

J. M. REEDER.
CONSTRUCTION OF STEAM BOILERS.

No. 9,901.

Patented Aug. 2, 1853.

Fig 1.

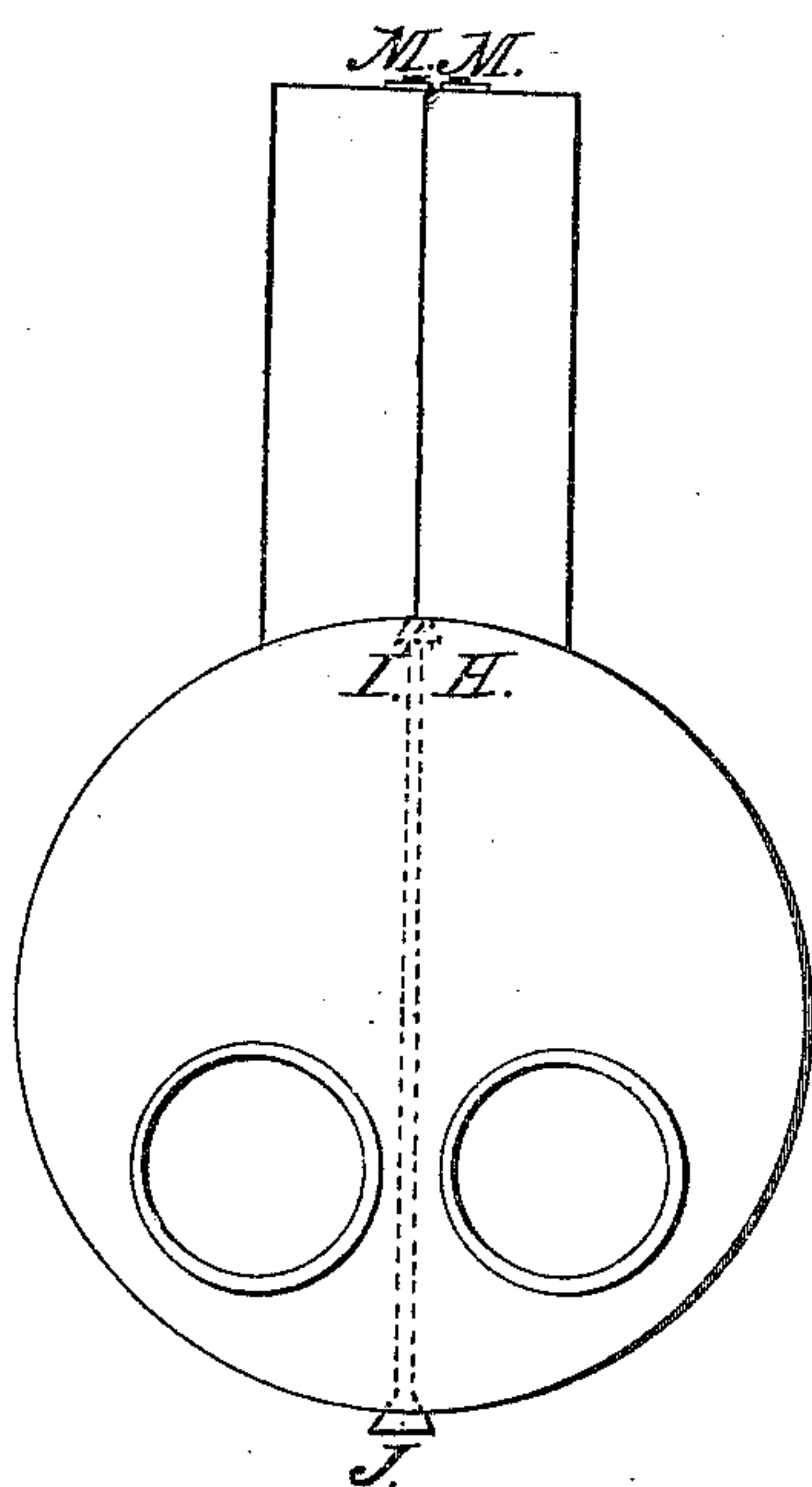
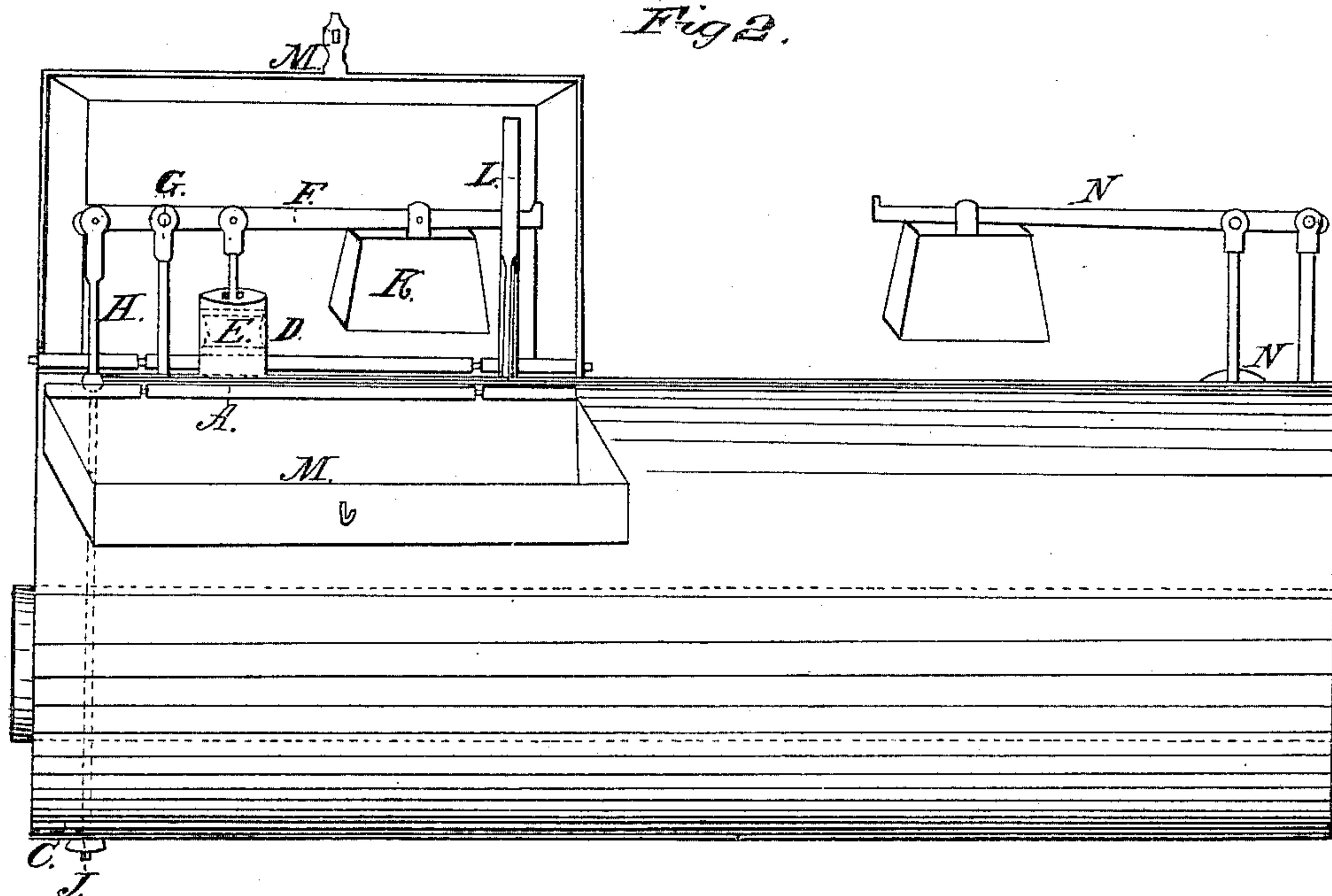


Fig 2.



UNITED STATES PATENT OFFICE.

JOHN M. REEDER, OF MEMPHIS, TENNESSEE.

CONSTRUCTION OF STEAM-BOILERS.

Specification of Letters Patent No. 9,901, dated August 2, 1853.

To all whom it may concern:

Be it known that I, JOHN M. REEDER, of the city of Memphis, county of Shelby, and State of Tennessee, have invented a new and
5 Improved Mode of Preventing Steam-Boilers from Bursting; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and the letters of
10 reference marked thereon.

The title I have given my invention is Reeder's patent safety guard.

The nature of it consists in providing the upper part of a steam boiler with two open-
15 ings, or apertures, in addition to that for the safety-valve, and the bottom of the boiler with one as shown at letters A, B and C in the accompanying drawings. Those apertures are closed one by cylinder and piston
20 and two by valves, which are arranged to pass the water from the boilers on to the fire under them when steam gets to any given height, and thereby prevent explosion should the safety valve or engineer fail to perform
25 their functions.

Figure 1, of drawings represents an end view. Fig. 2, of drawings represents a side view.

To enable others skilled in the art to make
30 and use my invention, I will proceed to describe its construction and operation.

I construct my steam-boiler in any of the known forms and apply thereto gage cocks, a safety-valve, and the other appendages of
35 such boilers; but in order to obviate the danger arising from the adhesion of the safety valve, carelessness of the engineer or from other causes, I make three other apertures in the boiler, two on top and one in the bottom
40 of the boiler, as shown on Fig. 2 of the accompanying drawings marked letters A, B, and C. I surround aperture A with cylinder D in which works piston E, which is attached to lever F, which works in fulcrum
45 G, and passes to stem H and is attached

thereto. Stem H passes through aperture B between the flues and through the aperture C, as shown in Fig. 1. Valves I and J are formed on stem H and close apertures B and C. Lever F is provided with pin K and
50 guide L. The inspector decides how much steam a boiler should sustain and he then places pin K at its proper point on lever F and confines it by a screw or rivet.

Box M M is constructed so as to entirely
55 inclose lever F, cylinder D, piston E, fulcrum G, apertures B and A and top of stem H, as shown in Fig. 2, and may be locked up, to be opened only by the proper inspectors.
60

N N (Fig. 2) represents a common safety-valve, which being under the control of the engineer, he can at all times let off steam if necessary.

The drawings accompanying this specifi-
65 cation represent the form of a boiler used by a steamboat navigating the Mississippi River, but my invention may be applied to boilers of any form. For a locomotive I contemplate letting the water out at the head
70 of the boiler and by a pipe convey it through the fire front.

To box M M may be attached a pipe to convey off any waste steam to the chimney or overboard, and to stem H, between aper-
75 ture B and end of lever F, may be attached an alarm whistle.

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

The application to steam boilers of stem
80 H, valves I and J, and the mode of their operation, which will at any given pressure allow the water in the boilers to pass freely on the fire under them, thereby reducing the steam and prevent explosion, as herein de-
85 scribed.

JOHN M. REEDER.

Witnesses:

W. B. WALDROAN,
NICHOLAS SPURGIN.