

No. 688,139.

Patented Dec. 3, 1901.

E. VAN KEUREN.
STEAM BOILER.

(Application filed July 13, 1901.)

(No Model.)

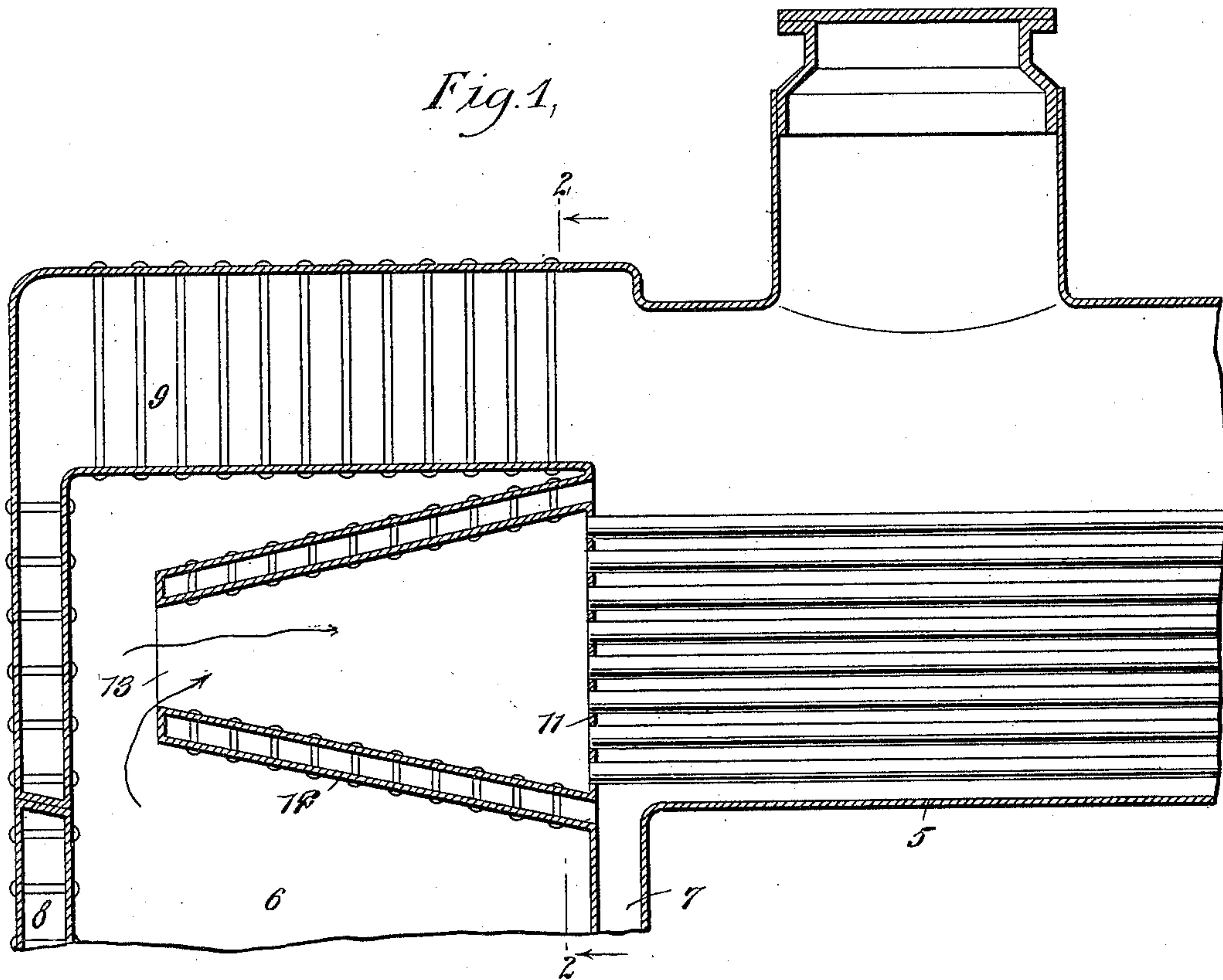
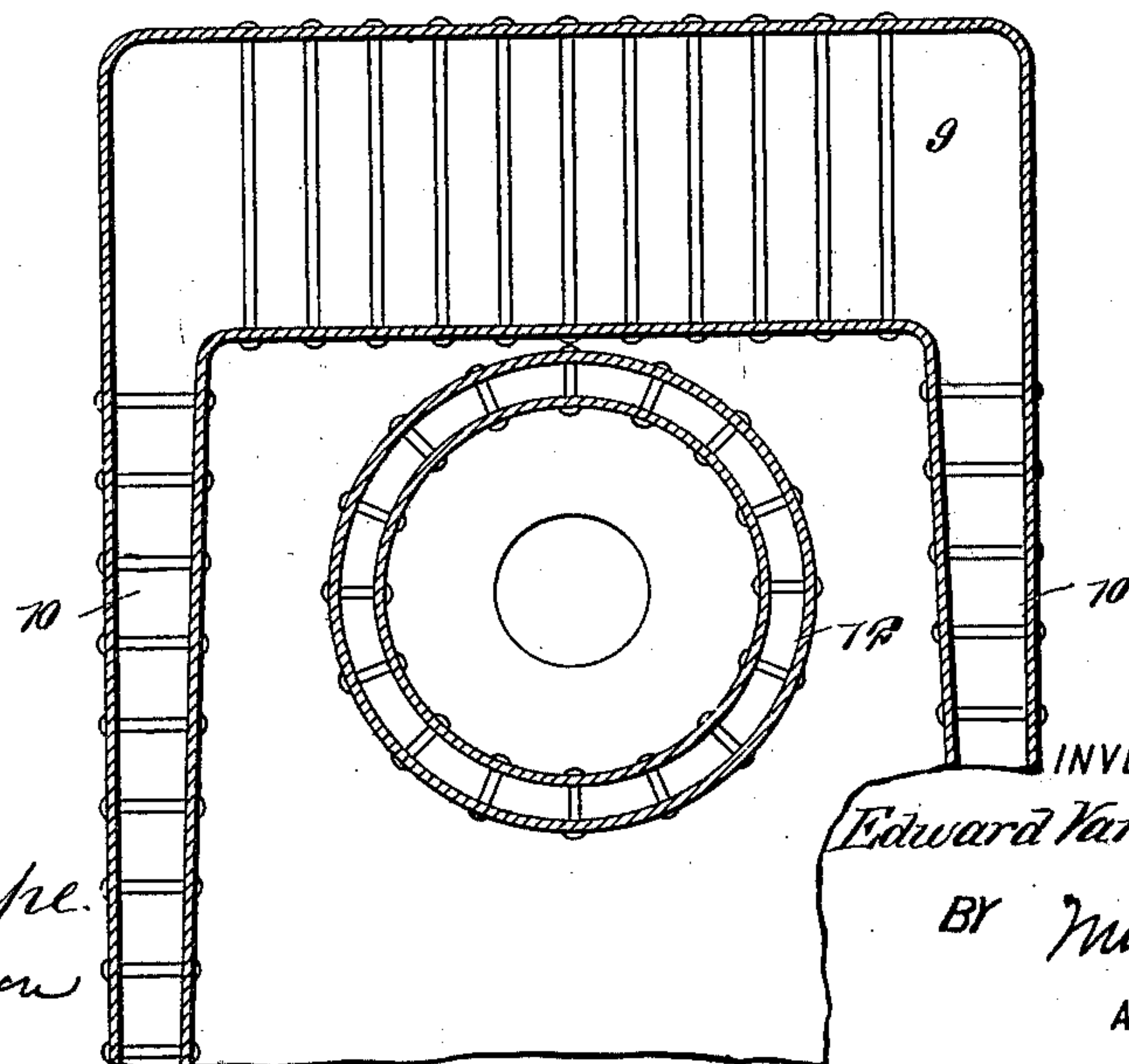


Fig. 2.



WITNESSES:

Edward Thorpe.
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UNITED STATES PATENT OFFICE.

EDWARD VAN KEUREN, OF POUGHKEEPSIE, NEW YORK.

STEAM-BOILER.

SPECIFICATION forming part of Letters Patent No. 688,139, dated December 3, 1901.

Application filed July 13, 1901. Serial No. 68,194. (No model.)

To all whom it may concern:

Be it known that I, EDWARD VAN KEUREN, a citizen of the United States, and a resident of Poughkeepsie, in the county of Dutchess and State of New York, have invented a new and Improved Steam-Boiler, of which the following is a full, clear, and exact description.

This invention relates to improvements in steam-boilers, and particularly locomotive-boilers, the object being to provide a greater water-heating space than is provided in the usual form of boilers.

I will describe a steam-boiler embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both figures.

Figure 1 is a longitudinal section of a portion of a boiler embodying my invention, and Fig. 2 is a section on the line 2 2 of Fig. 1.

Referring to the drawings, 5 designates the boiler, and 6 the fire-chamber, having the usual water-legs at the rear and the water-spaces 8 and 9 at the front and top and also having the water legs or spaces 10 at the sides. Extended from the flue-sheet 11 and into the fire-chamber is a water-jacket 12. This water-jacket, as here shown, is made conical, with the larger end attached to the flue-sheet, and

the interior of the jacket communicates with the interior of the boiler, as clearly shown in Fig. 1.

In operation the water will pass from the boiler into the jacket 12, and as it is surrounded by heat and as the products of combustion pass through the open end 13 of the jacket it is also thoroughly heated on the inner surface, and thus it will be seen that I have not only provided for a larger water-space than usual, but provided for a quicker heating thereof.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a boiler, a conical water-jacket extended from the flue-sheet into the fire-chamber, substantially as specified.

2. In a boiler having flues, a water-jacket attached to the flue-sheet and surrounding the flues, said water-jacket being extended forward into the heating-chamber, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD VAN KEUREN.

Witnesses:

JNO. M. RITTER,
C. R. FERGUSON.