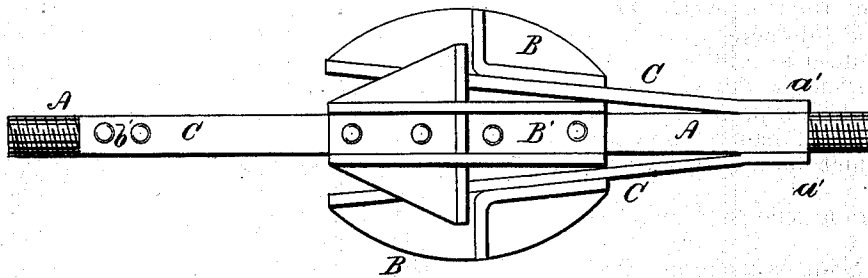


H. FREEMAN.
Flue-Cleaners.

No. 146,177.

Patented Jan. 6, 1874.



Witnesses

W. T. Newman.
Mort M. Leggett.

Inventor

Hiram Freeman
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UNITED STATES PATENT OFFICE.

HIRAM FREEMAN, OF PETROLEUM CENTRE, PENNSYLVANIA.

IMPROVEMENT IN FLUE-CLEANERS.

Specification forming part of Letters Patent No. **146,177**, dated January 6, 1874; application filed February 23, 1873.

CASE B.

To all whom it may concern:

Be it known that I, HIRAM FREEMAN, of Petroleum Centre, in the county of Venango and State of Pennsylvania, have invented certain new and useful Improvements in Flue-Cleaners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in flue-cleaners.

In the drawing is represented a plan view of the cleaner.

My invention consists of the various devices and combinations of parts, as hereinafter specified and claimed, wherein—

A represents the shaft, and B B' the scrapers, attached to the spring-arms C. These spring-arms C are secured to the shaft A at opposite points—that is, one pair, B, are attached at *a' a'*, near the end of the shaft A, and the other pair, B', at *b'*, toward the handle of the shaft, so that the scrapers meet at one point, the mouth of the scrapers B opening toward the handle, and the mouth of the scrapers B' opening toward the end.

The object and advantages of thus arranging the scrapers on their shafts are, that they lap and fit into one another better, and form a more thorough cleaner.

The pair B', in the act of being pushed through the flue, are caused to expand, and the pair B collapsed; and in the act of the scraper being withdrawn from the flue, the pair B are caused to expand, and the pair B' collapsed.

By this means the flue is thoroughly scraped from end to end at each forward and backward movement of the scraper.

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

The flue-scraper constructed substantially as herein described, and consisting of the shaft A and the scraper-springs B B' C, secured alternately at opposite ends and sides of the shaft A, as and for the purposes specified.

In testimony that I claim the foregoing, I have hereunto set my hand this 6th day of February, 1873.

HIRAM FREEMAN.

Witnesses:

WELLS W. LEGGETT,
EDM. F. BROWN.