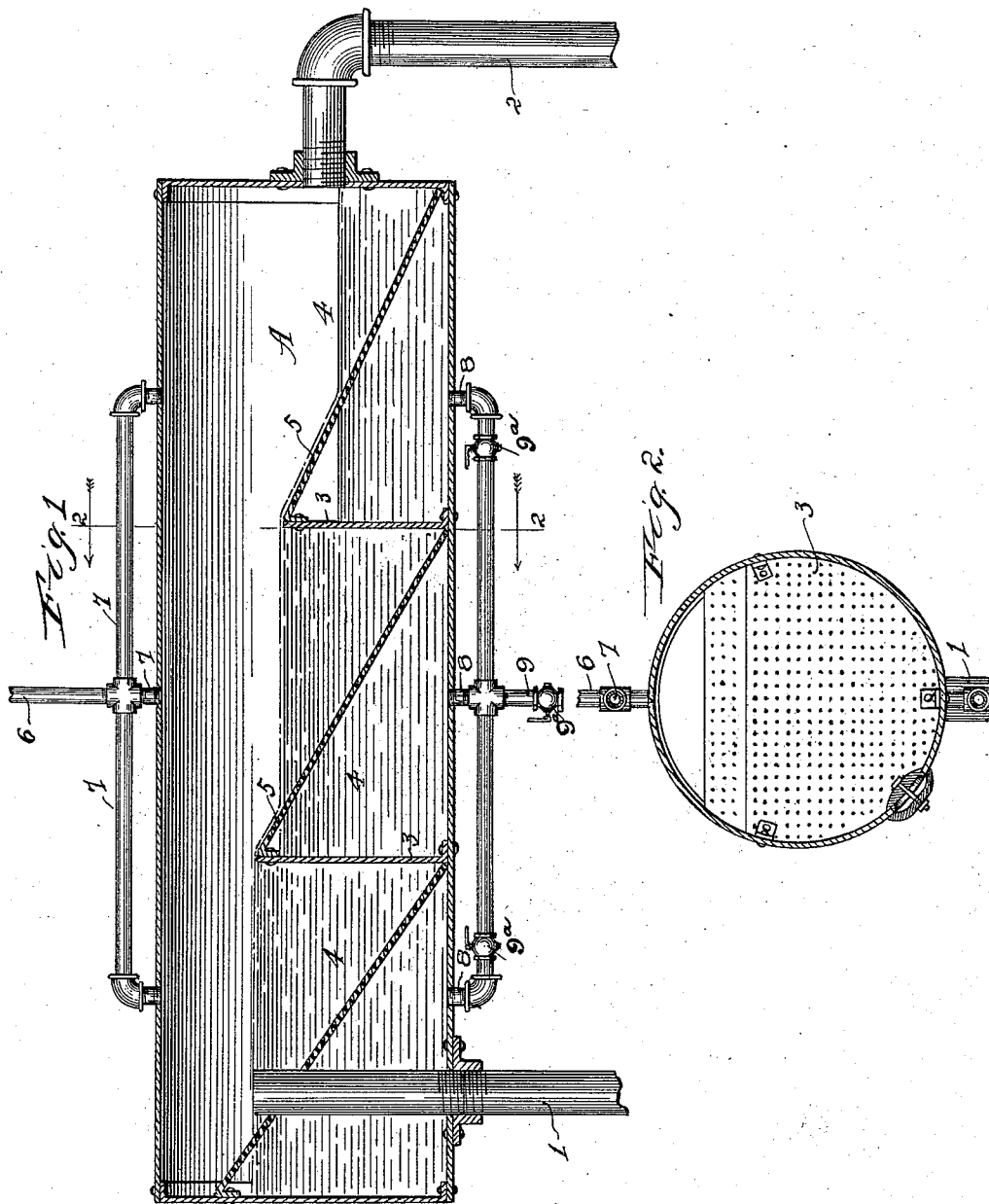


(No Model.)

J. MOHR.
FEED WATER PURIFIER.

No. 532,082.

Patented Jan. 8, 1895.



Witnesses:

Arthur K. Lotz
Rudolph V. Lotz

Inventor:
Joseph Mohr
By *Lo Z. K. Meyer* Attys.

UNITED STATES PATENT OFFICE.

JOSEPH MOHR, OF CHICAGO, ILLINOIS.

FEED-WATER PURIFIER.

SPECIFICATION forming part of Letters Patent No. 532,082, dated January 8, 1895.

Application filed June 20, 1893. Serial No. 478,281. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH MOHR, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have
5 invented certain new and useful Improvements in Feed-Water Purifiers; 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
10 it appertains to make and use the same.

This invention relates to a novel construction in feed water purifiers, the object being to provide a device of this kind of simple, durable and efficient construction.

15 The invention consists in the features of construction and the combinations of parts hereinafter fully described and specifically claimed.

20 In the accompanying drawings illustrating my invention—Figure 1 is a central vertical section. Fig. 2 is a cross section on the line 2—2 of Fig. 1.

Referring now to said drawings, A indicates the cylinder of my improved feed water purifier provided at one end with a feed pipe 1
25 and at its other end with an outlet pipe 2 leading to the bottom of the boiler. The said cylinder A is divided at certain points between its ends by partitions 3, which in the instance
30 illustrated are two in number, dividing the cylinder thus into three compartments. The said partitions 3 rise only partially to the top of the cylinder so that the water can pass over the upper edges of said partitions to the outlet
35 pipe 2. The compartments 4 made by said partitions 3 are provided with what I term baffle plates 5 which consist of perforated plates placed at an incline and suitably secured in the compartments 4 and extending
40 from the lower end of one partition upwardly to the upper edge of the succeeding partition, the upper ends of the baffle plates being secured to the partition 3 of any particular compartment that is farthest from the outlet
45 pipe 2. The partitions 3 are arranged so that they decrease in height as they approach the outlet pipe 2, which outlet pipe 2 connects with the cylinder A at a point below the upper edge of the adjacent partition 3, as shown in
50 Fig. 1. The feed pipe 1 preferably passes

through the bottom of the cylinder and through the last of the baffle plates 5 to a point about on a level with the upper edge of the last partition 3.

A pipe 6 communicating with a source supplying steam is provided with the branches 7, and these branches communicate with the cylinder A, one over each compartment 4, while at the bottom of the cylinder are three
55 branches 8 communicating with each compartment and with a blow-off pipe 9.

The branch communicating pipes 8 and the blow-off pipe 9 are each provided with controlling valves 9^a, by means of which the water is retained at different levels in the
60 several compartments 4 of the cylinder.

The operation of my invention is as follows: Water being admitted to the cylinder A through the pipe 1 fills up these succeeding compartments thereof and passes out through
65 the outlet pipe 2 to the boiler. In passing through the cylinder A, however, the sediment and impurities carried by the water are precipitated in the usual manner and falling upon the baffle plates of the compartment
70 pass through the perforations thereof beneath the same, or fall down along their inclined faces as will be obvious. By arranging the different partitions of different size, decreasing from the first toward the outlet pipe, it
75 will be seen that the upper strata of water, or that which parts with its impurities first, can pass along toward the outlet pipe first, while the rest of the water or the impure part
80 will be arrested by the partitions while the impurities are being precipitated. It will be noted that by reason of the baffle plates 5 any impurities that settle in the compartments 4 will pass through and below the
85 baffle plates so that they will be undisturbed and cannot mix with the pure water, since these baffle plates prevent the currents in the cylinder from reaching the precipitated
90 impurities, so that they remain in the bottom of the cylinder where they fall. By means of the steam pipe 6 and blow-off pipe 9 these
95 impurities can be blown off in the usual manner, but it will be noted that in connection with the compartments of the feed water purifier I arrange a steam supply pipe 7 and a
100

blow-off pipe 8 above and below each of these compartments, so that when the steam is admitted these compartments are thoroughly cleaned of the sediment that is collected therein.

I claim as my invention—

1. A feed water purifier comprising a casing A having a supply pipe 1 near one end thereof and an outlet pipe 2 at the other end thereof and a series of upright partitions between said supply and outlet pipes extending from the bottom partially to the top of the casing to form a plurality of compartments, and baffle plates 5 located at an incline within said compartments with their upper ends adjacent to the end of the casing at which the supply pipe 1 is located, substantially as described.

2. A feed water purifier comprising a casing A having a supply pipe near one end thereof and an outlet pipe 2 at the other end, a plurality of upright partitions located within such casing and extending from the bottom thereof partially to the top of the same and decreasing in height from the supply pipe toward the outlet pipe, baffle plates located within the compartments formed by said partitions, and arranged at an angle with

their upper ends adjacent to the end of the supply pipe, substantially as described.

3. A feed water purifier comprising a casing A divided into a plurality of compartments and provided at its ends with feed and outlet pipes 1 and 2 and steam supply and blow-off pipes communicating with said casing above and below each of said compartments, substantially as described.

4. A feed water purifier comprising a casing A provided at its ends with feed and outlet pipes 1 and 2, a plurality of upright partitions 3 extending from the bottom of said casing partially toward the top thereof, a plurality of inclined baffle plates 5 secured within the compartments formed by said partitions and having their upper ends adjacent to the end of the feed pipe and steam supply and blow-off pipes communicating with said casing above and below each of said compartments.

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

JOSEPH MOHR.

Witnesses:

RUDOLPH W. LOTZ,
HARRY COBB KENNEDY.