

(No Model.)

C. T. COE.
STEAM JET BLOWER.

No. 559,075.

Patented Apr. 28, 1896.

Fig. 1.

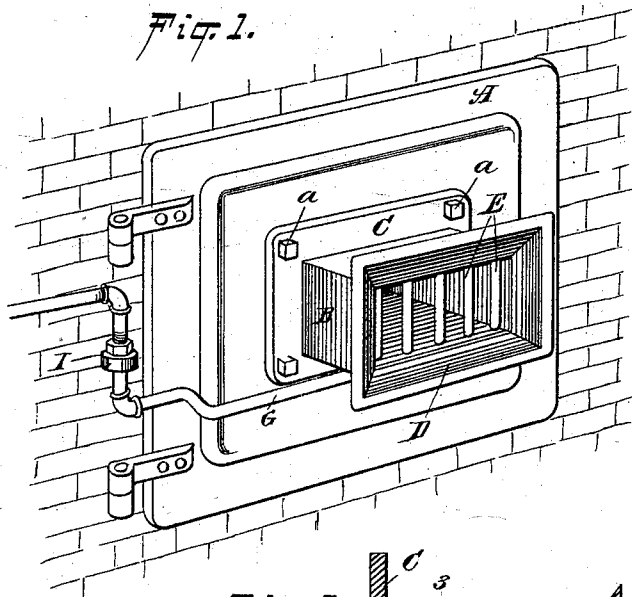


Fig. 2.

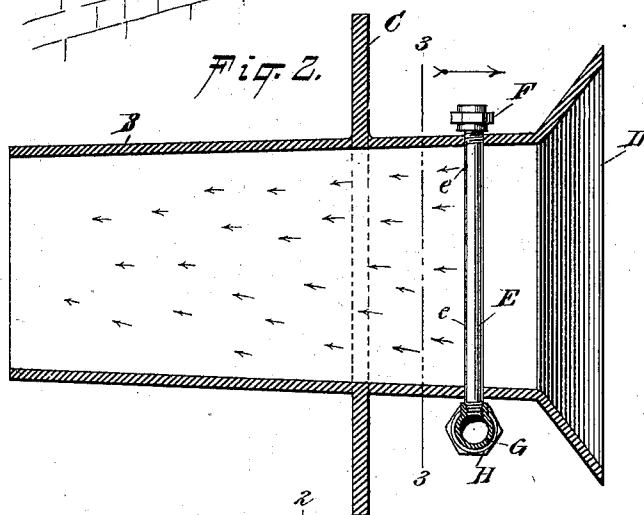
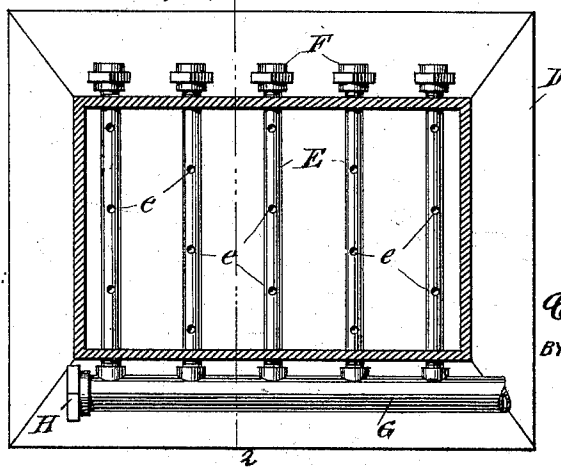


Fig. 3.



WITNESSES:

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STEAM-JET BLOWER.

SPECIFICATION forming part of Letters Patent No. 559,075, dated April 28, 1896.

Application filed January 14, 1896. Serial No. 575,531. (No model.)

To all whom it may concern:

Be it known that I, CHARLES THOMAS COE, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Steam-Jet Blowers, of which the following is a specification.

My invention relates to an improvement in steam-jet blowers for providing an extra draft or current of air to the under side of the fire-bed, the object of the same being to so construct a device of this kind or character that there will be little or no danger of its becoming clogged with foreign matter from long-continued use, and that when the same does become clogged or partially clogged it may be readily and easily cleansed or freed from such foreign matter.

The further object of my invention is to provide a device of this character which shall be simple and cheap to manufacture, and so arranged and constructed that it will offer the least amount of resistance to the inflowing current of air. In other words, so arranged and constructed that a large volume or current of air shall be provided with the least possible expenditure of steam.

With these and other ends in view my invention consists in certain novel features of construction and combinations of parts, as will be hereinafter fully described, and pointed out in the claim.

In the accompanying drawings, Figure 1 is a perspective view of my improved steam-jet blower attached to the door of an ash-pit. Fig. 2 is a sectional view taken on the line 2 2 of Fig. 3, and Fig. 3 is a view taken on the line 3 3 of Fig. 2.

Referring to the drawings, A represents the ash-pit door of an ordinary furnace, the central portion of which is cut away to receive the rectangular box or flue B, the sides of which preferably converge toward the rear end, and which has formed integral therewith, or secured thereto, the flange C, which, after said box or flue has properly been inserted in place, fits or abuts against the door A, and by means of which said box or flue is bolted or otherwise secured to said door, as shown at *a*.

The forward end of the box B is formed

with an enlarged flaring opening D, at which end the current of air enters the box, as indicated by the arrows. Immediately back of this flared end D, and in front of the flange C, is located a series of vertical pipes E, passing entirely through the upper and lower sides of the box B, the upper end of each of said pipes having a nut or detachable cap F, threaded or fitted thereon to prevent the escape of steam therefrom. The lower end of each of these pipes E is threaded into the horizontal supply-pipe G, the free end of which latter also has a nut or cap H fitted thereto, said supply-pipe being located below the lower side of the box B and having its forward end connected with the boiler or other steam-supply chamber.

At some convenient point in its length the pipe G is provided with a joint I to allow of the door A being opened and closed.

As shown in Fig. 3 of the drawings, the pipes E are provided with holes or perforations *e*, the latter being preferably so arranged or located that those in one pipe will fall opposite the spaces between the openings in the next adjacent pipes, this arrangement providing a more uniform current of air than would be the case if the holes were all in line.

It will now be understood from the above description that when the steam is let into the supply-pipe G it will issue in jets from the openings *e*, formed in the pipes E, and draw into the ash-pit under the fire-bed a large current or volume of air through the box or flue B, the pipes E offering but little resistance to the passage thereof.

By constructing the blower as described access can always be easily and readily had to the pipes E by removing the caps F therefrom should they become clogged with foreign matter. It is evident, however, that there will be little or no danger of this kind, as the horizontal supply-pipe G will act as a reservoir or receptacle to catch and contain the same. By removing the cap F from one of the pipes E a wire or small instrument may be inserted therein to dislodge any particle of foreign matter adhering therein, or by removing said cap and turning on the steam the latter will generally be sufficient to cleanse said pipe and force the foreign matter out of the top thereof. In cases of necessity a pipe E may

be unscrewed at its lower end from the supply-pipe G and lifted out through the upper side of the box, this being an easy matter, as the entire arrangement is on the outside of the furnace and within easy reach of the workman.

Should the supply-pipe G show any signs of becoming closed or clogged, it is only necessary to remove the cap H and turn on the steam, when it will be instantly cleansed by the force or current through it.

Several changes might be made in the detailed structure, or combinations, or arrangement of the several parts—as, for instance, instead of forming the box or flue rectangular in shape it might be made round, and instead of having the pipes E arranged vertically, as shown, they might be arranged horizontally—such changes or alterations readily suggesting themselves to any one skilled in the art and well understood by them without further description or illustration.

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

In a steam-jet blower the combination with a box or flue having a clear passage through it, of a series of perforated vertical pipes passing through said box or flue, and through the upper and lower sides thereof, said vertical pipes having their upper free ends closed by detachable caps, and a steam-supply pipe located below and outside of the lower side of said flue, into which the lower ends of said vertical pipes are threaded, and having its outer free end closed with a detachable cap, substantially as described.

Signed at New York, in the county of New York and State of New York, this 30th day of December, A. D. 1895.

CHARLES THOMAS COE.

Witnesses:

JOHN F. FLAGG,
F. S. KENNEDY.