall of the boiler, and that they have communication with the water-space between the inner and outer walls of the boiler by means of openings D, formed in said inner wall. It will be observed, further, that the adjacent ends of the partitions which terminate away from the inner wall of the boiler are connected together by vertical walls c , and that said partitions are located diametrically opposite each other.

Connected with the ends of the two walls of the boiler by screw-threads are pipes, (not shown,) which serve for the admission into and the exit from said boiler of the water.

E designates the door of the furnace of the boiler, the furnace constituting the base or tower section of the boiler.

The passage of the water in the hereinabove-described boiler is as follows: Entering the space between the inner and outer walls it passes up through the same and through the opening in the inner wall between the lower partitions c , thence out through the said opening up the space into the space between the next series of partitions, and so finally making its exit through an opening at the upper end of the boiler. The smoke and gas rises through the boiler, in its passage going through the openings between the vertical joining portions of the partitions and the inner wall of the boiler, finally making its exit from said boiler through the opening at the top thereof. It will be obvious that by setting the partitions at an inclination the scale and other impurities will find no lodgment on said partitions, but will slide off the same to the bottom of the boiler, from whence

they can be removed by being blown through a blow-off valve or raked out through hand-holes, with which the boiler may be provided. There will thus be no liability of the capacity
5 of the boiler being decreased by the baking of the scale on the partitions which is a disadvantage experienced with the use of horizontal partitions and which causes the increased consumption of fuel to heat the same
10 amount of water. It will be further obvious that the flame in the hereinabove-described boiler, instead of having a straight shoot through the flue-holes of the partitions, passes from one side of the boiler to the other, thus
15 giving the water the greatest possible chance to absorb the heat.

The partitions C, as shown in Figs. 2 and 3, are each formed with a central recess or dip J, which also increases their heating-surfaces.
20 The partitions may be made flat or corrugated, as desired.

Having now described my invention, what I believe to be new and desire to secure by Letters Patent, and what I therefore claim, is—

1. A steam-boiler built up of superimposed sections provided with inclined division-plates forming the top and bottom of each section and having central depressions or dips, substantially as shown and described. 25 30

2. The combination, with the outer sections of the boiler having internal vertical flanges, of the internal sections having external flanges, whereby the internal and external sections are separated to preserve the proper space between, substantially as specified. 35

In testimony whereof I affix my signature in the presence of two witnesses.

WILLIAM SCOTT.

Witnesses:

FRED S. LINSELL,
HARRY MOGFORD.