(No Model.)

C. E. DAVEY.

FLUE SCRAPER.

No. 493,235. Patented Mar. 7, 1893.

Fig. 1.

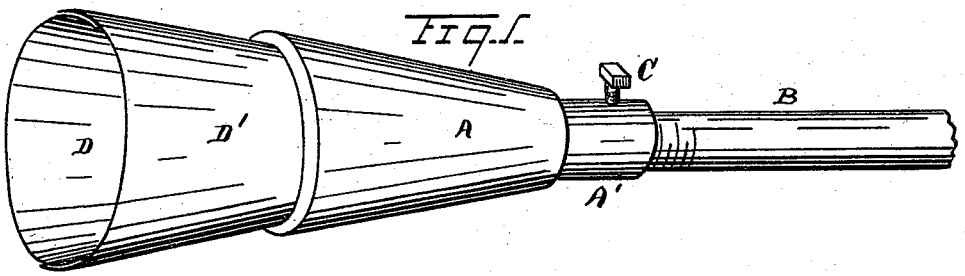
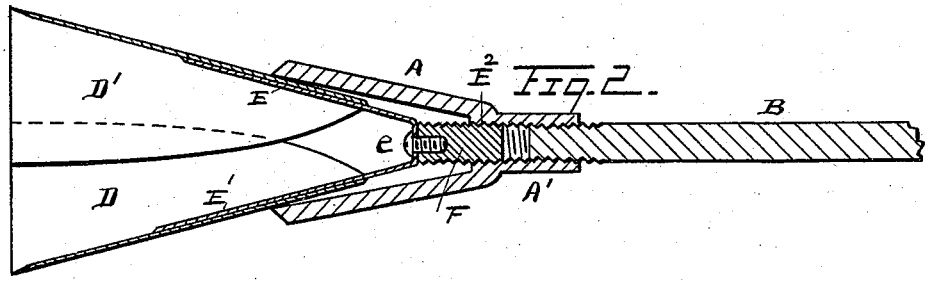


Fig. 2.



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UNITED STATES PATENT OFFICE.

CHARLES E. DAVEY, OF DETROIT, MICHIGAN.

FLUE-SCRAPER.

SPECIFICATION forming part of Letters Patent No. 493,235, dated March 7, 1893.

Application filed October 24, 1892. Serial No. 449,801. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. DAVEY, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Flue-Scrapers; and I 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, which form a part of this specification.

My invention relates to a new and useful improvement in flue scrapers, the design of my invention being, to provide as an article of manufacture, a flue scraper of superior simplicity, economy, efficiency and durability.

More particularly my invention has for its object to provide an adjustable flue scraper, and one which may be adjusted easily and readily, and even without the necessity of removing the scraper from the flue.

To these ends my invention consists of the devices and appliances, their construction, combination and arrangement as hereinafter specified and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a device embodying my invention. Fig. 2 is a longitudinal section thereof.

I carry out my invention as follows: I construct my device with a body or base A, made of metal of suitable strength and durability. This body is made tapering, or of substantially conical form, the taper extending toward the rear end, said end terminating in a shoulder A′, screw threaded on the interior, to receive a handle B. I prefer to use a set screw C, whereby the body and handle may be held in rigid engagement the one with the other. The body is made hollow at its opposite end.

D and D′ represent two scraper blades of segmental form in cross section, each tapering toward the rear end of the body A. The tapered ends of these blades project within said body and are engaged upon spring arms E, E′, said arms diverging at their outer ends and holding the blades against the inner periphery of the body at its outer edge. Said arms are engaged at their inner ends upon a screw threaded stem F, having a threaded engagement in the rear end of the body, as shown at E^2, Fig. 2. The arms may be made by bending a piece of spring metal intermediate its ends, to seat upon the outer end of said stem, upon which they may be riveted or otherwise secured, as shown at "*e*." The two scraper blades are so made as to permit their adjacent edges lapping past one another. It will be observed that this construction provides for the expansion and contraction of said blades, so as to increase or decrease their diameter, as may be desired. It will be obvious from Fig. 2 that the diameter of said blades at their outer ends, will be diminished by retracting the blades within said body, as by screwing in the stem F into the socket at the rear end of the body, and that the diameter of said blades at their outer ends will be increased by screwing said stem outward, allowing the spring arms to distend said blades. Instead however of manipulating the blades to contract or expand the same by screwing the stem in or out of its socket, the same will be obviously secured if the blades remain stationary and the body A is rotated in one direction or the other relative to said stem. The handle being rigidly secured in the body, enables the operator to easily and quickly turn the body in the desired direction to force it forward or rearward upon the scraper blades, said blades being held firmly in position by their binding contact with the flue.

Should the operator in the act of cleaning the flue strike against any hard substance, he may, by a simple turn of the handle, contract the scraper blades so as to pass the obstruction.

The scraper blades are preferably made of steel, as sheet steel, to give them greater durability. Should they become worn too much for efficient use, another set of scraper blades may be quickly engaged in the body, the body requiring no renewal. Thus practically, a new flue scraper may be provided easily and without much additional expense by simply renewing said blades, whenever required.

What I claim as my invention is—

1. A flue scraper consisting of a tapering body A, tapering spring actuated blades D, D′, having their smaller ends projecting into said body, a stem F engaged with the inner ends of said blades and having a screw threaded connection within the smaller end of

said body, and a handle B separate from said stem, having a direct screw threaded engagement in the smaller end of said body, substantially as described.

2. A flue scraper consisting of a tapering body A, tapering spring actuated blades D, D′, having their smaller ends projecting into said body; a stem F engaged with the smaller ends of said blades and having a screw threaded connection within the smaller end of said body; a handle B separate from said stem having a direct screw threaded engagement in the smaller end of said body, and means to hold said handle in fixed engagement with said body, whereby the body may be turned upon said stem by said handle to advance and retract said body upon said blades by the rotation of said handle, and thereby contract and expand said blades, substantially as described.

3. A flue scraper having in combination, a hollow tapering body A, tapering blades D, D′, arc-shaped in cross section, having their smaller ends projecting within said body, a stem F having a screw threaded engagement within the smaller end of said body, spring arms E, E′ engaging said blades upon said stem, a handle B directly engaged with said body, and means to hold the body and handle in a fixed engagement the one with the other, whereby the body may be advanced and retracted upon said blades by the rotation of said handle and thereby contract and expand said blades, substantially as and for the purpose described.

In testimony whereof I sign this specification in the presence of two witnesses.

CHARLES E. DAVEY.

Witnesses:
N. S. WRIGHT,
JOHN F. MILLER.