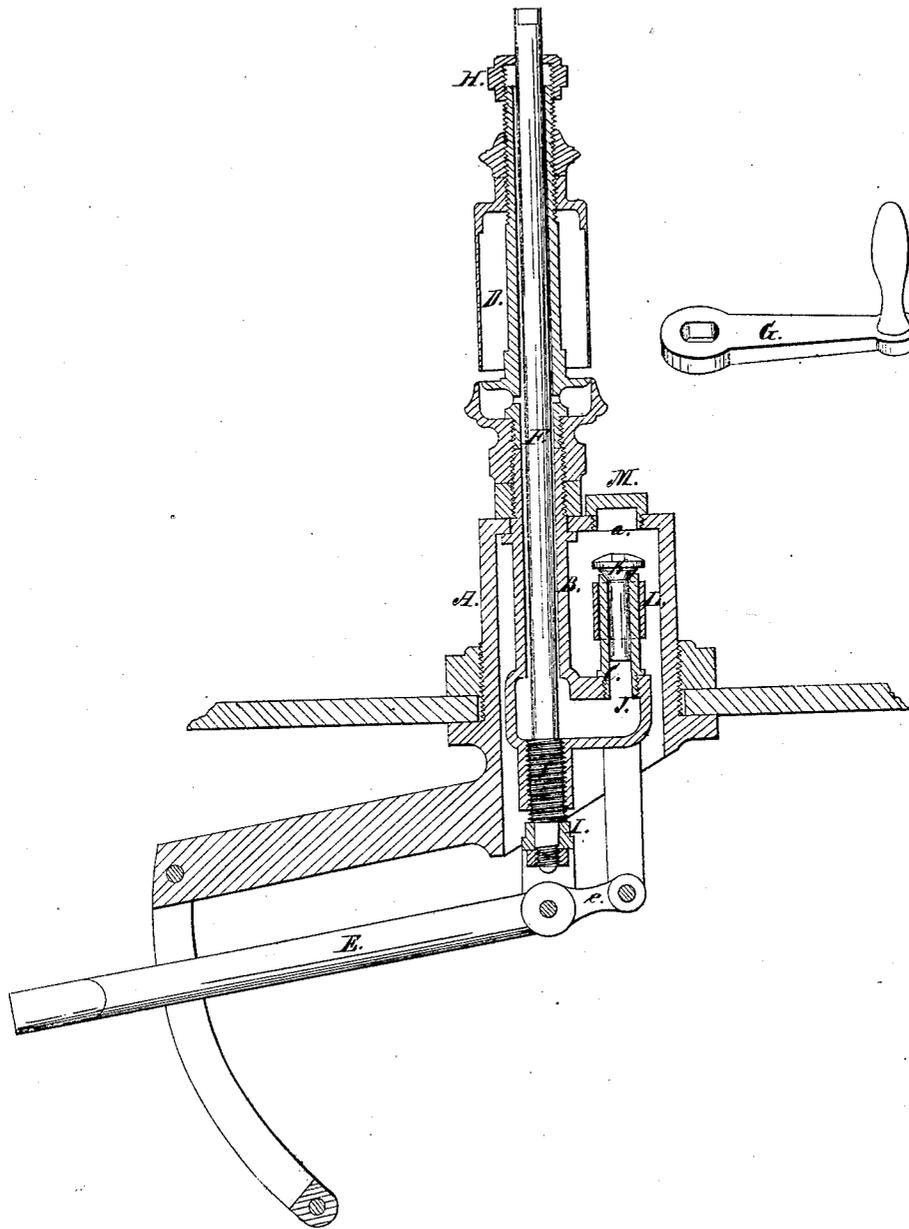


*Robbins & Frisbie,
Steam-Boiler Indicator.*

N^o 21,099.

Patented Oct. 5, 1858.



UNITED STATES PATENT OFFICE.

MARTIN ROBBINS AND JNO. L. FRISBIE, OF CINCINNATI, OHIO.

WATER-INDICATOR FOR STEAM-BOILERS.

Specification of Letters Patent No. 21,699, dated October 5, 1858.

To all whom it may concern:

Be it known that we, MARTIN ROBBINS and JOHN L. FRISBIE, both of Cincinnati, Hamilton county, Ohio, have invented a new and useful Improvement in Water-Indicators for Steam-Boilers; and we do hereby declare the following to be a full and exact description thereof, reference being had to the annexed drawings, making part of this specification.

This is an improvement in that class of water level indicators in which a steam alarm is sounded whenever the water sinks below a certain level and the invention relates first to a provision for the adjustment or change of the point of alarm while the instrument is in its place in the boiler, and, second, to a provision for ready access to the steam alarm valve while in the boiler.

A, is a small steam chamber or dome secured as shown in a hole in the top of the boiler. The interior diameter of this dome is barely sufficient to contain the main pipe B and its branch C, the main pipe being secured as shown, in the dome-top instead of in the top of the boiler, D is the whistle, E is the arm for the attachment of the customary float and *e*, its counter arm projecting behind the fulcrum, F, is a rod or stem which entering a stuffing box H at the top of the pipe B passes centrally down the latter and is screw threaded (*f*) below and tapped within the lower end of the said pipe B.

The stem F terminates below in a swivel I, which constitutes the attachment for the fulcrum of the float arm E *e*.

A branch C from the main pipe B, is closed at the top with a common valve K, said valve being operated in the usual way by a lifter L, hinged to the counter arm *e* of the float.

Immediately over the valve K, the dome A, has an aperture *a*, which is closed by a screw-cover M.

By turning the stem F by means of a handle G, or otherwise, the swivel I forming the fulcrum of the float is moved up or down—and thus the point of alarm is graduated to the minimum stage of water desired or the alarm may be sounded by hand by temporarily turning up the stem F, when it is desired to use the whistle for the ordinary purposes of signaling.

When it is desired to inspect, repair or replace the valve K, the screw-cover M is removed so as to afford ready access without removing the whistle or disturbing any other attachments.

It will be seen that this arrangement necessitates but one perforation of the boiler, namely that made for the dome.

The following is what we claim as of our invention and desire to secure by Letters Patent:

1. In the described combination with a customary steam alarm; we claim the steam pipe B, provided with a central screw stem and swivel F *f*, I, supporting the fulcrum of the float arm in the manner and for the purposes set forth.

2. In this connection we claim the small steam dome A *a*, inclosing the branched pipe B C, valve K and lifter L, substantially as, and for the purposes set forth.

In testimony of which invention we hereunto set our hands

MARTIN ROBBINS.
JNO. L. FRISBIE.

Attest:

GEO. H. KNIGHT,
C. STEEMER.