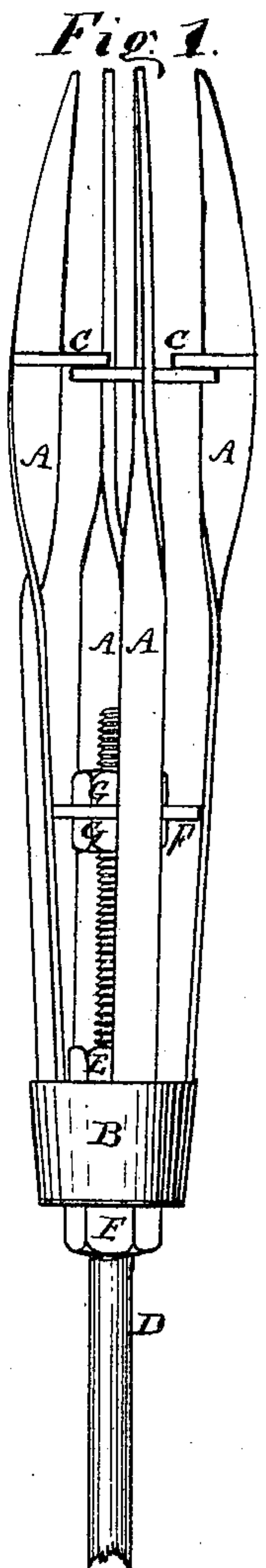
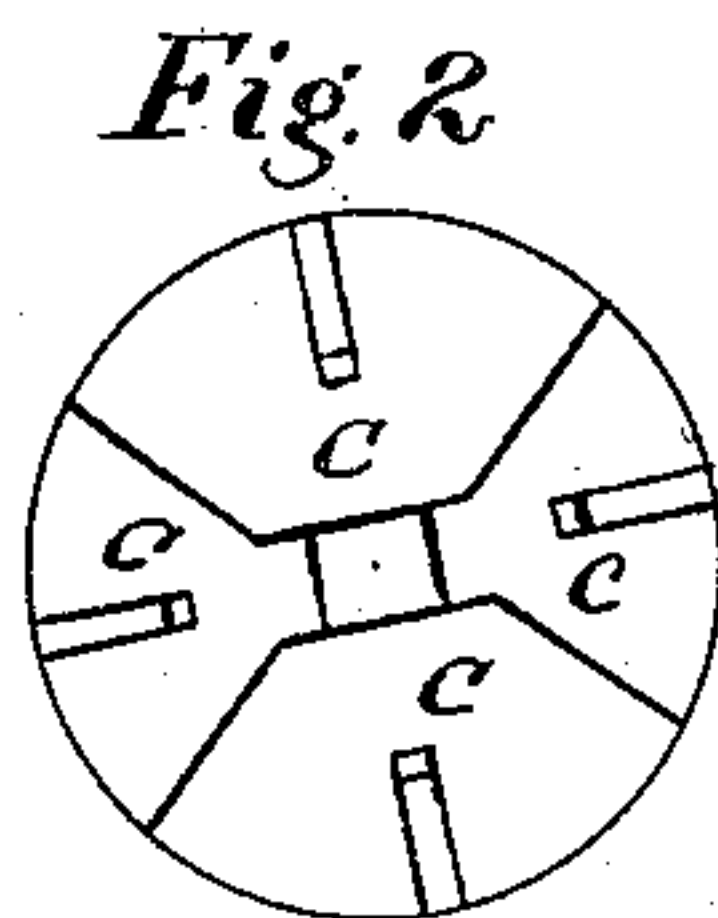


H. LEHMANN.
Boiler-Flue Cleaners.

No. 153,441.

Patented July 28, 1874.



Witnesses

Geo. M. Sibilla

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Inventor.

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UNITED STATES PATENT OFFICE.

HENRY LEHMANN, OF CLEVELAND, OHIO.

IMPROVEMENT IN BOILER-FLUE CLEANERS.

Specification forming part of Letters Patent No. **153,441**, dated July 28, 1874; application filed June 26, 1874.

To all whom it may concern:

Be it known that I, HENRY LEHMANN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented an Improved Boiler-Flue Cleaner, of which the following is a specification:

This invention relates to a scraper for cleaning boiler-flues; and consists of four spring-bars, having each a scraper attached, said bars being united at the butt to a head, through which a rod passes, having a screw-thread cut on it for that purpose, and having a nut or head on the end between the bars, which is designed for expanding the bars, so that they may fit the inside of a flue tightly, or readily adapt the scrapers to the unevenness or slight variations there may be therein.

To enable others to fully understand my invention, I will proceed to describe the same by the aid of the accompanying drawing, in which—

Figure 1 is a side elevation, and Fig. 2 is an end view, of my aforesaid flue scraper.

A A represent four flat bars of steel united to a head, B, with their flat sides outward, but which are at a point about two-thirds their length from the butt, twisted one-quarter-way round, so as to bring their edges to the side, and the outer edges of the said bars are curved

inward to the inside edges, thus making the points in a smaller circumference. To each of the bars A is attached a quarter-disk scraper, C, lapping each other at the intersecting line, so that they maintain a complete circumference at all times. Through the head B is passed a rod, D, it having a screw-thread cut on it for the nuts E E, which secure the rod in place in the head. Upon the inner end of the rod D is placed a washer, F, held in place by two nuts, G G. The washer is for expanding the bars, and thus adjusting the scrapers to fit snugly the insides of various-sized flues, the spring of the bars also causing the scrapers to bear harder on the inside.

This scraper has proved, after about a year's use, to be perfect in its work, and accomplishes what no other flue-scraper has done.

Having described my invention, I claim—

Bars A A, united to the head B, and having the scraper C C, the rod D, nuts E E, washer F, and nuts G G, all combined, as shown and described, to compose a flue-scraper, for the purpose set forth.

HENRY LEHMANN.

Witnesses:

GEO. W. TIBBITTS,
W. S. KENNISH.