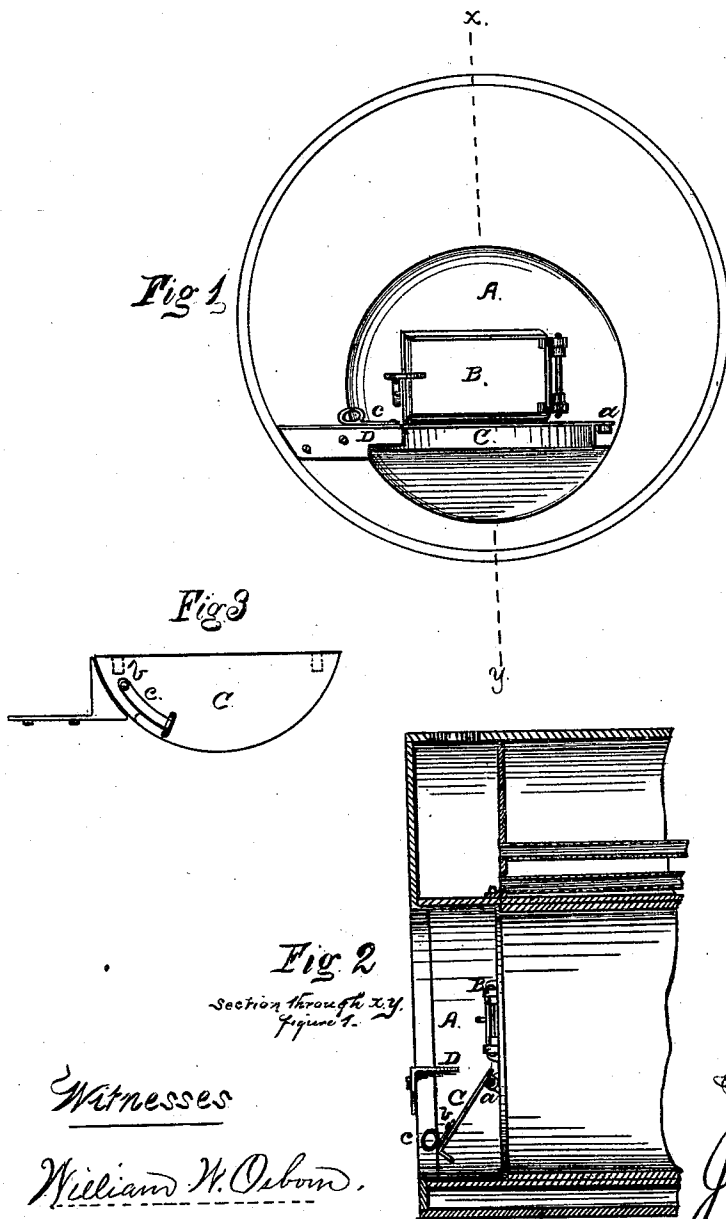


J. ENRIGHT.

DAMPER FOR RETURN TUBULAR BOILER.

No. 179,777.

Patented July 11, 1876.



Witnesses

William H. Osborn.

E. Patterson.

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UNITED STATES PATENT OFFICE.

JOSEPH ENRIGHT, OF SAN JOSÉ, CALIFORNIA.

IMPROVEMENT IN DAMPERS FOR RETURN TUBULAR BOILERS.

Specification forming part of Letters Patent No. **179,777**, dated July 11, 1876; application filed May 29, 1876.

To all whom it may concern:

Be it known that I, JOSEPH ENRIGHT, of San José, in the State of California, have invented an Improved Damper for Return Tubular Boilers, of which the following is a specification:

My invention relates to dampers for return tubular and other boilers; and it consists in making the damper of such form, and arranging it in such manner, that it can be permanently attached to the furnace front of the boiler, and properly operated to control the draft, the object of my invention being to support the furnace-door in an open position under any circumstances, and to prevent any liability of the damper becoming lost or misplaced, as frequently occurs in the case of portable engines and boilers having removable dampers.

Figure 1 of the accompanying drawing is an end view of the front end of a return tubular boiler with my invention applied thereto. Fig. 2 is a vertical section through the line *x y*, Fig. 1. Fig. 3 is a view of the damper separate from the boiler.

My invention consists in making the damper C of a semicircular form, or of the shape conforming to the curve of the front of the furnace A, and in hinging it in such manner below the door B that it can be raised and held up in position whenever desired, and also act as a support for the door when opened. The damper C is hinged at *a* to the face A of the boiler front, and is provided with a latch, *c*, pivoted to it at *b*, that is turned over to rest upon the support D when the damper is raised.

The position of the damper C is just below the lower edge of the door B of the furnace, so that it will act to support and keep the door from swinging to when the same is opened.

The front end of the damper-support D within the smoke-box or breeching is made of the same curve as the damper C, that the two may pass each other in raising the damper, and the support is secured to the face of the smoke box head to receive and hold the latch *c*, when the same is turned over upon it.

The form and position of these several parts and the position of the damper, both when lowered and when raised, are clearly shown in the drawing.

Heretofore, in the use of portable return tubular boilers, especially for agricultural purposes, much trouble and inconvenience have been occasioned by the loss of the damper in moving about from place to place, because, from the shape of the face of the fire-box, it has not been practical to hinge it or permanently attach it in place.

My invention removes these objections, and thus adds to the serviceable operation of these boilers. It further acts as a support for the furnace-door B, when, from the uneven nature of the ground, the boiler does not stand firmly, and the door cannot be kept open of itself.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent as being new therein, is—

In a return tubular boiler, the combination of the hinged damper C, the support D, and the latch *c*, whereby the furnace-door is supported in an open position, substantially as described and shown.

In witness whereof I have hereunto set my hand and seal this 18th day of May, A. D. 1876.

JOSEPH ENRIGHT. [L. s.]

Witnesses:

C. W. M. SMITH,
PHILIP MAHLER.