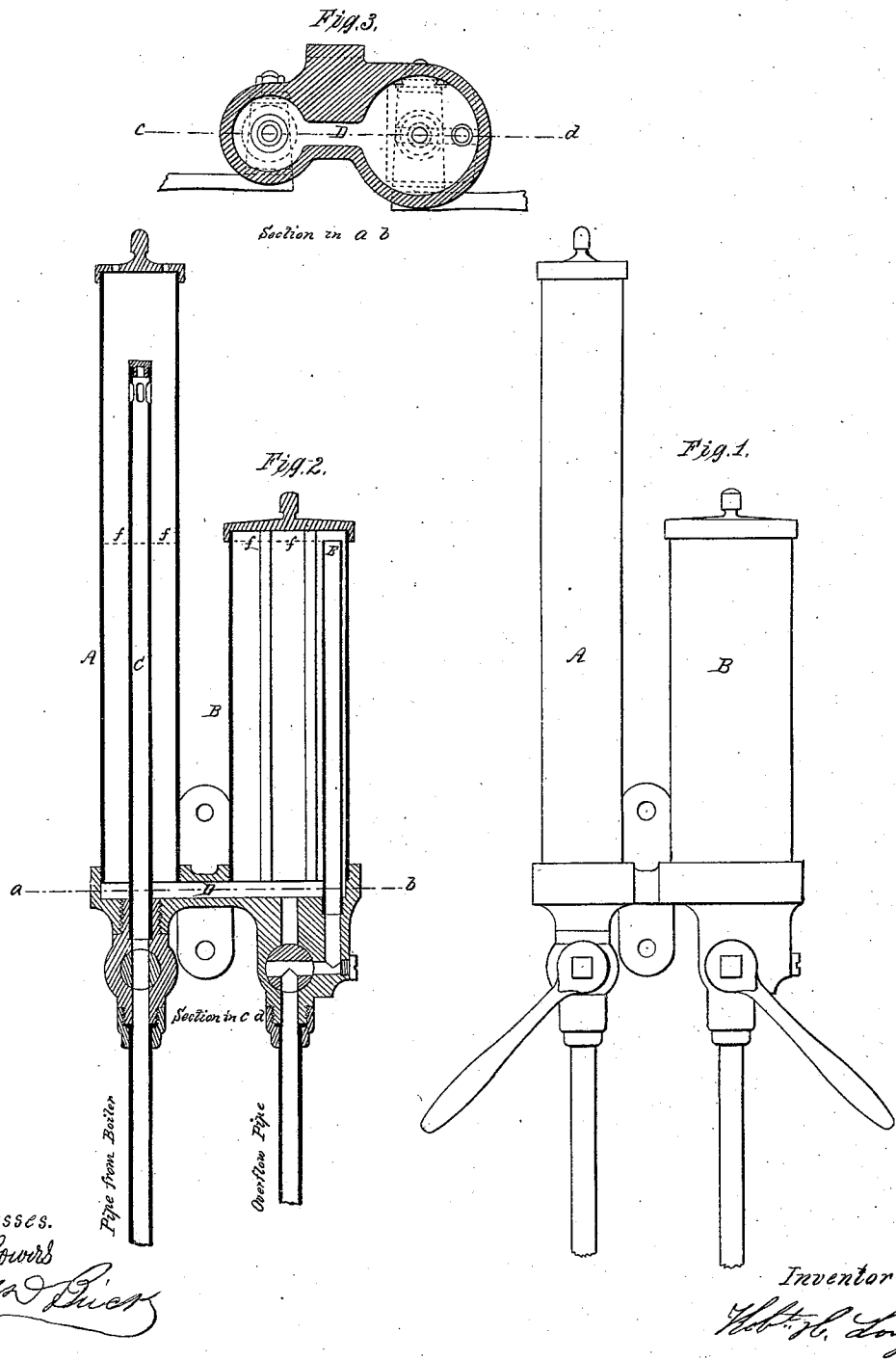


# R. H. Long.

## Salinometer Case.

N<sup>o</sup> 24,746.

Patented Jul. 12, 1859.



# UNITED STATES PATENT OFFICE.

ROBERT H. LONG, OF PHILADELPHIA, PENNSYLVANIA.

## SALINOMETER.

Specification of Letters Patent No. 24,746, dated July 12, 1859.

*To all whom it may concern:*

Be it known that I, ROBERT H. LONG, of Philadelphia, in the county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Salinometer-Cases for Steam-Boilers; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in the employment of a suitable size "brass or iron vessel" attached to the salinometer case "or cylinder containing a hydrometer for testing the density of water in steam boilers" for the purpose of preventing ebullition in the salinometer case as a means of safety, &c., and to facilitate the testing of the density of water in steam boilers.

By this improvement the frequent breaking of the glass gages or thermometer used with the salinometer cases, caused by the ebullition of the water in said case is "remedied", also preventing all accidents by scalding, &c., &c., and affording a great facility in testing more accurately the density of water in the boilers, as shall be hereinafter more fully described.

To enable others skilled in the art to make and use my invention I will now proceed to describe its construction and operation, reference being had by letters to the drawings forming part of this specification.

Figure 1 gives a perspective view of the salinometer case B, with improvement A. Fig. 2 gives a sectional view of same.

A is the brass or iron vessel, attached to the salinometer case B into which the water is first drawn by means of the pipe C terminating above the water line "f" which enables the water to free itself from the temperature above what is due to the boiling point, when under the atmospheric pressure, and allows it to gravitate into the vessel or horizontal pipe "A B" having a communication "D", and to rise calmly and quietly to the surface or overflow pipe "E", by which means water can be drawn from a steam boiler when the water is under any pressure and at any temperature without occasioning any ebullition whatsoever thereby securing safety in its use and giving great facility in the testing the density of water in the boilers, &c., &c.

Having thus fully described the nature and use of my improvement, I will proceed to state what I claim and desire to secure by Letters Patent.

I disclaim the salinometer case as patented by Wm. Sewell, Jr., February 6th, 1849; but

What I claim is—

The means of drawing into a vessel water from a steam boiler as a means to facilitate testing the density of water in the same; constructed and arranged for the purpose substantially as set forth.

In testimony I hereunto set my hand and seal.

ROBT. H. LONG. [L. s.]

Witnesses:

JACOB E. BOWERS,  
ALF. D. BRICK.