

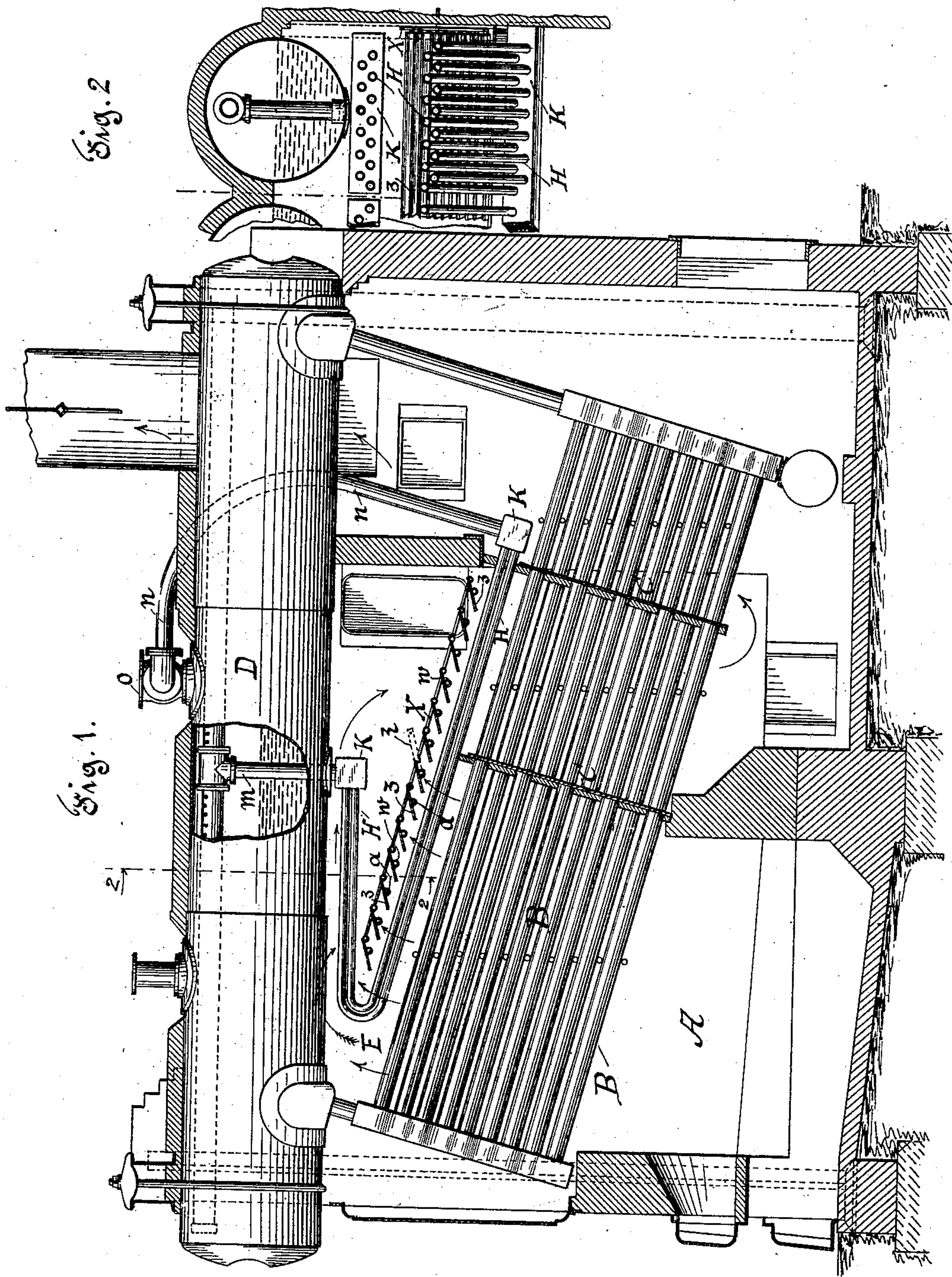
No. 713,185.

Patented Nov. 11, 1902.

H. WEBSTER.
SUPERHEATER FOR STEAM GENERATORS.

(Application filed Dec. 12, 1901.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

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SUPERHEATER FOR STEAM-GENERATORS.

SPECIFICATION forming part of Letters Patent No. 713,185, dated November 11, 1902.

Application filed December 12, 1901. Serial No. 85,553. (No model.)

To all whom it may concern:

Be it known that I, HOSEA WEBSTER, a citizen of the United States, residing at Montclair, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Superheaters for Steam-Generators, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to apparatus for superheating steam which is located within the combustion-chamber of the generator; and the invention consists in a device arranged adjacent to the superheater and in the line of the
15 current of the gases for distributing and deflecting the same to act more effectively upon the superheater, all as hereinafter particularly set forth.

20 In the accompanying drawings, forming part of this specification, my invention is shown embodied with a water-tube generator of the Babcock & Wilcox type, having a superheating apparatus located in the path of the gases of combustion, and composed
25 of U-shaped pipes communicating with the steam-space and steam-outlet.

30 Figure 1 represents a side elevation of the invention, partly in section; and Fig. 2, a cross-section of the superheater and steam and water drum on the line 2 2 of Fig. 1.

The main parts of the generator consist of the furnace A, inclined water-tubes B, with baffles or partitions C, and steam and water drum D. The course of the gases of combustion from the furnace to the uptake is indicated by the arrows in Fig. 1.

35 E is the superheater, composed of the U-shaped pipes H, cross-connecting boxes K, steam-inlet pipe *m*, and delivery-pipe *n*, connected with the steam-outlet O.

The device for distributing and regulating the current of the gases of combustion to act

more effectively upon the pipes H of the superheater is represented at P and consists of a series of narrow plates 3, hinged at *w* to 45 fixed transverse rods *a* and arranged above and parallel with the longer branch of the U-shaped pipes H of the superheater.

The series of hinged plates 3 are adjusted to open or close the passage between the same 50 by a sliding movement of the bar X, a handle-lever *z* (shown in dotted lines) being provided to engage with one of the hinges at *w* to project through the boiler-casing, as shown in Fig. 2, for convenience in operating the 55 same.

By moving the projecting handle-lever *z* and bar *x* the hinged plates 3 are simultaneously swung on their hinges, which opens or closes the spaces between them, thereby utilizing the whole or so much of the current of 60 the gases as may be desired.

The plates 3 are set at an angle to check the current of gases in their upward direction and to deflect the same upon the pipes 65 H in their downward direction, and thus an increased heating effect is obtained upon the pipes H of the superheater.

Having thus fully described my invention, what I claim, and desire to secure by Letters 70 Patent, is—

A steam-generator provided with a steam-superheating device located within the combustion-space combined with a deflector capable of adjustment to check distribute and 75 vary the direction of the current of the gases to the superheating surfaces, as set forth.

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

HOSEA WEBSTER.

Witnesses:

EMMA BLAINE WILSON.

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