

M. A. Solomons,
Boiler Cleaner.

No. 92,752.

Patented July 20, 1869.

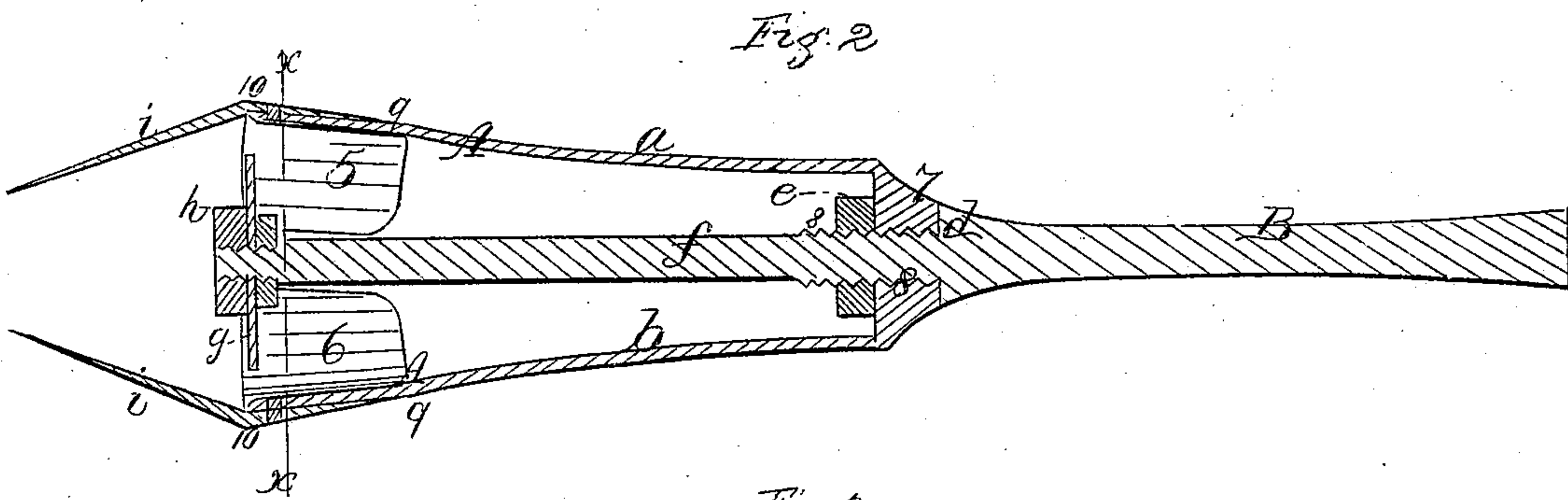
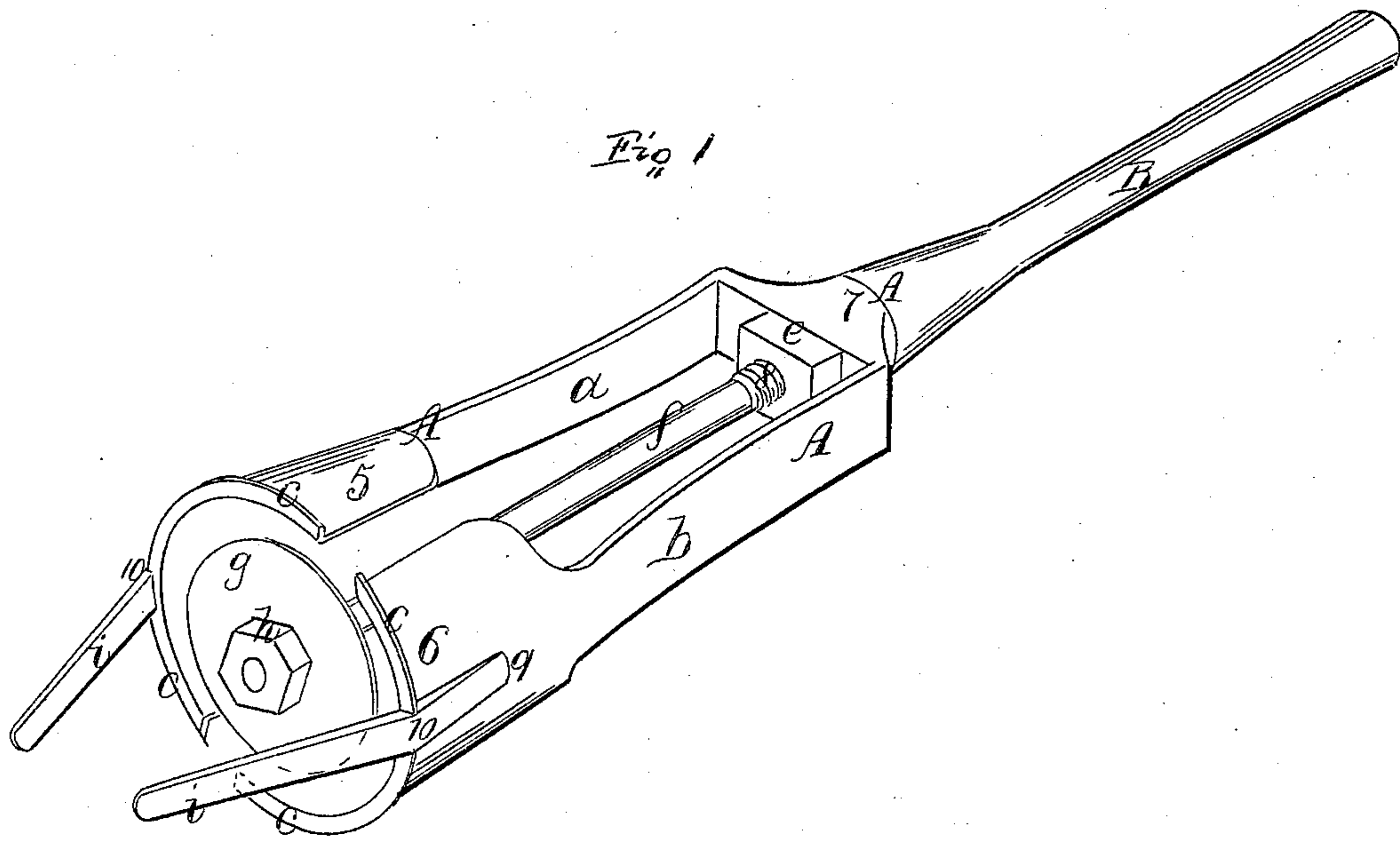
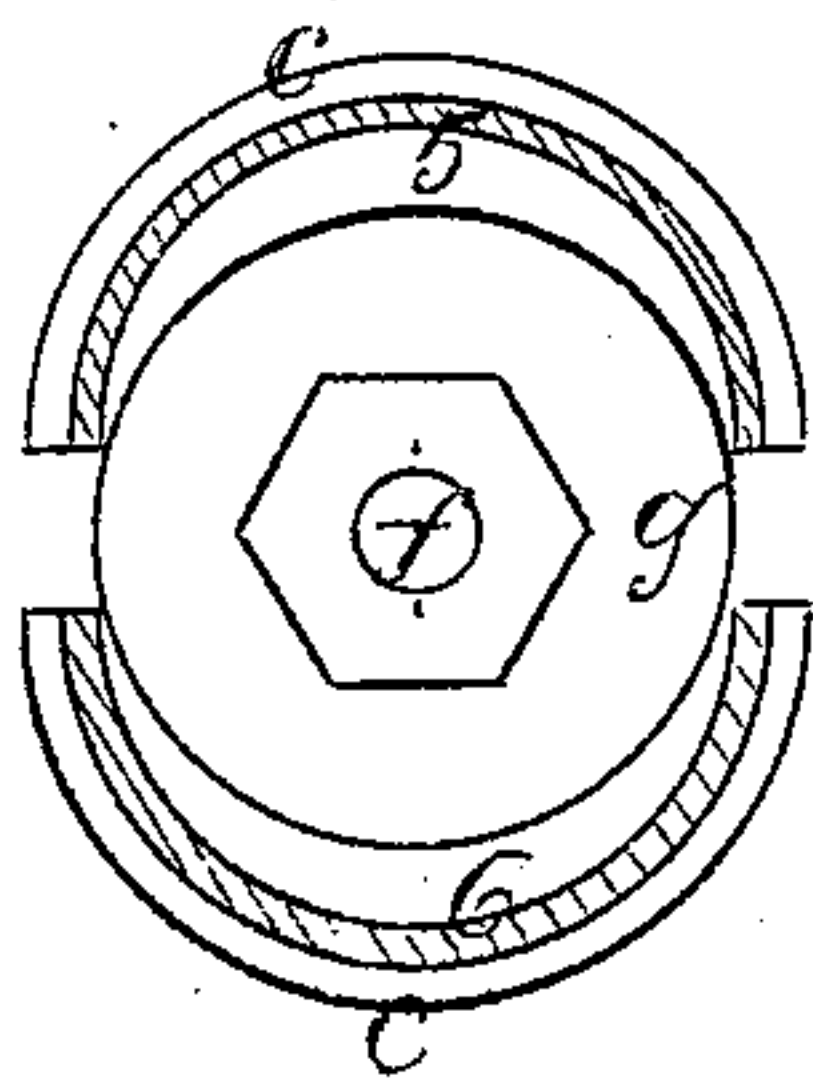


Fig 3.



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MITCHELL A. SALOMONS, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 92,752, dated July 20, 1869.

IMPROVEMENT IN BOILER-FLUE SCRAPERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, MITCHELL A. SALOMONS, of Boston, in the county of Suffolk, and State of Massachusetts, have invented an Improved Instrument for Cleaning the Flues of Steam-Boilers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of my improved instrument for cleaning the flues of steam-boilers.

Figure 2 is a longitudinal section through the centre of the same.

Figure 3 is a transverse section on the line *xx* of fig. 2.

My invention has for its object to produce a strong, simple, and efficient tool for cleaning the flues of steam-boilers; and

It consists in a pair of spring-jaws, attached to a suitable handle, each jaw being provided with a lip or flange, which bears against the interior of the flue or tube, and serves to remove the scale and soot therefrom as the instrument is moved back and forth.

And, in combination with the above, my invention also consists in a circular plate, or washer, which closes the opening at the mouth of the spring-jaws, and collects the scale and soot, and aids in its removal.

And my invention furthermore consists in providing the spring-jaws with projecting arms or guide-bars, which are inclined toward each other, so that, when entered into the mouth of the flue, they will force the spring-jaws together, and thus facilitate the entrance of the instrument, the inner ends of the guide-bars being also inclined toward each other, so that in withdrawing the instrument, after pushing it beyond the rear end of the flue, the jaws will be brought together, and the lips or flanges thereon prevented from being broken or injured by contact with the rear end of the flue.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings—

A represents a strip of steel, bent around so as to form two jaws, *a b*, having curved enlargements 5 6 at their outer ends, which are provided with lips or flanges *c c*, of the form shown in fig. 1.

These lips, when the jaws are forced together, fit snugly within, and spring out against the inside of the boiler-flue or tube, serving to remove the scale, or other deposit, as the instrument is moved back and

forth with a circular motion by means of the handle B, which is made of sufficient length for the purpose.

This handle is provided with a shoulder, *d*, which abuts against the outside or bottom portion 7 of the jaws *a b*, the handle extending through this portion 7, and being held securely in place by a nut, *e*, turned over a screw-thread 8, beyond which a rod, *f*, formed in one and the same piece with the handle, passes centrally and longitudinally between the open jaws *a b*, and has attached to its outer end, by a nut, *h*, or otherwise, a circular plate or washer, *g*, which closes the opening at the mouth of the jaws, and serves, as the instrument is moved back and forth, to collect and expel the deposit as it is removed by the lips or flanges *c c*.

i i are arms or guide-bars, secured diametrically opposite each other to the jaws *a b*, and inclined toward the axis of the instrument, so that when forced into the mouth of the flue, they will cause the spring-jaws to approach each other, thus facilitating the entrance of the flanges *c c*.

The inner ends of the guide-bars are also inclined from 9 to 10, where their outer surfaces are flush with the edges of the flanges *c c*, and thus, as the instrument is withdrawn after pushing it entirely through and beyond the rear end of the flue, the jaws will be brought together, and the lips, or flanges *c c*, prevented from being broken or injured by contact with the rear end of the flue.

When the lips, or flanges *c c*, become worn away, from constant use, new ones may be formed by turning over the edges of the portions 5 6 of the jaws, a sufficient amount of stock being left for this purpose.

If desired, a brush or a piece of cloth may be attached to the rod *f*, between the jaws, which will assist in cleaning the flues, and freeing them from soot or dirt.

Claims.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The construction of the jaws *a b* with their enlargement 5 6, and lips or flanges *c c*, arranged substantially as described.

2. Also, the combination of the circular plate, or washer *g*, and rod *f*, with the jaws *a b* and flanges *c c*, substantially as set forth.

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