

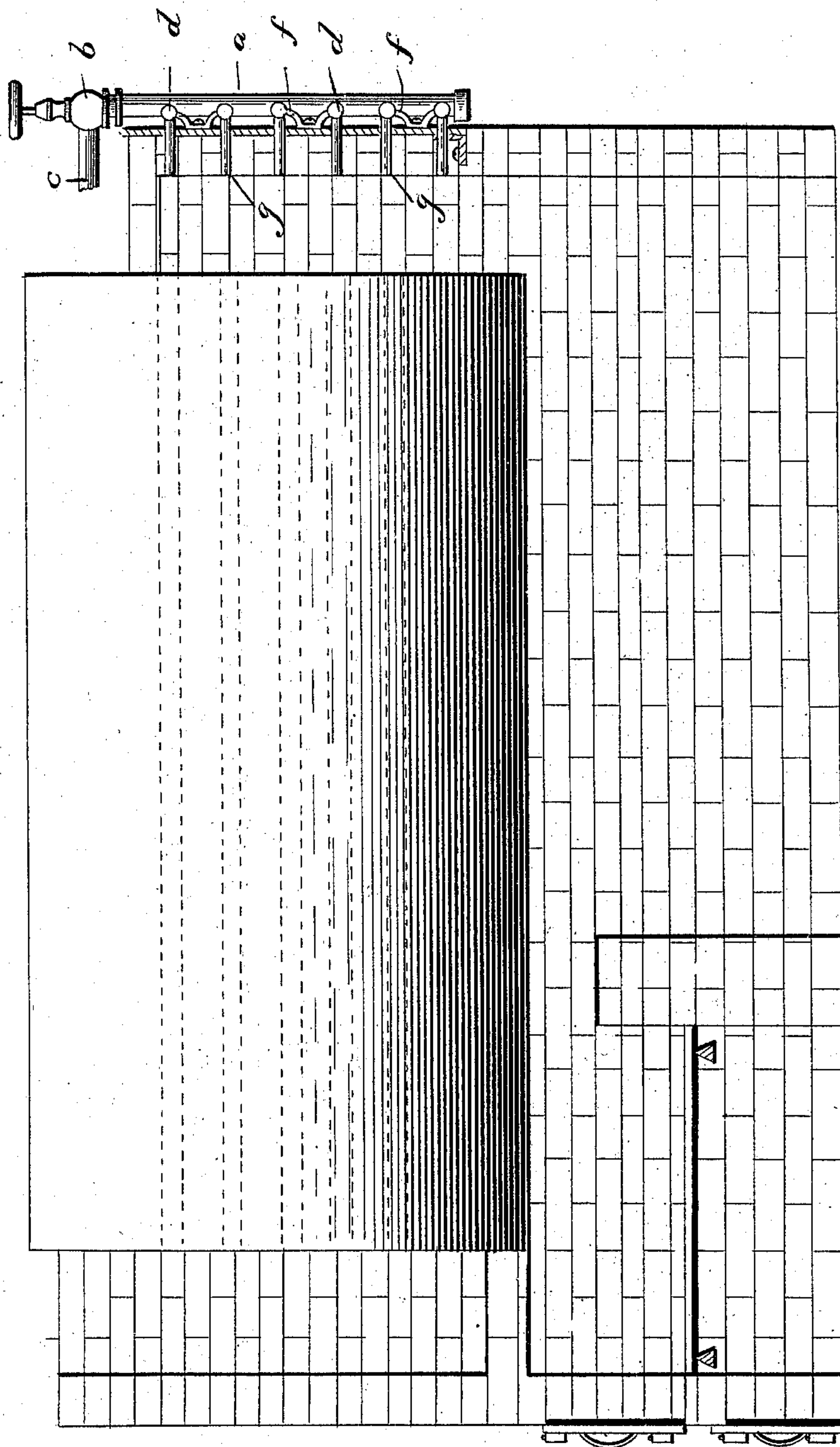
(No Model.)

2 Sheets—Sheet 1.

J. J. BRENNAN.
FLUE CLEANER.

No. 575,280.

Patented Jan. 12, 1897.



Witnesses:

J. B. McGirr.
D. Chadwick.

Inventor:

James J. Brennan
by H. C. Everett
att'y

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2 Sheets—Sheet 2.

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Fig. 2.

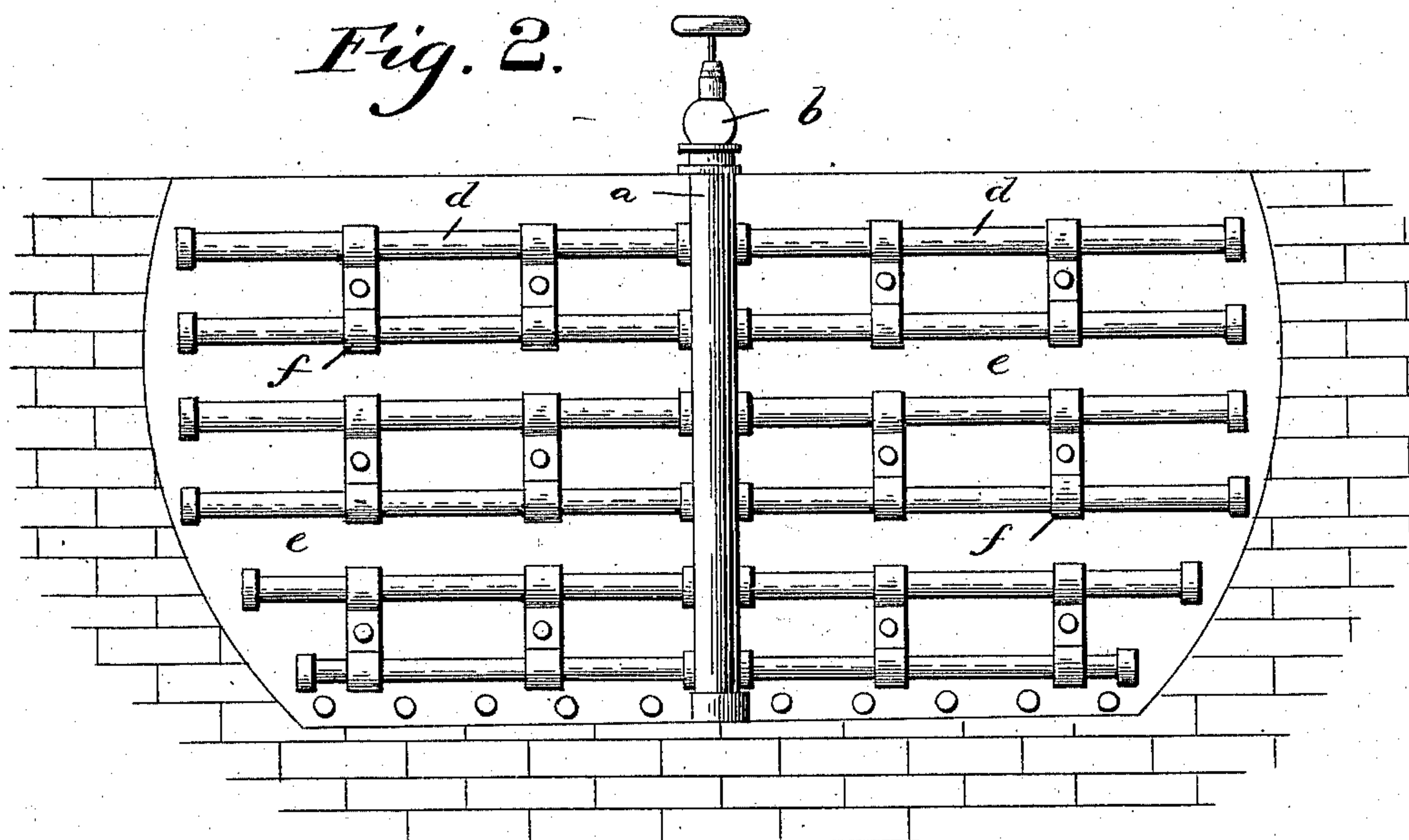


Fig. 4.

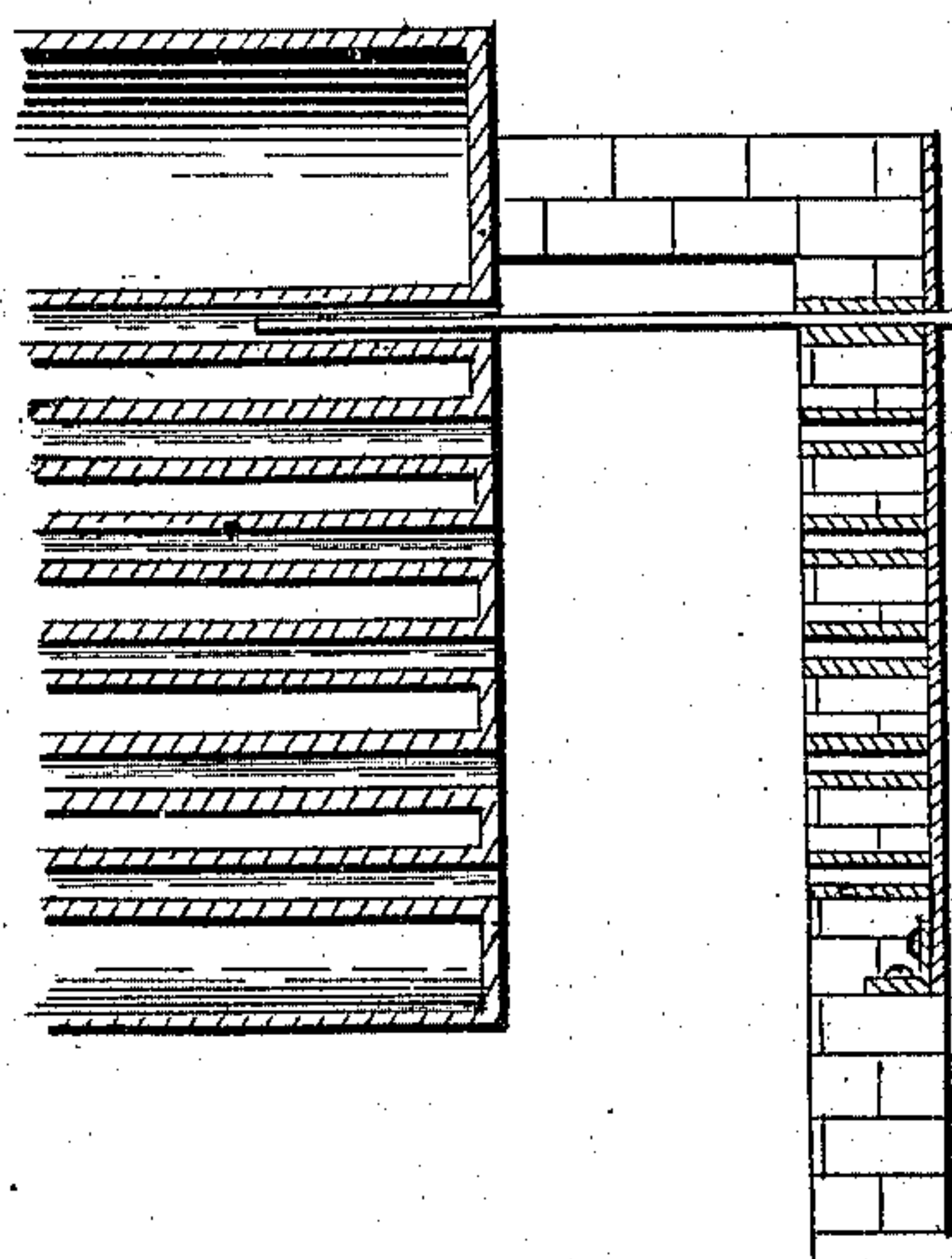
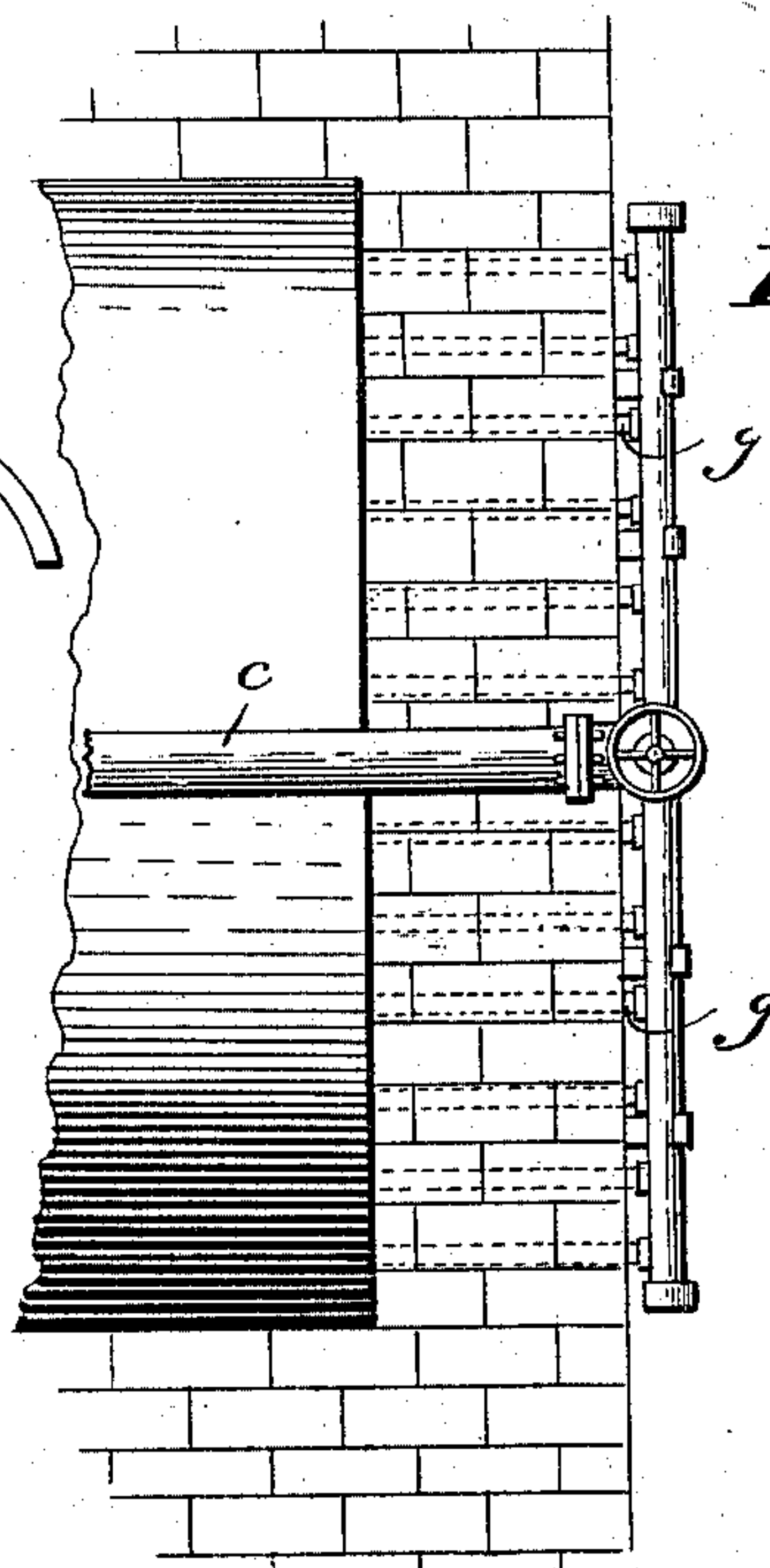


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES J. BRENNAN, OF PITTSBURG, PENNSYLVANIA.

FLUE-CLEANER.

SPECIFICATION forming part of Letters Patent No. 575,280, dated January 12, 1897.

Application filed March 27, 1896. Renewed December 18, 1896. Serial No. 616,204. (No model.)

To all whom it may concern:

Be it known that I, JAMES J. BRENNAN, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Flue-Cleaners, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in boiler-flue cleaners, and has for its object the provision of new and novel means whereby the flues may be easily cleaned without regard to the number
15 or size of the tubes.

A further object of the invention is to construct a flue-cleaner that will provide a considerable saving of time and labor in the cleaning of the flues and that will further save
20 from ten to twenty per cent. in the fuel.

A still further object is to provide a flue-cleaner that can be readily attached to any tubular boiler now in use, and that will be extremely simple in its construction, strong,
25 durable, effectual in its operation, and comparatively inexpensive to manufacture.

With the above and other objects in view the invention finally consists in the novel construction, combination, and arrangement of
30 parts to be hereinafter more specifically described, and particularly pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like letters of reference indicate similar
35 parts throughout the several views, in which—

Figure 1 is a side elevation of a boiler, showing the arrangement of the blower. Fig. 2 is a front elevation of the blower. Fig. 3 is a top plan view of the blower in position, showing a portion of the boiler and brickwork. Fig. 4 is a sectional view of a portion of a boiler and the brickwork, showing manner
40 of cleaning one flue at a time.

In the drawings, *a* represents the main blow-pipe, which is provided at the top with a valve *b*, to which is connected the steam-pipe *c*. A series of pipes *d d* are connected to the main
50 pipe *a*, which are closed at their free ends, as is also the pipe *a*. These pipes are secured to the plate *e* (which may be countersunk into

the brickwork) by braces *f*, which serves to make the pipes rigid by having the braces clasp two of the pipes, as shown, and these
55 braces can be fastened to the plate by rivets or bolts, as may be desired. Pipes *g g* are connected to the inner face of the pipes *d d* and to the pipe *a*, and extend through the brickwork or masonry to the combustion-
60 chamber.

The operation of my improved flue-cleaner will be readily apparent from the views of the same which I have shown in the drawings. The blower is arranged on the plate *e* at the
65 rear end of the boiler on the outside of the brickwork or masonry. The steam is turned on through the valve *b* from the steam-pipe *c* into the main pipe *a* and is forced through the pipes *d d* into the pipes *g g* through the
70 combustion-chamber and into the flues of the boiler, effectually cleaning the same and forcing all soot or other sediment into the smoke-box or britchen and thence out through the
75 smoke-stack.

By this arrangement of a flue-cleaner it will not interfere in any manner with the fireman or other workmen or destroy the draft in any one of the boilers, as in the old method of brushing or blowing out the flues from the
80 front of the boilers; but, on the contrary, the force of the steam through the flues while the blower is in operation will greatly improve the draft. Furthermore, the soot does not enter the combustion-chamber, as in the old method
85 of blowing from the front, which deposits all soot, dirt, and sediment at the rear end of the boiler in the combustion-chamber. This undesirable feature is entirely overcome by my improved blower, and, as will be noted, it
90 will also clean the head and rear end of the boiler at the same time the tubes are cleaned.

My improved flue-cleaner will also preserve the boilers to a considerable extent by reason of the uniform temperature which is retained
95 while using the blower, which is not the case with the old method.

In Fig. 4 of the drawings I have shown the method of cleaning one flue in the boiler, and for this operation the brickwork or masonry
100 is constructed with the apertures in the same manner as for the reception of the pipes *g*, and can be plugged or provided with a plug or slide on the plate *e*, as may be desired. A

nozzle is then placed on the steam-hose, this nozzle being of sufficient length to reach through the brickwork and the combustion-chamber into the boiler. The steam is forced
5 into the flue through the steam-hose and cleanses the same in the same manner as heretofore described for the blower. During this operation the remaining holes are closed, and the same operation is required for the remain-
10 ing flues.

It will be noted that my improved flue-cleaner can be readily adapted to be applied to locomotives as well as stationary boilers, and I therefore do not wish to limit myself
15 to the specific construction as shown herein; but various changes in the details of construction may be made without departing from the general spirit of my invention.

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

1. A flue-cleaner consisting of a series of pipes, jets leading from the pipes and extending through the furnace-wall opposite the boiler-flues, and brackets embracing the hori- 25 zontal pipes and connected to the wall, as and for the purpose described.

2. A flue-cleaner consisting of a series of blowpipes arranged at the rear of a furnace, clips secured to the wall with the ends em- 30 bracing the pipes, jets connected to the pipes and extending into the flues, at the rear and means for admitting steam into the tubes and causing it to follow the products of combustion therethrough, as and for the purpose 35 described.

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

JAMES J. BRENNAN.

Witnesses:

ALFRED M. WILSON,
H. C. EVERT.