M. C. Kilgore,

Steam-Boiler Water-Tube.

No. 61,210. Patented Jan. 15, 1867.

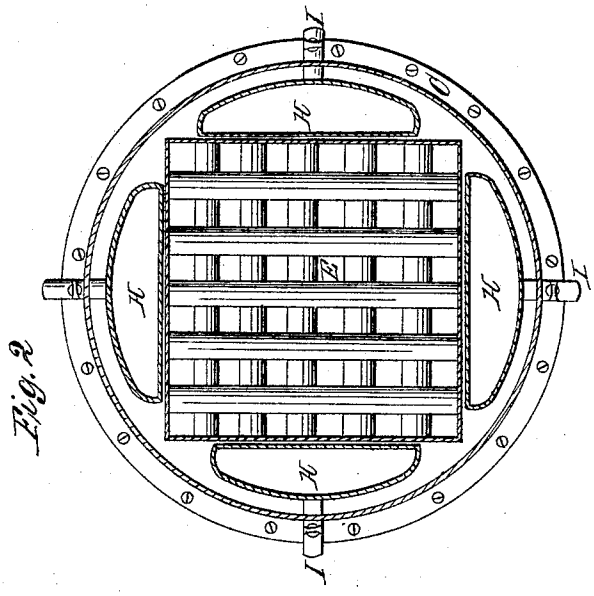


Fig. 2

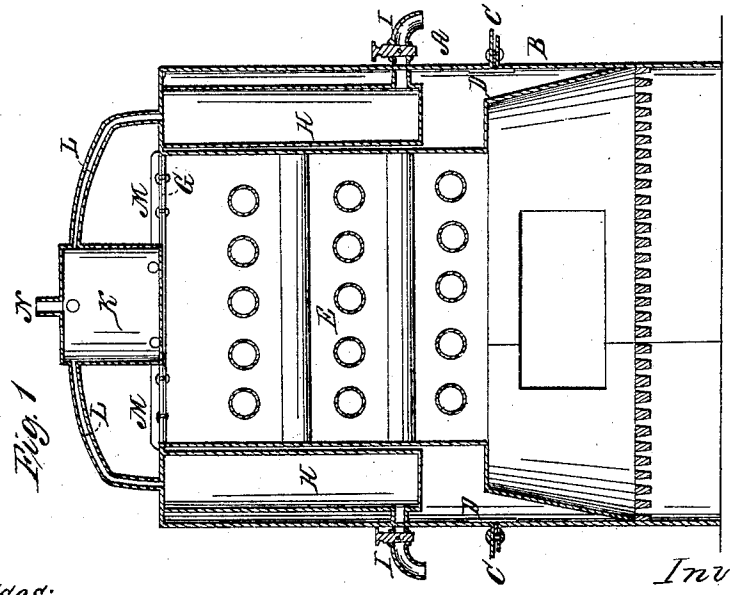


Fig. 1

Witnesses;
J. Clement Smith
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Inventor;
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By Chipman & Co
attys

AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

United States Patent Office.

MARTIN C. KILGORE, OF WASHINGTON, IOWA.

Letters Patent No. 61,210, *dated January* 15, 1867.

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, MARTIN C. KILGORE, of Washington, in the county of Washington, and State of Iowa, have invented a new and valuable Improvement in Steam Boilers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

The object of my invention is to provide means for raising steam with greater dispatch and for superheating and economizing such steam more effectively than has been accomplished by any device heretofore known. To this end I construct a boiler in two sections, the lower one of which extends down and around the furnace, as shown on Figure 1 of the drawings. I call the upper section A and the lower section B. These sections are united by flanges which extend outward from each, as shown at C, and which are fastened together by means of bolts, nuts, and screws, and suitable packing of lead or gum. A flange, D, extends upward from section B inside of section A, when the two sections are united. It serves as a rest and support for the joint C, and also aids in packing the same securely. In addition to the grate, my furnace is provided with a square flue-box marked E. This flue-box sits on the top of the furnace, and has in it a suitable number of tubes that extend from side to side and cross each other at right angles, as shown on Figure 2. In constructing this flue-box, care should be taken not to increase the number of tubes so as to interfere with the draught of the furnace. Both sections of my boiler have a cylindrical form, and section A encloses the flue-box above described. My boiler is designed to set in an upright position only. Section A of my boiler has an aperture at its top corresponding in size to an aperture or opening on the top of said flue-box, to which it is attached by means of bolts, nuts, and screws, and suitable packing, as shown at G, on fig. 1. On the inside of section A, and attached thereto, I place pockets or receivers for holding steam, marked H. These pockets are usually four in number, and are placed one on each side of the flue-box in the form and shape represented on fig. 2. I attach to these pockets faucets or escape-cocks, marked I, for the purpose of letting off the condensed steam or water that may accumulate therein. At the top of the boiler, and supported by the tubes hereinafter described, I place a cylinder or dome in which the steam is superheated. It is marked K on the drawings. A tube marked L leads from each of the pockets H into the upper end of this dome, and other tubes marked M lead into the lower end of the same from the top of the boiler proper. The steam pipe is attached to a tube on the top of the dome marked N, and the chimney is adjusted on the top of the boiler outside of the tubes L and M.

My device is operated in the same manner as other upright steam boilers. Its advantages consist in an upright draught for the fire; in presenting a great water surface to the action of the fire in proportion to the amount of water being used; in economizing and superheating steam by means of the pockets H and the dome K and tubes L and M; in ease and durability of packing by means of the flanges C and D, and in affording ready means for cleaning by being constructed in sections that can be readily taken apart.

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

1. The pockets H, constructed substantially as and for the purposes specified.

2. The dome K, in combination with the tubes L and M, constructed and operating substantially as set forth.

3. A steam boiler, having sections A and B, flanges C and D, flue-box E, and dome and tubes and pockets as described, constructed, combined, and arranged substantially as herein specified.

M. C. KILGORE.

Witnesses:

J. CLEMENT SMITH,

N. P. CHIPMAN.