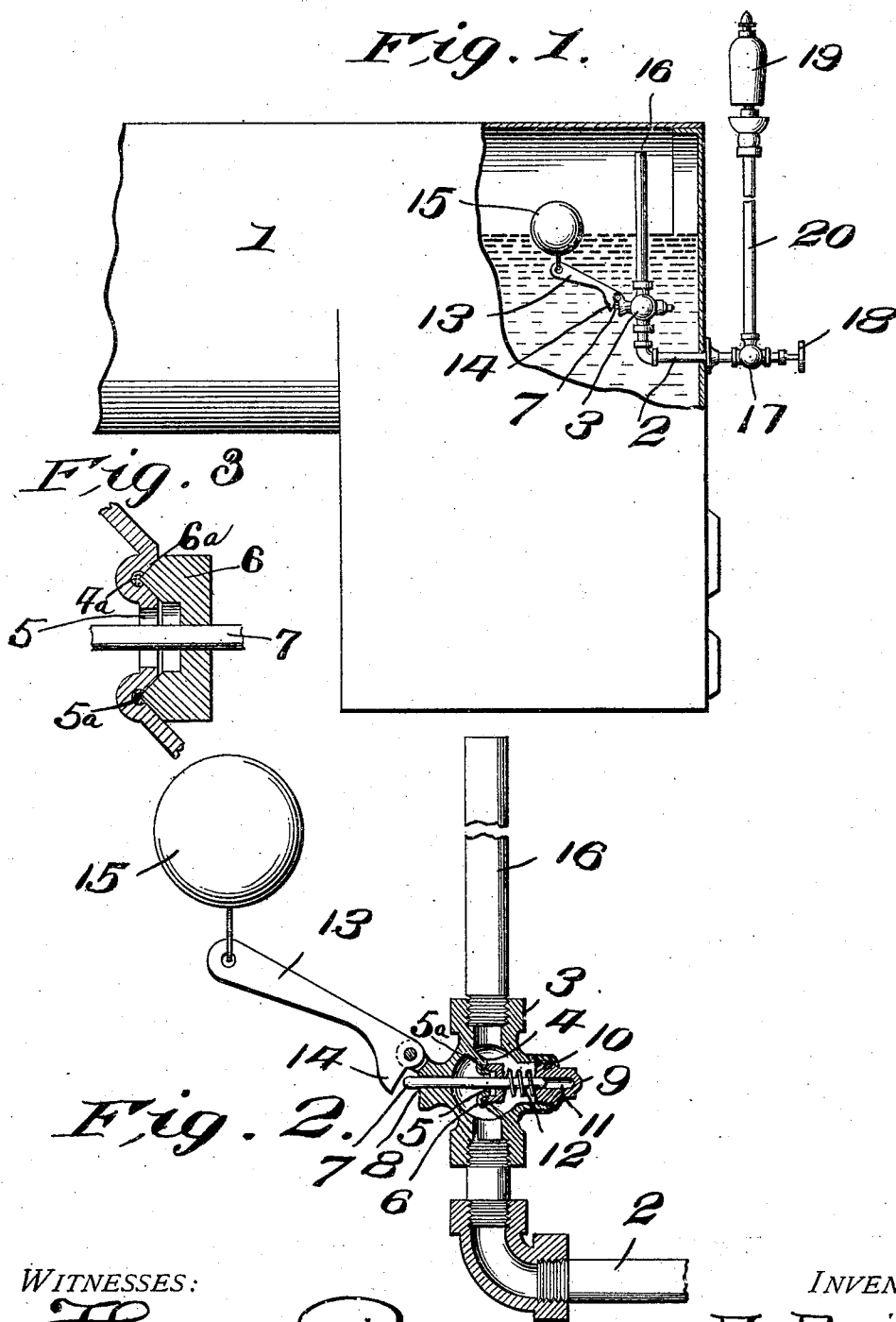


E. PARISH.
ALARM FOR BOILERS.
APPLICATION FILED AUG. 6, 1907.

929,478.

Patented July 27, 1909.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ERNEST PARISH, OF MILFORD, NEW YORK.

ALARM FOR BOILERS.

No. 929,478.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed August 6, 1907. Serial No. 387,385.

To all whom it may concern:

Be it known that I, ERNEST PARISH, a citizen of the United States, residing at Milford, in the county of Otsego and State of New York, have invented certain new and useful Improvements in Alarms for Boilers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to new and useful improvements in alarms for boilers, whereby the alarm will be sounded when the water has reached a pre-determined low mark in the boiler.

My object is to provide a valve and means whereby the valve will be operated and an alarm sounded when the water in the boiler reaches a pre-determined low water limit.

In the accompanying drawings I have shown the preferred form of my invention, and, in said drawings, Figure 1 is a side elevation of a boiler with portions thereof broken away showing my improved device in position. Fig. 2 is a detail sectional view showing the arrangement of the valve and operating mechanism therefor. Fig. 3 is a detail sectional view of the valve and valve seat.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 indicates a boiler, through which extends a pipe 2, to which is connected in any preferred manner my improved valve housing 3. A diaphragm 4 extends across the housing 3 and has an opening 5 in the center thereof. A groove 4^a is formed at the edge of the opening and has packing 5^a therein against which the valve 6 is adapted to be seated. The sides of the groove 4^a are outwardly tapered as shown at 6^a so that said sides will coincide with the tapered faces of the valve 6. The packing 5^a is preferably formed of a resilient material so that should any foreign particle rest between the sides of the valve seat and faces of the valve, the packing would expand and bear against the end of the valve, thus effectually closing the opening to prevent the escape of steam. The valve 6 has a stem 7 extending there-through, one end of which projects through an opening 8 in the housing.

I have provided means whereby the valve may be readily removed from the housing 3,

comprising a cap 9, which is adapted to be secured in an opening 10 in the side of said housing. The cap 9 is provided with a bore 11, into which takes the opposite end of the stem 7. A spring 12 is disposed around said stem 7 between the valve 6 and cap 9 and serves to normally hold said valve 6 against the valve seat in the diaphragm 4.

An arm 13, having a depending finger 14 is pivotally secured to the side of the housing 3, so that when the arm 13 is depressed, the finger 14 will engage the stem 7 and open the valve. The arm 13 is of sufficient weight to operate the valve 6 when allowed to descend, said arm being normally held in an elevated position by a suitable float 15, but when the water descends in the boiler, the arm 13 will operate the stem 7. A pipe 16 is connected to the upper end of the housing 3 and extends adjacent the top of the boiler.

It will thus be seen that when the water in the boiler is exhausted, or used so that the float 15 will be lowered sufficiently to open the valve 6, the steam will enter the top of pipe 16 and pass down through the open valve 6 and thence through the pipe 2 and an open valve arranged within the housing 17 to the whistle, thus at once notifying the engineer or attendant that a new supply of water should be delivered to the boiler.

Believing that the construction and operation of my improved safety attachment for boilers has thus been made clearly apparent, further description is deemed unnecessary.

What I claim is:

A device of the character described, comprising a valve, a housing therefor subdivided by a partition having an apertured right lined portion and formed at the edges of the latter portion with oppositely extending inclined portions, having an annular seat-groove therein, said annular seat-groove having therein an elastic cushion, said seat-groove being approximately circular in cross section, and said valve having a lower member formed with upwardly tapering portions, said tapering portions engaging said elastic cushion.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ERNEST PARISH.

Witnesses:

CASSIUS MAPLES,
LINN A. MAPLES.