

No. 777,538.

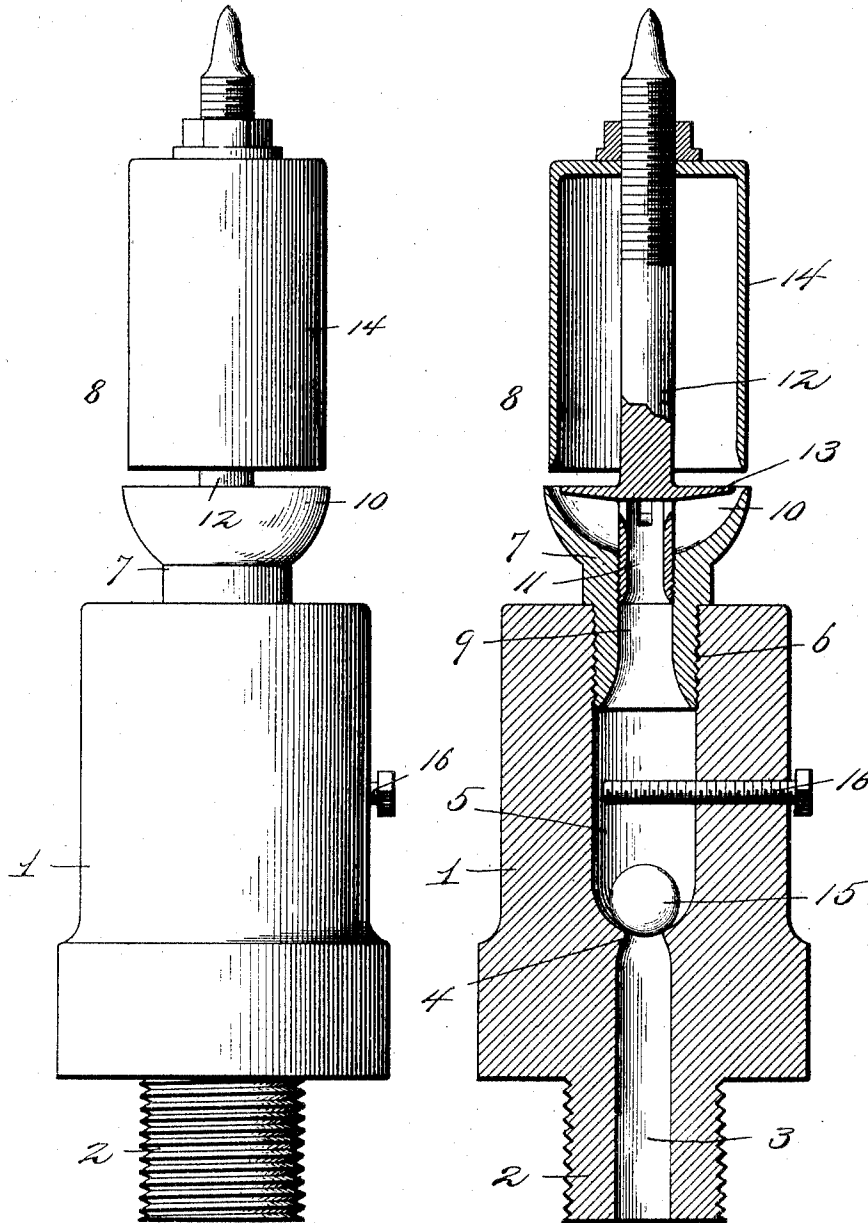
PATENTED DEC. 13, 1904.

W. PUCKETT.
ALARM DEVICE OR INDICATOR.
APPLICATION FILED NOV. 28, 1902.

NO MODEL.

FIG. 1.

FIG. 2.



WITNESSES:

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ALARM DEVICE OR INDICATOR.

SPECIFICATION forming part of Letters Patent No. 777,538, dated December 13, 1904.

Application filed November 28, 1902. Serial No. 133,041. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM PUCKETT, a citizen of the United States, residing at Wetzell, in the county of Antrim and State of Michigan, have invented new and useful Improvements in Alarm Devices or Indicators, of which the following is a specification.

This invention relates to an alarm device for application to an injector or inspirator of a steam-engine; and the object of the same is to provide simple and effective means to automatically notify an engineer or other attendant when an injector or inspirator becomes clogged and fails to operate and avoid injury to a boiler and engine and accident that might otherwise result by failure to perceive under ordinary circumstances the inoperative condition of an injector or inspirator.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of an alarm or signal device embodying the features of the invention. Fig. 2 is a transverse vertical section of the same.

Similar numerals of reference are employed to indicate corresponding parts in the views.

The numeral 1 designates a valve-casing having a lower screw-threaded stem 2, which is adapted to be connected to the suction-pipe of an injector or inspirator on which the improved alarm or signal device is used. Extending vertically through the stem and a part of the casing above is a bore 3, having an upper contracted extremity 4 opening into the lower extremity of a steam-chamber 5, having a greater diameter than the said bore, the said chamber opening out through the upper end of the casing 1 and having screw-threads 6 at the upper extremity thereof to receive the lower supporting member or base-piece 7 of a whistle 8 of usual construction, the said base-piece being formed with a steam-passage 9 and a deflecting-cup 10 to cooperate with the lower tubular member 11 of the whistle-stem or upright 12, having a deflector 13 in operative relation to the lower edge of a whistle-bell 14.

The upper contracted extremity of the bore

3 forms a valve-seat with the lower extremity of the chamber 5, and on said seat a ball-valve 15 closely rests and is free to be elevated in the chamber. To prevent the ball-valve 15 from moving upwardly too great a distance within the chamber 5, a stop 16 extends transversely through the casing 1 into said chamber and is in the form of a screw-bolt. When it is desired to clean the casing 1, the screw-bolt 16 may be removed and the base 7 detached, thereby permitting the ball-valve to roll outwardly from the chamber 5 and render the bore 3 and said chamber fully accessible for cleansing purposes.

When the injector or inspirator "kicks" or becomes stopped up so that it will not work, the steam will be forced backwardly through the suction-pipe and enter the casing 1 through the bore 3 and raise the ball-valve 15 and then pass upwardly through the chamber and operate the whistle. As soon as the steam-pressure in the casing 1 has become expended the ball-valve 15 will drop back to its seat and closes the said chamber 5 and the bore 3.

The advantage of the present alarm device and the mode of application thereof is that it notifies an attendant or engineer at a time previous to the ordinary low-water signals, and it has been frequently found that the low-water signals operate too late to avoid injury to a boiler. It will be observed that the present whistle-signal and alarm has but one valve and that controls the passage of the steam through the casing 1. The whistle itself is without a valve, and by this means the operation of the improved device is rendered more sensitive.

To accommodate different applications, changes in the form, proportions, and minor details may be resorted to without departing from the spirit of the invention.

Having thus fully described the invention, what is claimed as new is—

An alarm device or indicator comprising a casing having opposite screw-threaded ends provided with an opening passing centrally through both ends of the same, said opening being constructed of two different diameters having at their intersections a concave valve-seat, a cup secured to the upper end of the

casing having an opening therein communicating with the opening of said casing, a stem having a screw-threaded tube at its lower end provided with openings therein, said tube being
5 secured to the cup and communicating with the opening in the base of the cup, a deflector mounted on the tube and inclosed within the cup, a whistle, and a ball-valve loosely mounted in the concave valve-seat, and means
10 extending through the side of the casing and

into the larger portion of the opening therein, whereby to regulate the upward movement of the ball, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM PUCKETT.

Witnesses:

A. C. FENN,

S. I. ROSE.