

No. 702,414.

Patented June 17, 1902.

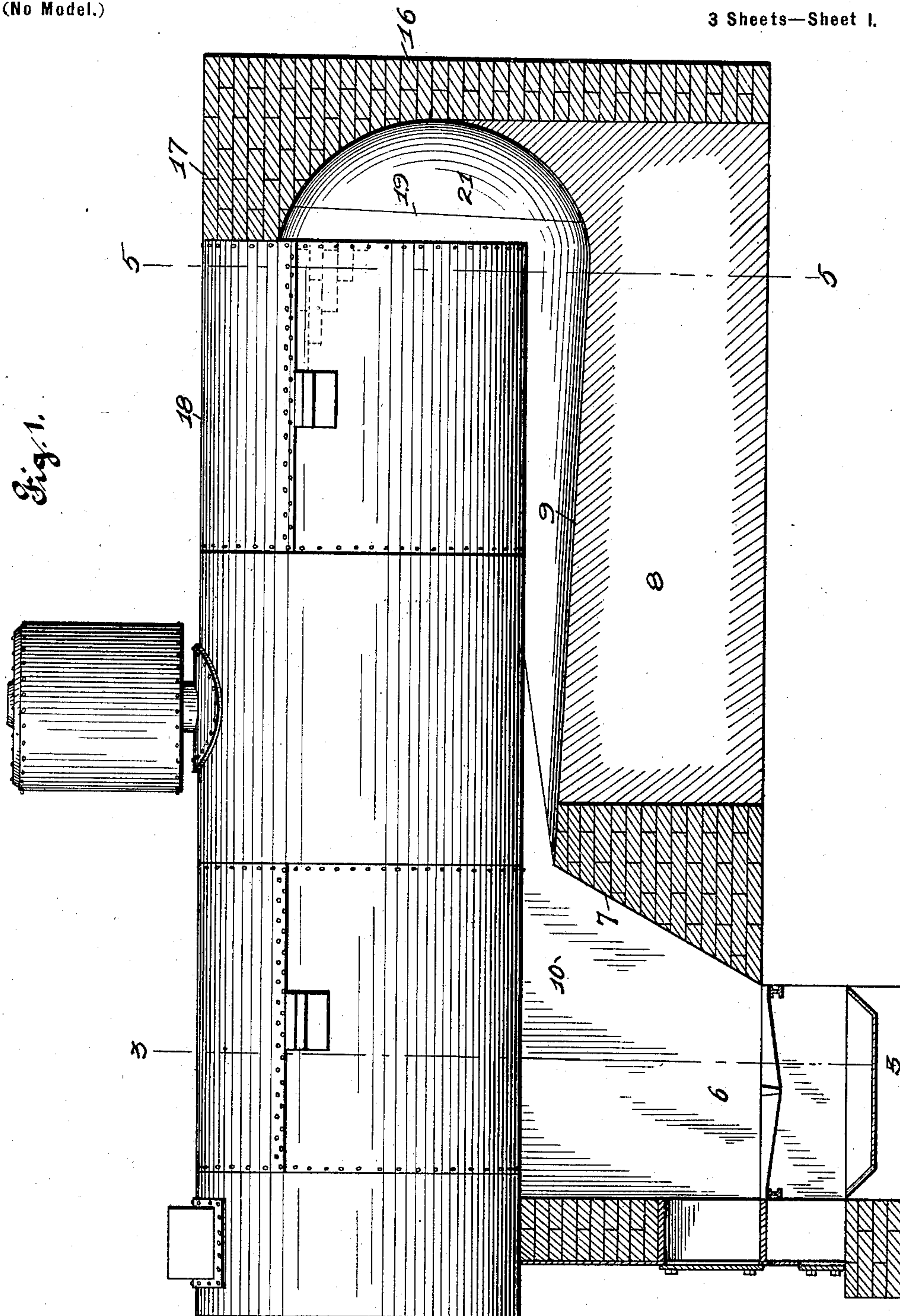
E. R. EDDINS.
BOILER SETTING.

(Application filed Mar. 11, 1902.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.



Witnesses
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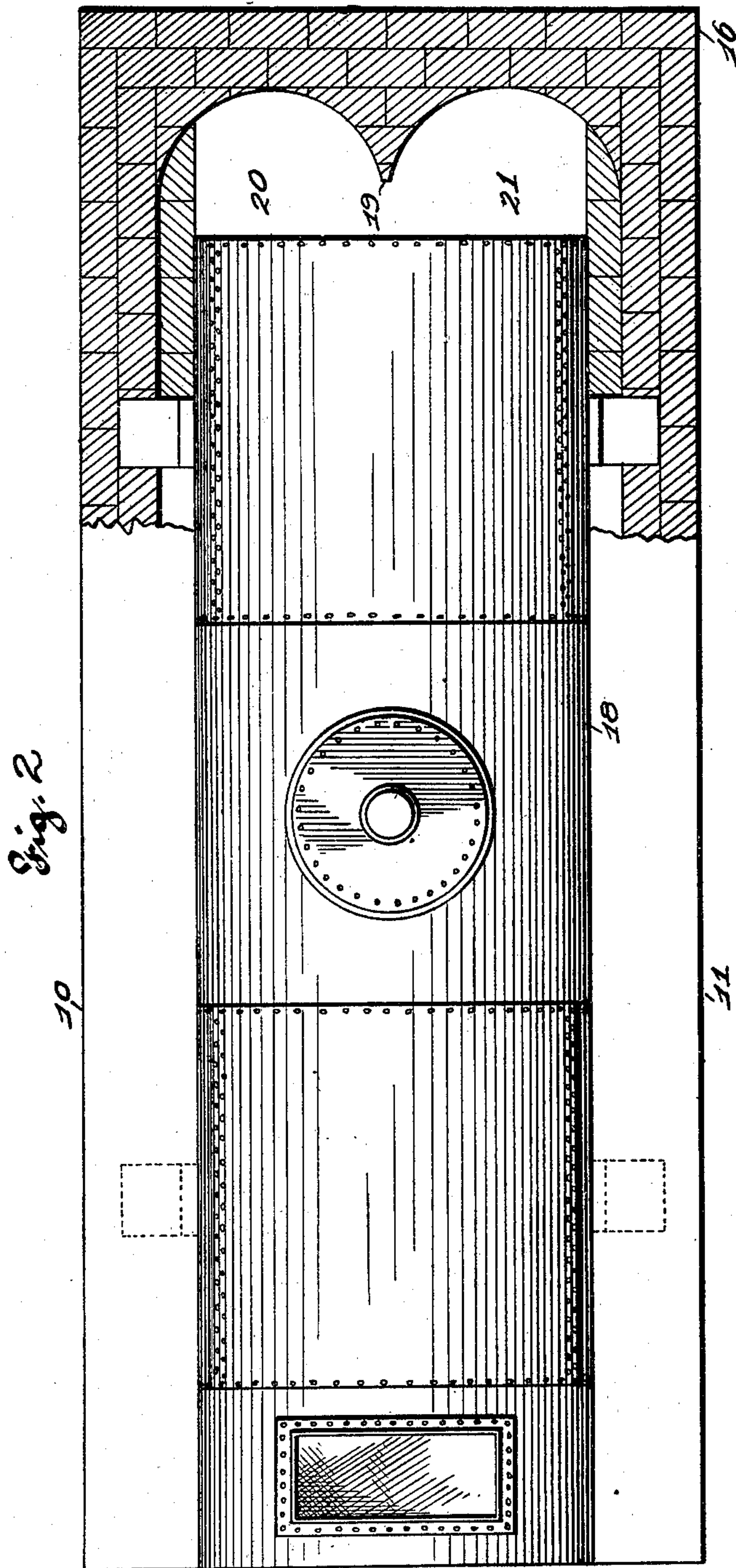
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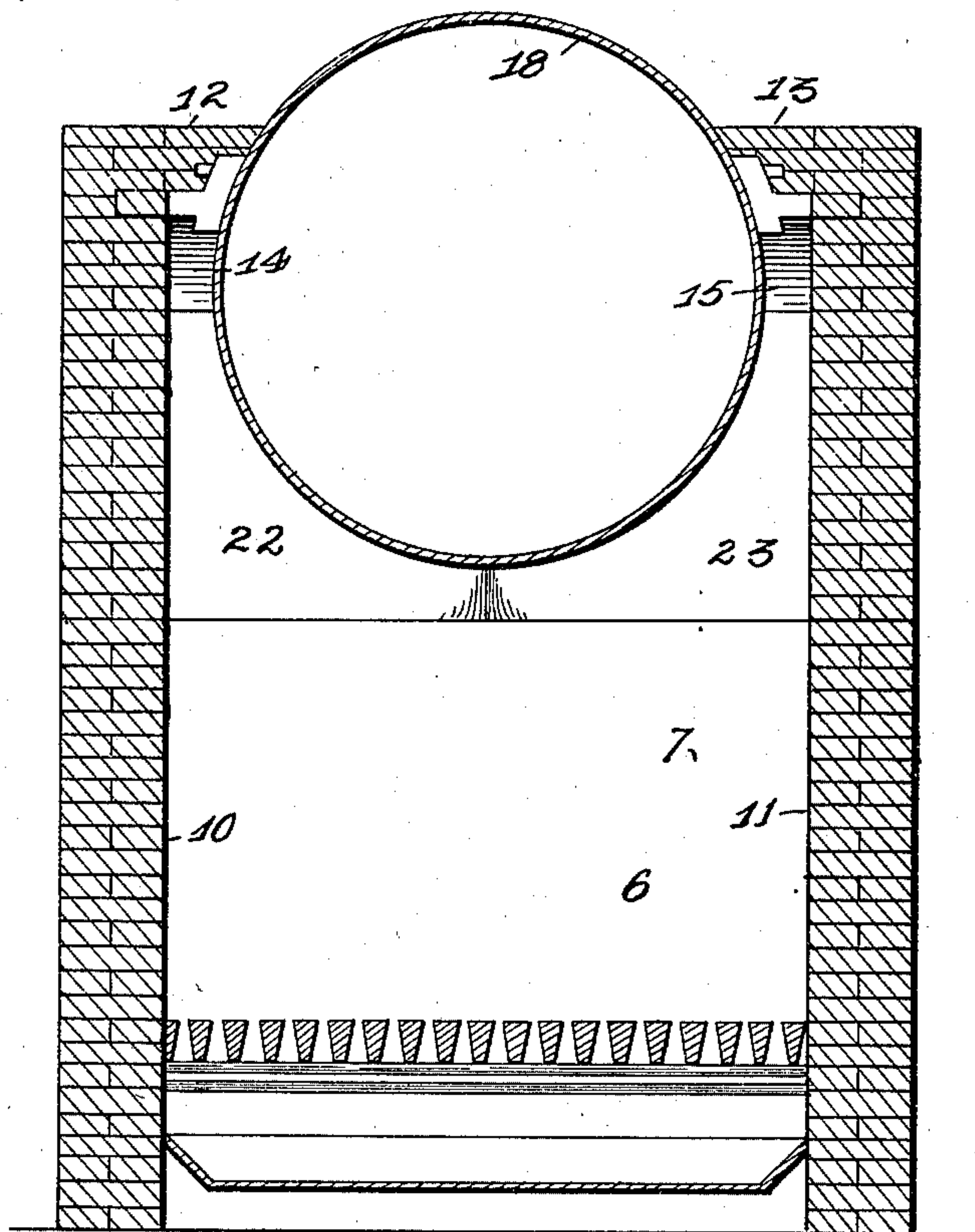


Fig. 3

Fig. 4

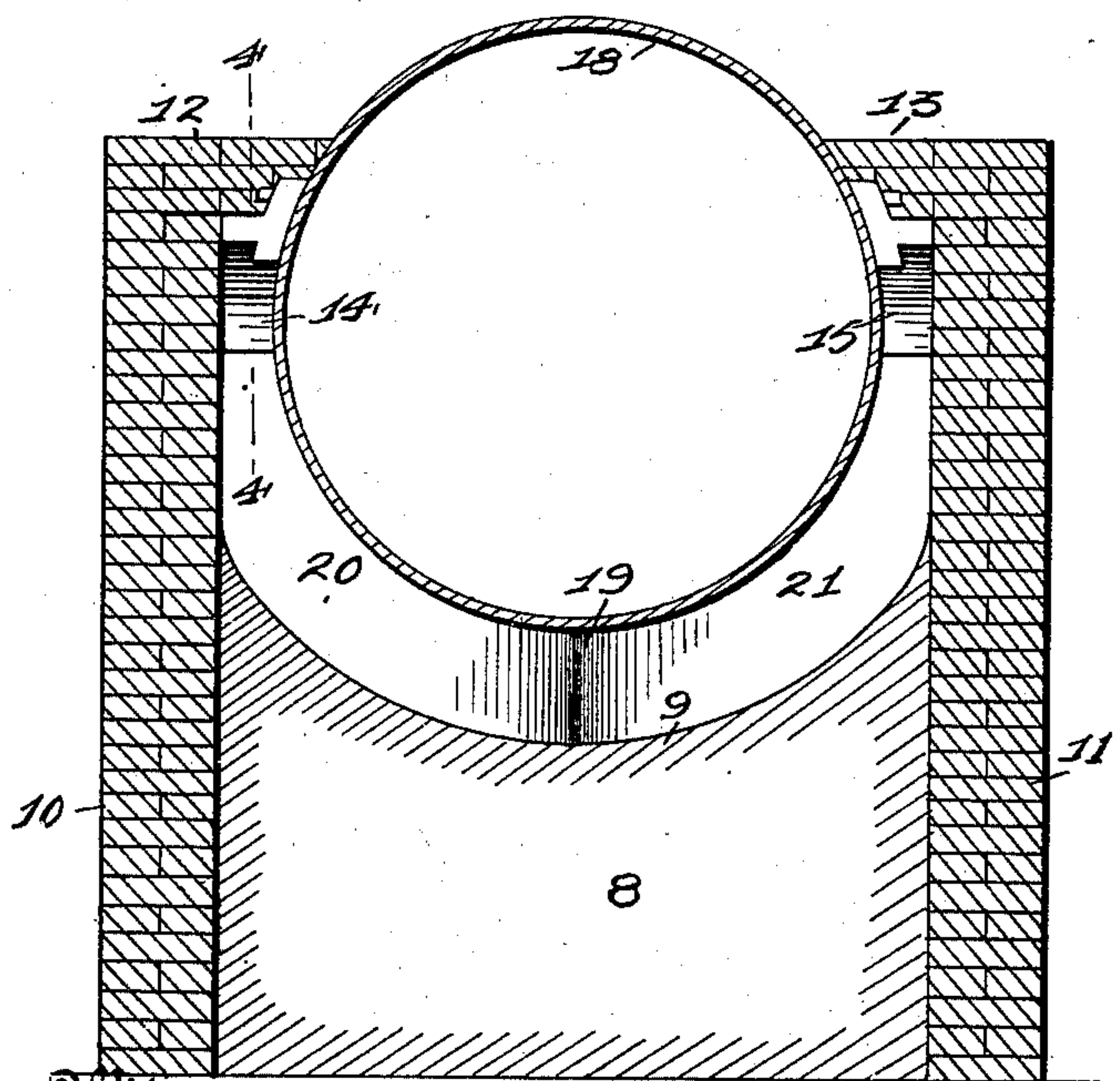
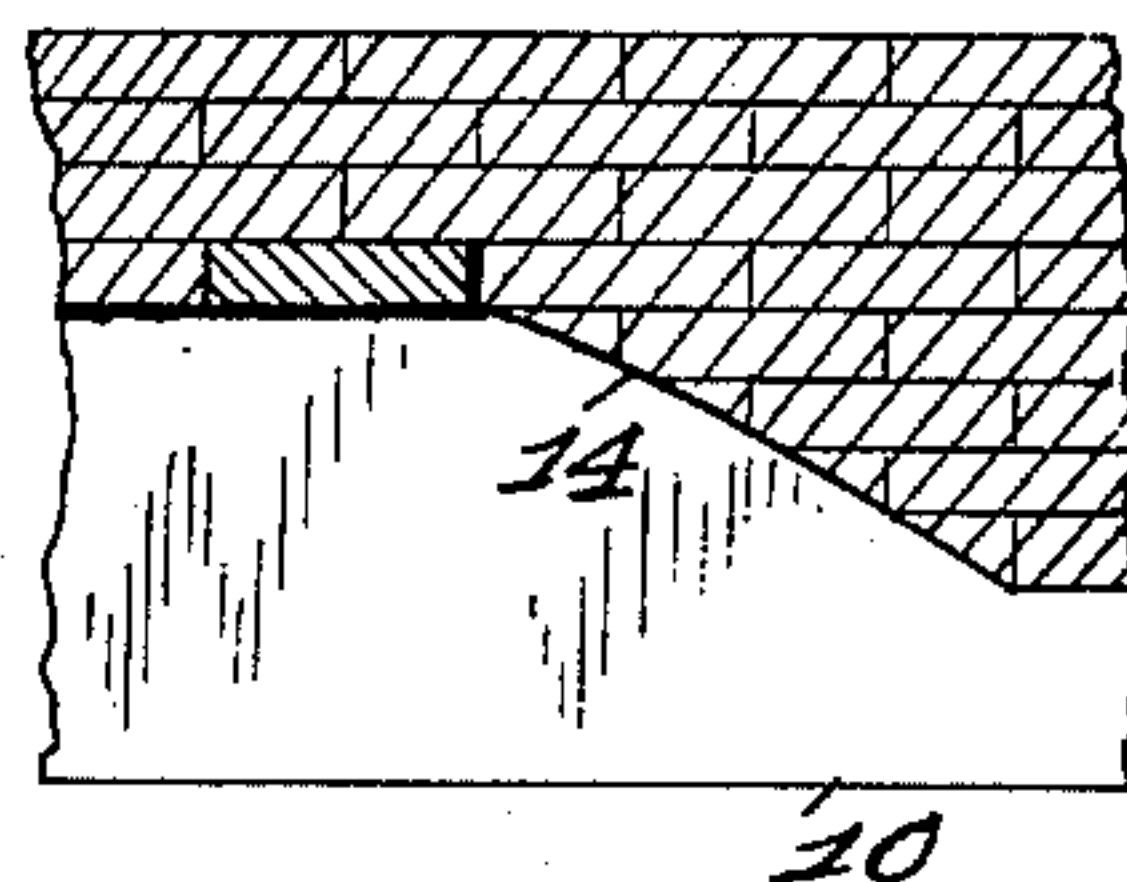


Fig. 5

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UNITED STATES PATENT OFFICE.

EDWARD R. EDDINS, OF ST. LOUIS, MISSOURI.

BOILER-SETTING.

SPECIFICATION forming part of Letters Patent No. 702,414, dated June 17, 1902.

Application filed March 11, 1902. Serial No. 97,762. (No model.)

To all whom it may concern:

Be it known that I, EDWARD R. EDDINS, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Boiler-Settings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to anti-counter-current boiler-setting; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

My object is to construct a boiler-setting in such a way that the smoke, flame, and hot air will pass smoothly around the boiler, so that there will be no obstructions to cause counter-currents, eddies, or the like; and my invention consists of an anti-counter-current boiler-setting comprising a fire-box, a bridge-wall extending upwardly behind the fire-box to a point near the boiler, the upper face of said bridge-wall being flat and horizontal, a foundation extending backwardly from the bridge-wall, said foundation being slightly lower at its rear end than the top of the bridge-wall and said foundation being curved at its rear end to match the curvature of the boiler, the change from the flat top of the bridge-wall to the curve of the rear end being gradual, side walls extending upwardly from the fire-box, bridge-wall, and foundation some distance outside of the boiler and above the center thereof, top walls extending inwardly from the upper edges of the side walls to the boiler, the inner faces of said top walls being inclined downwardly at their rear ends, and a rear wall connecting the ends of the side walls, said rear wall having a top wall extending forwardly to the end of the boiler and having a vertical central rib, the spaces on each side of said rib being curved in vertical section to a semicircle and curved in horizontal section to a semicircle.

Figure 1 is a vertical central section showing a boiler-setting embodying the principles of my invention with the boiler in position. Fig. 2 is a top plan view, the rear ends being broken away and shown in section. Fig. 3 is a vertical cross-section on the line 3 3 of Fig. 1. Fig. 4 is a sectional detail on the line

4 4 of Fig. 5. Fig. 5 is a vertical cross-section on the line 5 5 of Fig. 1.

Referring to the drawings in detail, the boiler-setting comprises the fire-box 6; the bridge-wall 7, extending upwardly back of the fire-box to a point near the boiler, the upper face of said bridge-wall being flat and horizontal, as shown in Fig. 3; the foundation 8, extending backwardly from the bridge-wall to the rear end of the boiler, the rear end of said foundation being slightly lower than the bridge-wall and the upper face 9 of said foundation being curved at its rear end to match the curvature of the boiler, as shown in Fig. 5, the change from the flat surface of the bridge-wall to the curvature of the rear end being gradual; the side walls 10 and 11, extending upwardly opposite the fire-box, the bridge-wall, and the foundation; the top walls 12 and 13, extending inwardly from the upper edges of the side walls to the boiler, at points above the center of the boiler, the inner faces 14 and 15 of said top walls being inclined downwardly at their rear ends, as shown in Fig. 4 and in dotted lines in Fig. 1; the rear walls 16, connecting the rear ends of the side walls and having a top wall 17 extending forwardly to the rear end of the boiler 18 and having a vertical central rib 19 extending from the rear end of the foundation to the top walls 17, the spaces 20 and 21 on each side of the rib being curved to semicircles in vertical section, as shown in Fig. 1, and curved to semicircles in horizontal section, as shown in Fig. 2.

The bridge-wall 7 is inclined at an angle of about sixty degrees, or it may be even straighter than shown, the object being to throw the flame directly up against the boiler, and the top of the bridge-wall is near to the top of the boiler at the center, thus choking and retarding the flame at the center and forcing it upwardly into the larger spaces 22 and 23. Then the heat passes upwardly around the boiler and completely envelops the part of the boiler within the boiler-setting. Then it passes backwardly and is spread out into a thin even sheet by the curvature of the foundation at the rear end, and the upper part of the heat is deflected downwardly by the inclined lower surfaces 14 and 15 of the top wall. Then the heat passes back

against the inner face of the rear wall and curves around into the flues of the boiler.

I find by careful practice that this setting greatly increases the capacity of the boiler and is a great improvement in many ways over the old form of setting.

I claim—

1. A boiler-setting comprising a fire-box; a bridge-wall extending upwardly behind the fire-box to a point near the boiler, the upper face of said bridge-wall being flat and horizontal; a foundation extending backwardly from the bridge-wall, said foundation being slightly lower at its rear end than the top of the bridge-wall, and said foundation being curved at its rear end to match the curvature of the boiler, the change from the flat top of the bridge-wall to the curve of the rear end being gradual; side walls extending upwardly from the fire-box, bridge-wall and foundation some distance outside of the boiler and above the center thereof; top walls extending inwardly from the upper edges of the

side walls to the boiler, the inner faces of said top walls being inclined downwardly at their rear ends; and a rear wall connecting the ends of the side walls, said rear wall having a top wall extending forwardly to the end of the boiler and having a vertical central rib, the spaces on each side of said rib being curved in vertical section to a semicircle and curved in horizontal section to a semicircle, substantially as specified.

2. In a boiler-setting, suitable side walls; top walls; and a rear wall connecting the side walls and having a top wall joining to the boiler, said rear wall having a vertical central rib, the spaces on each side of said rib being curved to a semicircle in vertical section and to a semicircle in horizontal section, substantially as specified.

EDWARD R. EDDINS.

Witnesses:

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