

No. 607,316.

Patented July 12, 1898.

F. V. WINTERS.
COUPLING NUT FOR STAND BOILERS.

(Application filed Sept. 25, 1897.)

(No Model.)

Fig. 1.

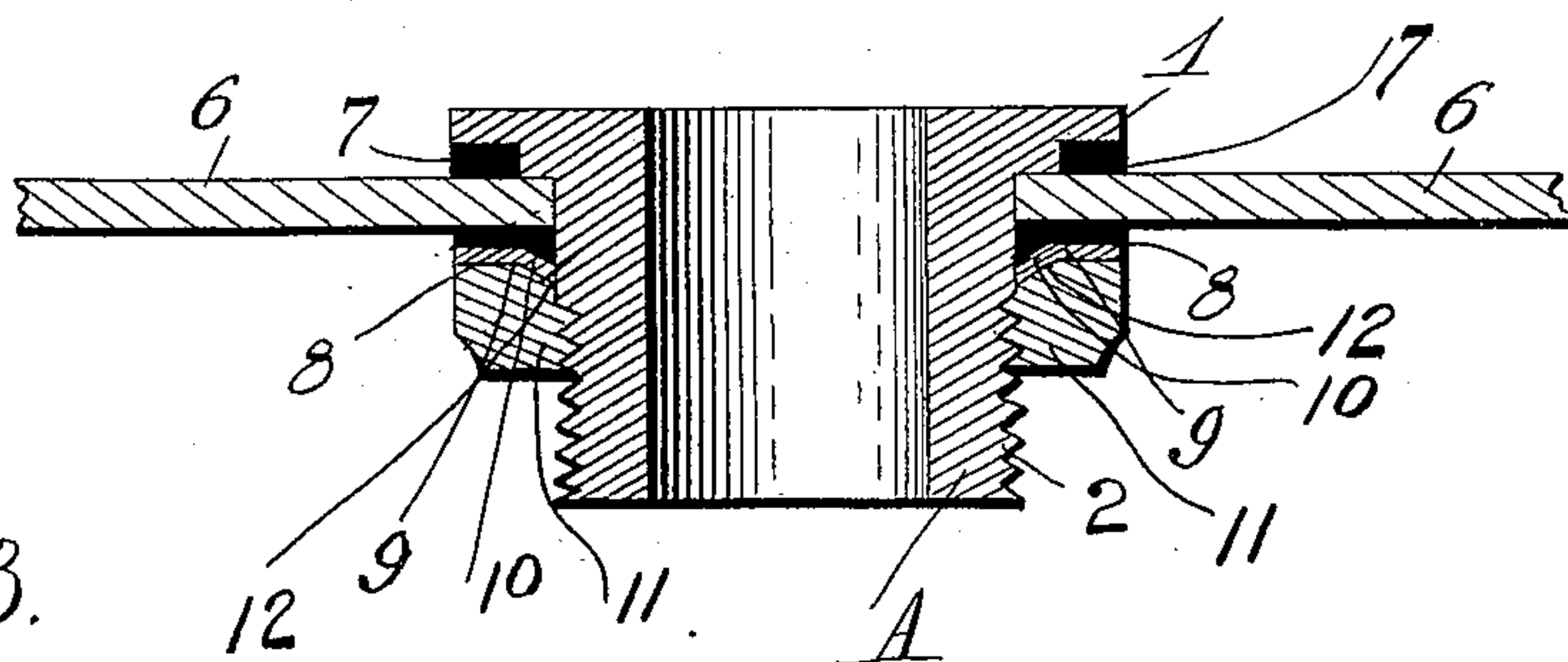


Fig. 3.

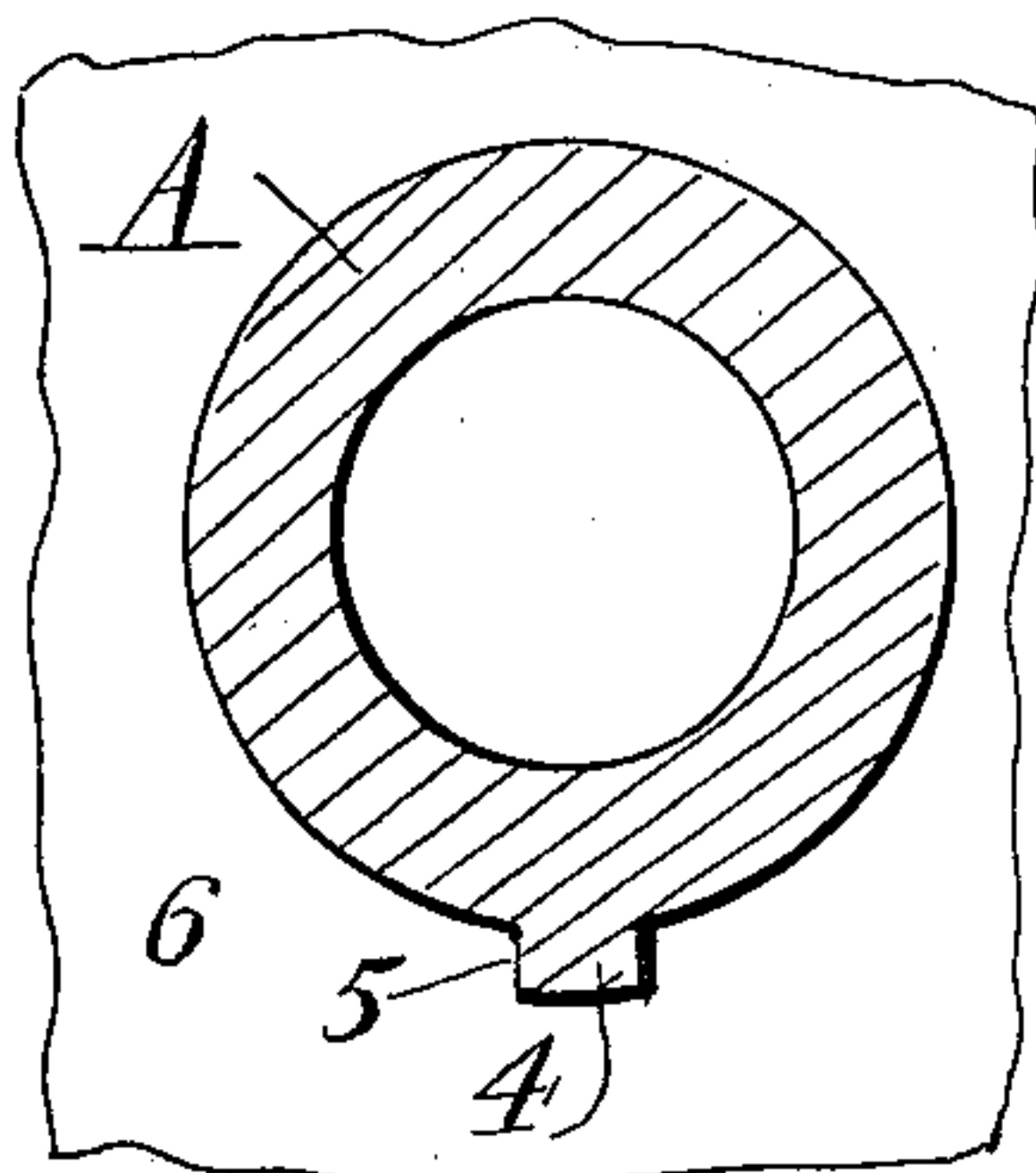
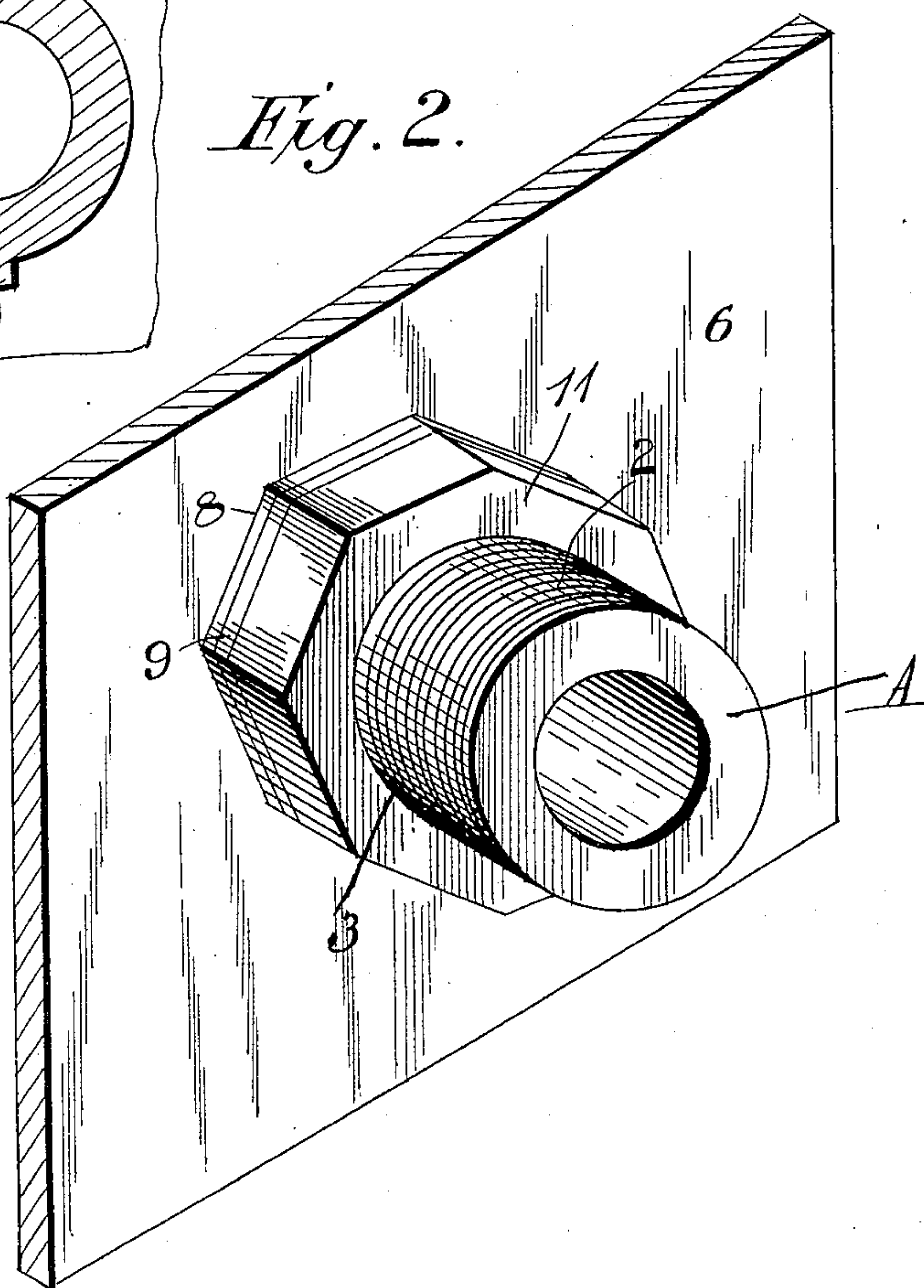


Fig. 2.



Witnesses
Frank L. Ourand.
Geo. H. Evans

Inventor
Fred V. Winters
by A. G. Heymann,
Attorney

UNITED STATES PATENT OFFICE.

FREDERICK VINCENT WINTERS, OF NEW YORK, N. Y.

COUPLING-NUT FOR STAND-BOILERS.

SPECIFICATION forming part of Letters Patent No. 607,316, dated July 12, 1898.

Application filed September 25, 1897. Serial No. 653,054. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK VINCENT WINTERS, a citizen of the United States of America, residing at the city of New York, in the State of New York, have invented a new and useful Coupling-Nut for Stand-Boilers and Similar Applications, of which the following is a specification.

My invention has relation to improvements in means for coupling and connecting pipes to boilers, especially for stand-boilers; and the invention consists of a flanged and shouldered sleeve, yielding metallic packing-washers, and a clamping-nut on the extending exterior portion of the sleeve, as will hereinafter be more specifically described, and particularly pointed out in the claim.

I have fully and clearly illustrated my invention in the accompanying drawings, to be taken as a part thereof, and wherein—

Figure 1 is a central vertical longitudinal section showing the pipe-joint section arranged in a boiler and held by the clamping-nut. Fig. 2 is a horizontal central section of the sleeve fitted in the boiler plate or shell. Fig. 3 is a sectional view through the sleeve on line with the face of the boiler, showing the locking-lug and corresponding seat or recess in the boiler-shell.

Referring to the drawings, A designates a sleeve, of suitable metal, made of such diameter and length as may be desired and adapted to have connected thereto any of the usual pipes leading to or from the boiler. On the inner end of the sleeve is formed an annular flange 1, which sets against the inner soft-metal packing. The outer end portion of the sleeve is provided with screw-threads 2, over which the threaded end of the pipe to be connected thereto engages. The body or shank of the sleeve, as at 3, is made circular in its exterior face, and at a proper place in its circumferential surface is formed with a lug 4, which is adapted to engage in a corresponding recess 5, formed in the shell of the boiler 6. The sleeve is fitted in an aperture in the boiler-plate, with the lug engaging in the recess 5, and is thus held against turning when the clamping-nut is turned up and also when the connected pipe is fixed thereto. On the sleeve, between the annular flange 1 and the inner face of the boiler, is arranged a soft-metal packing-washer 7, held against rotation by being formed with a recess to take

over the lug 4 on the sleeve, and on the sleeve, against the outer face of the boiler, is fitted another soft-metal washer 8, against which bears a hard-metal washer 9, preferably formed with an annular beveled flange 10 about the opening to give a sealing-pinch on the outer soft-metal ring by forcing the metal down tight on and about the sleeve and effecting a steam and water tight closure at the juncture of the parts.

11 designates the clamping-nut, having interior screw-threads, as shown, to engage those on the sleeve, and beveled or chamfered, as at 12, in its inner face adjacent to the sleeve to press the hard-metal washer 9 strongly against the outer soft-metal washer and effect a perfect sealing of the parts at the juncture with the boiler.

It will be perceived by reference to the foregoing description, taken in connection with the drawings, that the parts are assembled and secured in position by first placing the inner soft-metal washer over the sleeve against the annular head-flange and then placing the sleeve in the aperture made in the boiler, with the lug on the sleeve in the recess in the aperture, and then in succession placing the outer soft-metal washer and the hard-metal washer in position on the sleeve, and then screwing up the clamping-nut until the required sealing is effected.

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

The combination with a boiler formed with an aperture having a recess therein, of a coupling-sleeve formed with an annular head-flange, and a lug to engage in the recess of the aperture in the boiler, a soft-metal washer between the head-flange and the boiler, a soft-metal washer on the sleeve against the face of the boiler, a hard-metal washer having a beveled portion contiguous to the sleeve, and a clamping-nut formed with a beveled portion contiguous to the sleeve, whereby the metal of the soft washer is clamped tight about the sleeve and at the juncture with the boiler.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

FREDERICK VINCENT WINTERS.

Attest:

F. A. ONDERDONK,
JNO. A. YORK.