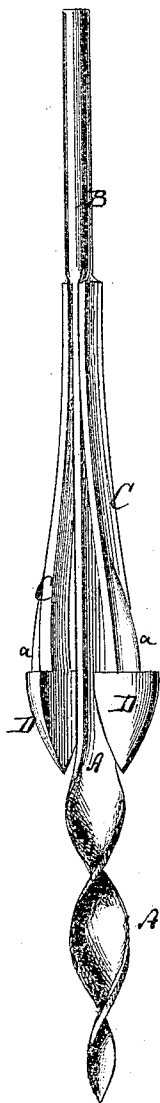


J. Green,

Boiler Tube Cleaner.

No. 105194.

Patented July 12. 1870.



Witnesses:

John Pecker.
E. S. Mabee

Inventor:

J. Green
PER *Munn & Co.*
Attorneys.

United States Patent Office.

JOHN GREEN, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 105,194, dated July 12, 1870.

IMPROVEMENT IN BOILER-TUBE CLEANERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, JOHN GREEN, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and improved Boiler-tube Cleaner; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

The drawing represents a side view of my improved tube-cleaner.

This invention relates to a new implement for cleaning boiler-tubes, and consists in the combination of two or more curved and elastic grapple-scrapers with a spiral auger, as hereinafter more fully described.

A, in the drawing, represents an auger, of suitable size, and attached to a suitable handle, B.

To this handle are also secured the upper ends of two or more springs, C C, which, at their lower ends, hold curved scrapers D D. These scrapers are pointed, to enter the tube without difficulty. Their broad upper or back ends have the scraping edges.

In order to prevent the same from catching against obstacles, ribs, *a a*, project from the spring shanks C

against the broad ends of the scrapers, flush with the faces of the same.

The implement is readily inserted in a tube. The auger makes the way for the scrapers, and may be dispensed with if the tube is not badly filled. The scrapers are, by the springs C, pressed against the sides of the tube, and clean the same when the instrument is withdrawn.

I am aware that spring-shanks, provided with scrapers and guard-ribs, are not, in themselves, new in this class of invention; but

Having thus described my invention,

I do claim as new and desire to secure by Letters Patent—

The improved boiler-tube cleaner, consisting of the handle B, spring-shank C, provided with the curved scrapers D, having guard-ribs *a a*, and the auger A projecting beyond the scrapers, all as shown and described.

JOHN GREEN.

Witnesses:

CHAS. B. F. ADAMS,
GEORGE H. CLAPP.