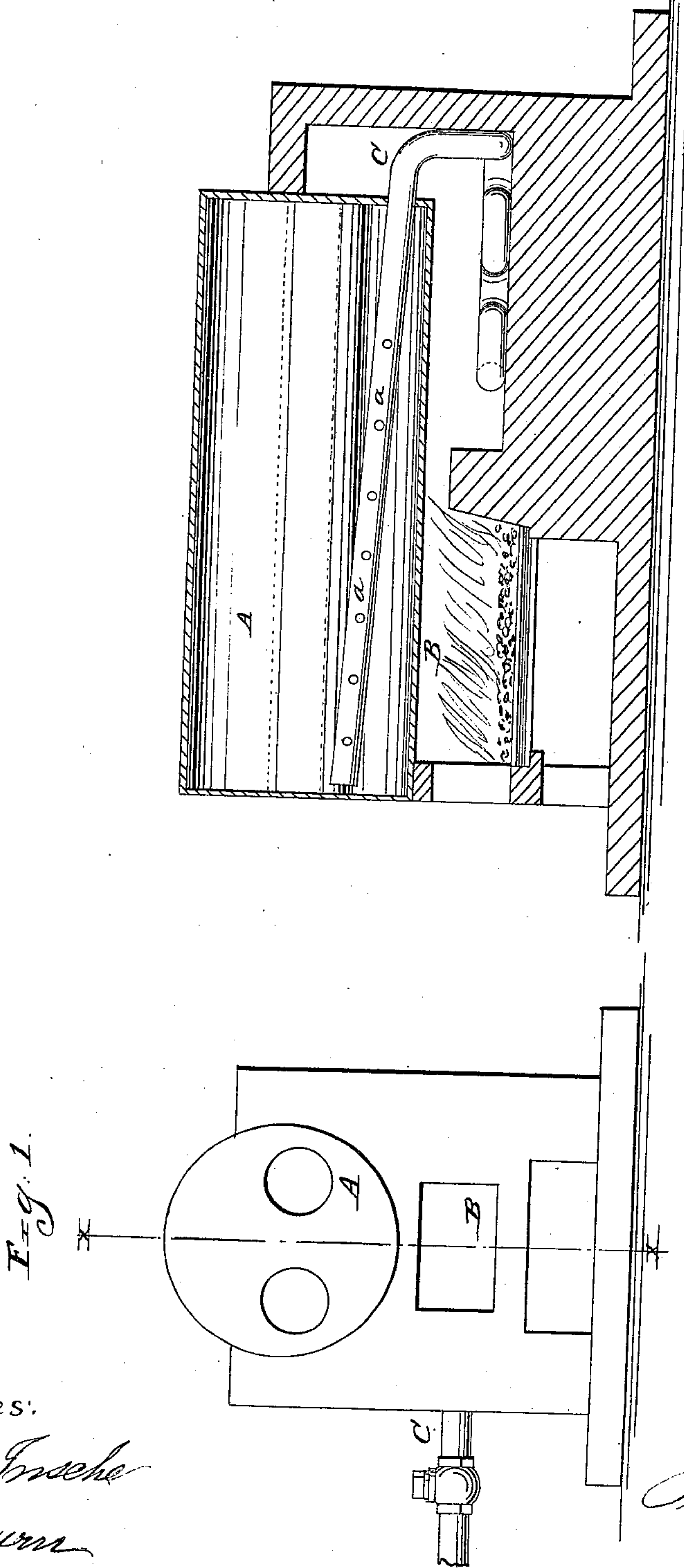


S. Stanton,
Steam Generator.
No. 95,532. *Patented Oct. 5, 1869.*



Witnesses:

Geo Encke
Wm Deum

Inventor:

S. Stanton
Per Mmuffe
Attorney

United States Patent Office.

SAMUEL STANTON, OF NEWBURG, NEW YORK.

Letters Patent No. 95,532, dated October 5, 1869.

IMPROVEMENT IN STEAM-GENERATORS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, SAMUEL STANTON, of Newburg, in the county of Orange, and State of New York, have invented a new and useful Improvement in Generating Steam in Steam-Boilers; and that the following description, taken in connection with the accompanying drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvement, by which my invention may be distinguished from all others of a similar class, together with such parts as I claim, and desire to have secured to me by Letters Patent.

This invention has for its object economy in fuel in generating steam, and consists in inducting heated air into the boiler through a perforated tube, which passes into the boiler below the water-level, and rapidly heats the water, and greatly assists in keeping it up to the boiling-point, and, at the same time, keeps the water supplied with atmospheric air, to compensate for that which is gradually expelled by the process of boiling.

In the accompanying sheet of drawings—

Figure 1 represents a front view of a steam-boiler provided with my invention.

Figure 2, a longitudinal vertical section of the same, taken in the line *x x*, fig. 1.

Similar letters of reference indicate like parts.

A represents a steam-boiler, and B, the furnace thereof, constructed and arranged in the usual or in any proper manner; and

C is an air-pipe, which is fitted in the rear part of

the furnace, and is of serpentine form at that part, and passes through the rear end of the boiler, below the water-level, and extends to the front end of the same, the portion of the pipe within the boiler being perforated with small holes, *a*.

The pipe C passes through the side of the furnace, and is provided with a check-valve, and air is forced through the pipe, into the boiler, by means of a suitable pump, the air being heated in its passage through the sinuous portion of the pipe, and forced, thus heated, through the perforations *a*, into the water in the boiler, rapidly bringing the water up to the boiling-point, and greatly assisting in keeping it up to that point, and, at the same time, keeping the water supplied with atmospheric air, which is continually being expelled by the boiling-process, and the loss of which requires a greater degree of heat to keep the water at the boiling-point.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

The arrangement of the serpentine pipe C in the rear part of the furnace, below the boiler, its upper straight and perforated portion entering the rear end of said boiler in an inclined direction, below the water-level, as herein described, for the purpose specified.

SAMUEL STANTON.

Witnesses:

JOHN W. LITTLE,
PETO B. TAYLOR.