

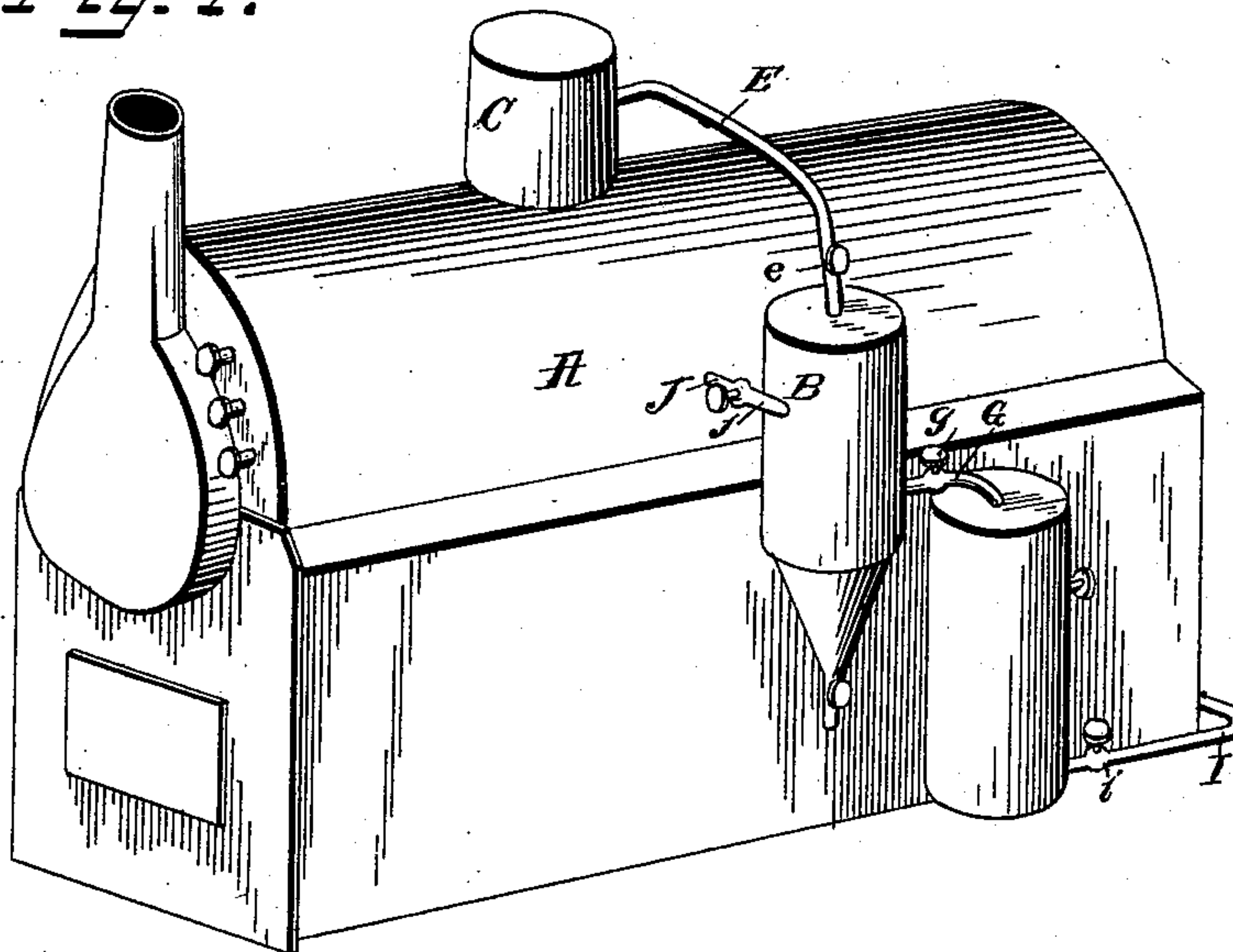
(No Model.)

D. N. BAXTER.  
BOILER CLEANER.

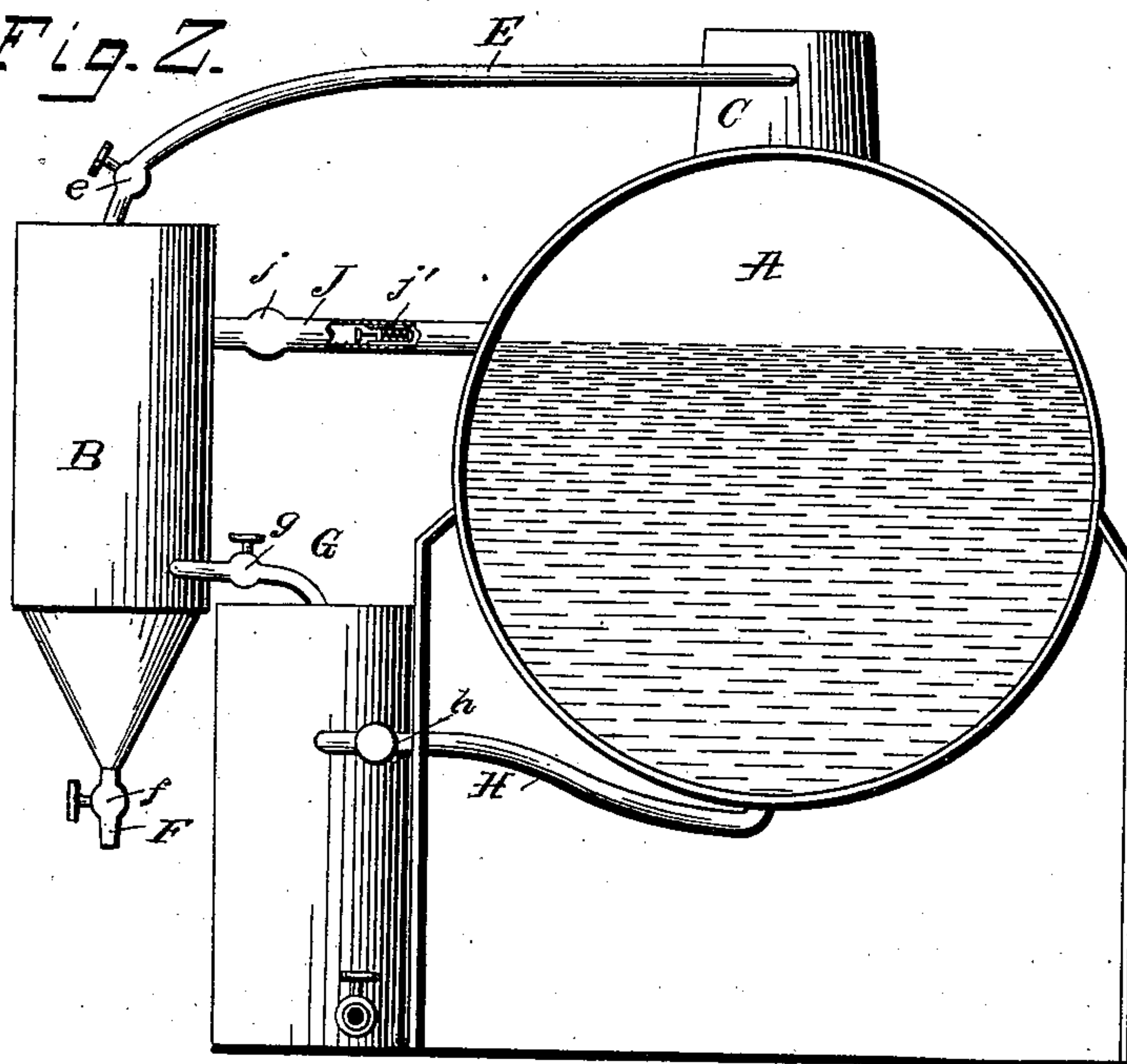
No. 370,306.

Patented Sept. 20, 1887.

*Fig. 1.*



*Fig. 2.*



WITNESSES.

M. A. Barnes.  
Van Buren Hilbyard.

INVENTOR.

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# UNITED STATES PATENT OFFICE.

DANIEL N. BAXTER, OF ROODHOUSE, ILLINOIS, ASSIGNOR OF ONE-HALF  
TO DAVID F. KING, OF SAME PLACE.

## BOILER-CLEANER.

SPECIFICATION forming part of Letters Patent No. 370,306, dated September 20, 1887.

Application filed May 13, 1887. Serial No. 238,101. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL N. BAXTER, a citizen of the United States, residing at Roodhouse, in the county of Greene and State of Illinois, have invented certain new and useful Improvements in Boiler-Cleaners; 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 ap-  
10 pertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

15 This improvement relates to provisions for purifying the water of steam-boilers, and for catching and collecting sediment which may be blown off from time to time.

The improvement consists, chiefly, of two  
20 vessels or drums located at different levels. The upper vessel is the settling-drum and the lower vessel is a combined cooling and sediment drum. The two drums are connected by a pipe which has a globe-valve. The upper  
25 drum is connected at its top with the steam-dome of the boiler and at a short distance from its top with the boiler at or about the water-line, and the lower drum communicates with the bottom of the boiler at a short distance  
30 from its top, and is provided with a blow-off pipe.

The novelty consists in the peculiar construction and combination of the parts, which will be more fully hereinafter set forth, claimed,  
35 and shown in the annexed drawings, in which—

Figure 1 is a perspective view of a boiler embodying my invention, and Fig. 2 a diagrammatical view showing the relative arrangement of the parts.  
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The boiler A may be of any approved pattern, and the settling-drum B is located opposite thereto, so that its top is below the top of the boiler, and is connected with the steam-dome C by the pipe E, which has a globe-valve,  
45 e, for opening or closing said pipe for admitting live steam to the drum for cleaning it, or for shutting the steam off therefrom when required. The pipe J, interposed between and  
50 connected at one end with the drum at a short

distance from its top and at the other end with the boiler at or about the water-line, is provided with the globe-valve j and the check-valve j', which prevents backflow from the drum when the valve j is open. The lower end is funnel-  
55 shaped and terminates in the spout F, which has the globe-valve f. The combined cooling and sediment drum is connected at its top with the drum B, near its bottom, by the pipe G, provided with the globe-valve g, and the pipe H  
60 connects it at a short distance below the top with the bottom of the boiler, and is provided with the globe-valve h. The lower end, which extends some distance below the bottom of the boiler, has the blow-off pipe I extended  
65 therefrom, which is opened and closed by the globe-valve i.

In practice the scum and foreign matter rising to the top of the water when ebullition takes place passes off through pipe J into the  
70 settling-drum, and the clear water will pass from this drum into the sediment-drum, and from thence into the boiler. To clean out the settling-drum, the valve g is closed and the valves e and f are opened, and the steam en-  
75 tering the drum will force the scum and foreign matter out through the spout F. The heavier particles of sediment—such as sand, &c.—will pass from the boiler into the sediment-drum through the pipe H, and from the drum B  
80 through the pipe G, where it will collect, and from which it can be blown out at intervals by live steam from the boiler by opening the valves e, g, and i.

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

1. The combination, with the boiler, of the two drums located at different levels and communicating with each other and with the boiler  
90 at points corresponding with the steam-space, the water-line, and water-space, substantially as and for the purposes described.

2. The combination, with the boiler and the two drums located at different levels, of the  
95 pipes connecting the top of the settling-drum with the steam-space of the boiler, the pipe leading from the water-line of the boiler and communicating with the settling-drum at a short distance from its top, the pipe connect-  
100

ing the two drums, the pipe connecting the lower drum with the bottom of the boiler, the blow-off pipe, and the globe-valves located in each of the several pipes, substantially as and  
5 for the purposes described.

3. The combination, with the boiler, the settling-drum having the blow-off spout F and valve *f*, the pipe E, connecting the top of the settling-drum with the steam-space of the  
10 boiler, and the pipe J, having a check and globe valve and connecting the settling-drum with the boiler at the water-line, of the sedi-

ment-drum, the pipe G, having a globe-valve and connecting the two drums, the pipe H, having the globe-valve *h*, connecting the sedi- 15 ment-drum with the bottom of the boiler, and the blow-off pipe I, having the valve *i*, substantially as set forth.

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

DANIEL N. BAXTER.

Witnesses:

A. W. BREWSTER,  
ALEXANDER KING.