(No Model.)

C. M. GIDDINGS.

STEAM BOILER.

No. 321,015. Patented June 30, 1885.

Fig. 1

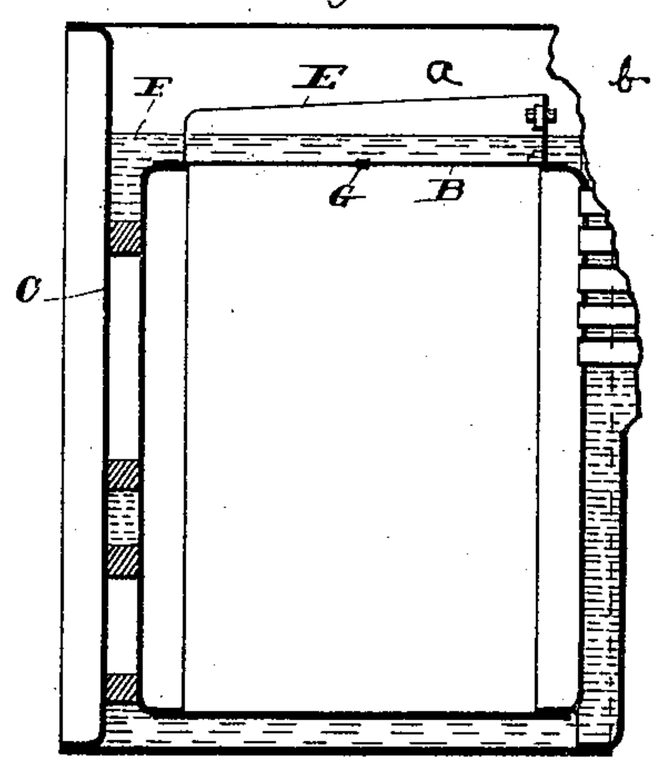


Fig. 2.

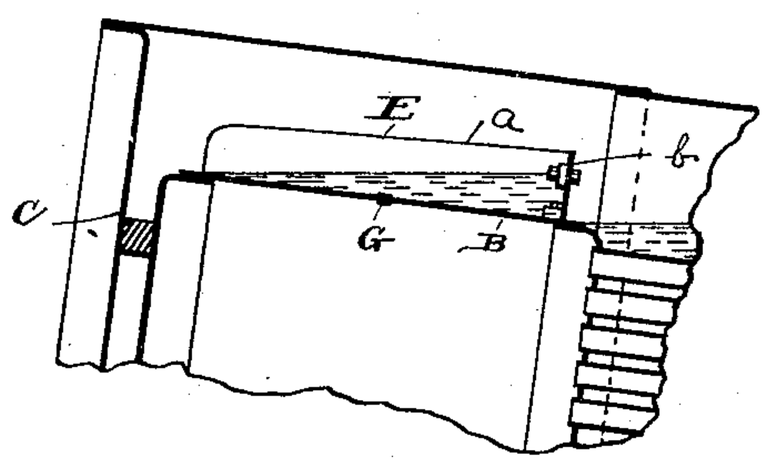
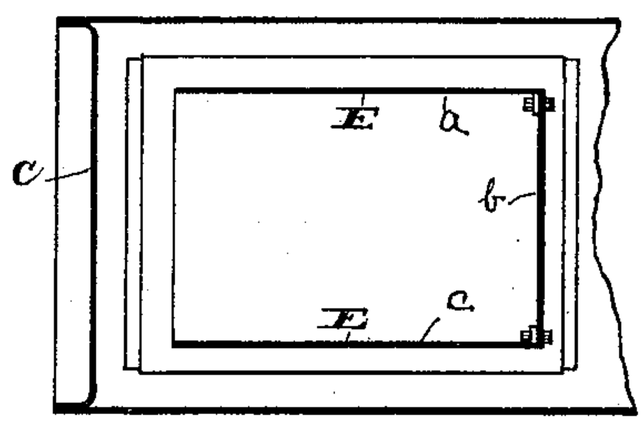


Fig. 3.



WITNESSES
W. S. Amstutz
E. W. Shumway

Charles M. Giddings INVENTOR
By Jno. Crowell
Attorney

UNITED STATES PATENT OFFICE.

CHARLES M. GIDDINGS, OF MASSILLON, OHIO.

STEAM-BOILER.

SPECIFICATION forming part of Letters Patent No. 321,015, dated June 30, 1885.

Application filed April 2, 1885. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. GIDDINGS, of Massillon, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Steam-Boilers; 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 it pertains to make and use the same.

My invention relates to improvements in steam-boilers of that class that have crown-sheets, and that are used for marine purposes or traction-engines, having for its object a water-retaining box located above and connected with the crown-sheet, to the end that with the forward end of the boiler inclined downward a sufficient quantity of water will be retained above the crown-sheet to protect the latter from being overheated and the safety-plug from being melted. With this object in view my invention consists in certain features of construction and in combination of parts, hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figures 1 and 2 are elevations in section of a portion of a boiler, showing my improved device attached, the former showing the boiler in its normal position, and the latter showing the boiler with its forward end depressed. Fig. 3 is a plan view of the crown-sheet and water-retaining box.

A represents the shell of the boiler; B, the crown-sheet, and C the end or head of the boiler.

E represents the water-retaining box, consisting of the plates *a*, *b*, and *c*, secured to each other and to the crown-sheet, making tight joints. These three plates of course might be integral and bent at the corners.

F represents the water-line. With the boiler in its normal position, as shown in Fig. 1, the water-retaining box is inoperative.

When the forward end of the boiler is depressed, as would be the case with a traction-engine going down hill, the water in the boiler if unobstructed would gravitate to the forward end, leaving the crown-sheet exposed, and if the hill were of considerable length the safety-plug G would be likely to be melted out; or in the absence of a safety-plug the crown-sheet would be liable to become overheated and injured.

With my device attached the water is retained above the crown-sheet, as shown in Fig. 2, and hills of any length may be descended in safety. In going "up hill" the head C serves the same purpose, and the rear end of the boiler would be flooded.

What I claim is—

1. The combination, with a boiler, of a water-box open at the rear end and at the top and rigidly secured to the upper surface of the crown-sheet.

2. The combination, with a boiler, of the water-retaining box, consisting, essentially, of two side sections and one end section rigidly secured to each other and to the upper surface of the crown-sheet, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 6th day of March, 1885.

CHARLES M. GIDDINGS.

Witnesses:
GEORGE HANSON,
ERNEST KIMMEL.