(No Model.)

W. T. LEVI.

BOILER SWEEPER.

No. 343,769. Patented June 15, 1886.

Fig. 1.

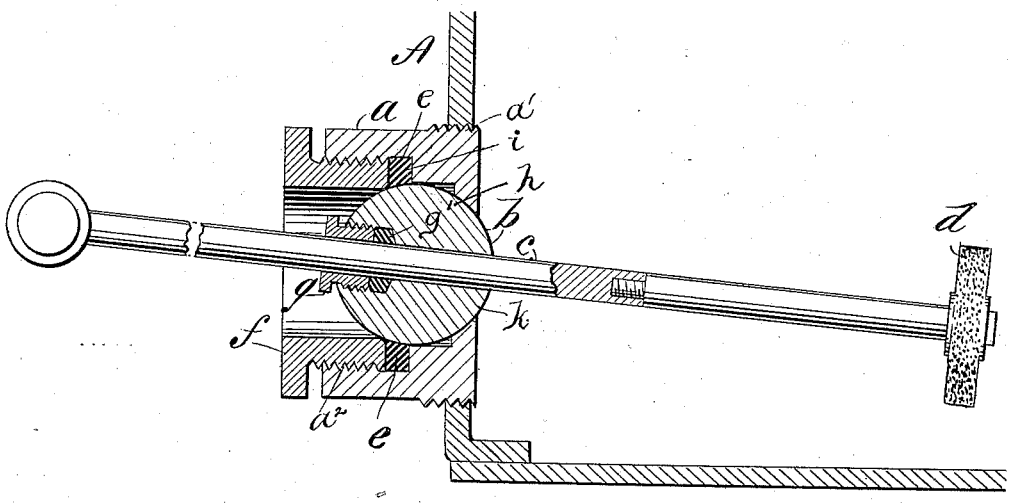
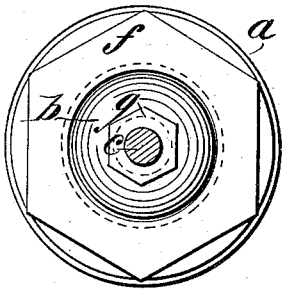


Fig. 2.



WITNESSES:

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WILLIAM T. LEVI, OF CHARLESTON, WEST VIRGINIA.

BOILER-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 343,769, dated June 15, 1886.

Application filed July 1, 1884. Serial No. 136,549. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. LEVI, of Charleston, in the county of Kanawha and State of West Virginia, have invented a new and useful Improvement in a Boiler-Sweeper Connection, of which the following is a full, clear, and exact description.

The object of my invention is to provide a sweeper for cleaning scales and sediment from boilers, tanks, and stills, that can be used while pressure is on; and it consists of the combination of parts, including their construction, substantially as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a sectional elevation of the connection as applied to a boiler, and Fig. 2 is a face view of the same with the rod in section.

Into a suitable screw-threaded aperture in the head of a boiler or still, A, and as near the bottom thereof as possible, is screwed the pivotal universal-joint connection for the sweeper-rod. My improved construction of this connection is illustrated in the drawings.

The box *a* is provided at its base with the external thread, *a'*, and at its open end with the internal thread, a^2. Below the thread a^2 the box is formed with an internal annular offset forming the annular shoulder *i*. In the bottom of the box *a* is a central circular aperture, *k*, and around this aperture is formed the concave seat *h*.

In the box *a*, and fitting the seat *h*, is a diametrically-apertured ball, *b*. A packing-gland, *g*, is provided for the aperture through the ball. The rod *c*, carrying the sweeping or scraping brush or head *d*, passes through the ball *b*, and packing *g'* makes a steam-tight joint around the rod. A screw-ring, *f*, the inner diameter of which is less than that of the ball *b*, is screwed into the open end of the box *a*. Between this ring and the shoulder *i* is a packing-ring, *e*. By this construction the ball is held steam-tight in the box. The ball thus seated is capable of universal movement to allow manipulation of the rod, and as the rod can also be slid endwise every portion of the bottom surface of the boiler can be reached and cleaned by brush *d*, and this sweeping operation can be performed when the boiler is in use or under steam-pressure, so that there need be no loss of time. For steamboats, where the boilers require frequent cleaning, that is a great advantage. The rod *c* is in sections screwed together, to allow of its being drawn out and disconnected to prevent its corrosion. The last section is to remain in the ball, with the brush drawn up, so as not to rest on the bottom and cause burning of the brush, and this section is made as short as possible, to prevent it projecting too far at the front of the head. This connection can readily be applied to any horizontal boiler and remain as a permanent attachment, ready for use at any time. It is preferably placed near the hand-hole plate.

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

As an improved article of manufacture, the universal-joint connection for a boiler-sweeper to a boiler, consisting of the box *a*, provided with the external screw-thread, *a'*, the aperture *k* in its base, the concave seat *h* around said aperture, the internal annular shoulder, *i*, and the internal screw-thread, a^2, above said shoulder, the ball *b*, diametrically apertured and provided with the packing-gland *g*, the externally-screw-threaded ring *f*, and the packing-ring *e*, substantially as described.

WILLIAM T. LEVI.

Witnesses:
W. H. FISHER,
L. E. MCWHORTER.