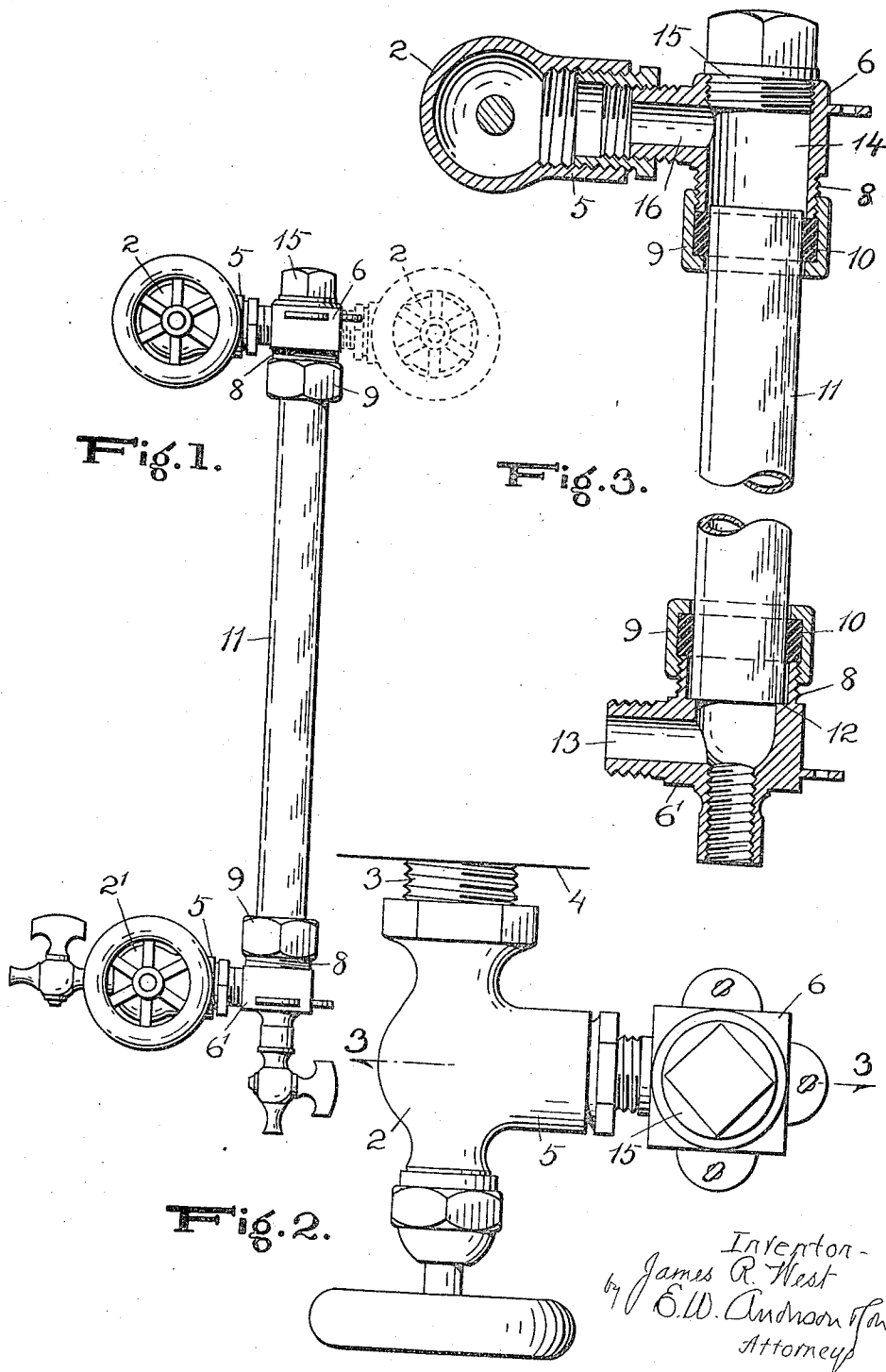


1,307,225.

J. R. WEST.
WATER GAGE.
APPLICATION FILED OCT. 5, 1918.

Patented June 17, 1919.



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UNITED STATES PATENT OFFICE.

JAMES R. WEST, OF MORENCI, ARIZONA.

WATER-GAGE.

1,307,225.

Specification of Letters Patent.

Patented June 17, 1919.

Application filed October 5, 1918. Serial No. 257,008.

To all whom it may concern:

Be it known that I, JAMES R. WEST, a citizen of the United States, resident of Morenci, in the county of Greenlee and State of Arizona, have made a certain new and useful Invention in Water-Gages; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a side view of the invention.

Fig. 2 is a plan view of the same.

Fig. 3 is a section on the line 3—3, Fig. 2, with parts broken away.

The invention has relation to water gages, having for its object to provide a device of simple construction, which is capable of being adjusted to receive a horizontal glass or a vertical glass and to fit the conditions wherein the boiler connections are not vertically or horizontally alined, the gage being adapted to take either of two lengths of glasses, and adapted to admit of the closing of the valves leading to the boiler in case of breakage of the gage glass.

The invention consists in the novel construction and combinations of parts, as hereinafter set forth.

In the accompanying drawings, illustrating the invention, the numerals 2, 2' designate globe valves, spaced apart and having respectively connection with the upper and lower ends of a water column or boiler, nipples 3, 3' of the valves being screwed into the boiler shell 4.

Each valve has at one side thereof a lateral extension 5 of its valve chamber, adapted upon the opening of the valve to allow passage of the water from the boiler through the extension. Connected with the lateral extensions 5 of the two valves are upper and lower heads 6, 6', each chambered to communicate with the passage of the tubular extension 5, and having each a screw-threaded tubular extension 8, respectively upper and lower and extending toward each other. Upper and lower nuts 9 are threaded

upon the extensions 8, and each nut is provided with a packing insert 10, with which the gage glass 11 engages.

The lower head 6' is provided with a shoulder 12, annularly around its vertical bore and located above the horizontal bore 13 of the said head, to limit the downward movement of the glass or to avoid possibility of the glass moving downward at its lower end to close the communication of the boiler therewith.

The upper head 6 has a vertical bore 14, which is about the same or a trifle larger diameter than the external diameter of the gage glass, to admit of the glass being inserted or slid therethrough into engagement with the vertical bore of the lower head 6'. The glass being inserted into position engaging both heads, an upper plug 15 is screwed into the upper end of the bore of head 6, to close the same, said plug terminating at its lower end short of the horizontal bore 16 of the upper head. The distance between the packing insert 10 of the nut 9, engaging the upper extension, and the horizontal bore 16 of the latter is sufficient to admit of the use of a gage glass of either of two different lengths, the extra length of the longer glass extending from the packing insert of the upper nut toward the horizontal bore 16 of the extension aforesaid, and terminating short of said extension, and in the case of a shorter glass the engagement therewith of the packing insert of the upper nut being sufficient to hold it.

I claim:

In a water gage, upper and lower valves spaced apart and having at their inner ends connection with the upper and lower portions of the water column of a boiler, the casing of each valve having a lateral tubular extension, upper and lower tubular heads having each a lateral extension communicating with the lateral extension of the respective valve casing, said heads having tubular projections extending toward each other, nuts threaded upon said extensions and bearing each a packing insert, the lower head having an annular shoulder located above the bore of the lateral extension thereof and the up-

per head having a vertical bore of slightly larger diameter than the external diameter of a gage glass, a removable plug threaded into the upper end of the bore of the upper head and a gage glass engaging the packing inserts of the upper and lower nuts, the distance between the bore of the lateral extension of the upper head and the packing insert of the corresponding nut being suffi-

cient to admit of the use of gage glasses of 10 two succeeding standard sizes.

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

J. R. WEST.

Witnesses:

W. C. CONNORS,
L. E. SHIRLEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."