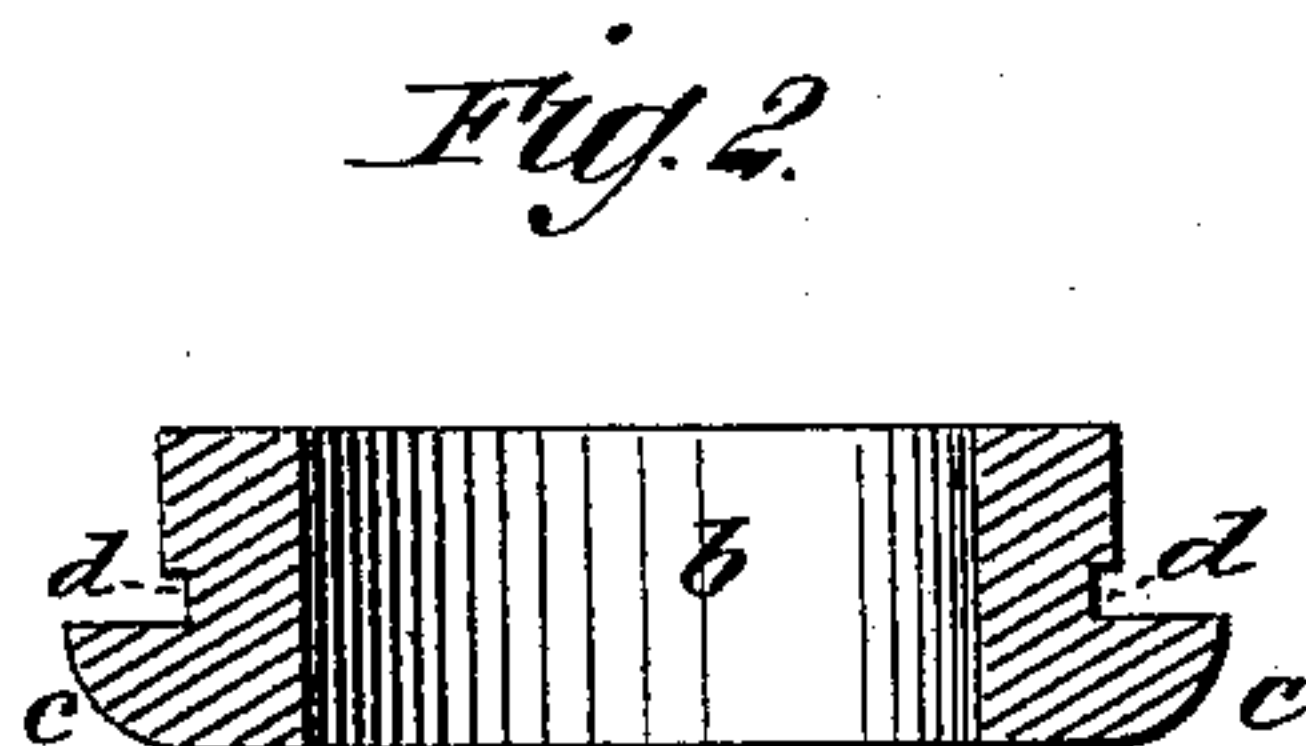
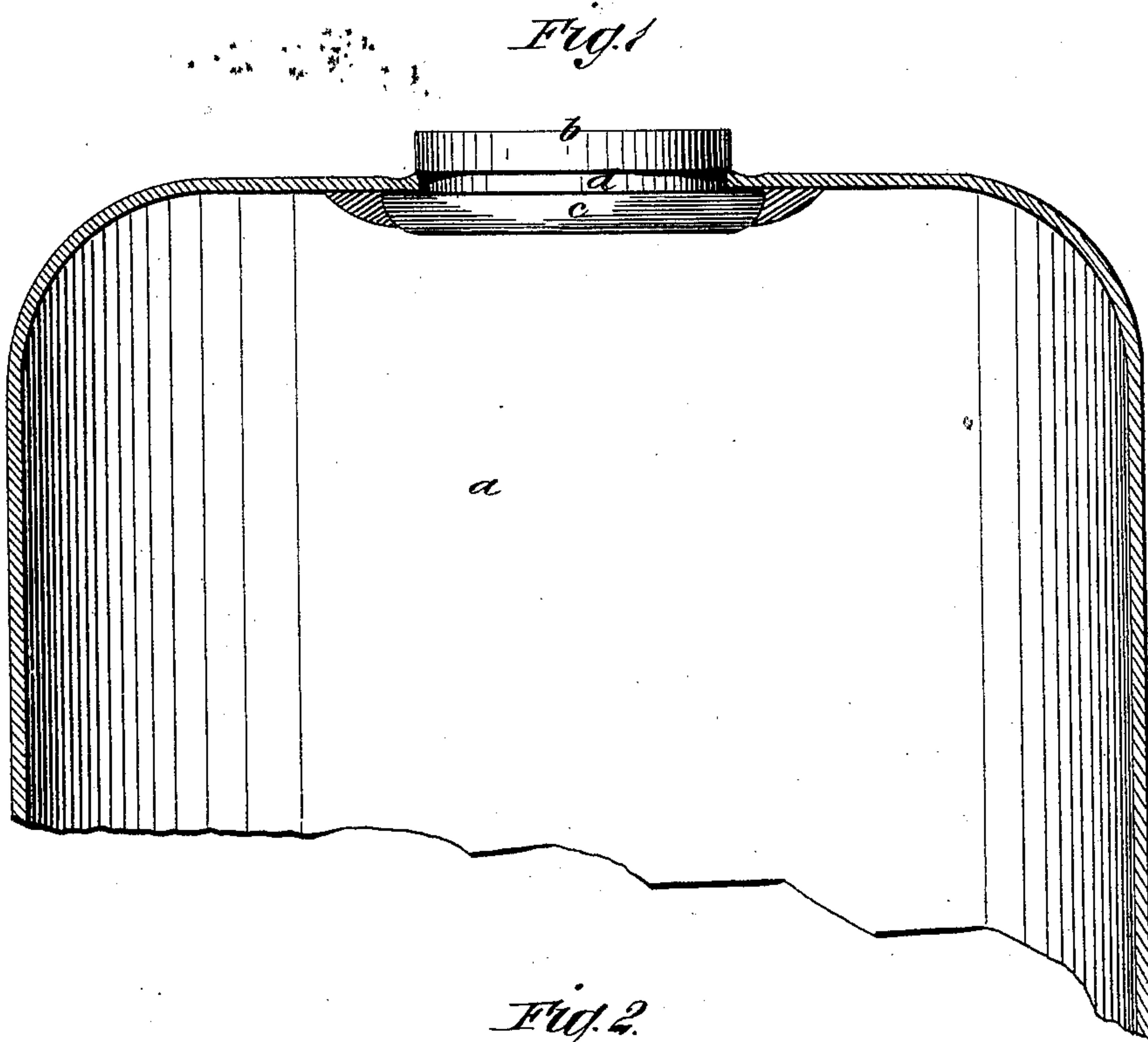


J. TRAGESER.  
Method of Connecting Spuds to Boilers.  
No. 210,476.                      Patented Dec. 3, 1878.



WITNESSES:  
*Francis M. Ordle*  
*C. Sedgwick*

INVENTOR:  
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BY *Thomson & Co.*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JOHN TRAGESER, OF NEW YORK, N. Y.

## IMPROVEMENT IN METHODS OF CONNECTING SPOTS TO BOILERS.

Specification forming part of Letters Patent No. **210,476**, dated December 3, 1878; application filed November 4, 1878.

### *To all whom it may concern:*

Be it known that I, JOHN TRAGESER, of the city, county, and State of New York, have invented a new and useful Improvement in Connecting "Spots" to Boilers, of which the following is a specification:

Pipes from water-boilers are usually coupled to screw-rings or spots, which are attached to the boiler-head. Such spots have been attached by riveting them to the boiler; but they are apt to get loose and leak at the joint.

The object of my invention is to connect the spots firmly and reliably, so that the joint will be perfectly water-tight.

The invention consists in a spot formed with an annular recess or cavity around its body, into which recess the edge of the opening in the boiler is calked and the joint afterward brazed.

In the accompanying drawing, Figure 1 is a section of a boiler-head with a spot attached in accordance with my invention. Fig. 2 is a section of the spot detached.

Similar letters of reference indicate corresponding parts.

*a* is a boiler of any usual or desired construction, such as is used in connection with water-backs, and *b* is the spot attached to the same. The spot *b* is in the form of a ring that

passes through an opening in boiler *a*, and it has a flange or head, *c*, that takes against the inner surface of the boiler.

Upon the exterior of the ring or spot *b*, next to flange *c*, there is cut an annular cavity or recess, *d*, which, when the spot is inserted into the boiler, is in the same plane with the edge of the opening, and the metal of the boiler at the edge of the opening is calked or worked with suitable tools into the cavity *d*. The joint is then brazed to make the connection perfectly water-tight.

By this manner of connecting the spot to the boiler I am enabled to make a perfectly tight and firm joint, which will not leak.

The projecting end of the spot will be cut with a thread, as usual, for coupling the pipes.

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

The improved method of attaching spots to boilers, consisting in forming a recess around the body of the spot, into which recess the metal of the boiler is worked and the joint brazed, substantially as shown and described.

JOHN TRAGESER.

Witnesses:

C. SEDGWICK,  
GEO. D. WALKER.