(No Model.)

T. NESOM.

STEAM BOILER.

No. 347,502. Patented Aug. 17, 1886.

Fig. 1.

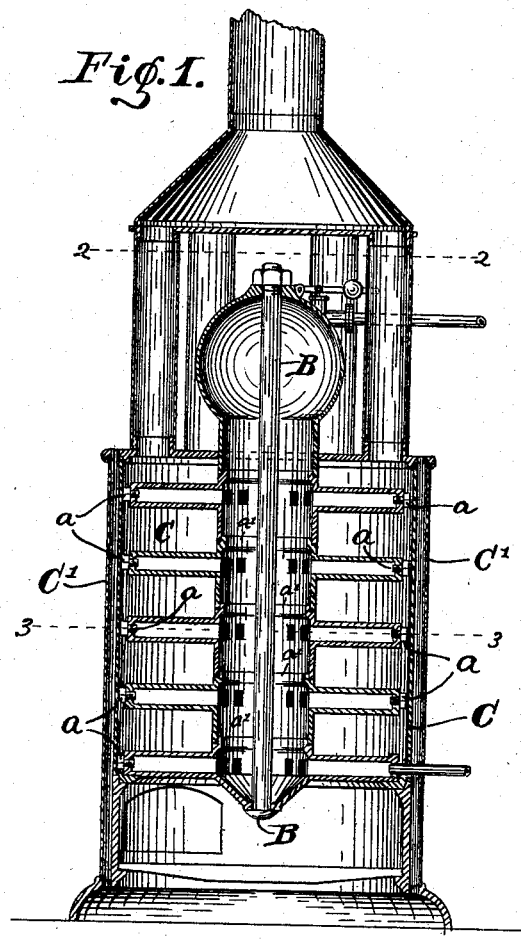


Fig. 2.

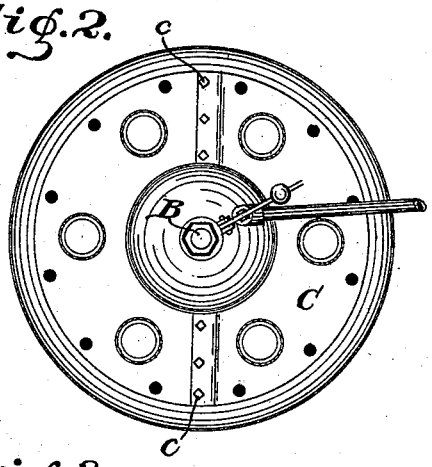


Fig. 3.

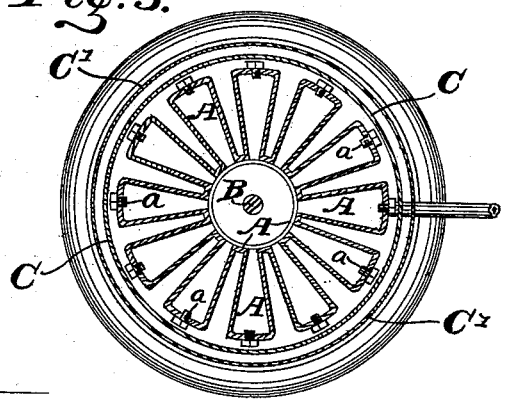
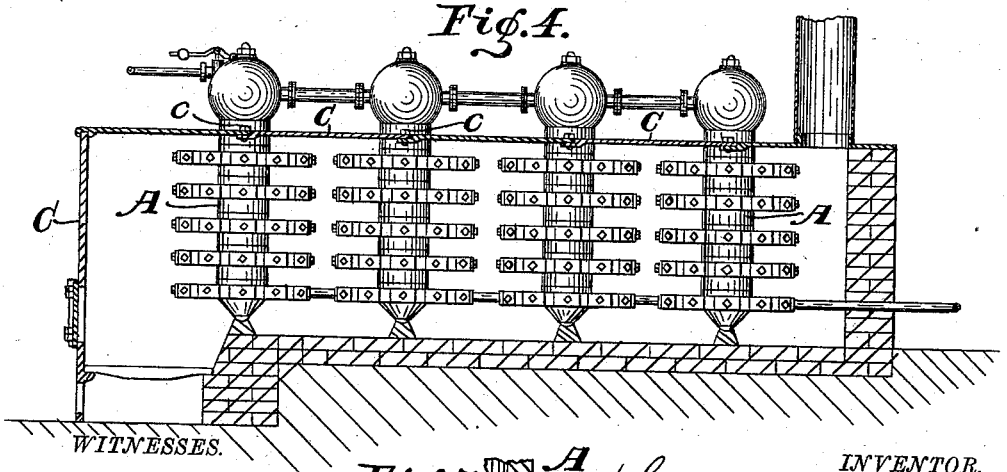


Fig. 4.

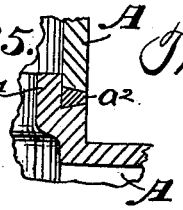


WITNESSES.

Chas. N. Leonard.

E. W. Bradford.

Fig. 5.



INVENTOR.

Thomas Nesom,

PER

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UNITED STATES PATENT OFFICE.

THOMAS NESOM, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF TO ROBERT E. POINDEXTER, OF SAME PLACE.

STEAM-BOILER.

SPECIFICATION forming part of Letters Patent No. 347,502, dated August 17, 1886.

Application filed March 30, 1886. Serial No. 197,105. (No model.)

To all whom it may concern:

Be it known that I, THOMAS NESOM, of the city of Indianapolis, county of Marion, and State of Indiana, have invented certain new and useful Improvements in Steam-Boilers, of which the following is a specification.

The object of my said invention is to produce a cheap and efficient steam-boiler; and it consists in forming such a boiler of a series of cast plates constructed in the general form of a wheel, with the arms hollow, and in various other details of construction, as will be hereinafter more fully described.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a central vertical section of a steam-boiler constructed according to my invention; Fig. 2, a horizontal sectional view looking downwardly from the dotted line 2 2 in Fig. 1; Fig. 3, a similar view looking downwardly from the dotted line 3 3 in Fig. 1; Fig. 4, a longitudinal section of the outer portion or furnace, showing a series of boilers connected together in side elevation, illustrating the method of duplicating such boilers to provide for greater capacity; and Fig. 5, a detail section of the joint on an enlarged scale.

The boiler proper, as before stated, consists of a series of cast plates, A, of the general form of a wheel, the arms as well as the central portion of which are formed hollow to receive the water, thus giving a large and effective fire-surface. The arms increase in width toward their outer ends, thus increasing their capacity and the fire-surface. In the outer end of each is formed a hole, which is filled with a plug, *a*, as shown most plainly in Figs. 1 and 3, and these plugs may be removed for the purpose of cleaning or otherwise. Each of the cast sections is provided with a flange, *a'*, which fits inside the edge next to it on the adjacent section, thus giving an overlapped flanged connection between the several sections. The upper section is formed into a steam-dome, as shown, and is provided with a safety-valve and steam-pipe connection, as usual. After the sections are all put together, they are secured by a large bolt, B, running from the bottom to the top, as shown most plainly in Fig. 1. The joints between the several sections are formed on a slight incline, as shown in Fig. 5, so that the packing a^2, which is placed in said joint, may be squeezed inwardly instead of outwardly, and thus securely held in position.

The boiler is surrounded by the casing or furnace-wall C, as is usual. The sections forming the face of this casing are brought together with spliced joints, as shown by the dotted lines in Figs. 1, 2, and 4, which joints are secured by the bolts *c*.

The shell of the furnace (especially in the form shown in Fig. 1) is preferably surrounded with a jacket, C', having openings in its top communicating with the air in the room and in its bottom leading to the grate. The air in passing between this jacket and the furnace to the grate becomes heated, and thus fuel is saved and the heat is kept from the room at the same time.

The other parts—such as feed-water, steam and connecting pipes, and smoke-stack—are not at all peculiar in their construction, and need no special description, as they will be readily understood from the drawings.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a steam-boiler, the combination of a series of hollow plates, A, secured together and formed with the flanges *a* and inclined edges, packing interposed between said edges, and radial arms formed on and extending out from said hollow plates, all substantially as set forth.

2. The combination, in a steam-boiler, of a series of hollow plates having flanges *a* and inclined edges, as shown, and packing between the edges, substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 20th day of March, A. D. 1886.

THOMAS NESOM. [L. S.]

In presence of—
C. BRADFORD,
CHARLES L. THURBER.