

AUGUSTUS W. NEWELL'S ADJUSTABLE FIRE-BOX

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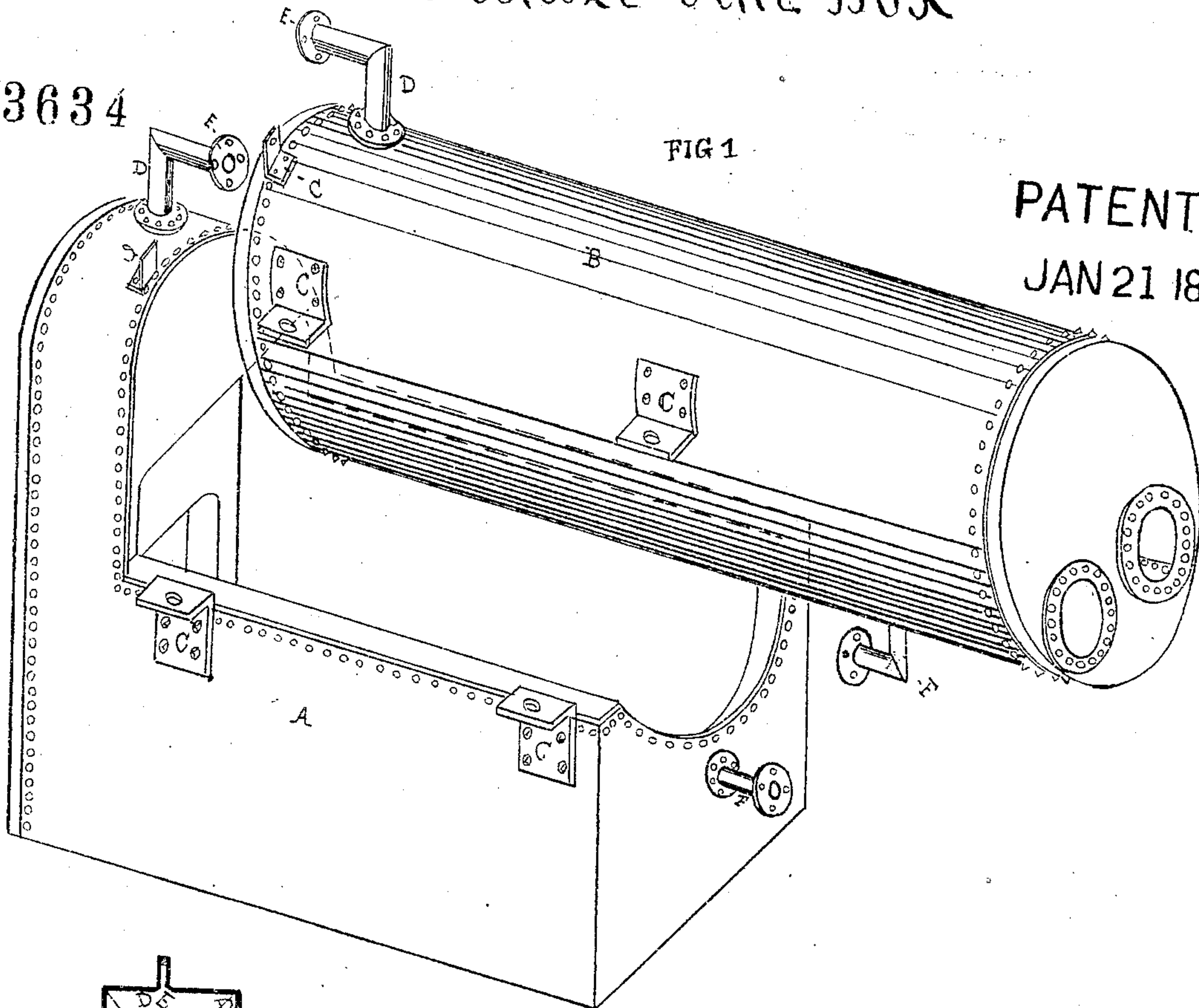


FIG 1

PATENTED
JAN 21 1868

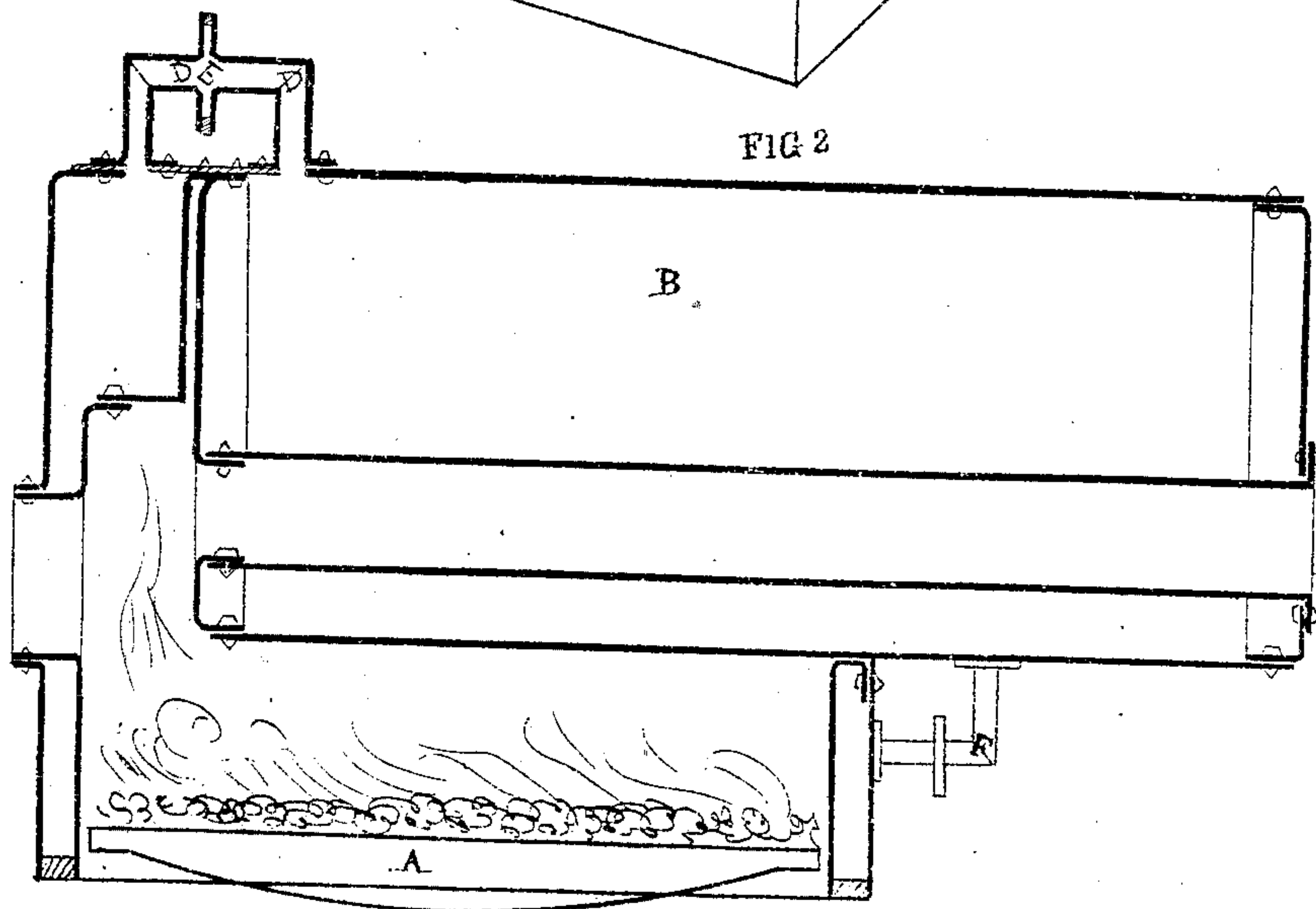


FIG 2

WITNESSES

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INVENTOR

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AUGUSTUS W. NEWELL, OF BRADFORD, PENNSYLVANIA.

Letters Patent No. 73,634, dated January 21, 1868.

IMPROVEMENT IN STEAM-GENERATORS.

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

TO WHOM IT MAY CONCERN:

Be it known that I, AUGUSTUS W. NEWELL, of Bradford, McKean county, in the State of Pennsylvania, have invented a new and useful Improvement in Adjustable Fire-Boxes for Boilers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and making a part of this specification, in which my invention is shown as attached to a cylinder boiler.

The object I have in view in this invention is so to construct a fire-box, to be used with cylinder, locomotive, or other kind of boilers, that it may readily be attached or detached, as occasion may require. To do this, I make a fire-box in any required form, with or without water-space, as may be desired, or with a partial water-space. It may be made to extend a part or the whole length of the boiler, and the steam and water of the fire-box and boiler are connected by means of pipes with expansion joints. The fire-box is built entirely separate and independent of the boiler, and of different sizes and forms necessary to fit the different sizes and varieties of boilers.

Having thus described the manufacture of my invention, I will now name the various parts, as shown in the drawings.

A is the adjustable fire-box. B is a cylinder boiler. C C are lugs upon the fire box and boiler, through which the bolts are passed to hold the two together. D is a steam-pipe with, E, expansion-joints to connect the steam in the boiler and fire-box. F are pipes, shown in red lines, to connect the water in the fire-box and boiler.

In the use of my fire-box, made as above described, there will be a great saving effected in transportation, and much trouble avoided in the handling and setting. At any time repairs are necessary, it may be removed and another substituted, thus saving a great loss of time, especially when used upon locomotive-boilers. The combustion of fuel used will also be increased by direction of the draught from the rear of the fire-box to the front end of the flues, as shown in fig. 2, the arrow indicating the direction of the draught.

Figure 1 is a perspective view of my invention.

Figure 2 is a vertical sectional view of the same.

The same letters indicate like parts in each figure.

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

The construction of an adjustable fire-box, as hereinbefore described, provided with suitable fastenings C C, steam-pipes D, with expansion-joints E and proper water-pipes F, arranged substantially as and for the purposes described.

AUG. W. NEWELL.

Witnesses:

H. G. HANNAMAN,
GEORGE RUHLANDT.