A. MILLER.

BULL'S EYE WATER GAGE FOR STEAM BOILERS.

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1,058,452. **Patented Apr. 8, 1913.**

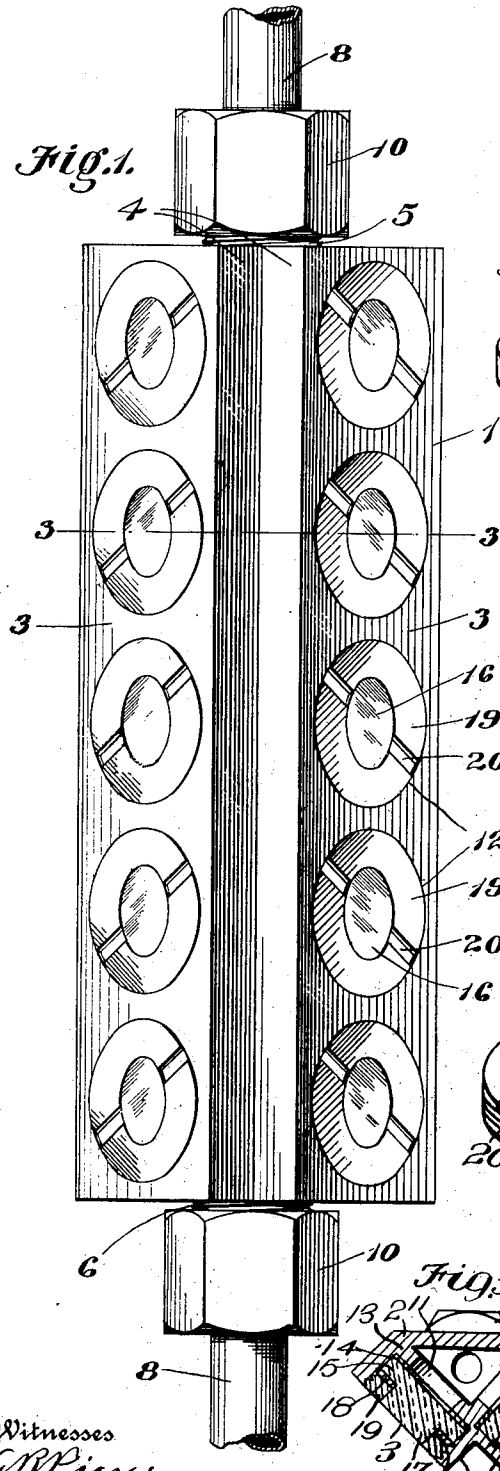

Fig. 1.

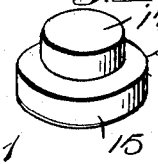

Fig. 4.

Fig. 2.

Fig. 5.

Fig. 3.

Witnesses

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ALONZO MILLER, OF EAST ST. LOUIS, ILLINOIS.

BULL'S-EYE WATER-GAGE FOR STEAM-BOILERS.

1,058,452. Specification of Letters Patent. Patented Apr. 8, 1913.

Application filed October 21, 1911. Serial No. 655,933.

To all whom it may concern:

Be it known that I, ALONZO MILLER, a citizen of the United States, residing at 1115 Lynch avenue, East St. Louis, in the county of St. Clair and State of Illinois, have invented a new and useful Bull's-Eye Water-Gage for Steam-Boilers, of which the following is a specification.

The present invention relates to improvements in water gaging tubes for locomotive boilers; the primary object being to so construct the gage and arrange the same with relation to the boiler that the water level within the same will be readily perceptible from any point within the locomotive cab, and thus the water level of the boiler will, at all times be under the observation of either the engineer or of the fireman of the locomotive.

I propose to provide a gage having right angularly arranged faces, each of which being formed with threaded openings for the reception of sight glasses; simple and effective means, comprising ring nuts and washers being employed for removably securing the sight glasses to the gage tube.

I also aim to provide a water gage which may be easily and quickly attached, and which will not require the employment of gaskets, packings or the like, and the necessary adjustment or replacing of the same.

With the foregoing objects in view and others which will appear as the invention is more fully understood, the improvement resides in the construction, combination and arrangement of parts set forth in the following description, and falling within the scope of the appended claims.

In the drawing, Figure 1 is a front elevation of a gaging tube constructed in accordance with the present invention. Fig. 2 is a central vertical sectional view through the same. Fig. 3 is a horizontal sectional view upon the line 3—3 of Fig. 1. Fig. 4 is a perspective view of one of the sight glasses. Fig. 5 is a similar view of one of the ring nuts.

Referring now to the drawings in detail, the numeral 1 designates a water gage tube which I preferably construct in substantially the form of a triangle in cross section, in order to provide the tube with a sight back 2 and inclined sides 3. The central portion of the front of the tube is provided with a depressed portion, the same embodying walls 4, each of which being arranged at a direct right angle to the inclined sides or faces 3. Both of the upper and lower faces of the tube are provided with threaded pipe extensions 5 and 6, the same communicating with the hollow body of the tube, and these pipe extensions have their mouths provided with annular depressions forming sides for enlarged annular heads 7 provided upon the pipe members 8 which communicate with the boiler. The heads 7 opposite their annular enlargements provide shoulders, the same adapted to co-act with shoulders 9 provided by interiorly threaded nipples 10, the same co-acting with the pipe extensions provided upon the tube. By such an arrangement it will be noted that the annular heads of the pipe members 8 will be forced tightly upon the seats provided by the pipe extensions of the tube, so that the necessity of the employment of washers is effectively overcome.

The side faces 3 of the tubing 1 are each formed with a plurality of threaded depressions, and the bore of the tube is provided with reduced openings 11 which communicate with the said threaded depressions, which may be designated by the numeral 12. By this arrangement it will be noted that each of the depressions is formed with a shoulder 13, and adapted to be positioned upon this shoulder is a washer 14, the same adapted to be contacted by the enlarged rounded inner portion 15 of a sight glass 16. Each of the sight glasses has a reduced annular extension 17 to provide a shoulder at its juncture at its enlarged portion 15, and this shoulder is adapted to receive a gasket 18.

The numeral 19 designates the ring nuts which are adapted to coact with the threaded depressions, and to force the sight glasses tightly within the depressions. The outer face of each of the rings 19 is provided with oppositely arranged depressions 20, the same being adapted to receive a suitable instrument, which, when manipulated will permit of the withdrawal of the ring nuts or the insertion thereof within the depressions.

By a construction as above described it will be noted that the device, when positioned upon the boiler of the locomotive will permit the fireman, who by the way, it may be stated assumes a position upon one side of the cab, to readily determine the level of the water and also that the opposite right-

angular face of the tube is always within view of the engineer whose position is upon that side of the cab opposite the fireman.

Having thus described the invention, what I claim is:—

1. A water gaging tube for locomotive boilers having right angular faces, each of the faces being provided with threaded depressions which terminate in a flange that has an opening communicating with the bore of the tube, a washer for the flange, a sight glass comprising a shoulder member adapted to abut with the washer, a second washer for the shoulder of the member, a ring nut for the threaded depressions, and adapted to compress the washer upon the shoulder of the sight glass, and the said ring nut having a smooth outer face provided with oppositely disposed depressions, substantially as and for the purpose set forth.

2. A water gaging tube for locomotive boilers comprising a member having angular front faces, the central portion of the tube being depressed to provide walls which are arranged at an angle to the inclined faces, the inclined faces of the said tube being provided with a plurality of removable sight glasses, the top and bottom of the tube having pipe extensions, the mouths of which having annular depressions, pipe members having headed annular ends adapted to engage within the annular depressions and interiorly threaded flanged nipples for engaging the threaded pipe extensions of the tube and for forcing the heads of the pipe members within the depressed mouths provided by the pipe extensions of the tube.

ALONZO MILLER.

Witnesses:
GUS CURRY,
GEO. HOOK.