J. H. DAVIS.

BRUSH FOR CLEANING BOILER-FLUES.

No. 190,960. Patented May 22, 1877.

Fig. 2.

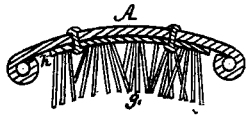

Fig. 3.

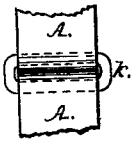

Fig. 1.

Witnesses

A. C. Johnston

A. H. Johnston.

Inventor

Joseph H. Davis

By Johnston & Donn

his attorneys

UNITED STATES PATENT OFFICE

JOSEPH H. DAVIS, OF SEWICKLY, PENNSYLVANIA.

IMPROVEMENT IN BRUSHES FOR CLEANING BOILER-FLUES.

Specification forming part of Letters Patent No. **190,960**, dated May 22, 1877; application filed November 23, 1876.

To all whom it may concern:

Be it known that I, JOSEPH H. DAVIS, of of Sewickly, in the county of Allegheny and State of Pennsylvania, have invented a certain new and useful Improvement in Brushes for Cleaning Boiler-Flues; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and the letters of reference marked thereon.

The nature of my invention consists in constructing a brush for cleaning the outer surface of flues for steam-boilers in a series of curved sections, hinged together so as to adapt its scouring-bristles to flues of different diameters.

To enable others skilled in the art with which my invention is most nearly connected to make and use it, I will proceed to describe its construction and operation.

In the accompanying drawings, which form part of my specification, Figure 1 is a front view of my improvement in brush for cleaning the outer surface of flues for boilers. Fig. 2 is a side view of one of the curved sections of the brush. Fig. 3 is a detail view, representing the manner of hinging the sections of the brush together by means of a link.

In the accompanying drawings, A represents the curved sections of the brush, which are hinged together at B by means of pintles *f*, but may be hinged together by means of a link, *k*, as shown in Fig. 3. The bristles *g* are constructed of steel, and bent in the form of the letter U, and inserted in openings in the curved plate *h*, which is riveted to the hinged sections A, which serve as a back plate for holding the bristles *g* in place in the plate *h*. One of the end sections A is furnished with a handle or lever, C, which is secured in position by means of screw-nuts D *e*. One of the end sections is furnished with a coupling-chain, *f'*, as shown in Fig. 1.

The skillful mechanic will readily understand the construction of my improved brush for cleaning boiler-flues from the foregoing description and by reference to the accompanying drawings. I will, therefore, proceed to describe its operation, which is as follows: The brush is placed around the flue A', as shown in Fig. 1, and the coupling-chain *f'* is wound around the handle or lever C, so that the operator can grasp it and the lever in his hand. He then gives to the lever C a reciprocating motion, thereby causing the brush to move from right to left around the flue A', equal to the sweep given to the lever C. By the reciprocating motion given to the lever and brush the operator can gradually move it along over the flue as it is cleaned.

By constructing a brush as hereinbefore described it will be adapted to flues of different diameter, and can be manufactured cheaply and with great facility; and it will be very durable, and not liable to get out of order. Its simple construction, adaptation to flues, varying in diameter, and of different diameters, and the ease of holding the brush to its work, are some of the advantages of my improvement.

What I claim as of my invention is—

A brush consisting of a series of hinged and curved sections, the end sections furnished with a lever and coupling-chain, substantially as hereinbefore described, and for the purpose set forth.

JOS. H. DAVIS.

Witnesses:

JAMES J. JOHNSTON,

A. C. JOHNSTON.