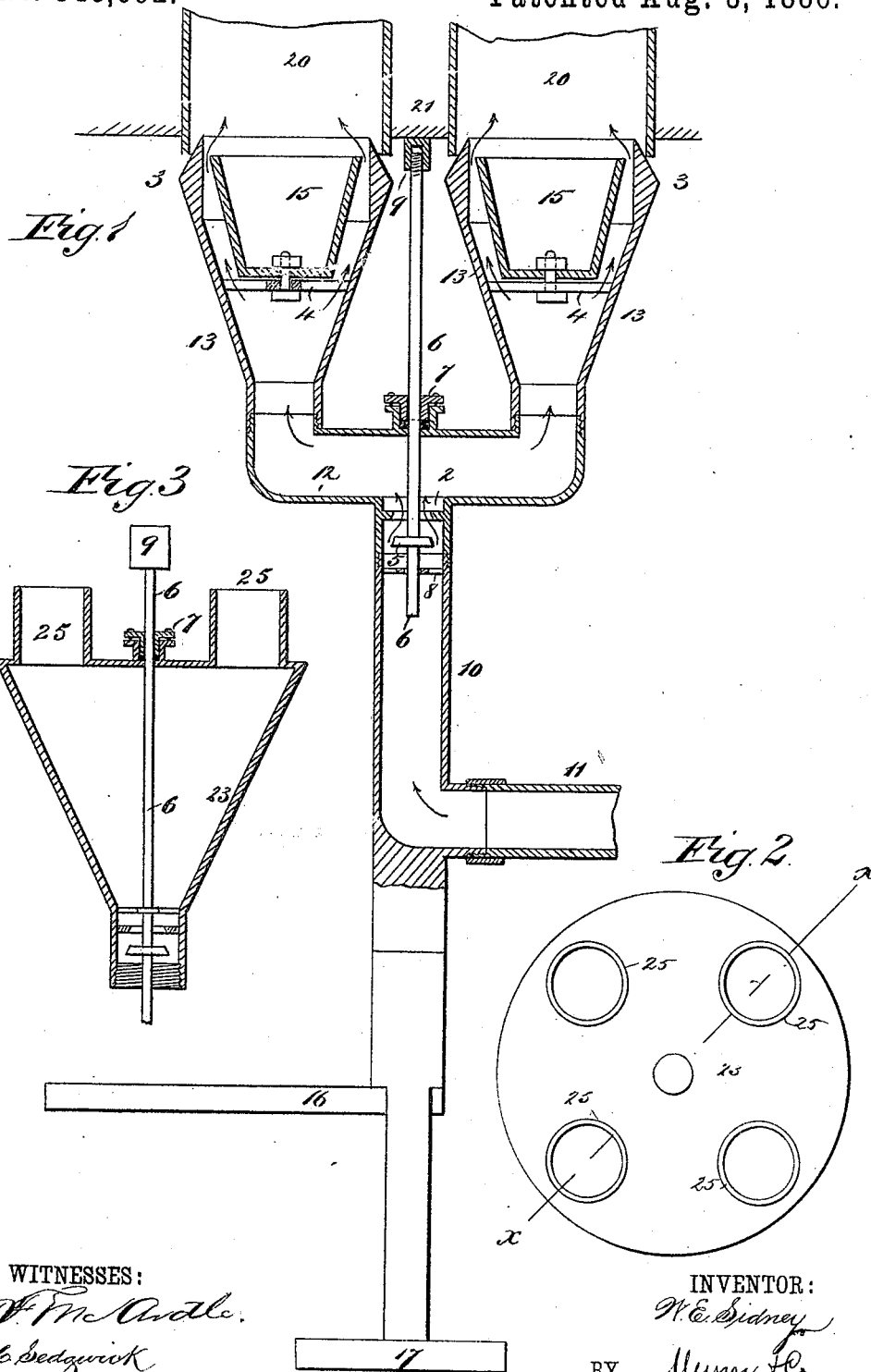


del.)

W. E. SIDNEY.
FLUE CLEANER.

No. 346,692.

Patented Aug. 3, 1886.



WITNESSES:

W. M. Andle.
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INVENTOR:

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UNITED STATES PATENT OFFICE

WILLIAM E. SIDNEY, OF FRANKFORT, INDIANA.

FLUE-CLEANER.

SPECIFICATION forming part of Letters Patent No. 346,692, dated August 3, 1886.

Application filed May 11, 1886. Serial No. 201,830. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. SIDNEY, of Frankfort, in the county of Clinton and State of Indiana, have invented a new and Improved Flue-Cleaner, of which the following is a full, clear, and exact description.

My invention relates to the construction of a cheap, durable, and efficient boiler-flue cleaner; and the invention consists of certain novel constructions and combinations of parts to be hereinafter described, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional plan view of the cleaner, the handles, however, being shown in full lines and the parts being represented in the position they assume when the cleaner is in position for use. Fig. 2 is a face view of a modified construction; and Fig. 3 is a sectional view of the same, taken on line *x x*.

Referring now more particularly to the construction illustrated in Fig. 1, 10 is the main steam-supply pipe, which, through the medium of a pipe, 11, is connected to the steam-supply source. To the forward end of the pipe 10 there is coupled a steam-distributing pipe, 12, in the neck of which there is arranged a valve-seat, 2, and to the extending ends of which there are coupled bell-shaped attachments 13 13, that flare outward from just beyond the point at which they are connected to the distributing-pipe 12, to the point 3, from which point they flare inward, so that in reality the attachments 13 are in the form which would be outlined by the joining of two cone frustums at their bases. Within the attachments 13 there are mounted cross strips, 4, and to these strips there are bolted cone-shaped deflectors, 15, the edges of which closely approach but do not touch the inner walls of the attachment 13. A valve, 5, is arranged in connection with the valve-seat 2, and this valve is carried by a stem, 6, which extends through a stuffing-box, 7, the inner end of the stem being guided by an apertured strip, 8, that is supported by pipe 10. Upon the extending end of the stem 6, which is screw-

threaded, there is fitted an adjustable box-nut, 9. The whole device is provided with proper handles, 16, 17.

Such being the general construction of my improved flue-cleaner, the operation is as follows: The bell-shaped attachments 13 are placed so that their inwardly-flaring ends will enter the exposed open ends of the flue 20, the box-nut 9 striking against the boiler-head 21, thus throwing the valve 5 from its seat 2, and allowing the steam to enter the flues, as indicated by the arrows shown in the drawings, the amount of steam admitted being regulated by the position of the box-nut 9.

The arrangement described is to be used when but two flues are to be cleaned at a time; but if a great number of flues—as 4—were to be cleaned at the same time, I would connect such an attachment as that illustrated in Figs. 2 and 3 with the supply-pipe 10. This attachment consists, essentially, of a distributing-chamber, 23, that is connected to the steam supply-pipe 10, and provided with four connecting-flanges, 25, to which the attachments 13 are secured, the box-nut, valve-stem, and flue being arranged as in the case of the construction illustrated in Fig. 1.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a boiler-flue-cleaner, the combination, with a steam-supply pipe, of a distributing-pipe or chamber, bell-shaped attachments 13, formed with inwardly flaring ends, deflectors 15, arranged within the attachments 13, and a valve, 5, provided with an extending stem, 6, substantially as described.

2. In a boiler-flue cleaner, the combination, with a steam-supply pipe, of a distributing-pipe, bell-shaped attachments 13, formed with inwardly-flaring ends, deflectors 15, arranged within the attachments 13, and a valve, 5, carried by a stem, 6, the extending end of which is provided with an adjustable box-nut, substantially as described.

WILLIAM E. SIDNEY.

Witnesses:

HENRY URSCHEL,
PATRICK O'CONNOR.