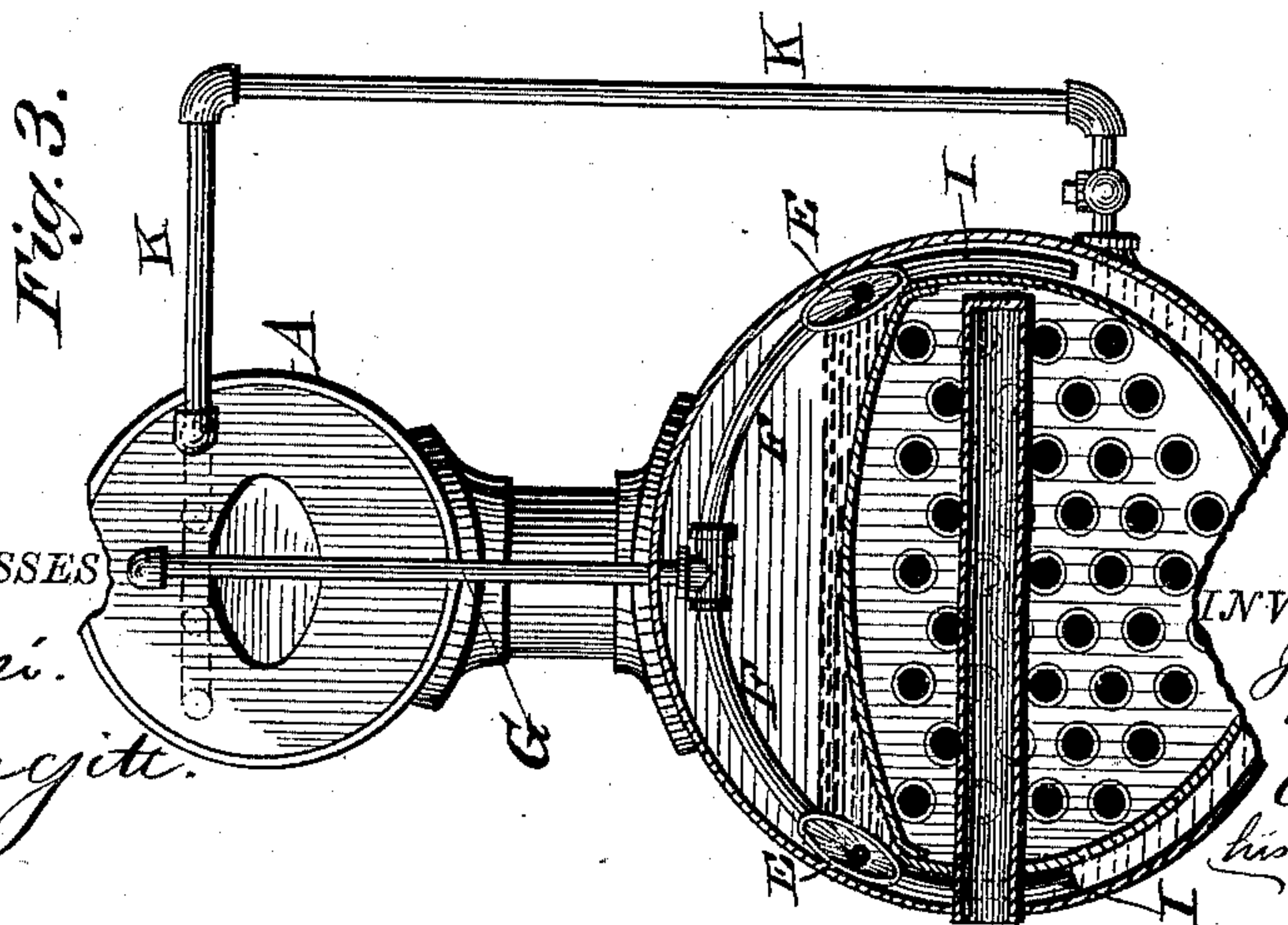
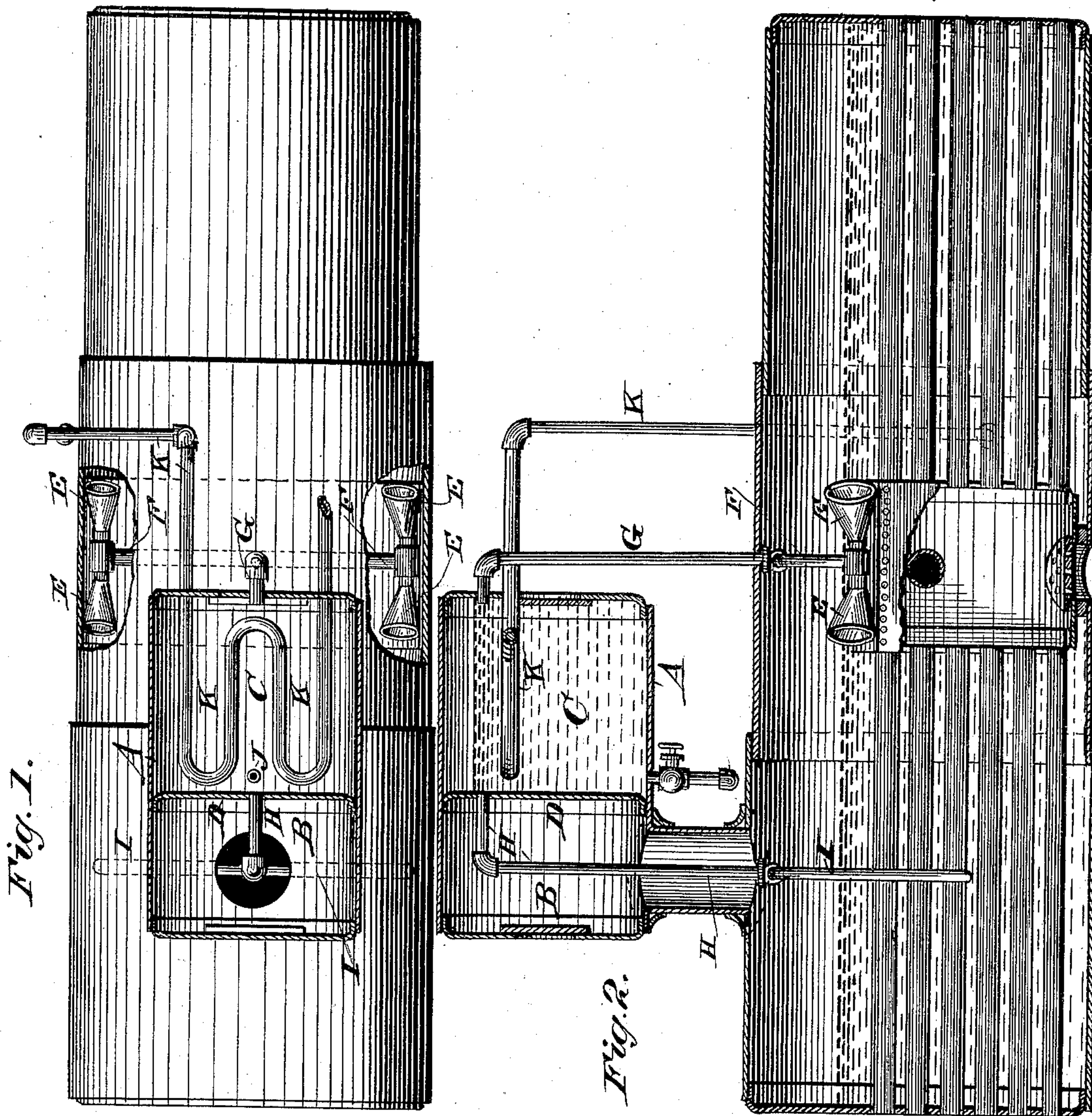


(No Model.)

J. MITCHELL.  
STEAM BOILER ATTACHMENT.

No. 335,947.

Patented Feb. 9, 1886.



WITNESSES  
Philip Massi.  
Ben Fugate.

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# UNITED STATES PATENT OFFICE.

JOHN MITCHELL, OF LOUISVILLE, KENTUCKY.

## STEAM-BOILER ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 335,947, dated February 9, 1886.

Application filed December 5, 1885. Serial No. 184,843. (No model.)

### *To all whom it may concern:*

Be it known that I, JOHN MITCHELL, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Steam-Boiler Attachments; and I do 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a top or plan view, partly in section. Fig. 2 is a side elevation, partly in section. Fig. 3 is a transverse sectional view.

My invention has relation to steam-boiler attachments; and it consists in the construction and novel combination of parts, as will be hereinafter fully described, and pointed out in the claim.

The steam-boiler attachment herein shown and hereinafter described is especially designed for attachment to the improved boiler shown and described in Letters Patent No. 310,071, granted to me December 30, 1884.

Referring by letter to the accompanying drawings, A is a cylindrical drum, which is divided into two compartments, B and C, by the vertical flanged sheet D. The compartment B in this construction serves or acts as the dome or steam-drum from which the steam is drawn for use. C designates a chamber through which the water of the boiler will circulate and into the bottom of which the sediment from the water will settle. The circulation is accomplished by passing into the mouths of the skimming-funnels E E, one of which opens each way, or at each side of the boiler, as shown.

The water enters the funnels E E and passes through the curved branch pipes F F into the pipe G, and thence into the compartment C of the drum A. After settling in this compartment C the water passes through the pipe H into the steam-drum B, and is carried by the pipe H beneath the water-line of the boiler by means of branch pipes I I, similar to the branch pipes F. In the bottom of the chamber C is placed a blow-off cock, J, for removing the sediment as it accumulates.

For the purpose of heating the feed-water, and which arrangement forms part of the combination, I place in the chamber C a coil of pipe K, through which the feed-water is passed into the boiler. The skimming-funnels E E are so arranged that the openings of the pipes F will be below the water-line of the boiler, but so that the top lips of the funnels will always open into the steam-space, thus always having the water-line between the upper and lower lips of the funnels.

The object of this construction is to combine in one attachment a steam-drum, a feed-water heater, a settling-drum, and a boiler-cleaner.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

The combination, with the boiler and cylindrical drum A, divided into two compartments, B and C, by flanged sheet D, of the pipes G F and funnels E E, and the blow-off pipe J, substantially as specified.

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

JOHN MITCHELL.

Witnesses:

NEWTON G. ROGERS,  
D. D. ELLIS.