(No Model.)

G. H. RHEUTAN.

TUBULAR STEAM BOILER.

No. 262,247. Patented Aug. 8, 1882.

Fig. 1.

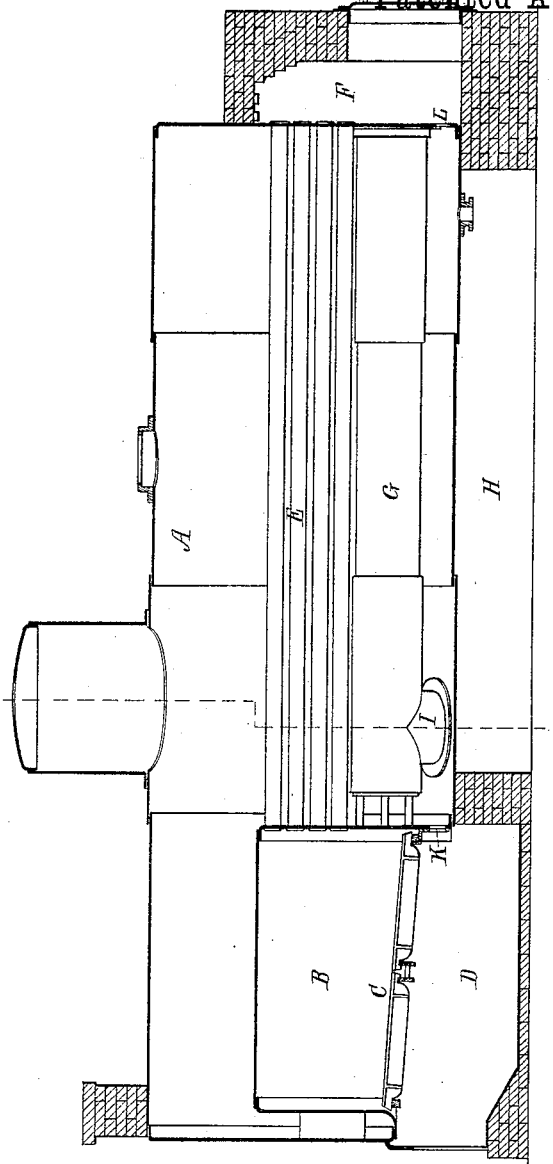
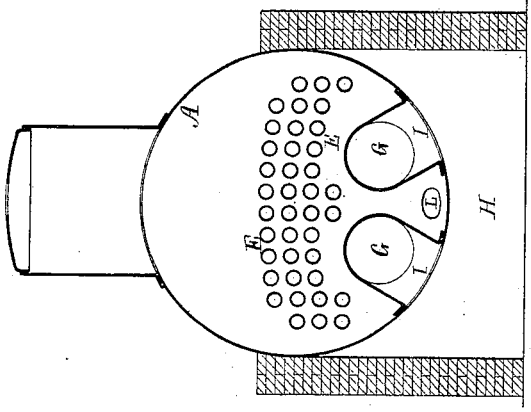


Fig. 2.



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GARRIE H. RHEUTAN, OF HARTFORD, CONNECTICUT, ASSIGNOR TO HENRY B. BEACH & SON, OF SAME PLACE.

TUBULAR STEAM-BOILER.

SPECIFICATION forming part of Letters Patent No. 262,247, dated August 8, 1882.

Application filed June 6, 1882. (No model.)

To all whom it may concern:

Be it known that I, GARRIE HERRING RHEUTAN, of the city and county of Hartford, of the State of Connecticut, have invented a new and useful Improvement in Tubular Steam-Boilers; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a vertical and longitudinal section of a boiler provided with my invention. Fig. 2 is a transverse section of it, taken through the connections of its return and advance flues.

My invention, the nature of which is defined in the claim hereinafter presented, relates to the connections of the return and advance flues, and to the arrangement of such connections relatively to the openings for the clearance of deposits from the bottom of the internal surface of the boiler-shell.

Prior to my invention it has been customary to open the two return-flues into a chest or box arranged within the boiler-shell and opening through its bottom. Such box, unless having an arched passage through it in line with the cleansing hole or holes of the lower part of the shell, interfered with the removal of deposits from the bottom of the inner surface of the shell, and, besides, being made with flat sides, it had to be braced to prevent it from collapsing under the pressure to which it might be subjected while the boiler was generating steam.

With my improvement I wholly dispense with such box, and have to each return-flue tube closed at its front end, a branch tube to lead from it to and through the boiler-shell, the two branch tubes being arranged on opposite sides of the range of the lower cleaning-holes of the shell, in order that the cleaning implement, while in use, may be readily passed between such branch tubes. It will thus be seen that by such an improvement I not only dispense with the box and its braces, but have to the shell and return-flues cylindrical tubular connections capable of resisting the pressure of the boiler without requiring to be braced therefor.

In the drawings, A denotes the boiler-shell; B, the fire-place; C, its grate, and D the ash-chamber.

The stack of flue-tubes is shown at E, the smoke-chamber at F, and the two return-flues at G G. The branch tubes connecting such return-flues with the advance flue, H, beneath the shell, are shown at I I, the cleansing-openings of the bottom of the shell being represented at K L as ranging with each other in a line midway between the said two branch tubes. The return-flues are closed at their front ends.

In the operation of this boiler the smoke and gases proceeding from the fire-place pass through the tube stack into the smoke-chamber, and thence backward through the two return-flues, and thence through the two branch tubes into and through the advance flue, from which they escape into the chimney.

I claim as my invention as follows, viz:

The boiler having the stack of flue-tubes and the two return-flues arranged with an advance flue, and connected therewith by the separate branch tubes, as described, and also having the bottom cleansing-holes arranged in line or range between such branch tubes, all being substantially as explained.

GARRIE HERRING RHEUTAN.

Witnesses:
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