

(No Model.)

M. W. ILES.
TUYERE.

No. 497,072.

Patented May 9, 1893.

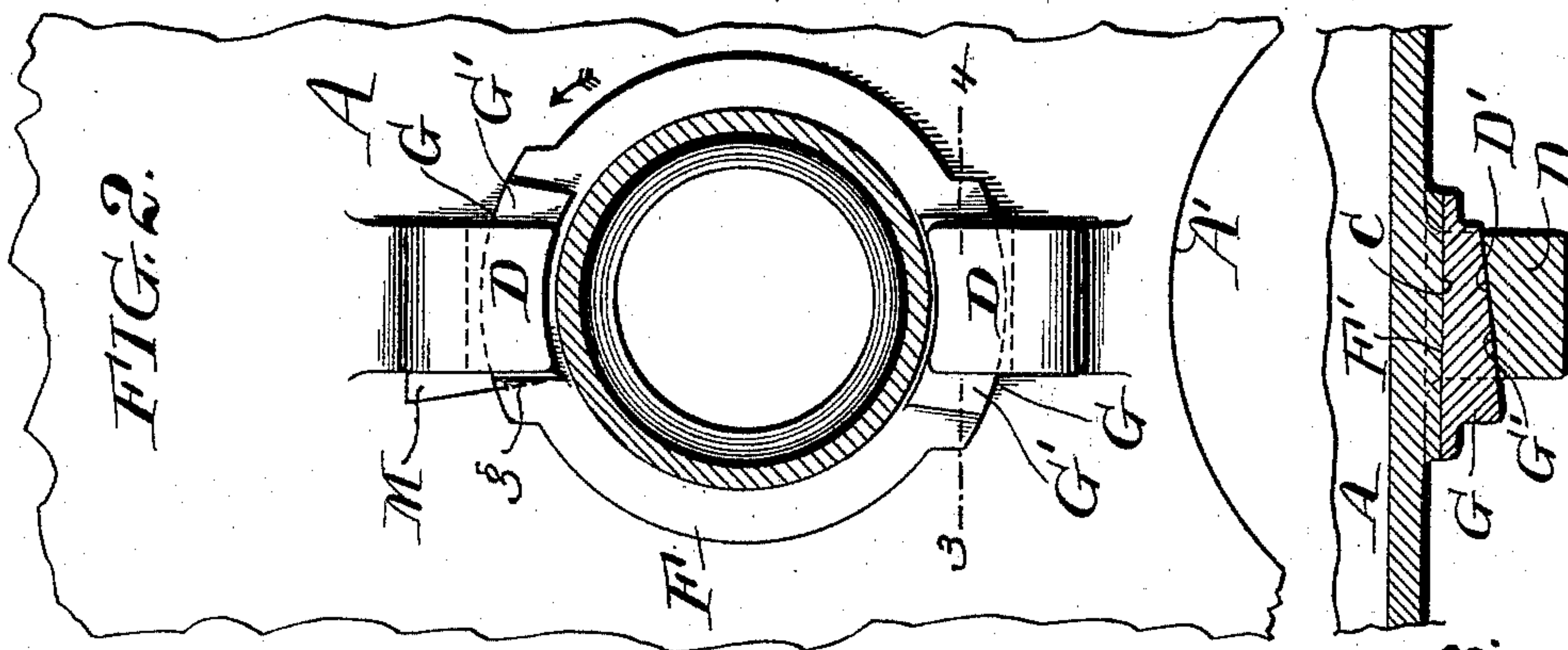


FIG. 2.

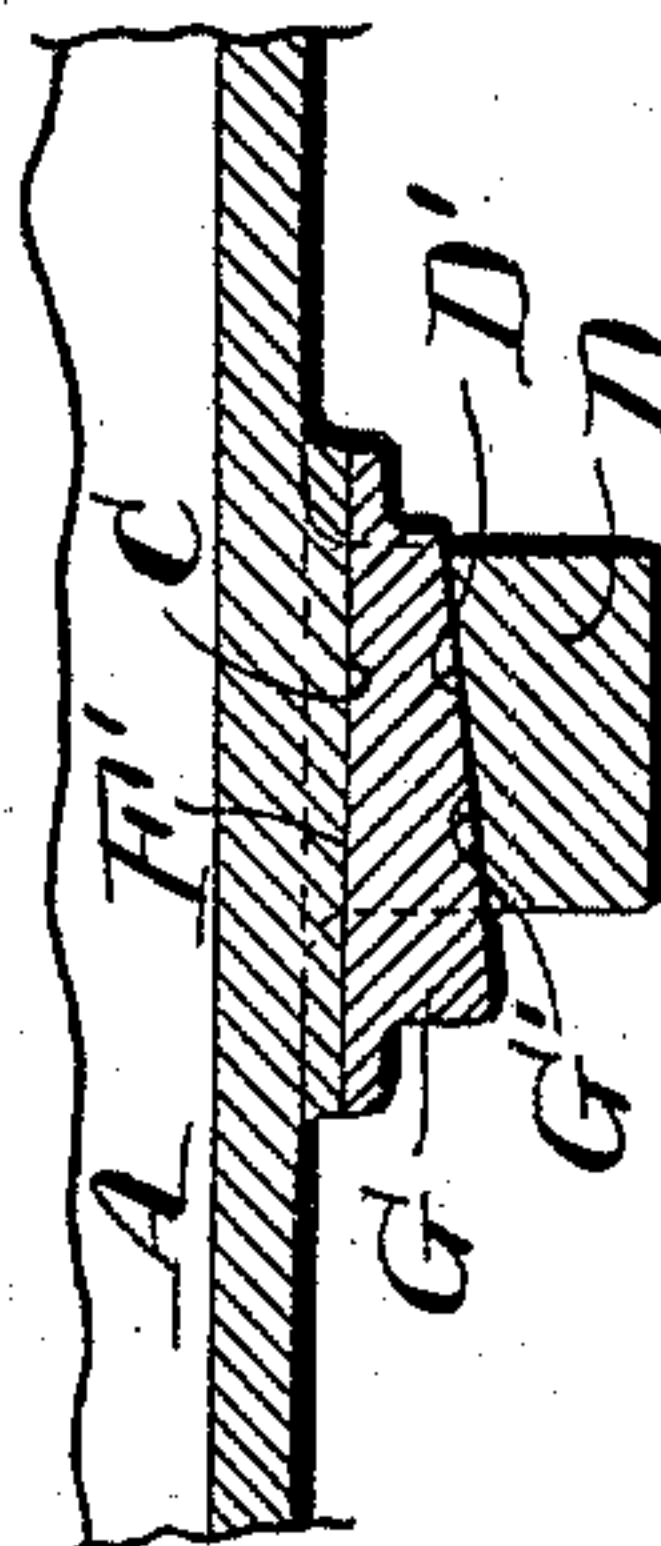


FIG. 3.

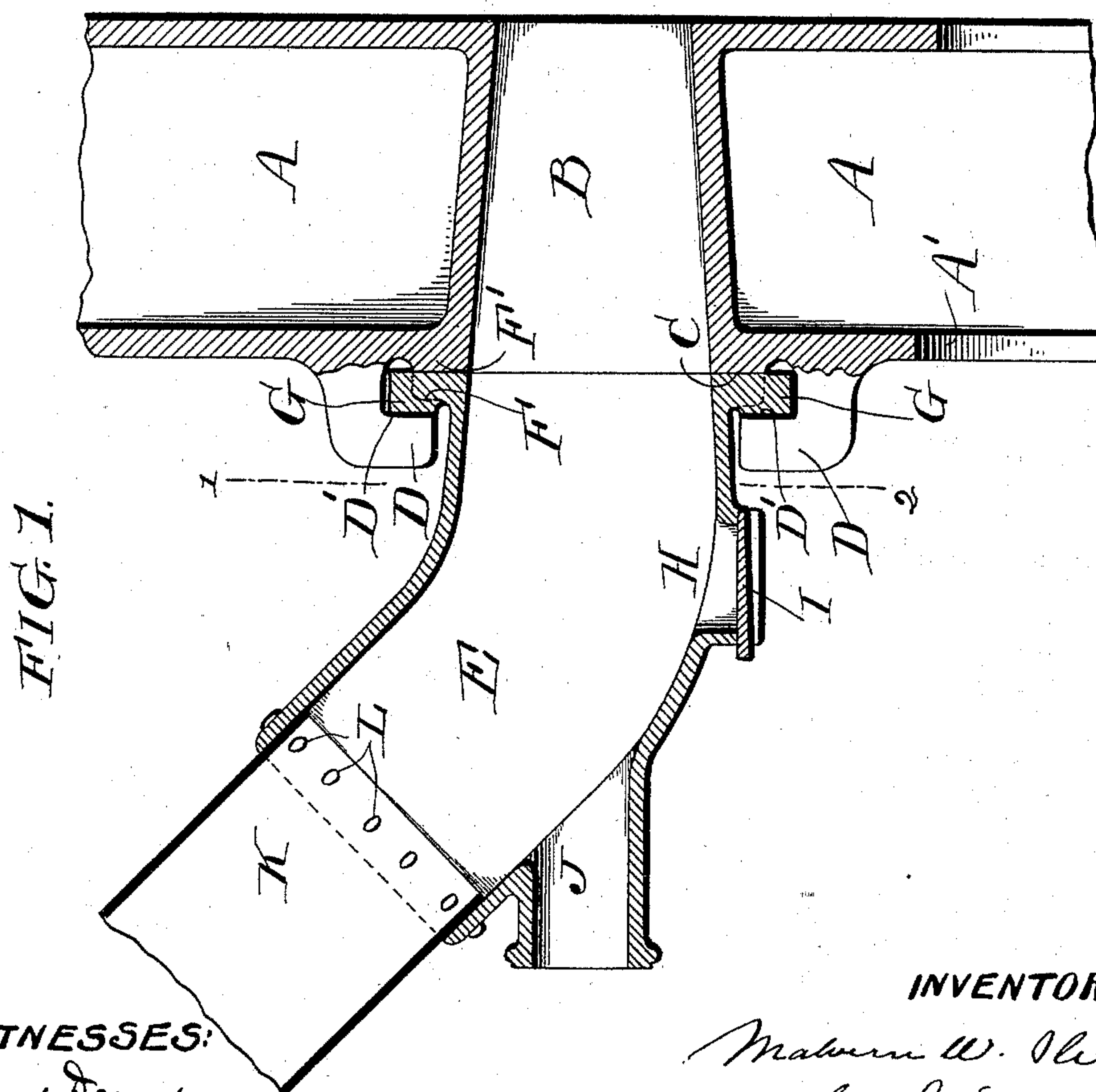


FIG. 1.

WITNESSES:

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UNITED STATES PATENT OFFICE.

MALVERN W. ILES, OF DENVER, COLORADO.

TUYERE.

SPECIFICATION forming part of Letters Patent No. 497,072, dated May 9, 1893.

Application filed August 27, 1892. Serial No. 444,301. (No model.)

To all whom it may concern:

Be it known that I, MALVERN W. ILES, of Denver, county of Arapahoe, State of Colorado, have invented a certain new and useful Improvement in Tuyeres, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to tuyeres and has for its object to provide improved means for securing them in place on the water jackets with which they are used.

The nature of my invention will be best understood as described in connection with the drawings in which it is illustrated, and in which—

Figure 1 is an elevation showing a longitudinal central section of the tuyere and the water jacket to which it is attached. Fig. 2 is a sectional view taken on the line 1—2 of Fig. 1, and Fig. 3 is a section on the line 3—4 of Fig. 2.

A is the water jacket which I form with an air passage B extending through it as shown, the outer rim of said passage being faced as shown at C, and lugs D D being provided on opposite sides of the passage B and formed with inwardly projecting arms, the inner faces of which are preferably made oblique or wedge-shaped as shown at D', Fig. 3.

E is the tuyere which I provide with a faced rim F, the face F' of which is adapted to fit against and form a joint with the face C of the passage B, and on opposite sides of the rim F I form lugs G having oblique or wedge-shaped faces G' adapted to fit against the inner faces D' of the lugs D. The lug G which is adapted to come uppermost is as shown provided with a tapered perforation as indicated in dotted lines in Fig. 2.

To place the tuyere in position it is turned sidewise, in which position it can be easily

slipped between the lugs D D and seated on face C. It is then turned upward in the direction indicated by the arrow in Fig. 2 so that the lugs D' will pass beneath the arms of lugs D and press against them wedging the tuyeres tightly against the face C and forming a tight joint therewith.

It is advisable to have some locking device to prevent the tuyere from turning after it is firmly seated, and for this purpose a wedge such as M can be employed, the wedge resting against the back of the upper lug D and entering a tapered perforation g on the corresponding lug G.

As shown the tuyere E is provided with a hole H at its bottom, said hole being closed by a combustible or fusible plate I; it has also a sight hole J and a sheet metal extension K secured to it by rivets L.

With the exception of the peculiar device for securing it to the jacket A the tuyere and its jacket A are similar to those shown in my pending application, filed June 6, 1892, Serial No. 435,595.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination with a water jacket A having a passage B formed through it and a face C on the outer side of said passage of cam lugs D secured to the outside of the water jacket around the face C, a tuyere E having a face F' adapted to form a point with face C and cam lugs G arranged to engage the lugs D and by wedging action therewith to force the faces C and F' together to form a tight joint and at the same time secure the tuyere to the water jacket.

MALVERN W. ILES.

Witnesses:

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