

No. 842,901.

PATENTED FEB. 5, 1907.

S. McADOO.
BOILER FLUE CLEANER.
APPLICATION FILED JULY 25, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

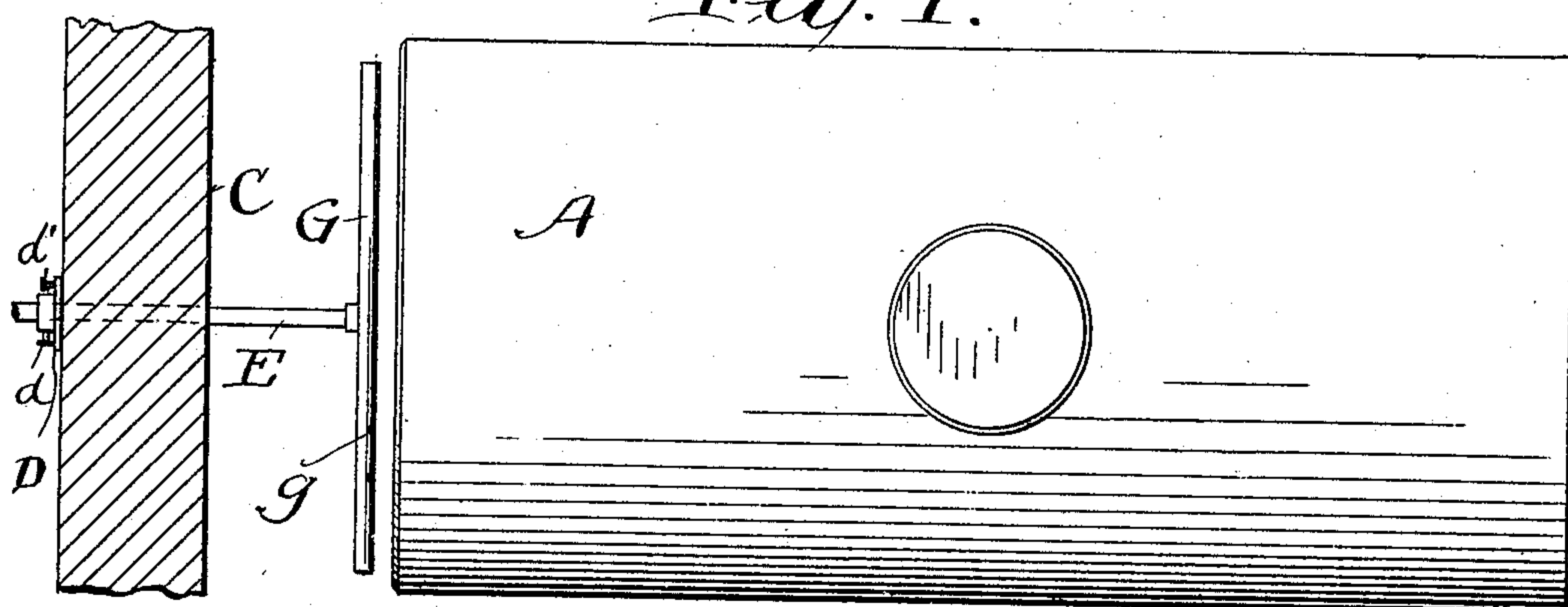
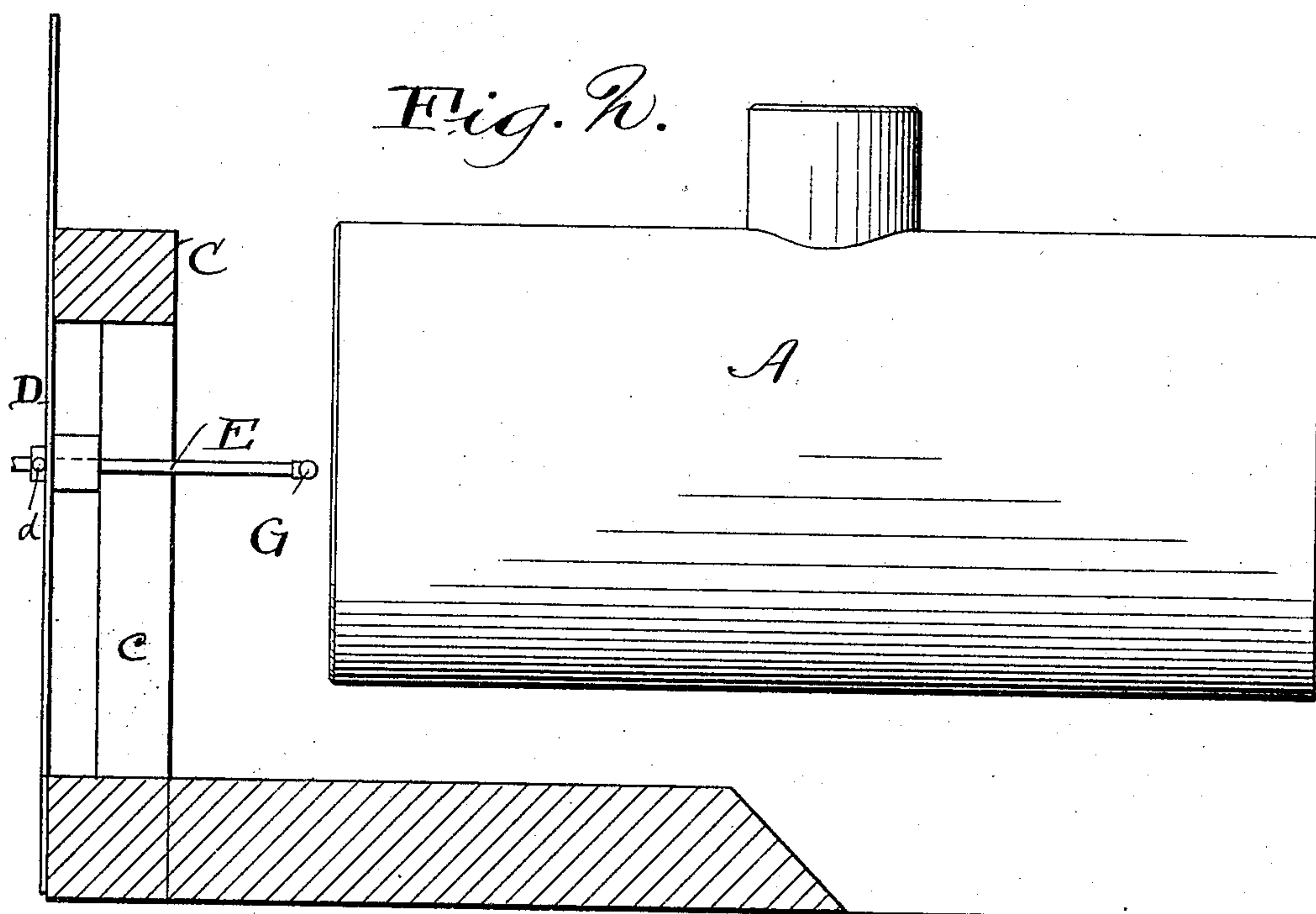


Fig. 2.



Witnesses.
E. B. Gilchrist
Nellie J. Webster

Inventor.
Samuel McAdoo
By Thurston Woodward
Attorneys

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2 SHEETS—SHEET 2.

Fig. 3.

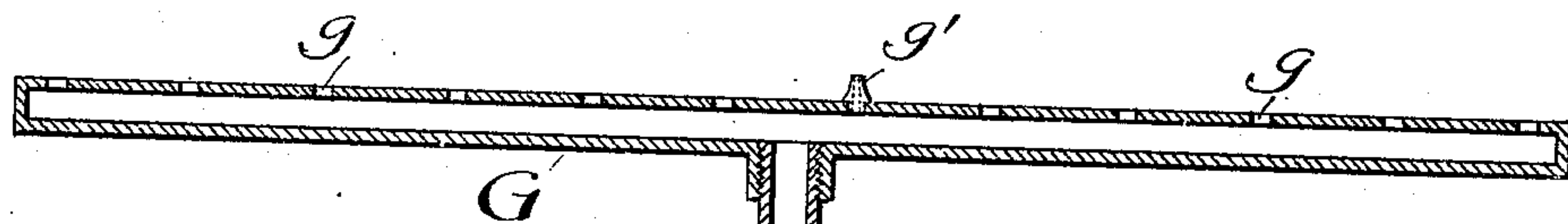
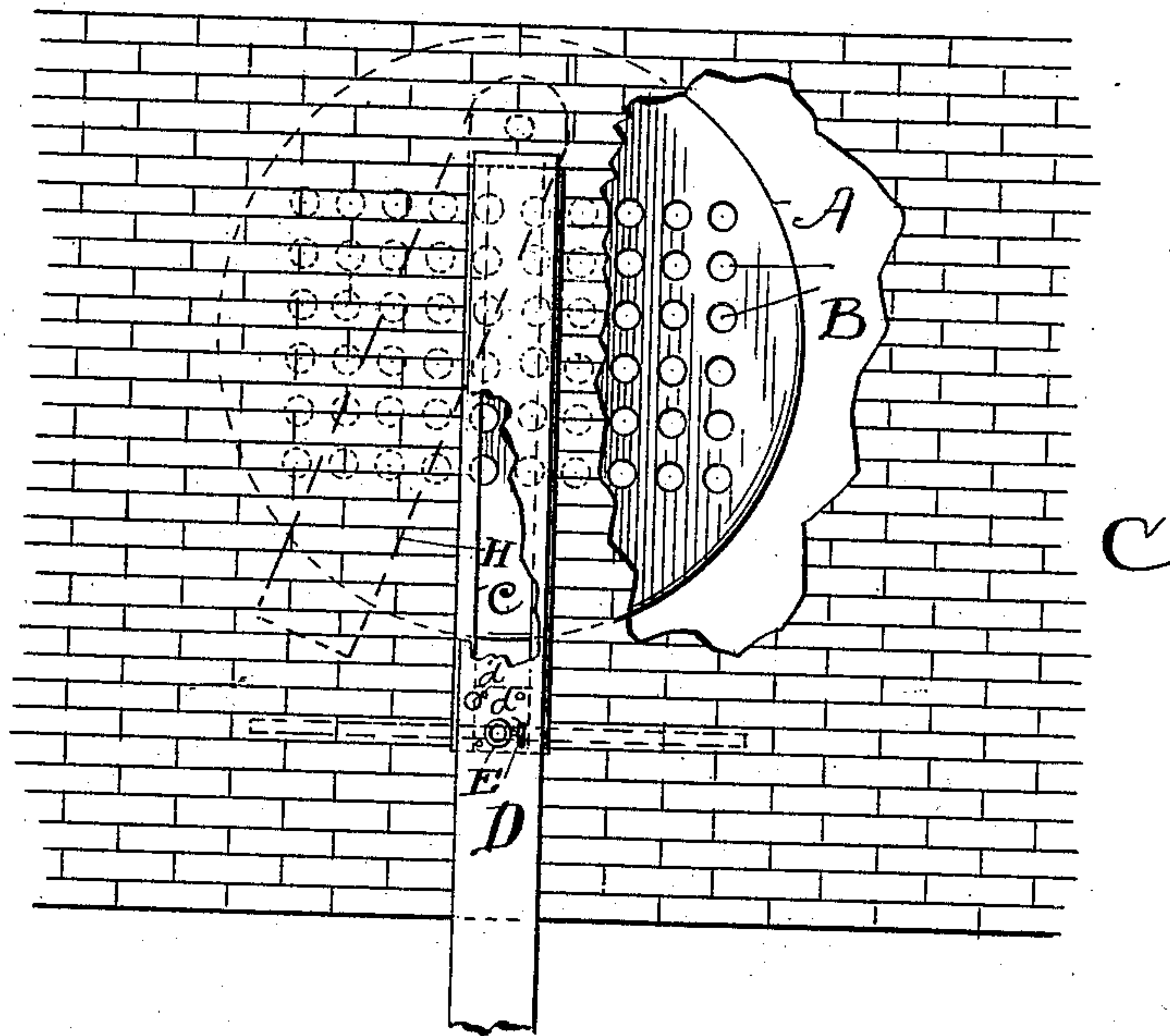


Fig. 4.

Witnesses.
E. B. Gilchrist
Nellie J. Webster

Inventor
Samuel McAdoo
By Thurston Woodward
Attorney

UNITED STATES PATENT OFFICE.

SAMUEL McADOO, OF TORONTO, OHIO.

BOILER-FLUE CLEANER.

No. 842,901.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed July 25, 1906. Serial No. 327,671.

To all whom it may concern:

Be it known that I, SAMUEL McADOO, a citizen of the United States, residing at Toronto, in the county of Jefferson and State of Ohio, have invented a certain new and useful Improvement in Boiler-Flue Cleaners, of which the following is a full, clear, and exact description.

The invention is an improvement in boiler-flue cleaners—that is to say, devices for cleaning out the fire tubes or flues of tubular boilers by blowing steam or air through them.

The object of the invention is to provide an inexpensive and efficient flue-cleaner; and the invention consists of the combination of parts hereinafter described, and pointed out definitely in the claims.

In drawings, Figure 2 is a sectional side elevation of the invention. Fig. 1 is a plan view with the back wall of the boiler-setting shown in section. Fig. 3 is a rear elevation of the boiler equipped with the invention, and Fig. 4 is an enlarged sectional plan view.

Referring to the parts by letters, A represents a tubular steam-boiler, and B the fire tubes or flues, which extend longitudinally therethrough.

C represents the back wall of the boiler setting or housing. In this back wall is a vertical slot *c*, to which is fitted a vertically-movable slide D. A steam-supply pipe E passes rather tightly through a hole in this slide and may be secured therein by means of a set-screw *d*. On the inner end of this supply-pipe is a horizontal pipe G. In that side of this pipe G which faces the end of the boiler are numerous jet-openings *g*, which are placed at a distance apart equal to the distance, measured horizontally, between the centers of adjacent flues B in the various rows of flues. If desired, these jet-openings may extend through tapered nozzles *g'* on pipe G, adapted to enter the ends of the flues.

To use the device, the slide D is raised to the proper level for cleaning a given horizontal row of flues, and it may be secured at the proper elevation by a set-screw *d'*. Then pipe E is moved inward through the slide D until pipe G is in contact with the end of the boiler. At this time the jet-openings *g* will be alined with all of the tubes in one horizontal row of tubes, and when steam is discharged into pipe E this steam issuing from these jet-openings will be discharged directly into the boiler-flues and will blow out of them the deposits of soot, &c., therein. The de-

scribed parts may be readjusted up or down for each horizontal row of boiler-flues.

The slide D may be of such length that it will always close the slot *c* in the rear wall C, and thereby the admission of cold air to cool the tubes will be prevented. If desired, however, the slide may be short, and any other means for closing the slot may be provided—as, for example, a swinging door H, which may be pivoted to the rear wall C. When the apparatus is not in use, this slide D is allowed to go down to the bottom of the slot, and the pipe E is drawn outward until pipe G rests in the angle between the floor and the back wall of the furnace-setting, where it will not be burned out or otherwise injured in the operation of the furnace.

Having described my invention, I claim—

1. In boiler-flue cleaners, the combination of a boiler having tubular flues therethrough from end to end, and a boiler-setting whose vertical rear wall has a vertical slot, with a slide movable vertically in said slot, a steam-pipe movable horizontally through said slide, and a discharge-pipe which is secured to the inner end of the supply-pipe and at right angles thereto and is provided with jet-openings in that face which is adjacent to the end of the boiler, substantially as and for the purpose specified.

2. In boiler-flue cleaners, the combination of a boiler having substantially horizontal tubular flues extending through it from end to end, and a boiler-setting whose vertical rear wall has a slot, with a slide movable vertically in said slot, a steam-supply pipe movable horizontally in said slide toward and from the end of the boiler, a discharge-pipe which is secured to the inner end of the supply-pipe and at right angles thereto, and is provided with jet-openings in that side which faces the end of the boiler, and means for closing the slot throughout its entire length whatever may be the position of the slide therein, substantially as specified.

3. In boiler-flue cleaners, the combination of a boiler having substantially horizontal tubular flues extending through it from end to end, and a boiler-setting whose vertical rear wall has a vertical slot, with a slide movable in said slot, a steam-supply pipe movable endwise through said slide, a discharge-pipe which is secured to the inner end of the supply-pipe and at right angles thereto and is provided with jet-openings in that side which faces the end of the boiler, said slide

being so much longer than the slot that it will close the same whether the flue-cleaning device is in use or out of use, substantially as specified.

5 4. In boiler-flue cleaners, the combination of a boiler having tubular flues extending through it from end to end, and a boiler-setting whose end wall opposite the ends of the flues has a slot through it, with a slide movable in said slot, a steam-supply pipe movable lengthwise through said slide toward and from the end of the boiler in a path substantially parallel with the flues therein, a discharge-pipe secured to the inner end of the
10 supply-pipe and at right angles thereto and

therefore extending at right angles to the said flues, said supply-pipe being provided with a series of nozzles projecting therefrom toward the end of the boiler and located a distance apart substantially equal to the distance between centers of adjacent flues in the same horizontal row, substantially as specified.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

SAMUEL McADOO.

Witnesses:

E. L. THURSTON,
J. M. WOODWARD.