(No Model.)

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SEPARATOR FOR STEAM BOILERS.

No. 526,919. Patented Oct. 2, 1894.

Fig. 1.

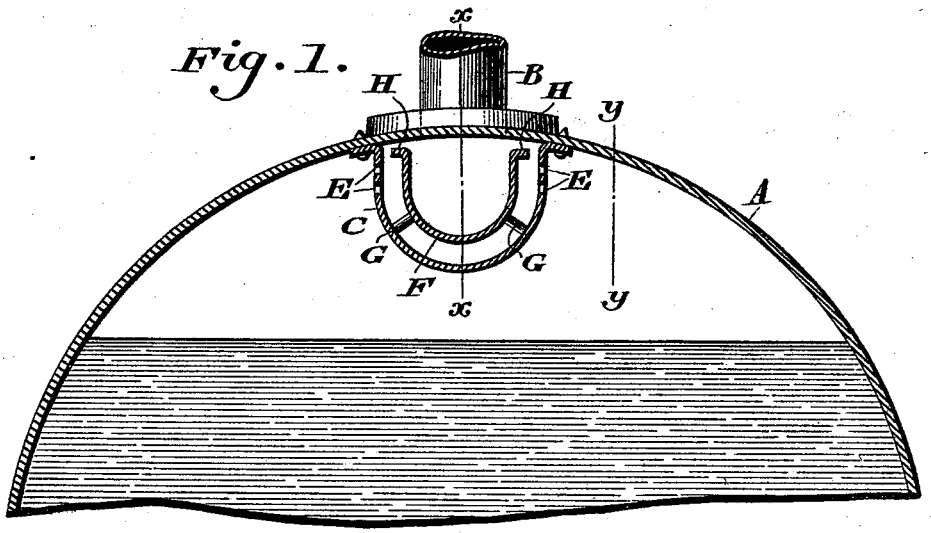


Fig. 2.

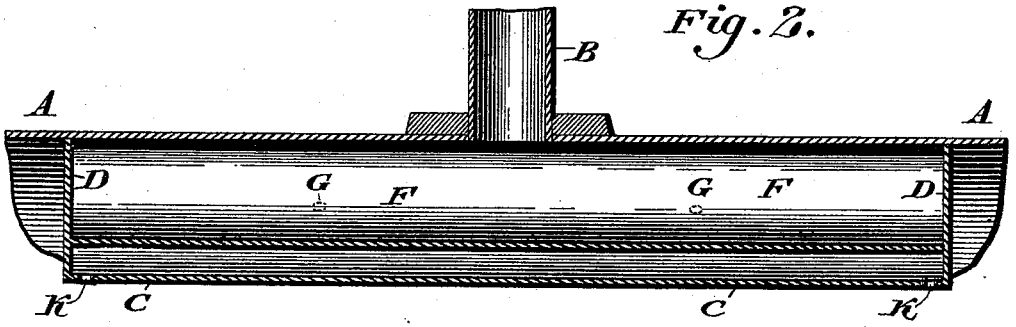
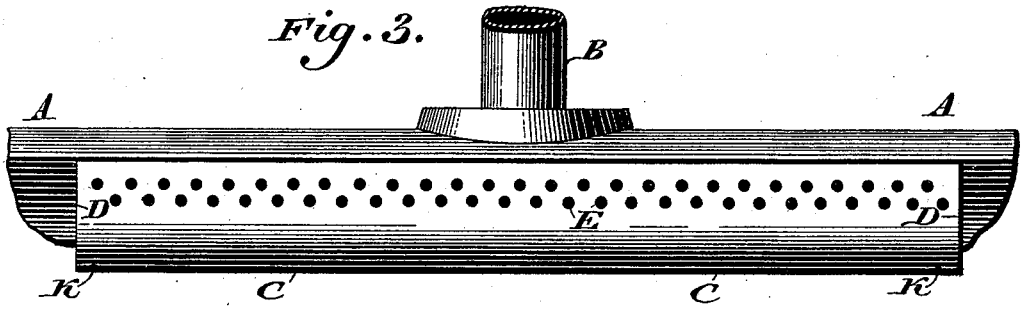


Fig. 3.



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SEPARATOR FOR STEAM-BOILERS.

SPECIFICATION forming part of Letters Patent No. 526,919, dated October 2, 1894.

Application filed May 31, 1894. Serial No. 512,946. (No model.)

To all whom it may concern:

Be it known that I, CHARLES EDGERTON, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Separators for Steam-Boilers, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a separator for steam boilers by means of which the steam in its passage from the boiler is relieved of all moisture, entrained water and other impurities by being deflected against baffle plates of novel construction, all as will be hereinafter set forth.

Figure 1 represents a vertical sectional view of a separator embodying my invention. Fig. 2 represents a longitudinal section of the same on line *x*, *x*. Fig. 3 represents a longitudinal section of the same on line *y*, *y*.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings: A designates the shell of the boiler, and B designates the steam outlet pipe thereof.

C designates a bent plate or shell having its ends D closed and suitably secured longitudinally within the boiler to the top thereof, the longitudinal center of the shell C being preferably coincident with the center of the pipe B. The shell C, has on each side, near its junction with the boiler, one or more series of perforations E.

F designates another bent plate, which is suitably supported within the shell C, in the present instance by the post G, the said curved plate F having its upper edges terminating in the longitudinal flanges H, which are located just above the upper series of holes E, in the outer shell C.

K designates drips through which the water abstracted from the steam, flows back into the boiler.

The operation will now be apparent. The wet steam passes through the perforations E, and strikes the curved shell or baffle F, whose flanges H being located just above the upper row of holes E, serve to abstract the entrained water and other impurities, and deflect the same downwardly, the dry steam rising and being conducted away through the pipe B.

My device also prevents the sharp suction from the opening in the boiler toward the surface of the water, whereby the water is lifted from its normal level. Furthermore the separating apparatus being of such length as to extend over the greater portion of the surface of the water, the draft of steam from the boiler is equalized, and priming or lifting of water so common in boilers of ordinary construction is effectually prevented by my device.

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

1. A separator for steam boilers, comprising a bent plate having closed ends, said plate being attached to the interior of a boiler, below the steam outlet, and having a series of perforations in its sides, a second bent plate suitably supported within and out of contact with the first plate and having its edges bent outwardly to form longitudinal flanges, said flanges being located above the perforations in the outer plate or casing, said parts being combined substantially as described.

2. A steam separator consisting of a pair of bent plates suitably supported out of contact with each other, in the steam space, the outer plate being longitudinally attached to the boiler and provided with perforations, while the inner plate has longitudinally extending flanges arranged adjacent to said perforations, the above parts being combined substantially as described.

3. A steam separator consisting of a pair of bent plates suitably supported out of contact with each other in the steam space, the outer plate being longitudinally attached to the boiler, and provided with perforations, while the inner plate has its upper edges arranged adjacent to said perforations, said parts being combined substantially as described.

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Witnesses:
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