

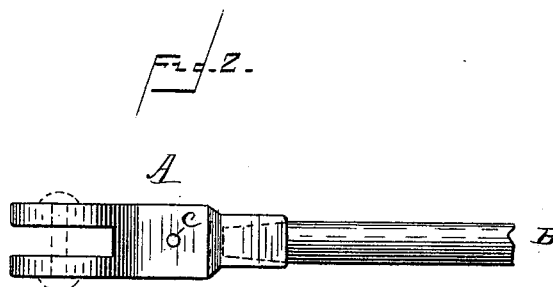
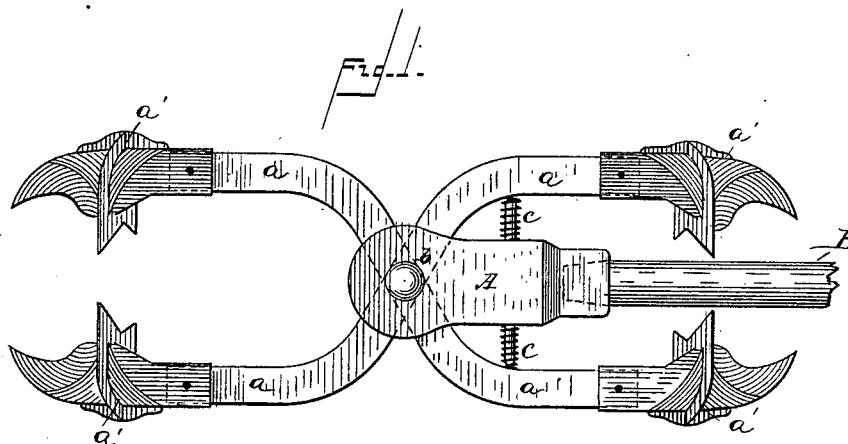
(No Model.)

2 Sheets—Sheet 1.

C. E. KENDALL.  
BOILER TUBE CLEANER.

No. 386,988.

Patented July 31, 1888.



WITNESSES.

H. W. Tealy.

G. B. McCormick.

INVENTOR.

Chauncey E. Kendall.

by his atty,  
J. R. Drake.

(No Model.)

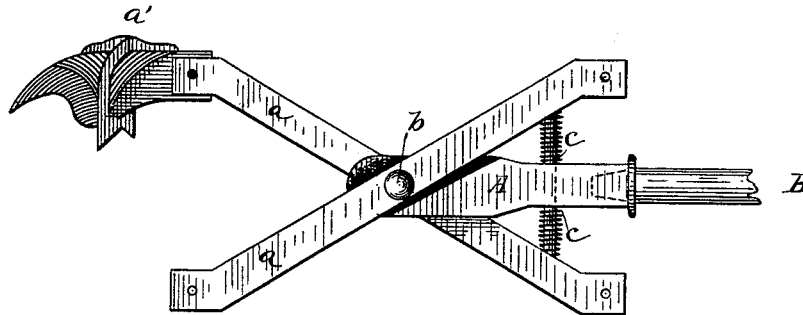
2 Sheets—Sheet 2.

C. E. KENDALL.  
BOILER TUBE CLEANER.

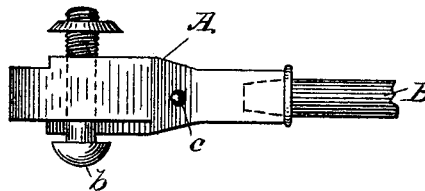
No. 386,988.

Patented July 31, 1888.

*Fig. 3.*



*Fig. 4.*



WITNESSES.

W. D. Neely.

F. C. McCormick.

INVENTOR.

Chauncey E. Kendall  
by his Atty.

J. R. Drake.

# UNITED STATES PATENT OFFICE.

CHAUNCEY E. KENDALL, OF BUFFALO, NEW YORK.

## BOILER-TUBE CLEANER.

SPECIFICATION forming part of Letters Patent No. 386,988, dated July 31, 1888.

Application filed April 25, 1887. Serial No. 236,025. (No model.)

*To all whom it may concern:*

Be it known that I, CHAUNCEY E. KENDALL, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Boiler-Tube Cleaners; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The object of this invention is to simplify the construction of boiler-flue cleaners; and the invention consists, mainly, in the employment of two (or more) crossed arms pivoted where crossed in or to a shank or holder, to which the handle is attached, the ends of the arms being provided with scrapers, all as hereinafter fully explained.

In the drawings, Figure 1 is a side elevation; Fig. 2, a top plan of the holder separate from the arms; Fig. 3, a side elevation of a holder with the arms on the side; Fig. 4, a plan of same without the arms.

A represents a shank and holder for the handle B, said handle setting into a socket at one end, the other end being preferably forked, (see Fig. 2,) and in this are the scraping-arms *a a*, crossing each other at or near the middle and pivoted in the fork of the holder by the pin *b*. The arms are preferably bent inward, as shown, but may be straight, if desired, (see Fig. 3,) and may be pivoted on the side of the

holder A without its being forked, (see Figs. 3 and 4;) but I prefer the construction as shown.

The flue-scrapers proper, *a' a'*, are attached to the ends of the arms *a* or are formed thereon as may be most convenient.

I do not wish to confine myself to any particular style of scrapers *per se*, as they do not form a part of the present invention, which is the crossed arms pivoted at or near the middle to or in a holder, A.

A spring, *c*, is arranged in connection with the holder A and arms *a a a a* to keep the arms expanded.

The great advantage of these crossed arms and being pivoted to the holder A is that both ends each side of the pivot *b* are opened or closed simultaneously, as well as allowing a little play to the arms and scrapers. The arms will therefore automatically adapt themselves to the size of the flues and allow them to override uneven surfaces therein.

I claim—

In a boiler-flue cleaner, arms *a a*, crossed at or near their center and pivoted there in or to a holder, A, the ends of said arms being provided with scraping-edges, and a suitable spring, *c*, working in connection with said arms, all substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHAUNCEY E. KENDALL.

Witnesses:

J. R. DRAKE,  
HENRY HEITMUELLER.