E. D. Wood,

Steam Separator for Boilers.

No. 46,171. Patented Jan. 31, 1865.

Fig. 1

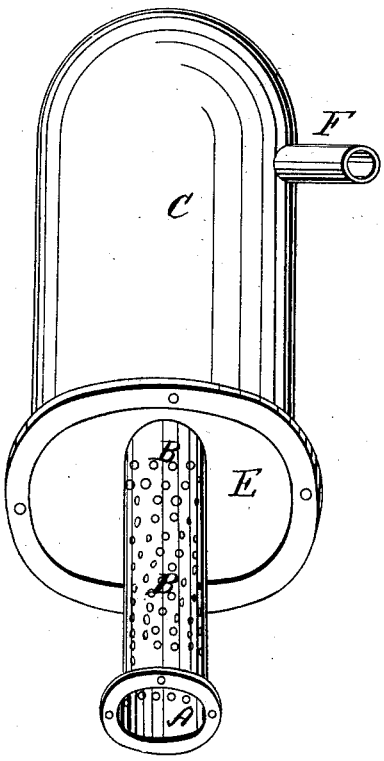
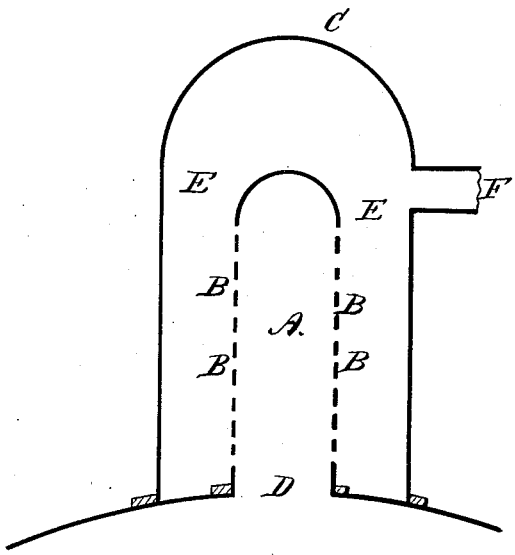


Fig. 2



Witnesses;

James F. Mann

Andrew Dagnell

Inventor;

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UNITED STATES PATENT OFFICE.

ENOS D. WOOD, OF UTICA, NEW YORK.

IMPROVEMENT IN STEAM-BOILERS.

Specification forming part of Letters Patent No. **46,171**, dated January 31, 1865.

To all whom it may concern:

Be it known that I, ENOS D. WOOD, of the city of Utica, in the county of Oneida and State of New York, have invented a new and useful Improvement or Attachment to Steam-Engine Boilers for Freeing the Steam from Foam and the Foreign Substances which Rise with it, of which the following is a specification.

The nature of my invention consists in adding a second dome to the boiler which is placed inside of the ordinary one, having its periphery perforated, through which the steam must pass before it enters the steam-chamber or steam pipe and by means of which it is freed from all foam and foreign substances and the engine prevented from priming or working water; and I do hereby declare that the following is a full and exact description of my invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure 1 is a perspective view of the improvement, and Fig. 2 a sectional view thereof.

A is the inner dome; B B the perforations therein; C the outer dome; D the steam-passage from the boiler; E the steam chamber, and F the steam-pipe. The inner dome, A, like the outer dome, C, is of metal, open at the bottom and closed at the top, and is placed directly over the steam-passage D, and is attached steam-tight to the boiler. Its periphery is perforated with small holes of from one-eighth to one-quarter of an inch in diameter. Surrounding the inner dome is the outer dome, C, which is attached in like manner to the boiler, and is of such size as to leave space sufficient for the steam-chamber between it and the inner dome, as seen in Figs. 1 and 2.

When steam is forming in the boiler, it passes up into the perforated dome A, through the steam-passage D in the boiler, and then through the perforations B B into the steam-chamber E, freed from all the foam-water and foreign substances which usually rise into the dome when constructed in the ordinary manner. The steam thus purified is carried to the cylinder from the top of the steam-chamber E by means of the steam-pipe F. The freeing the steam from foam before it enters the steam-chamber of course prevents the engine from priming or working water.

The advantages of this improvement as herein described and arranged are that it is more economical, less liable to get out of working order, and easier to be put in order, and works better and is cheaper than any known contrivance for like purpose.

Instead of making the improvement in the form of domes, the parts may be in any other proper form, and it will answer sufficiently well if the inner one is a short pipe closed at the top, and the other or outer one is the ordinary steam-pipe suitably enlarged.

I claim—

The domes A and C, or their equivalents, constructed and arranged in combination substantially as described, for the uses and purposes mentioned.

E. D. WOOD.

Witnesses:
JAMES F. MANN,
ANDREW DAGWELL.