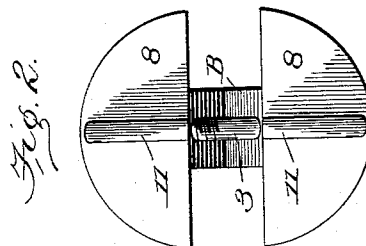
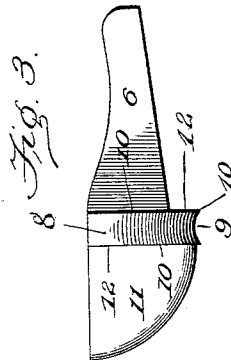
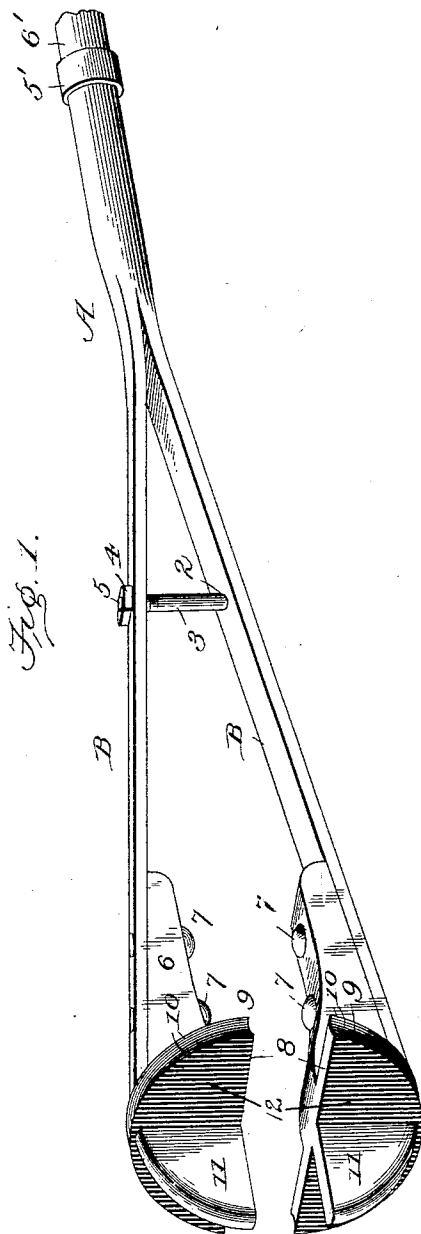


(No Model.)

C. L. DILLON.
FLUE CLEANER.

No. 580,258.

Patented Apr. 6, 1897.



WITNESSES:

Edwin L. Bradford
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CHARLES LOUIS DILLON, OF LA CROSSE, WISCONSIN.

FLUE-CLEANER.

SPECIFICATION forming part of Letters Patent No. 580,258, dated April 6, 1897.

Application filed July 18, 1896. Serial No. 599,595. (No model.)

To all whom it may concern:

Be it known that I, CHARLES LOUIS DILLON, a citizen of the United States, and a resident of La Crosse, in the county of La Crosse and State of Wisconsin, have invented certain new and useful Improvements in Boiler-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 appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

My invention has relation to improvements in boiler-flue cleaners, and more particularly to that class of flue or tube cleaners in which the converging spring-legs are provided with an integral threaded socket and their outer ends formed with semicircular cutter-heads arranged transversely and at a right angle to said spring-arms and having semicircular grooves forming parallel cutting edges; and the object is to provide a simple, cheap, and effective device for this purpose.

To this end the novelty consists in the construction, combination, and arrangement of the same, as will be hereinafter more fully described, and particularly pointed out in the claim.

In the accompanying drawings the same reference-characters indicate the same parts of the invention.

Figure 1 is a perspective view of my improved cleaner. Fig. 2 is a central longitudinal section of the same. Fig. 3 is an end view thereof.

The cleaner proper consists of the iron bar A, at one end of which are welded the resilient members or legs B B, the free ends of which have bolted to them the semicircular heads 8. At suitable points along the members B B are aligned holes 2 2, through which pass the bolt 3, said bolt having the nut 4, engaging the threaded end 5, by means of which the resilient members or legs B B may be adjusted at will. The said cutter-heads 8 are composed of the lugs 6, which receive the bolts 7, which secure the cutter-heads to the members or legs B. The said heads have

a semicircular circumferential groove 9, which forms the cutting edges 10.

By referring to Fig. 3 it will be seen that the cutting edges 10 at the intersection of the outer edges of the semicircular circumferential groove 9 and the right-angular parallel plane faces 12 of the semicircular heads 8 form acute angles, the plane face 12 of which is arranged at a right angle to the line of travel to form a cutting edge as contradistinguished from a scraping edge, similar to the approved form of a modern metal-cutting tool, while a cut-away portion, represented by the groove, corresponds to the heel of the metal tool and is so formed as to give "clearance" to the tool while in operation. This is an important feature of my construction and greatly increases the effectiveness of the same. Quadrantal-shaped ends or guides 11 are situated at right angles to the said heads and project longitudinally therefrom to facilitate the insertion of the tool in the flue.

The end of the bar A is provided with a threaded socket 5', which receives the detachable handle 6'.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

An improved boiler-flue cleaner, comprising the integral converging spring-legs B B, and the transverse bolt 3 extending through said legs and adapted to adjustably compress the same, in combination with the semicircular heads 8 8, fixed to the outer ends of the said legs, and at a right angle thereto, and provided with the parallel plane faces 12 12, and the semicircular circumferential groove 9, the outer edges of which intersect with the plane faces 12 12 of the heads, to form cutting edges 10 10, the plane cutting edge of which is at a right angle to the line of travel, the groove 9 forming a clearance for said cutting edge, substantially as shown and described.

CHARLES LOUIS DILLON.

Witnesses:

WALTER C. WINTER,
JOHN J. ESCH.