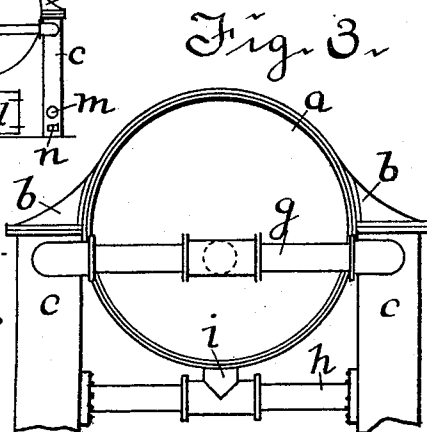
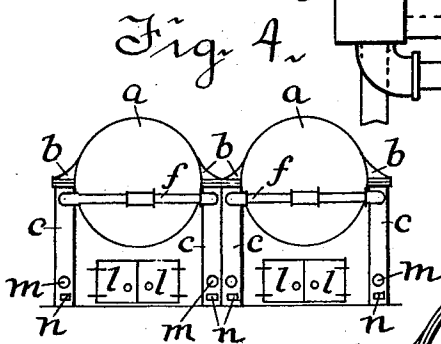
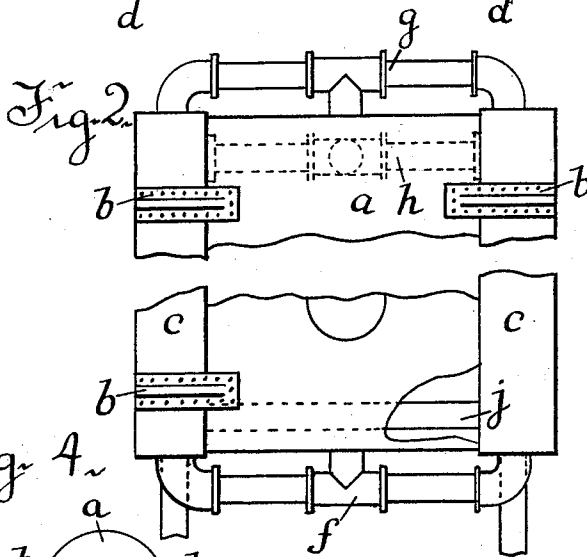
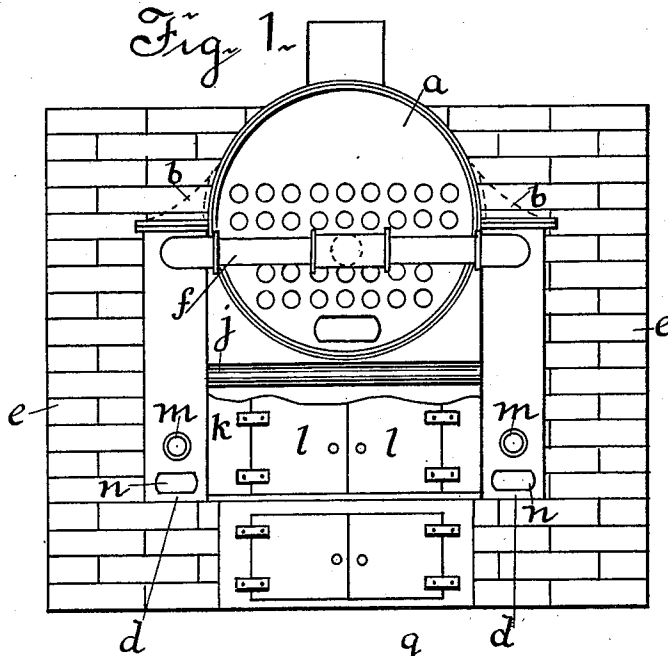


(No Model.)

T. MILLER.
STEAM BOILER.

No. 522,077.

Patented June 26, 1894.



WITNESSES.

W. H. Morgan
E. H. Morgan

INVENTOR.

T. Miller
By A. P. Thayer
att'y

UNITED STATES PATENT OFFICE.

THOMAS MILLER, OF JERSEY CITY, NEW JERSEY.

STEAM-BOILER.

SPECIFICATION forming part of Letters Patent No. 522,077, dated June 26, 1894.

Application filed March 19, 1894. Serial No. 504,173. (No model.)

To all whom it may concern:

Be it known that I, THOMAS MILLER, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Steam-Boilers, of which the following is a specification.

My invention relates to cylindrical boilers with water legs forming the sides of the furnace, and it consists of the improved construction and arrangement of the water legs, whereby such boilers may be constructed more simply and cheaply, and the setting is facilitated as hereinafter described reference being made to the accompanying drawings, in which—

Figure 1, is a front elevation of my improved boiler set up for use with a part of the front plate of the furnace broken out. Fig. 2, is a plan view in part without the brick setting. Fig. 3, is a rear end elevation in part, and Fig. 4, is an end elevation of a couple of boilers placed side by side showing the intermediate water legs serving for the partition between the furnaces without any brick work, which is unnecessary with such water legs.

With the boiler *a*, of the ordinary horizontal cylindrical form and provided with the usual brackets *b*, for its support on the furnace walls, I provide the separately constructed flat rectangular water legs *c*, for the side walls of the furnace and for surrounding part of the boiler, said water legs being of equal length as the boiler or thereabout, also of suitable height, and also of suitable form on the top to receive and support the boiler holding brackets *b*, and being set up edgewise on suitable shelves *d*, of the inclosing brick work *e*. At the front and back ends of the boiler and water legs I provide the circulating pipe connections *f* and *g* respectively, said pipes connecting with the ends of the water legs near the top, and with the boiler a little below the water level, and I provide another circulating pipe connection *h* under the boiler and lower down in the sides of the water legs, or may have several at intervals along the space back of the furnace chamber or therein

if desired, said connections being made with the under side of the boiler by the vertical branches *i*, which is a favorable arrangement for efficient circulation, particularly in connection with the front and back end connections *f* and *g*. I will also have one or more pipes *j*, forming direct communication between the water legs directly inside of the front plate *k*, above the fire doors *l*. The feed water pipes will be connected with the water legs at *m*. Hand holes *n* will be provided in the ends of the water legs near the bottom. It will be seen that with the boiler and water legs thus separately made they can be assembled, put together and connected without any fitting or riveting, the only requisite being the connecting of the pipes, and where several boilers are placed in a battery no intermediate brick work is needed for the support of the boilers, or for partitions between the furnaces, and it will also be noted that any suitable cheaper protective covering may be substituted for the brick work, the water legs forming ample supports for the boiler, so that the boiler may be set up on its legs with no brick work except such as may be needful for inclosing the ash pit and for the foundations on which to seat the water legs. Removal of a boiler thus made and set is also greatly facilitated.

I claim as my invention—

The combination with the horizontal cylindrical boiler *a*, provided with the usual brackets *b* for its support on the furnace walls, of the separately constructed water legs *c*, of same length as the boiler or thereabout, said boiler being supported by its brackets on the top of said water legs, and therewith closing the top of the furnace, said boiler and water legs connected at the ends and under the boiler by the circulating pipes substantially as described.

Signed at New York city, in the county and State of New York, this 31st day of January, A. D. 1894.

THOS. MILLER.

Witnesses:

W. J. MORGAN,
S. H. MORGAN.