Nov. 9, 1926. 1,606,629

O. E. HALBROOK

BOILER

Filed August 4, 1922 3 Sheets-Sheet 1

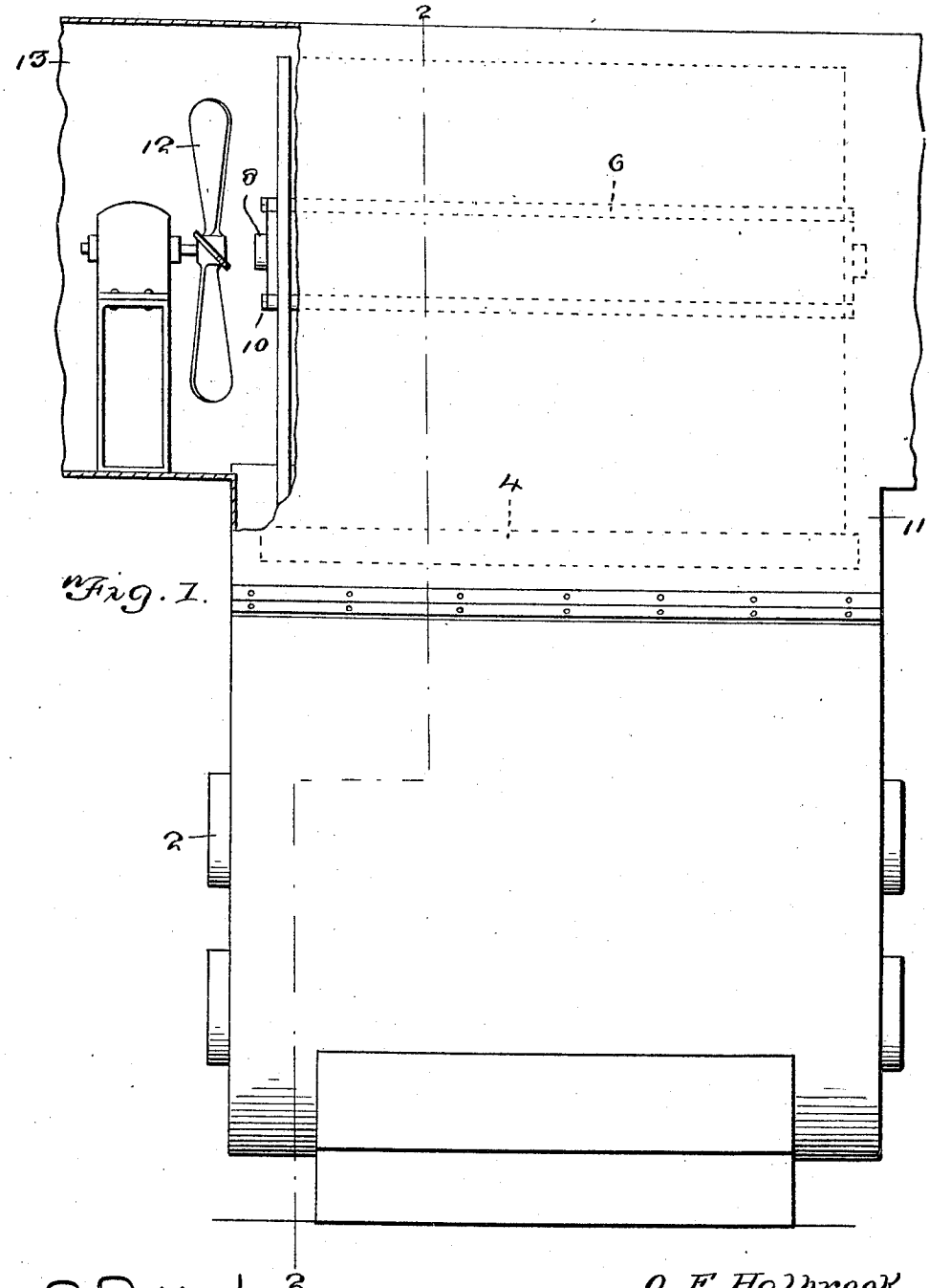



Fig. 1.

E. R. Pulsifer.
L. B. Middleton.
WITNESS:

O. E. Halbrook
INVENTOR
BY Victor J. Evans
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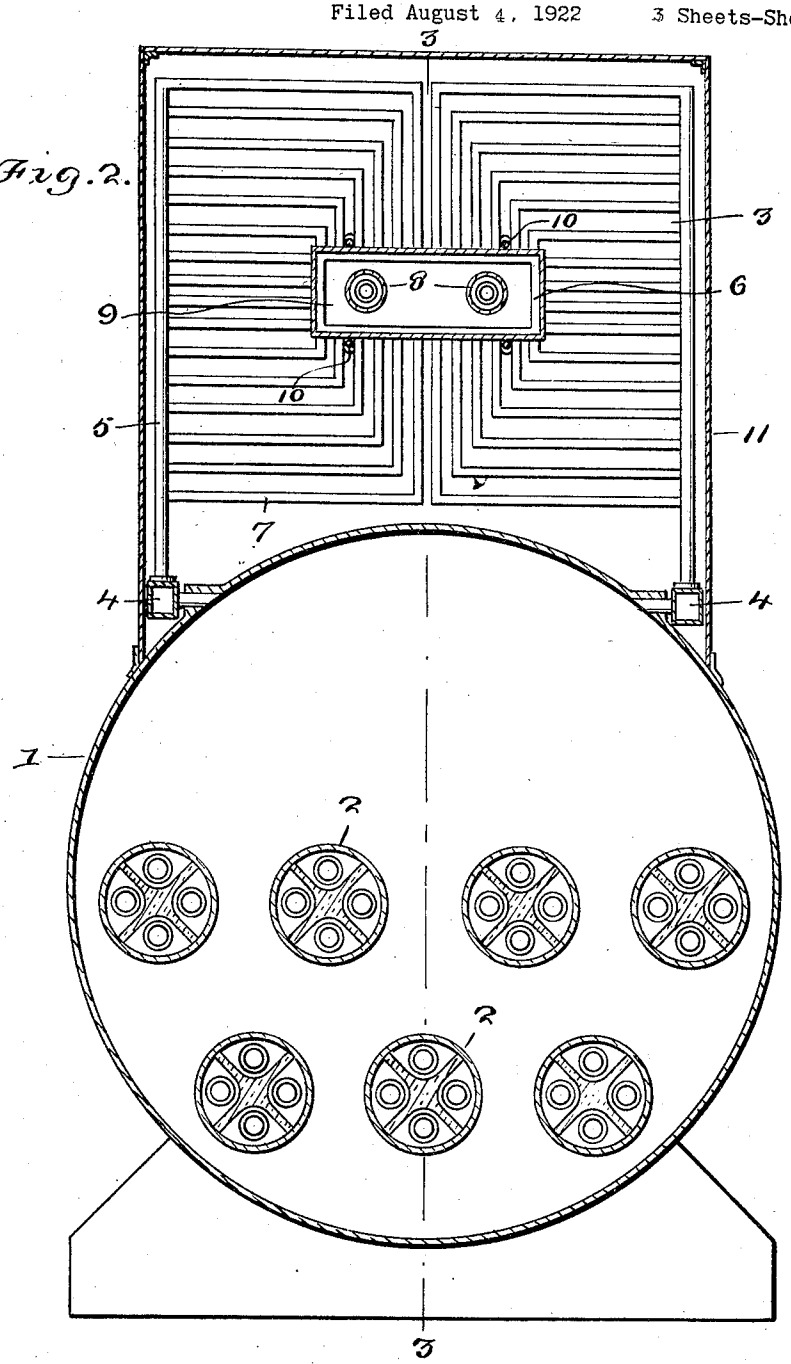
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O. E. HALBROOK

BOILER

Filed August 4, 1922 3 Sheets-Sheet 2

Fig. 2.




E. R. Ruppert.
L. B. Middleton.

WITNESS:

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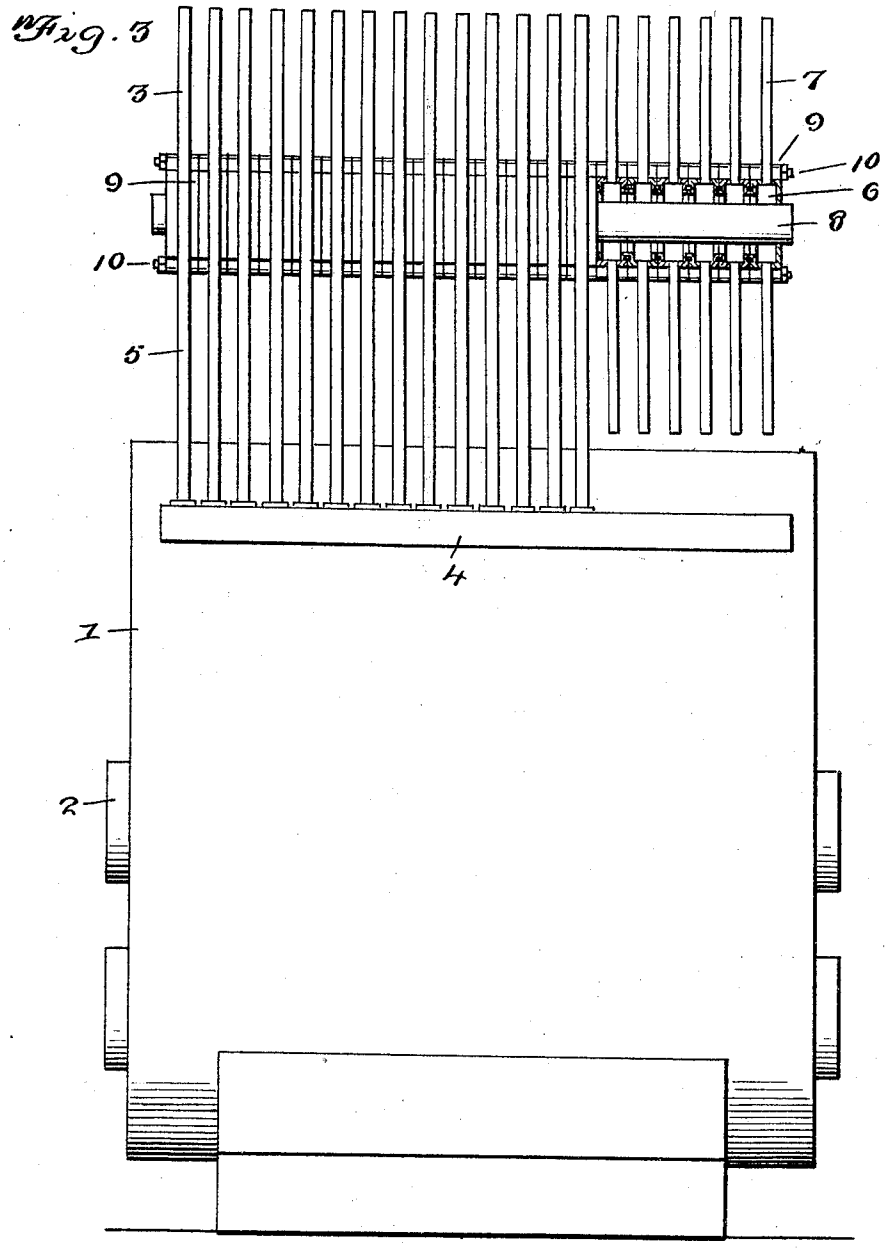
Nov. 9, 1926. 1,606,629

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BOILER

Filed August 4, 1922 3 Sheets-Sheet 3

Fig. 3




E. R. Ruhsport.
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Patented Nov. 9, 1926. 1,606,629

# UNITED STATES PATENT OFFICE.

OTTO E. HALBROOK, OF RIVER ROUGE, MICHIGAN.

## BOILER.

Application filed August 4, 1922. Serial No. 579,680.

This invention relates to a heating system, the general object of the invention being to provide means for producing steam heat by electrical means, with means for circulating the heat through the building.

Another object of the invention is to provide a radiator which is attached to a boiler with means for superheating the steam in said radiator.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a side view of the invention.

Figure 2 is a section on line 2—2 of Figure 1.

Figure 3 is a section on line 3—3 of Figure 2.

The remaining figures are detail views.

In these views 1 indicates a boiler which is provided with means for feeding water thereinto. This boiler is heated by electricity through means of the units 2 which are constructed in any desired manner and the terminals of which are connected with a source of electrical supply. A radiator 3 is supported on the boiler, said radiator consisting of the manifolds 4 which are connected with the steam space of the boiler, and vertical pipes 5 extending upwardly from the manifolds, the superheater 6 and the pipes 7 connecting the superheater with the pipes 5. The pipes 7 are arranged in parallelism and the majority of these pipes are provided with angle bent portions also arranged parallel and these portions are secured to the heater 6 as clearly shown in Figure 2 of the drawings. The electrical heating units 8 are located in the superheater for heating the steam therein. This superheater is formed in sections, as shown at 9, and each section is connected with the manifolds by the pipes 5 and 7. The sections are connected together by the bolts 10. A housing 11 encloses the radiator and the superheater 6 is arranged centrally therein. A motor operated fan 12 is located adjacent the outlet 13 of said housing, said fan acting to draw the heated air through the radiator and out of the housing into the room to heat the same.

It will thus be seen that the steam formed in the boiler will flow into the radiator and will be further heated in the superheater 6 which forms a part of the radiator so that when the fan is in motion the air drawn through the housing 11 will be highly heated and will heat the room or building within which it circulates.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:—

The combination with a boiler, of a housing mounted thereon and rising from opposite sides thereof, horizontally disposed manifolds arranged upon opposite sides of said boiler within the housing and in communication with the boiler, vertical pipes rising from the manifolds, a sectional superheater, straight pipes and right angle bent pipes extending from each vertical pipe and terminating in one section of the superheater, said pipes serving to support said superheater centrally and longitudinally in said housing and with respect to said vertical pipes, and means for causing a draft through said housing.

In testimony whereof I affix my signature.

OTTO E. HALBROOK.