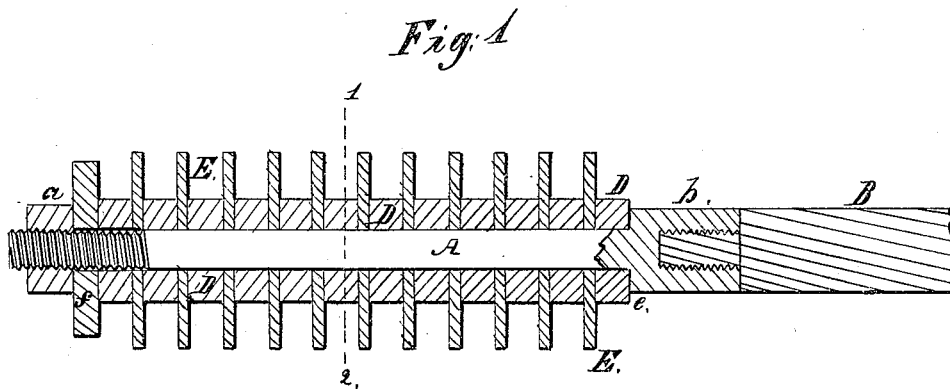
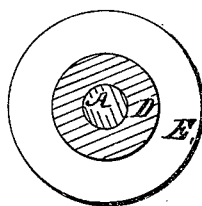


*J. M. Spiegle,*  
*Steam-Boiler Cleaner.*  
*No 51,362.      Patented Dec. 5, 1865.*



*Fig. 2*



*Witnesses:*

*Wm. Albert Steel,*

*John Parker*

*Inventor:*

*J. M. Spiegle &  
 By his Attys*

*H. H. Howard*

# UNITED STATES PATENT OFFICE.

JOHN M. SPIEGLE, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVED INSTRUMENT FOR CLEANING BOILER-FLUES.

Specification forming part of Letters Patent No. 51,362, dated December 5, 1865.

*To all whom it may concern:*

Be it known that I, JOHN M. SPIEGLE, of Philadelphia, Pennsylvania, have invented an Instrument for Cleaning the Tubular Flues of Boilers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of a rod to which a series of metal washers and disks of gum-elastic are confined by a nut or its equivalent, all as described hereinafter, so as to form an instrument by which the interior of tubes which form the flues of steam-boilers may be readily and effectually cleansed.

In order to enable others to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a longitudinal section of my instrument for cleaning the tubes of steam-boilers, and Fig. 2 a transverse section on the line 1 2, Fig. 1.

A is a cylindrical rod, on the outer end of which are cut screw-threads adapted to a nut, *a*, the opposite end of the rod having an enlargement, *b*, in which is an internal screw-thread adapted to receive the screwed end of a rod or handle, B, of appropriate length.

A shoulder, *e*, is formed on the rod A by the enlargement *b*, and against this shoulder bears a washer, D, of cast-iron, there being a number of these washers on the rod A and a number of

gum-elastic disks, E, each of which is situated between two washers, the whole being confined to the rod by the nut *a* and washer *f*.

The gum-elastic disks are of the same diameter as, or they may be a trifle greater in diameter than, the interior of the tubes to be cleansed, while the washers D are so much less in diameter than the disks that the outer edges of the latter can readily yield.

The end of a rod or handle, B, of suitable length, is screwed into the enlargement *b* of the rod A, and the instrument is pushed backward and forward through the tube, from which the ashes and tarry matter are rapidly removed by the disks, which, although yielding readily to any inequality in the tube, effectually accomplish the desired purpose without injuring the tube by scraping or abrading the metal.

I claim as my invention and desire to secure by Letters Patent—

As a new manufacture, the within-described instrument, composed of the rod A, its series of washers D, disks E, of gum-elastic, and the nut *a*, or its equivalent, the whole being constructed and arranged substantially as and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN M. SPIEGLE.

Witnesses:

CHARLES E. FOSTER,  
JOHN WHITE.