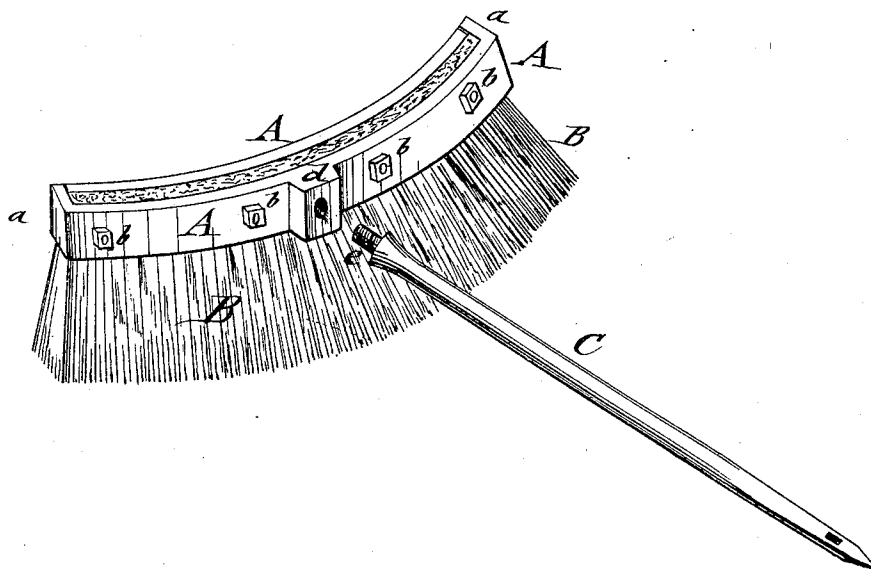


J. L. LLOYD.
BOILER CLEANER.

No. 176,018.

Patented April 11, 1876.



WITNESSES:

Chas. Nida
Alex F. Roberts

INVENTOR:

J. L. Lloyd
BY *Mumford*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN L. LLOYD, OF WILLIAMSTON, MICHIGAN, ASSIGNOR TO HIMSELF AND
OSCAR McCAUSEY, OF SAME PLACE.

IMPROVEMENT IN BOILER-CLEANERS.

Specification forming part of Letters Patent No. **176,018**, dated April 11, 1876; application filed
October 8, 1875.

To all whom it may concern:

Be it known that I, JOHN L. LLOYD, of Williamston, in the county of Ingham and State of Michigan, have invented a new and Improved Boiler-Cleaner, of which the following is a specification:

The accompanying drawing represents a perspective view of my improved boiler cleaner or broom.

The object of my invention is to provide a strong and durable broom for cleaning the dirt and sediments from the bottom of steam-boilers; and the invention consists of wood bristles clamped between arc-shaped and screw-connecting pieces that are screwed to a shank or handle to be operated in the boiler.

In the drawing, A represents the bristle-holding clamp-pieces, which are made in the shape of an arc of a circle, the main clamp-piece being provided with end lugs *a* for guiding the second clamp-piece, which is rigidly connected to secure the intermediate bristles B by connecting screw-bolts *b*. The bristles B are preferably made of wood, as this material is more pliable and durable than wire bristles, and as the wood bristles accommodate themselves more fully to the uneven parts of

the boiler, rivet-heads, &c. The main clamp-piece A is provided with a central socket, *d*, into which the shank *c* is inserted by a screw-thread, *e*, at its end. The shank *c* is attached to a handle of suitable length for applying the broom throughout the full length of the boiler-bottom. The broom is first inserted endwise, without the shank and handle, through the hand-hole plate, into the boiler, and then the shank screwed into it, for cleaning the boiler-bottom under the tubes and flues in an effective manner. The bristles are readily and cheaply replaced when worn out by detaching the binding clamp-plate, and I produce thus a simple, strong, and durable boiler-cleaning device.

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

A boiler-brush, made of an arc shape, and having handle-socket in the center of clamping-plate A, adapted to receive a detachable handle, as and for the purpose specified.

JOHN L. LLOYD. [L. S.]

Witnesses:

HARVEY HAMMOND,
G. O. WILLIAMS.