

G. B. Brayton,
Steam-Boiler Water-Tube.
N^o 44,598. Patented Oct. 11, 1864.

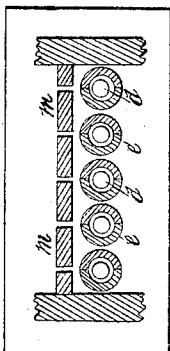


Fig. 2.

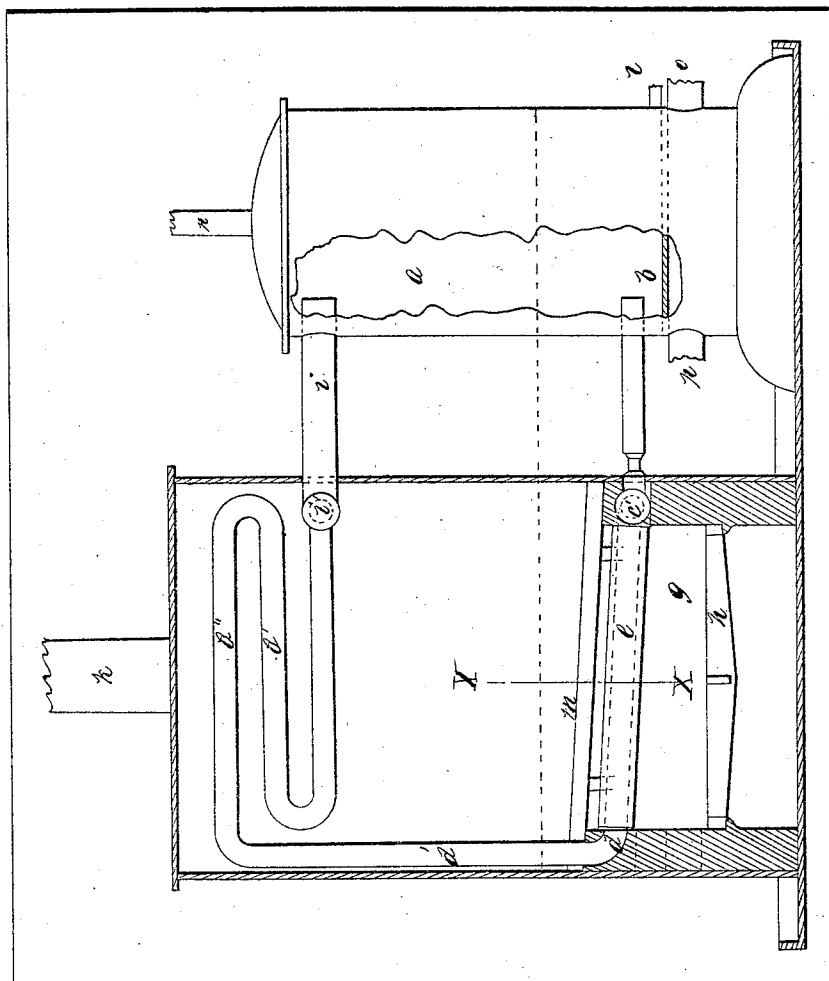


Fig. 1.

Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE B. BRAYTON, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN STEAM-GENERATORS.

Specification forming part of Letters Patent No. **44,598**, dated October 11, 1864.

To all whom it may concern :

Be it known that I, GEORGE B. BRAYTON, of the city and county of Providence, in the State of Rhode Island, have invented certain new and useful Improvements in Steam-Generating Apparatus, which results in giving perfect safety from the dangerous and damaging effects of explosions, thus dispensing with that constant attention heretofore rendered necessary in the production of steam, economy in the consumption of fuel, and economy in construction, as compared with the ordinary forms of steam-generating apparatus.

These new and valuable results are obtained through a series of inventions fully described in this and other Letters Patent granted to me and bearing even date with this, each and all of which inventions may be used independently of each other, and are therefore made the subject of separate patents. Each specification is descriptive of only so much of the accompanying drawings as is necessary to understand fully the particular improvement under discussion; but the different specifications, when taken in connection, make a complete description of the whole apparatus.

This specification has relation to one of these improvements, and is termed the "heat reservoirs or suppression-plates" in a steam-generating apparatus, and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings.

In Figure 2 is shown an end view of the plates *m m* and the position occupied by them in the apparatus. Fig. 1 is a side view of the same. They are made of cast-iron, in the shape shown in the drawings, and adapted to

a form of generator composed of wrought-iron pipes, which is fully described in connection with my patent for an intercepting and transmitting medium, bearing even date with this.

g is the fire-space. *d* are the steam-generating vessels. The plates *m m* are placed above and near the upper surface of the vessels *d*, leaving sufficient space for the flames to pass between them and the vessels. Each plate extends from the center of one vessel to the center of the next, allowing but a small space between the different plates.

The object of the employment of these plates is to retard or suppress the tendency to a rapid escape of the flames and cause the direction to be taken by them to conform to the shape of the upper surface of the water-vessel, thus keeping the flames in contact with their whole surface and permitting a large proportion of the heat to be taken up by the vessels before the gases finally pass up between the plates. The plates, becoming highly heated, act as heat-reservoirs, and during the operation of stoking or replenishing the fire they give out heat to the generating-vessels, thus serving to equalize or make up for any sudden decrease in the amount of heat given out by the fire. They can be made of cast-iron or other suitable material.

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

The use of plates in the furnace of a steam-generating apparatus, substantially as and for the purpose specified.

GEO. B. BRAYTON.

Witnesses:

A. G. UTLEY,
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