July 27, 1926. 1,593,984

T. E. MURRAY

BOILER STRUCTURE

Original Filed May 31, 1923

Fig. 1.

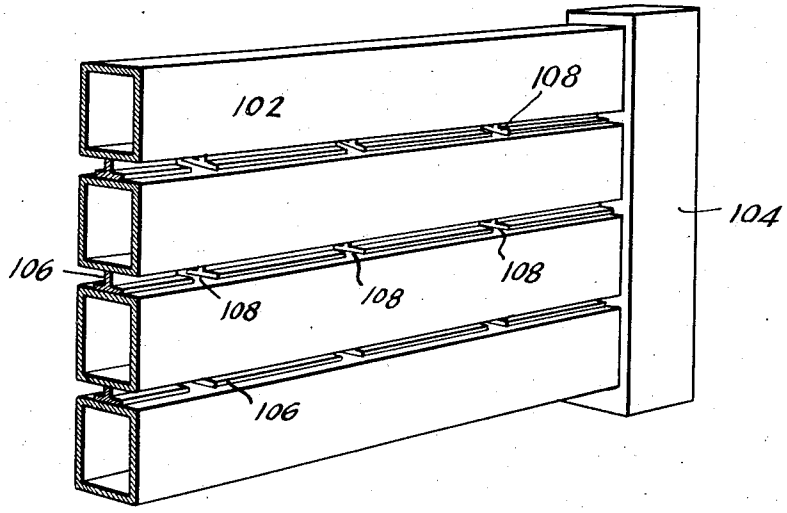
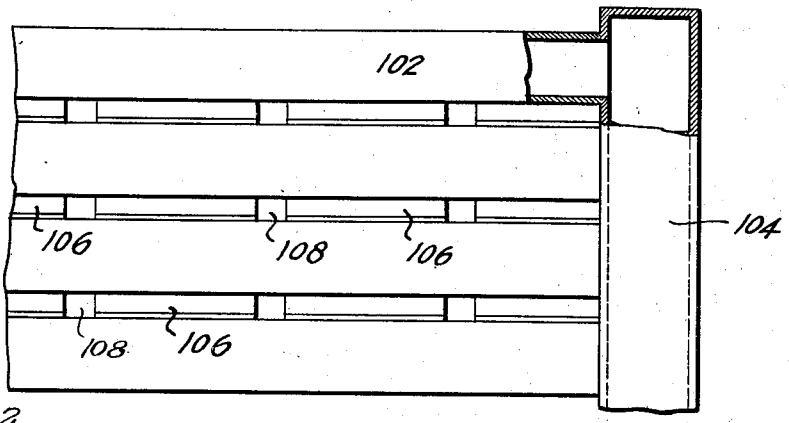


Fig. 2.



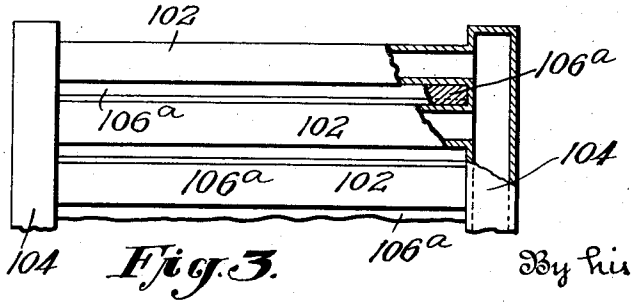


Fig. 3.

Inventor
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By his Attorney
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Patented July 27, 1926. 1,593,984

UNITED STATES PATENT OFFICE.

THOMAS E. MURRAY, OF BROOKLYN, NEW YORK.

BOILER STRUCTURE.

Original application filed May 31, 1923, Serial No. 642,427. Divided and this application filed June 25, 1924. Serial No. 722,226.

This application is a division of my application Serial No. 642,427 filed May 31, 1923, and relates to details of boiler construction and aims to provide a structure adapted to form either a boiler wall or a tube assembly.

An embodiment of the invention is illustrated in the accompanying drawings in which—

Fig. 1 is a sectional perspective; and

Fig. 2 is a side elevation with portions broken away.

Fig. 3 illustrates a modification.

In the drawings, I show a plurality of practically square boiler tubes 102 connected to a header section 104, the tubes being spaced apart by T-bars 106 which are welded or otherwise secured between the adjacent tubes. These T-bars are adapted to serve as baffle walls between the different boiler tubes. And they are made in short lengths so as to provide suitable openings 108 at intervals to permit the passage of gases between the different banks of tubes.

This structure will be used in some instances to form the outer walls of a boiler as shown in Fig. 3 in which case the T-bars 106^a will extend continuously from one upright 104 at one side of the structure to a similar upright at the other side of the structure and will therefore close the space between the adjacent tubes 102. The boiler tubes 102 may be formed by butt welding two channel sections along their opposed edges as disclosed in the above identified application.

While I have described the specific embodiment of the invention herein illustrated, it is not to be construed that I am limited thereto as various modifications may be made by those skilled in the art without departing from the invention as defined in the appended claims.

What I claim is:—

1. A boiler including a header of substantially rectangular cross-section, a multiplicity of substantially rectangular boiler tubes communicating therewith and a series of T-bars secured between the adjacent tubes and extending longitudinally of the tubes, said bars being spaced apart to form openings at intervals between the tubes.

2. A boiler wall including a header having connected therewith a tube structure comprising a plurality of hollow flat sided tubes and bars extending longitudinally of the tubes and closing the spaces between adjacent tubes, each bar having at least one flange and web the flat surface of said flange engaging the flat surface of one tube and a thin edge of said web engaging the flat surface of an adjacent tube.

In witness whereof, I have hereunto signed my name.

THOMAS E. MURRAY.