E. D. WOOD.

MODE OF SETTING STEAM-GENERATORS.

No. 191,791. Patented June 12, 1877.

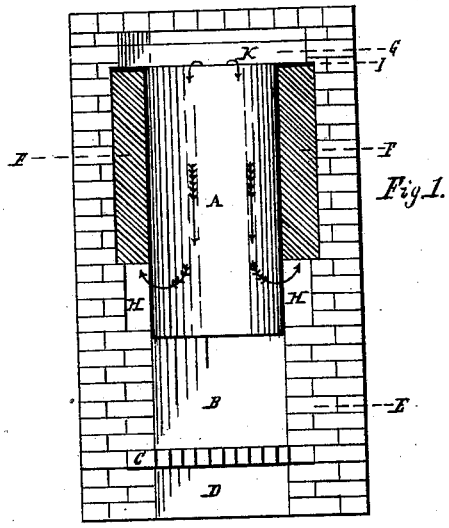


Fig. 1.

Fig. 2.

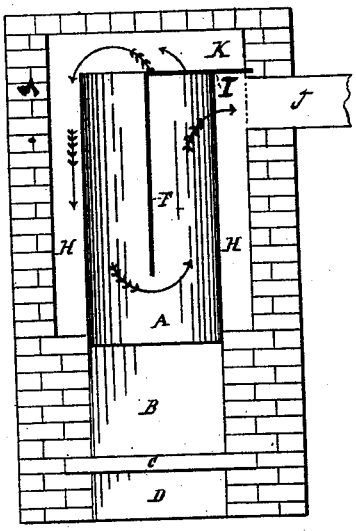
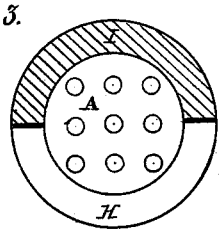


Fig. 3.



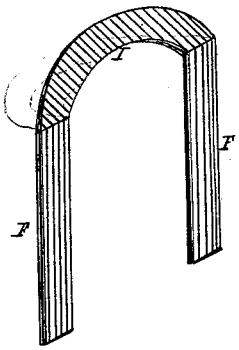


Fig. 4.

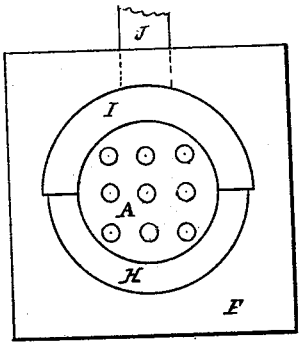


Fig. 5.

Witnesses;
E. D. Smalley.
Edw. Cooper

Inventor;
Enos D. Wood

UNITED STATES PATENT OFFICE.

ENOS D. WOOD, OF UTICA, NEW YORK.

IMPROVEMENT IN MODES OF SETTING STEAM-GENERATORS.

Specification forming part of Letters Patent No. **191,791**, dated June 12, 1877; application filed February 20, 1877.

To all whom it may concern:

Be it known that I, ENOS D. WOOD, of Utica, Oneida county, New York, have invented an Improvement in the Mode of Setting of Steam Generators or Boilers for Warming Buildings, of which the following is a specification:

The object of my invention is to more perfectly utilize the products of combustion by causing them, after they have passed up through the generator-tubes, which are surrounded by water, to pass down one side of the outside of the generator or boiler, and up the other side before they pass out at the flue.

Figure 1 represents a vertical generator, A, with tubes extending through from one head to the other. Underneath is the fire-box B, the grate C, and the ash-pit D. There is no escape for the products of combustion only through the vertical tubes, which are surrounded by water. H H is a space or chamber around the generator A. I is a plate or cover, which closes up a portion of this space H H at the top of the generator A.

F F, Figs. 1, 2, and 4, are plates or partitions extending down the sides of the generator A, closing the space H H down to near the bottom, where an opening is left underneath each, to allow the products of combustion to pass under and up the other side of the generator into the flue J. The plate or cover I and the partitions F F may be of metal and the generator-setting of brick, as shown in the drawings; or any other material may be substituted for either, as may be desired, the operation remaining the same.

The same letter refers to like parts in each figure.

The operation is as follows: The products of combustion, on leaving the fire-box B, pass through the vertical tubes into the chamber K, Figs. 1 and 2, and down into the space or chamber H H on one side of the outside of the generator A, underneath the lower ends of the plates or partitions F F, and up the other sides of the generator A, and into the flue J, as shown by the arrows, Fig. 2, thus utilizing the products of combustion and the whole of the outside of the generator.

I am aware that generators of this class have been placed in a position eccentric to the space H H, with the flue at the narrowest point; and I do not claim that arrangement.

I claim—

In combination with an upright steam generator or boiler, the plates I and F, constructed and operated substantially as described, for the uses and purposes mentioned.

ENOS D. WOOD.

Witnesses:

E. D. SMALLEY,

G. EDW. COOPER.