

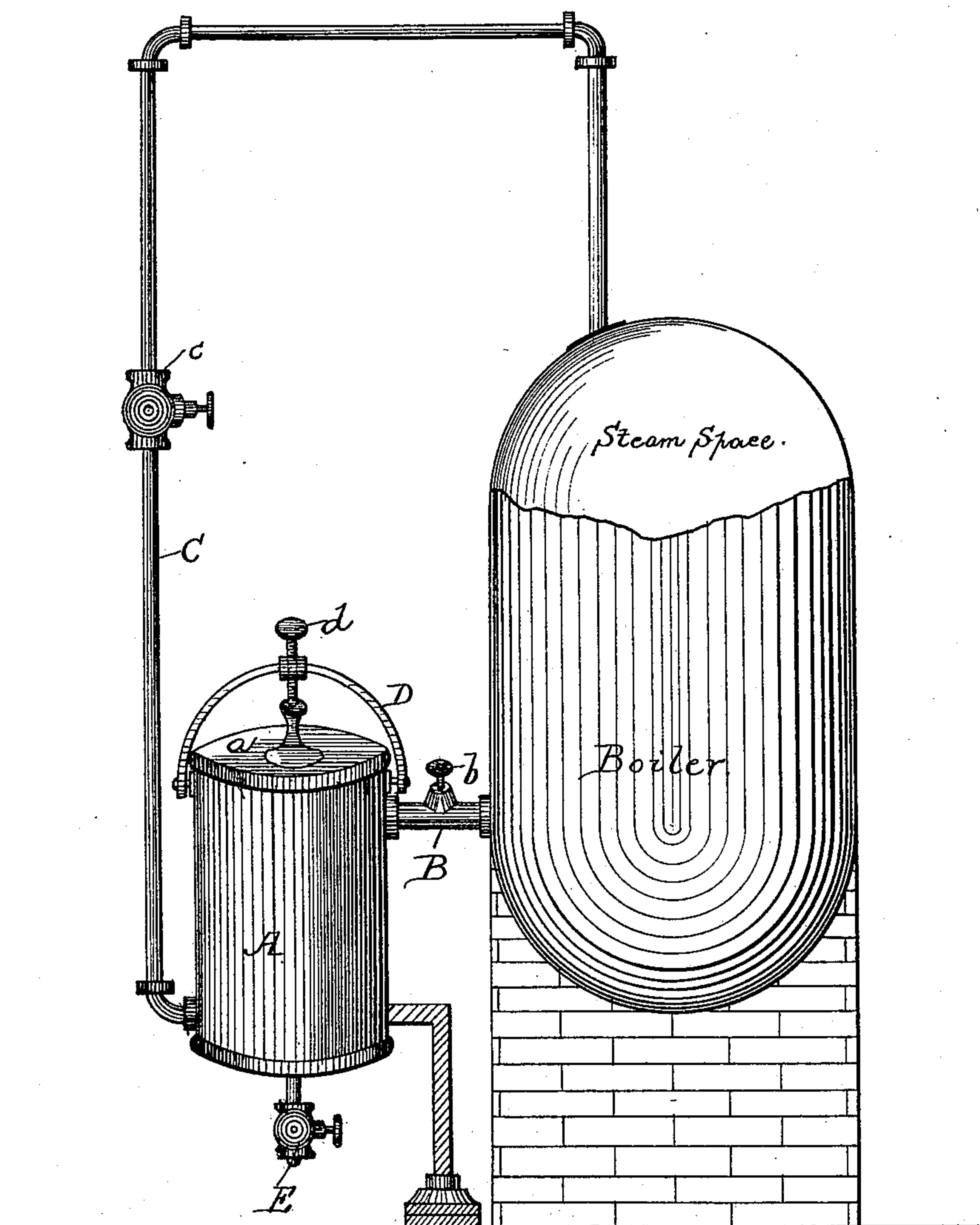
(No Model.)

E. E. EUCHENHOFER.

DEVICE FOR PREVENTING INCRUSTATION.

No. 396,033.

Patented Jan. 8, 1889.



Witnesses.
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Geo. Bullen

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UNITED STATES PATENT OFFICE.

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DEVICE FOR PREVENTING INCRUSTATION.

SPECIFICATION forming part of Letters Patent No. 396,033, dated January 8, 1889.

Application filed June 11, 1888. Serial No. 276,783; (No model.)

To all whom it may concern:

Be it known that I, EDWARD E. EUCHENHOFER, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented a new and useful Device for Preventing Incrustation, of which the following is a descriptive specification.

The object of my invention is to provide an apparatus for feeding all kinds of compounds, for the prevention of scale, into steam-boilers automatically, without feeding through heaters and pumps, as is usually done; to the injury of the pipes and pump-valves, which soon clog up and have to be cleaned frequently to prevent clogging. I avoid these obstacles in my apparatus and I attain better results.

In constructing my invention a receptacle of any given size is attached directly to the mud-drum or feed-pipe connecting with boiler. This feed-pipe can be made very short and easy of access, so that it can easily be cleaned out if it should get cloggy. Attached to the steam-space in the boiler, and leading to the side of the receptacle near the bottom, I have a pipe provided with a valve. This pipe is a steam-condenser, which, filling with water, makes the water-head greater than the water-line in the boiler, and will, by opening the valve, allow the accumulated water from the steam to flow into the receptacle at the bottom side, thereby keeping the compound constantly stirred up and forcing all such substances as may be used to the top of the cup and through the feed-pipe into the boiler. The valves are used as "shut-offs" when filling the receptacle. The small cock in the bottom of the receptacle is for drawing off the water before refilling. The head or cover of the cup or receptacle is made large for the purpose of providing a large mouth or opening, so that such substances as sal-soda can be easily placed

therein. On the under side of the cover is a packing-ring to make perfect joint between the cup and cover. This cover is held in place by means of a stirrup and screw, which may be easily removed by loosening the screw when the receptacle is to be filled with the compound.

My invention is fully illustrated in the view set forth in the accompanying drawing, in which similar letters refer to the several parts.

A is the receptacle, provided with cover *a*.

B is the feed-pipe leading from receptacle to boiler, provided with valve *b*. The pipe B extends from near the upper part of the receptacle A into the lower part of the boiler, so as to enter just above the portion in which the sediment collects, for the purpose of supplying the solution from the receptacle at the most effective point.

C is the steam-pipe leading from steam-space in boiler to the cup or receptacle containing the compound. This pipe is also provided with valve *c*.

D is the stirrup with screw *d*, for holding down the lid or cover, while E is the cock at the bottom of the receptacle.

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

The combination, with a steam-boiler, of a wide-mouthed receptacle having a removable cover, a pipe leading from the steam-dome to the lower part of the receptacle, and a pipe leading from the upper part of the receptacle to the lower part of the boiler, above the bottom thereof, whereby the anti-incrustation solution is caused to circulate from the receptacle into the boiler, above the sediment and at the most advantageous point, substantially as specified.

E. E. EUCHENHOFER.

Attest:

C. J. WEINMAN,
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