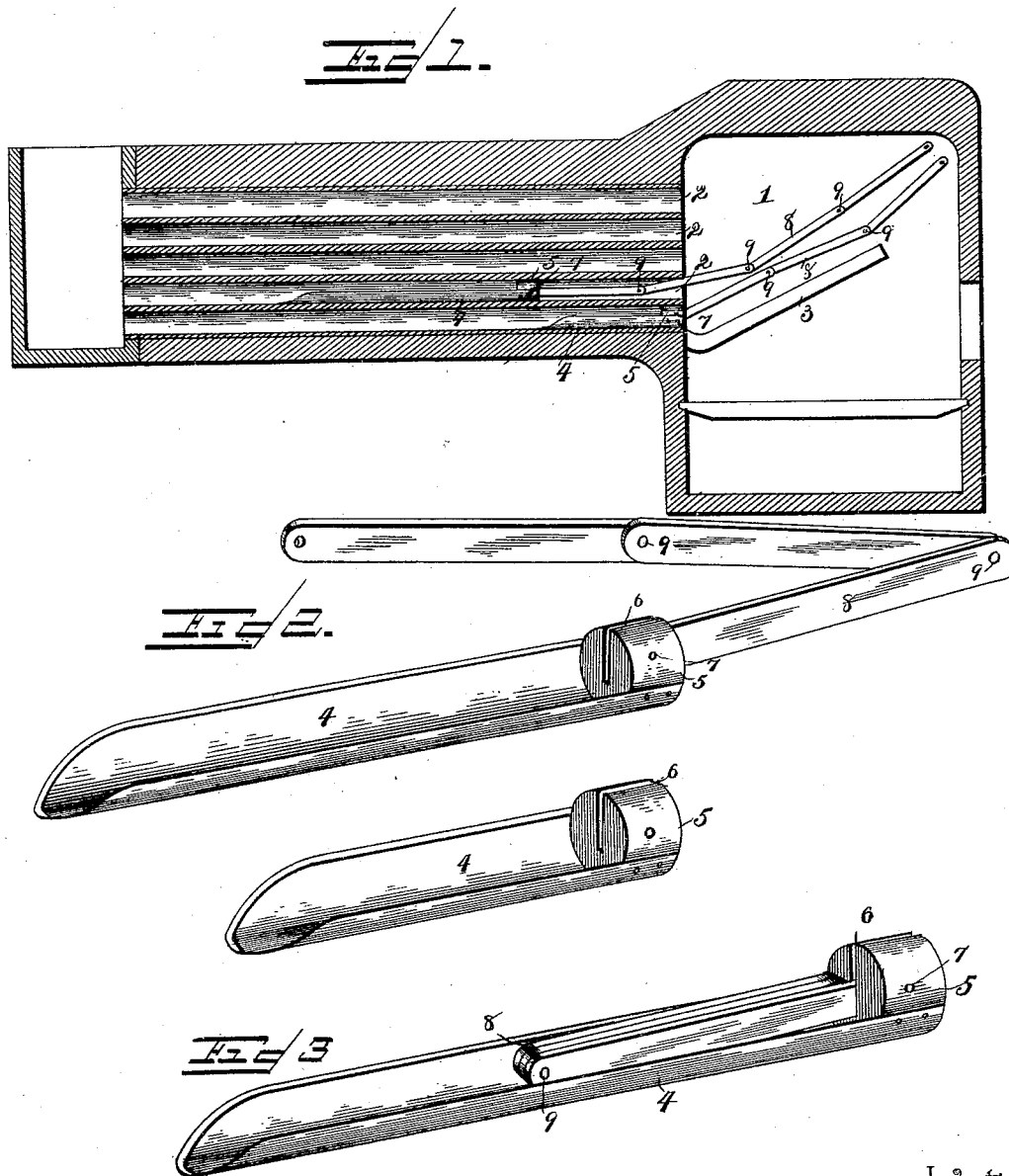


(No Model.)

C. E. POOR, C. E. MESSENGER & A. DALLAS.  
BOILER FLUE CLEANER.

No. 493,290.

Patented Mar. 14, 1893.



Witnesses

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# UNITED STATES PATENT OFFICE.

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OF FAIRBURY, NEBRASKA.

## BOILER-FLUE CLEANER.

SPECIFICATION forming part of Letters Patent No. 493,290, dated March 14, 1893.

Application filed September 22, 1892. Serial No. 446,615. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES E. POOR, CLARENCE E. MESSENGER, and ALEXANDER DALLAS, citizens of the United States, residing at Fairbury, in the county of Jefferson and State of Nebraska, have invented a new and useful Boiler-Flue Cleaner, of which the following is a specification.

This invention relates to certain new and useful improvements in boiler flue cleaners, and has for its object to provide simple and effective means for thoroughly and conveniently cleansing the flues and removing therefrom all soot and cinders and with this object in view the invention consists of the construction and arrangement of the parts as will be hereinafter more fully described and claimed.

In the drawings:—Figure 1 is a sectional view of a boiler and furnace showing the improved device in connection therewith in several positions and as being operated to clean the flues. Fig. 2 is a detail perspective view of the improved device showing an extra scoop differing in size from that shown attached. Fig. 3 is a similar view of a portion of the adjustable or folding handle of the device shown folded within the scoop attached thereto to form a cutting or penetrating projection or chisel.

Similar numerals of reference are employed to indicate corresponding parts in the several figures.

Referring to the drawings;—the numeral 1 designates a furnace and boiler having flues 2, and an arch 3.

It will be understood that the construction of the furnace and boiler and flues has no bearing upon the improved device and the construction shown is employed in this instance merely to illustrate the use and application of the invention.

The device consists of a scoop 4, having a head 5 at one end formed with a slot 6, said head being adapted to receive a depressed or countersunk key 7. Within the slot 6 of the head 5, is pivotally mounted through the medium of the key 7, the front end of an adjustable handle 8, which is made up of pivoted sections 9 adapted to be folded together to decrease the length of said handle or unfolded to increase the length of the same, and

as shown in Fig. 2 the said handle may be folded over within the scoop 4, to form a cutting or penetrating projection or angular edge which materially assists in removing the hardened or crusted material within the tubes or flues adjacent to the fire bed and which result from the continuous intense heat brought to bear thereupon. This latter operation is accomplished by rotating the cleaner or scoop 4 in the tube or flue, together with the handle arranged as shown in Fig. 3, and thereby loosening the crusted deposit at the mouth of the said tube or flue by bringing the sharp or angular edges of the handle to bear thereagainst together with the edges of the said screw, and after this operation is completed the handle is unfolded and the scoop may the more readily be inserted into the flue to be cleaned.

As shown by Fig. 2, scoops varying in size may be attached to the same handle for various purposes and especially adapted for cleaning the lower flues or tubes, and in the latter instance the short scoop is employed, it being of a length proportionate or equal to the space from the lower flues to back where the arch starts. By the adjustability of the handle 8, it is adapted to be arranged at any angle and in any desirable manner as to length and this form of device will be found exceptionally convenient in view of the fact that the arch starts at about fifteen inches from the lower flues and on a slant upward as high as the middle flues or a little higher than the same, making it extremely difficult to get at the lower flues with any ordinary tool or propelling rod.

It will be understood that the short scoop is used in the lower flues so as to be more readily manipulated, and the longer scoop is employed in connection with the upper flues which have such a position relatively to the arch as to make them more readily accessible.

In the use of the device the scoop is inserted in the flue or tube and propelled by twisting the wrist from side to side and thereby imparting a similar movement to the handle and the scoop. It will be observed that the edges of the scoop are sharpened from the inside outward and thereby causes a close fitting of the scoop against the sides of the flue. As

before stated the handle may be folded over into the scoop to form a penetrating projection or chisel to start and cut away the particles of combustion and other matter which have collected and become hardened a short distance in each flue. In entering the lower flues the handle is bent up at an angle or on a slant with the arch until the scoop is inserted and then section after section of the handle can be entered in like manner.

The device herein set forth is simple and effective in its construction and operation, strong and durable and easily and readily manipulated in cleaning flues of the character set forth.

Having thus described the invention, what is claimed as new is—

1. A boiler flue cleaner consisting, of a scoop having a head with a slot therein and a fold-

ing handle adjustably connected to said head and movable in the slot thereof, substantially as described.

2. A boiler flue cleaner consisting, of a scoop having a head with a slot therein and a handle pivotally connected to said head and movable in the slot thereof and comprising a series of pivoted folding sections, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

CHARLES E. POOR.  
CLARENCE E. MESSENGER.  
ALEXANDER DALLAS.

Witnesses:

VOLNEY KINYON,  
J. M. RUGG.