(No Model.)

N. W. PRATT.

STEAM GENERATOR.

No. 323,882. Patented Aug. 4, 1885.

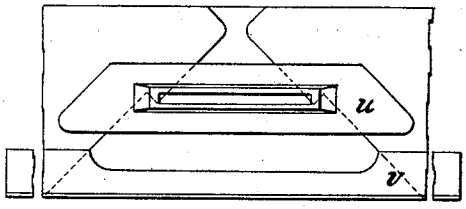


FIG. 1

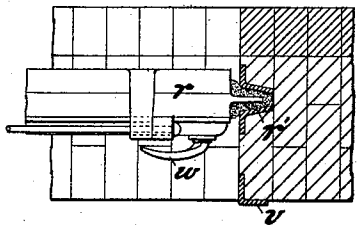


FIG. 2

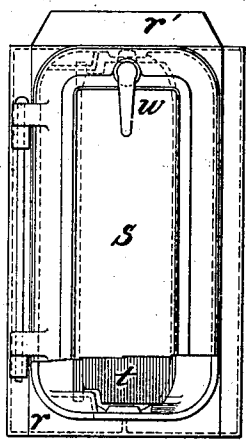


FIG. 4

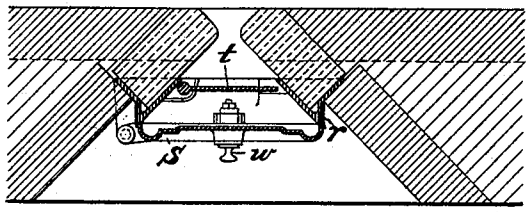


FIG. 3

WITNESSES:

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UNITED STATES PATENT OFFICE.

NATHANIEL W. PRATT, OF BROOKLYN, ASSIGNOR TO THE BABCOCK & WILCOX COMPANY, OF NEW YORK, N. Y.

STEAM-GENERATOR.

SPECIFICATION forming part of Letters Patent No 323,882, dated August 4, 1885.

Application filed January 13, 1885. (No model.)

To all whom it may concern:

Be it known that I, NATHANIEL W. PRATT, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Steam-Generators, of which the following is a specification, reference being had to the accompanying drawings, forming a part of the same, in which—

Figures 1, 2, 3, and 4 illustrate various detached and enlarged views of the invention, which will hereinafter be particularly referred to and claimed.

The invention relates to a doorway of special form provided in the setting or brick-work of the boiler, and a door or shutter of special construction and security fitted therein to close and render the same accessible to a brush or jet of steam for the purpose of removing ashes, &c., that lodge upon the tubes.

In order to secure this door in the brick-work and form an outwardly-flaring opening, the frame is made in approximately V-shaped sections, joined together top and bottom by horizontal plates, and built into the brick-work, as shown in Fig. 3, which permits such a degree of horizontal movement of a brush or cleaning pipe as to reach the greatest amount of interior surface and at the same time to expose the least possible amount of door-surface to the heat. The top of the frame *r* is constructed with a vertical flange, *r'*, that projects into a recessed beam, *u*, which, in connection with the lintel *v*, prevents the brick-work from springing the frame *r* when it settles. This flange may be set in mortar, as shown in Fig. 3, to prevent an air-leak to the furnace. The door *s* closes tightly against the frame *r*, and is held shut by means of locking-handles, (shown at *w*, Figs. 3, 4, and 5.) Between the inner wings of the frame *r* a loosely-fitted shutter, *t*, is hung, to protect the door *s* from the heat and prevent its warping, this shutter and door being so placed in relation to each other that the shutter has to be shut before the outer door *s* will close, as shown in Fig. 3.

It will be observed upon inspection of Fig. 3 that the door-frame *r* is built into the brick-work, so that the bricks are laid in regular bond, and the flaring opening made wide enough to permit the door to swing flush with the inside of the frame, and the shutter in turn to swing back against the door, leaving the opening unobstructed and free to work through.

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

1. A door frame-work for the purpose specified, consisting of vertical members of V cross-section, joined to horizontal top and base plates, adapted to form a portion of an outwardly-flaring opening, and secured in the brick-work, substantially as described.

2. A door frame-work having a vertical flange cast with the upper cross-piece, combined with a recessed beam, substantially as and for the purpose specified.

3. A door frame-work adapted to form a portion of an outwardly-flaring opening, as described, provided with an outer door and an inner protecting door or shutter, both opening outwardly, said doors being fitted to open clear of the passage, and so arranged that the outer door is incapable of closing previous to the closing of the inner door, as described.

NATHANIEL W. PRATT.

Witnesses:
CHAS. W. FORBES,
C. R. WATERBURY.