

J. B. Eversole,

Steam-Boiler Fire-Tube.

N^o 1,536.

Patented Mar. 31, 1840.

Fig. 2.

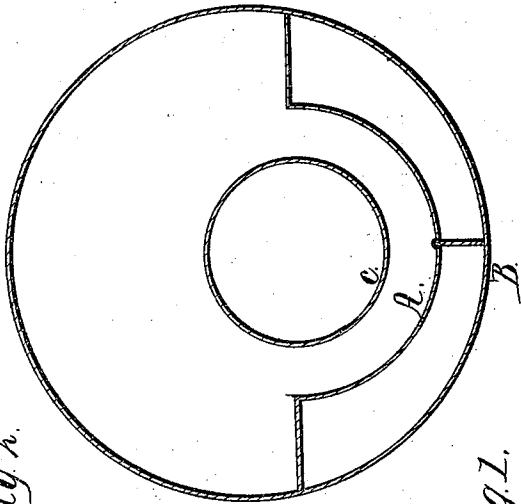
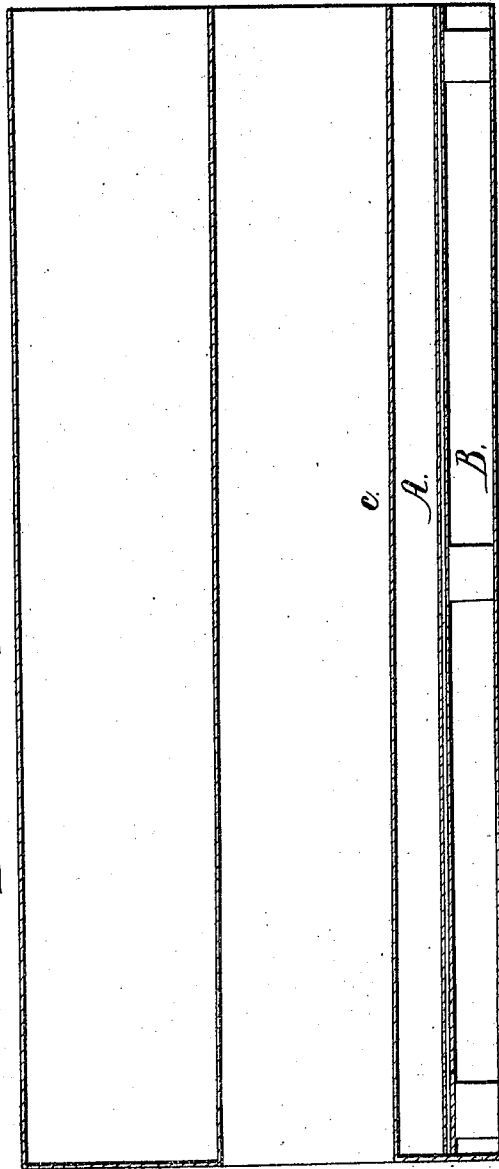


Fig. 1.



UNITED STATES PATENT OFFICE.

JACOB B. EVERSOLE, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN STEAM-BOILERS.

Specification forming part of Letters Patent No. 1,536, dated March 31, 1840.

To all whom it may concern:

Be it known that I, JACOB B. EVERSOLE, of St. Louis, Missouri, have invented a new and useful Improvement in the Construction of Boilers for Generating Steam, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a longitudinal section of the boiler. Fig. 2 is a transverse section.

In the use of the common boiler the steam that is generated at the bottom thereof prevents the lower part of the flue from generating as much steam as it should generate, for the steam, commencing to be generated in small particles and these assuming a globular shape and increasing in size until the particles of steam become too large for the affinity that attaches it to the boiler, it then disengages itself from the boiler, takes a perpendicular direction to the surface precisely in the same way that a piece of cork or any other buoyant substance would do when sunk under the surface of the water and then let go. It is very evident that it would take a direction upward to the surface. So will the steam leave the bottom of the boiler, and all that is perpendicularly under the flue will come in contact with it, and from the quantity of steam that one boiler generates, whether it has a double or single flue, the greater part of it is generated upon the bottom surface of the boiler, and three-fourths of it must necessarily come in contact with

the flue in rising to the surface and form a sheet of steam against the flue, thus excluding the water from the lower surface of the flue and preventing its forming its due proportion of steam. Said sheet of steam is supposed to be from one-half to three-fourths of an inch thick, which renders it impossible for the heat of the flue to generate steam through a sheet of steam already formed on the bottom surface. Now, to prevent this evil I arrange a segment-guard A between the bottom of the boiler B and the bottom of the flue C, extending up half round the flue to the center on each side, so as to conduct the steam past the center of the flue that it may ascend without coming in contact with the flue. The segment guard or partition is supported by legs, braces, rods, or any convenient means resting on the bottom of the boiler. The furnace is made and arranged in the usual manner.

What I claim as my invention, and which I desire to secure by Letters Patent, consists—

In placing the segment guard or partition between the flue and bottom of the boiler, so as to ward off the steam generated on the bottom of the boiler and direct it upward without touching the bottom of the flue, as before described.

J. B. EVERSOLE.

Witnesses:

WM. P. ELLIOT,
JOHN D. AKIN.