

No. 812,685.

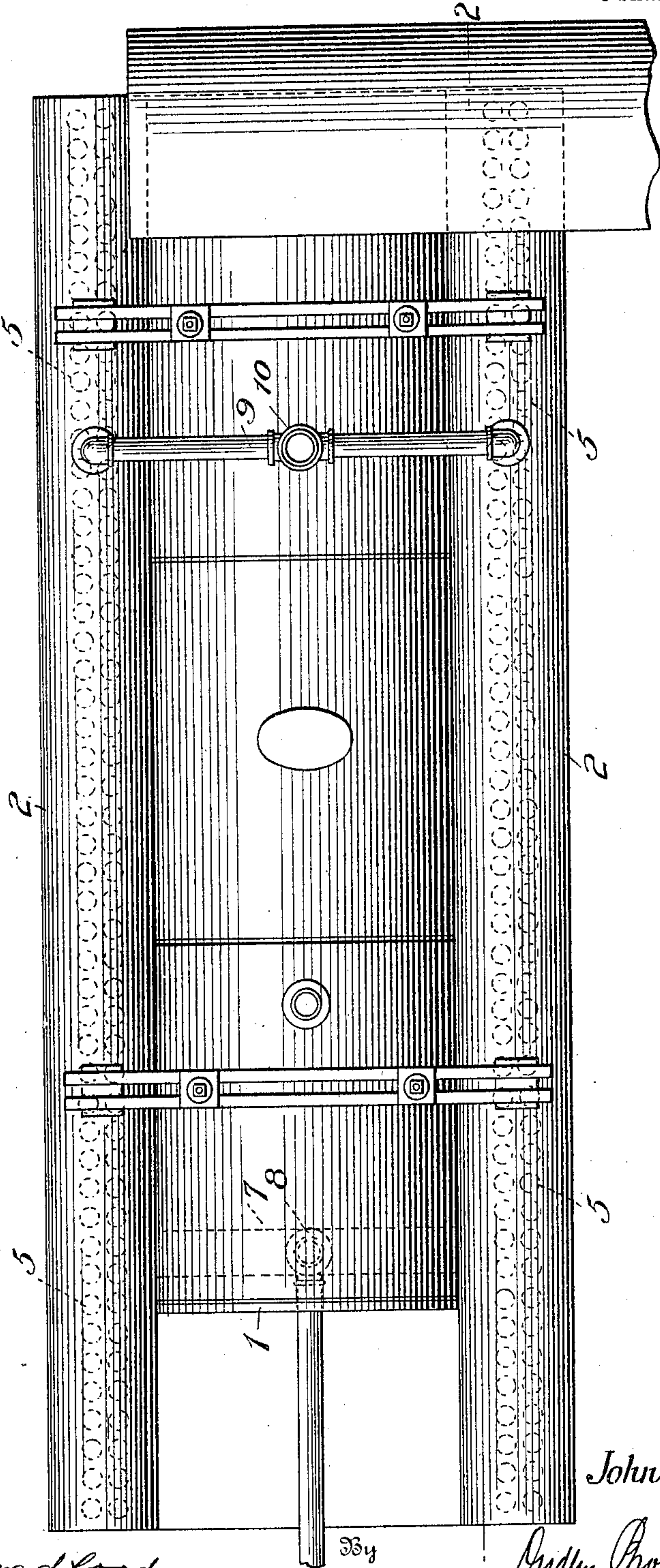
PATENTED FEB. 13, 1906.

J. C. SCHNEIDER.  
STEAM BOILER.

APPLICATION FILED JULY 28, 1905.

3 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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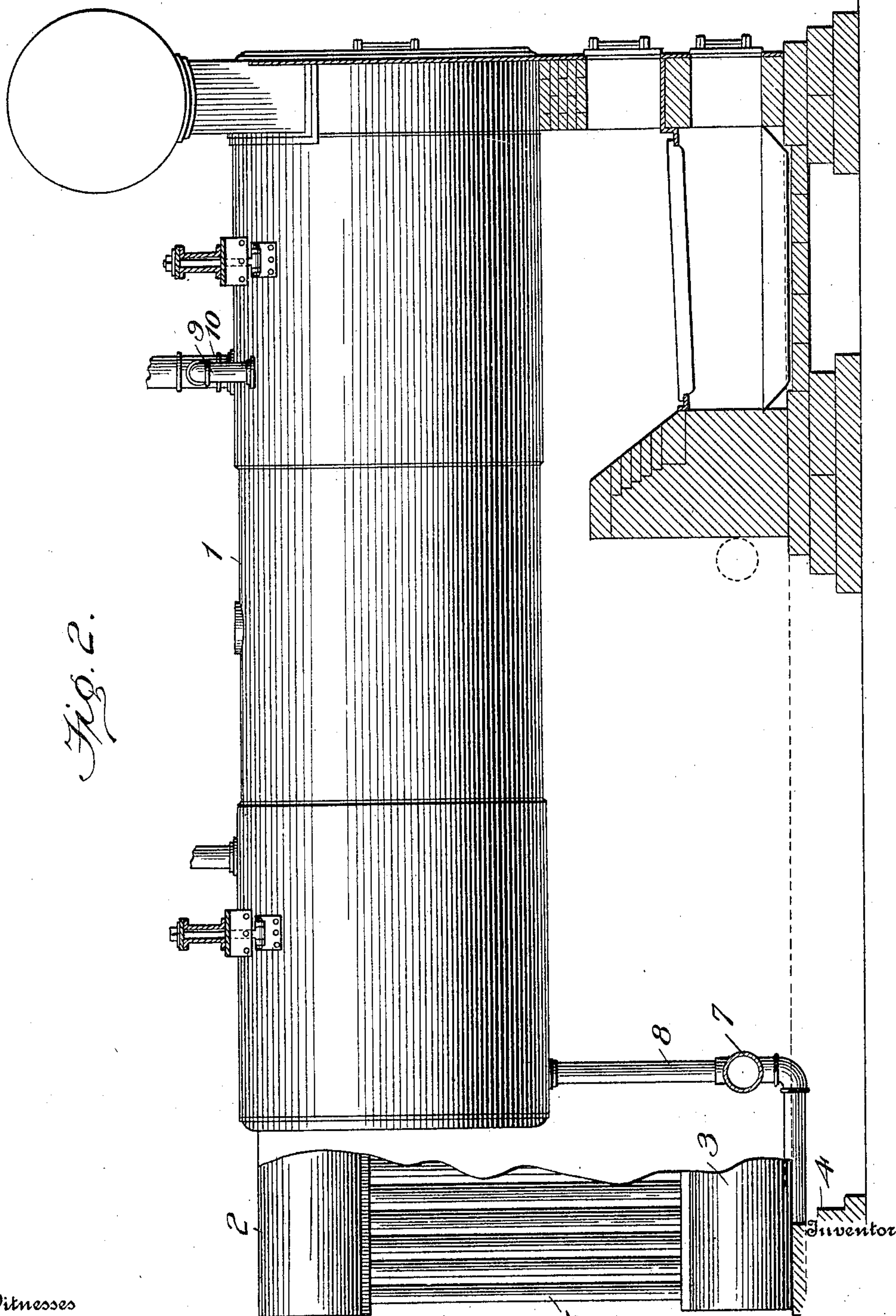
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3 SHEETS—SHEET 2.



Witnesses

Edwin L. Bradford  
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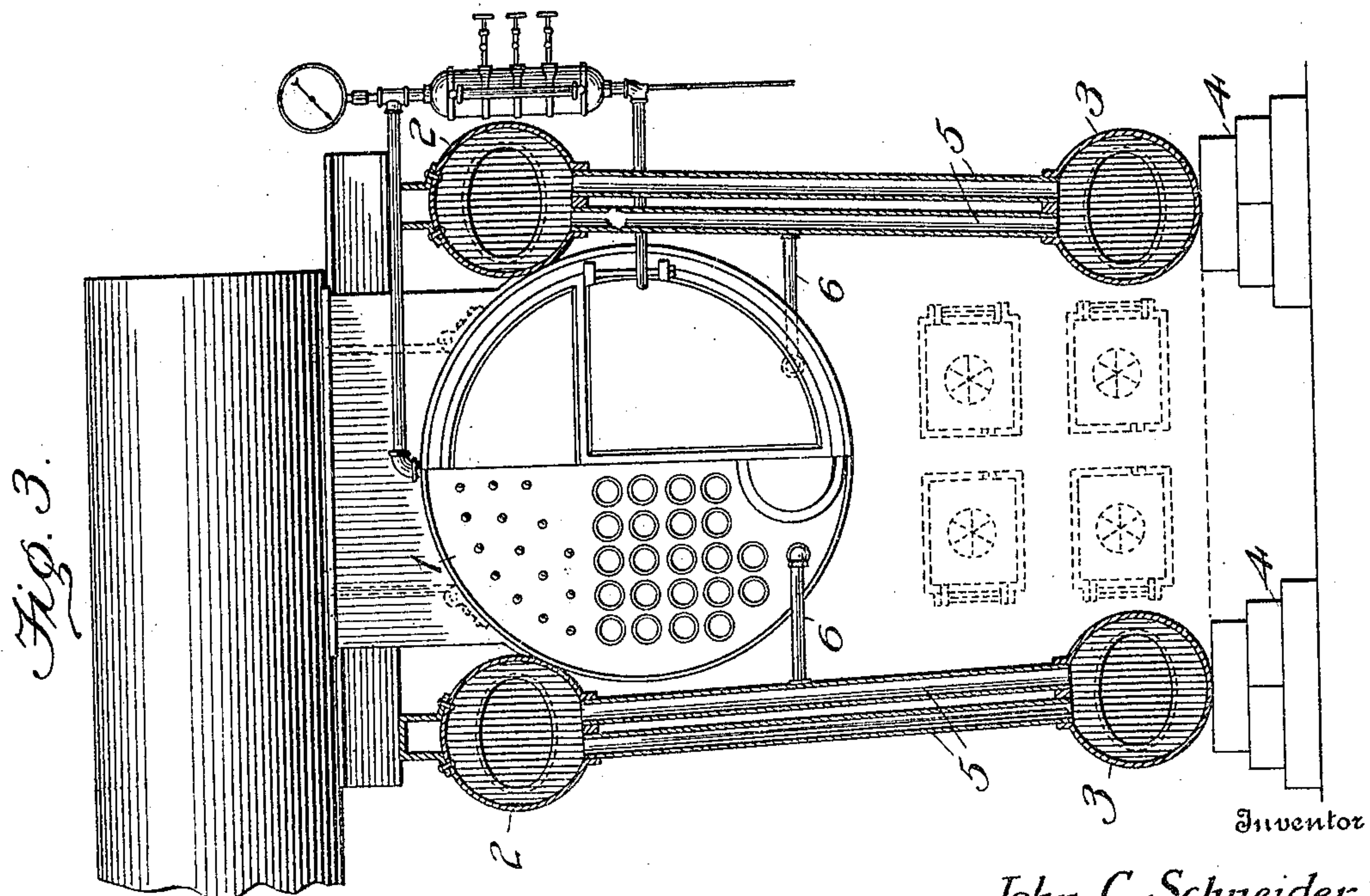
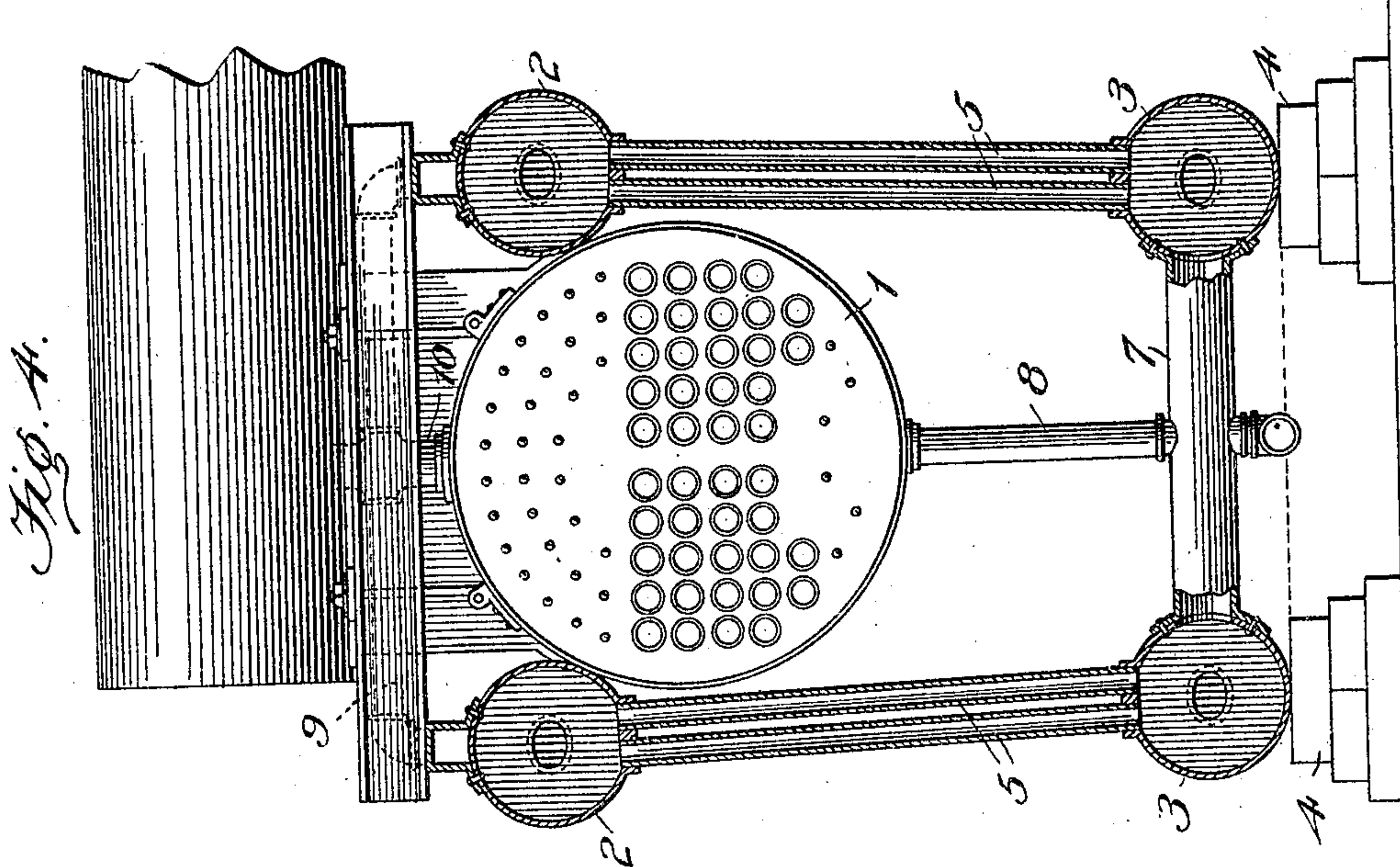
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3 SHEETS—SHEET 3.



Witnesses

Edwin L. Bridgford  
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# UNITED STATES PATENT OFFICE.

JOHN C. SCHNEIDER, OF WINONA, MINNESOTA.

## STEAM-BOILER.

No. 812,685.

Specification of Letters Patent.

Patented Feb. 13, 1906.

Application filed July 28, 1905. Serial No. 271,665.

*To all whom it may concern:*

Be it known that I, JOHN C. SCHNEIDER, a citizen of the United States, residing at Winona, in the county of Winona and State of Minnesota, have invented certain new and useful Improvements in Steam-Boilers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

In Letters Patent No. 784,894, issued to me March 15, 1905, there is shown, described, and claimed a steam-boiler having water-jacketed side walls composed of two corrugated sheets and communicating with the boiler proper, which may be of the tubular or other type and with upper steam-drums and lower drums for the accumulation of sediment.

My present invention is an improvement upon the patented construction above referred to; and it consists of a steam-boiler having upper and lower drums connected by a plurality of tubes to afford communication between them, and which tubes are also connected for communication with the boiler proper, whereby the cost of construction is materially decreased.

The invention in detail is set forth in the following description, and illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view of a steam-boiler embodying my invention. Fig. 2 is a vertical longitudinal sectional view of the same, taken on line 2 2 of Fig. 1. Fig. 3 is a front elevation of the same, partly in section. Fig. 4 is a rear elevation of the same, partly in section.

Referring to the drawings by numerals, 1 denotes the boiler proper, which may be of the usual fire-tube type shown or of other type. At each side of the boiler 1 is a steam-drum 2, equipped with inspection and scraping openings, at which are suitable closures, and below each steam-drum and in approxi-

mate vertical alinement therewith is a sediment or mud drum 3, supported on a base 4, of masonry or the like. The mud-drums are similarly equipped with inspection and scraping openings and with closures therefor. Connecting each steam-drum and the corresponding mud-drum are tubes 5 5, approximately vertically disposed and opening into said drums, whereby to establish communication and to obtain a circulation of the contained water. Preferably an inner and an outer set or series of tubes are provided, one or more of the inner tubes communicating with the boiler 1 through a connecting pipe or pipes 6. The mud-drums intercommunicate through the medium of a cross-connection 7, which latter communicates with the boiler 1 through a tube 8. Likewise, also, the steam-drums communicate with each other and with the boiler 1 through a cross connection 9 and a central tube 10. The drums and connecting-tubes are interchangeable to bring the outer series of tubes innermost in the event of wear by heat, whereby to prolong the period of usefulness of the boiler.

I claim as my invention—

In a steam-boiler, the combination of the boiler proper, of side walls therefor each consisting of a lower mud-drum, an upper steam-drum in substantially vertical alinement with the mud-drum, and a plurality of substantially vertically disposed tubes connecting the steam and mud drums throughout the lengths of the latter, a transversely-disposed tube connecting the steam-drums and in communication intermediately with the upper portion of the boiler, and a transversely-disposed tube connecting the mud-drums and in communication intermediately with the lower portion of the boiler.

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

JOHN C. SCHNEIDER.

Witnesses:

D. E. TAWNEY,  
W. J. SMITH.