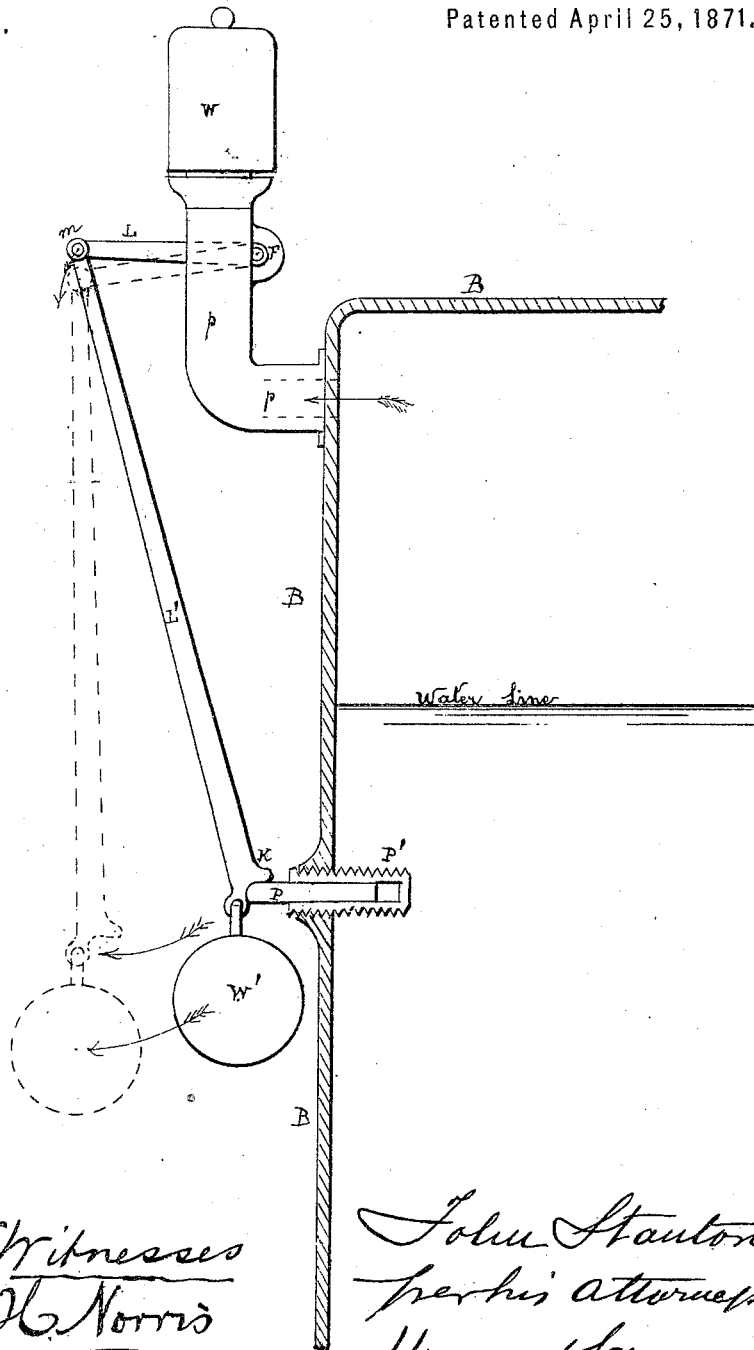


JOHN STANTON.

Improvement in Low-Water Alarms.

No. 114,216.

Patented April 25, 1871.



*Witnesses*  
*A. H. Norris*  
*W. B. Henderson*

*John Stanton*  
*per his attorneys*  
*Houson & Son.*

# United States Patent Office.

JOHN STANTON, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 114,216, dated April 25, 1871.

## IMPROVEMENT IN LOW-WATER ALARMS.

The Schedule referred to in these Letters Patent and making part of the same.

I, JOHN STANTON, of Philadelphia, Pennsylvania, have invented an Improved Low-Water Alarm, of which the following is a specification.

### *Nature and Object of the Invention.*

My invention consists of the combination, substantially as described hereafter, of a fusible plug applied to a steam-boiler; a weighted rod adapted to the said plug, and a steam-whistle or other alarm; the whole being so arranged that when the water becomes dangerously low the plug will be melted by the heat of the steam and the alarm will be given by the falling of the weighted rod.

### *Description of the Accompanying Drawing.*

The figure in the accompanying drawing represents in section sufficient of a boiler and appliances to illustrate my improvement.

### *General Description.*

B represents a portion of the end of a steam-boiler with the steam-space of which communicates a pipe, *p*, terminating at the top in a whistle, W, steam being admitted to or cut off from the latter by means of the usual valve, arranged to be operated by a lever, L, which has its fulcrum at F.

To the outer end of this lever L is suspended a weighted rod, *L'*, having near its lower end a shoulder, K, adapted to the outer end of a fusible plug, P, which is inserted into the front of the boiler at a point below which it would be dangerous to permit the water to fall.

The plug consists of an alloy which will melt when

exposed to the heat of steam, but will remain rigid as long as it is exposed to the less intense heat of the water in the boiler.

In the present instance the fusible plug is fitted into a tube, P', screwed into the boiler, the tube being closed at its inner end; but I do not desire to restrict myself to this arrangement, as the fusible plug may be driven directly into the boiler.

As long as the water remains above the plug the latter will serve to retain the weighted arm *L'* in the position shown in the drawing, the valve of the whistle being consequently closed; but should the water become so low that the fusible plug is exposed to the action of the steam, it will melt and cease to support the weighted arm *L'*, which, suddenly falling, will depress the lever L and open the valve of the whistle, thereby giving an alarm to indicate the dangerous position of the boiler.

It is not essential that a whistle should be used as a medium for giving the alarm, as a bell or gong might be struck by the falling of the weighted rod.

### *Claim.*

The tube P', arranged to project into a boiler below the water-line of the same, and containing a plug of fusible metal projecting in front of the boiler, and arranged to support a weighted lever connected to a whistle or other alarm, all as set forth.

JOHN STANTON.

Witnesses:

LIONEL J. D'EPINEUIL,  
JOSHUA DAVIS.