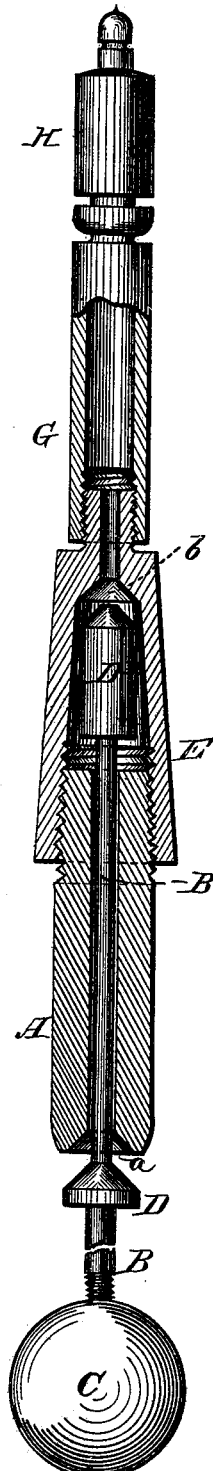


W. MATHEWS.  
ALARMS FOR BOILERS.

No. 185,560.

Patented Dec. 19, 1876.



Witnesses:  
*P. C. Dieterich*  
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Per: *C. H. Watson & Co. Attorneys.*

# UNITED STATES PATENT OFFICE.

WILLIAM MATHEWS, OF ST. CLAIR, PENNSYLVANIA.

## IMPROVEMENT IN ALARMS FOR BOILERS.

Specification forming part of Letters Patent No. **185,560**, dated December 19, 1876; application filed October 10, 1876.

*To all whom it may concern:*

Be it known that I, WILLIAM MATHEWS, of St. Clair, in the county of Schuylkill and State of Pennsylvania, have invented certain new and useful Improvements in Alarms for Boilers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a low-water alarm for steam-boilers, as will be hereinafter more fully set forth.

The accompanying drawing, which fully illustrates my invention, represents a longitudinal section of my low-water alarm.

A represents a pipe, screwed or otherwise permanently attached to the top of a steam-boiler, and forming at its lower end a valve-seat, *a*, as shown. This pipe answers as a guide for the valve-rod B, or suitable guides for said rod may be arranged within the pipe. On the lower end of the rod B is fastened the copper float C, and also a valve, D, to close, at the proper time, the lower end of the pipe A, as hereinafter described. On the upper end of the rod B, above the pipe A, is secured

the valve D'. On the upper end of the pipe A is screwed a chamber, E, inclosing the valve D', and forming the valve-seat *b* for the same. On top of the chamber E is screwed the pipe G, connecting with the whistle H. The chamber E is screwed down on the pipe A to the required distance to allow the valve D' to have room to work, and also sufficiently low so that the valve D will still be open when the valve D' is closed, the lower valve D only closing when it is required to grind the upper valve or clean any dirt that may accumulate on it at any time, and so prevent an escape of steam and consequent continuous alarm. The upper pipe G and whistle H are then attached, completing the alarm.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the pipe A, with valve-seat *a*, chamber E, with valve seat *b*, pipe G, whistle H, and valve-rod B, with valves D D' and float C, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM MATHEWS.

Witnesses:

RUFUS C. BOYER,  
WM. G. BURWELL.