

No. 787,279.

PATENTED APR. 11, 1905.

C. T. COE.
STEAM JET BLOWER.

APPLICATION FILED MAR. 22, 1904. RENEWED MAR. 16, 1906.

2 SHEETS—SHEET 1.

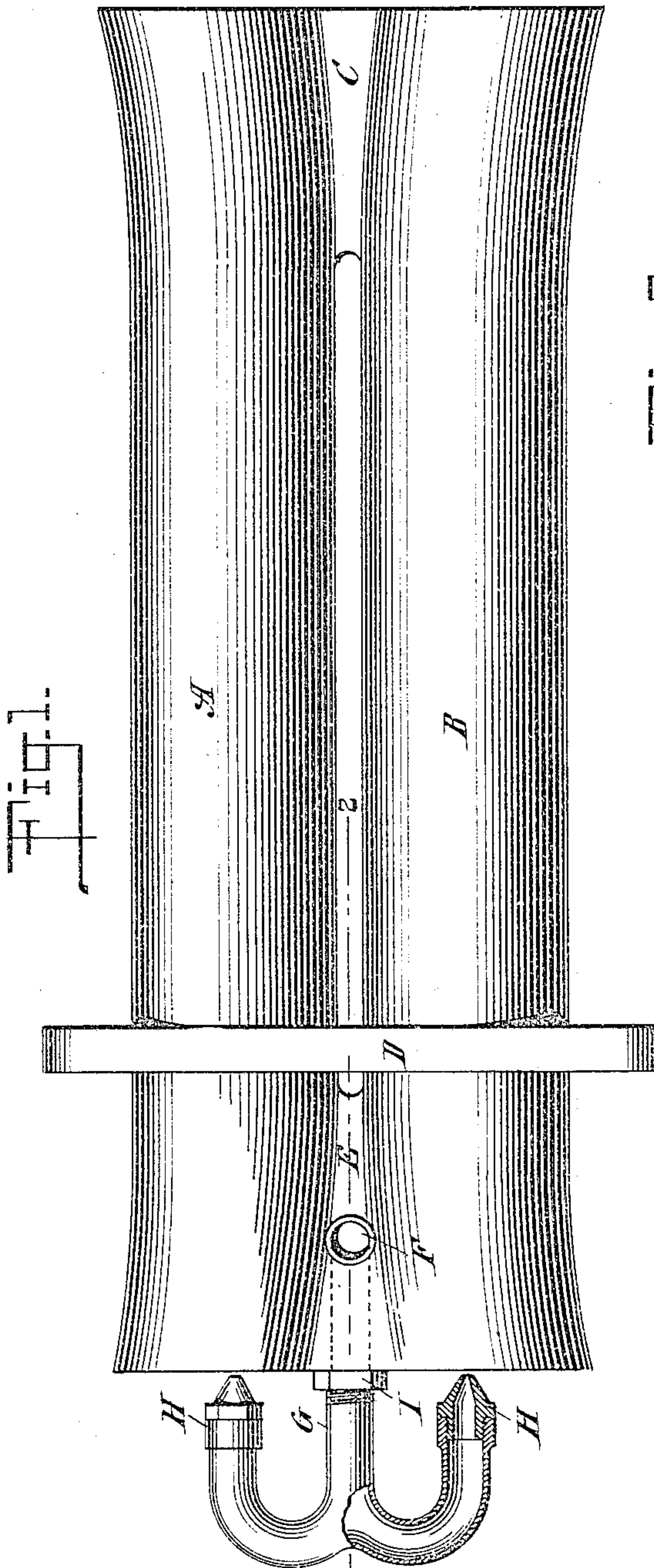


Fig. 1.

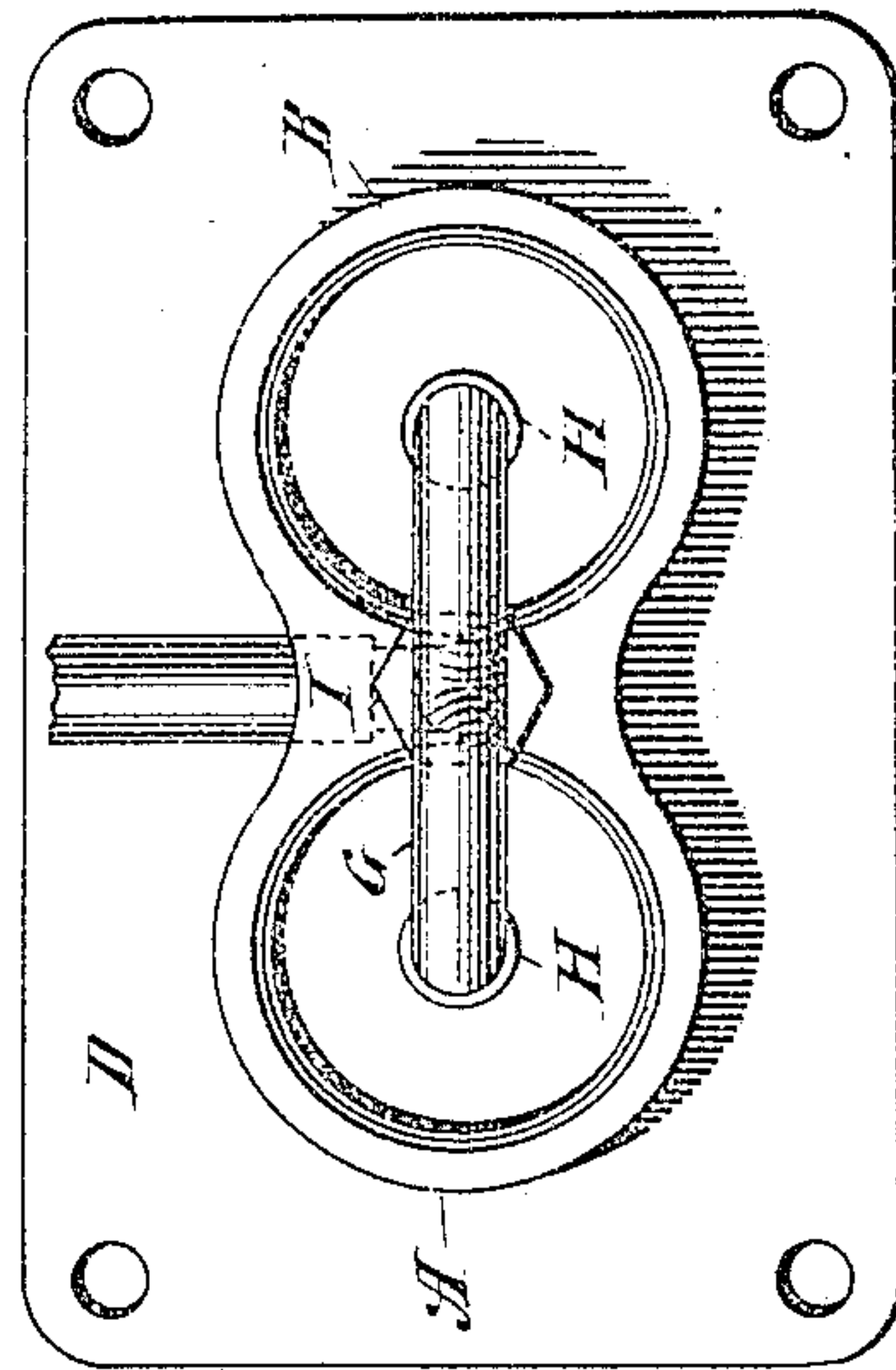


Fig. 3.

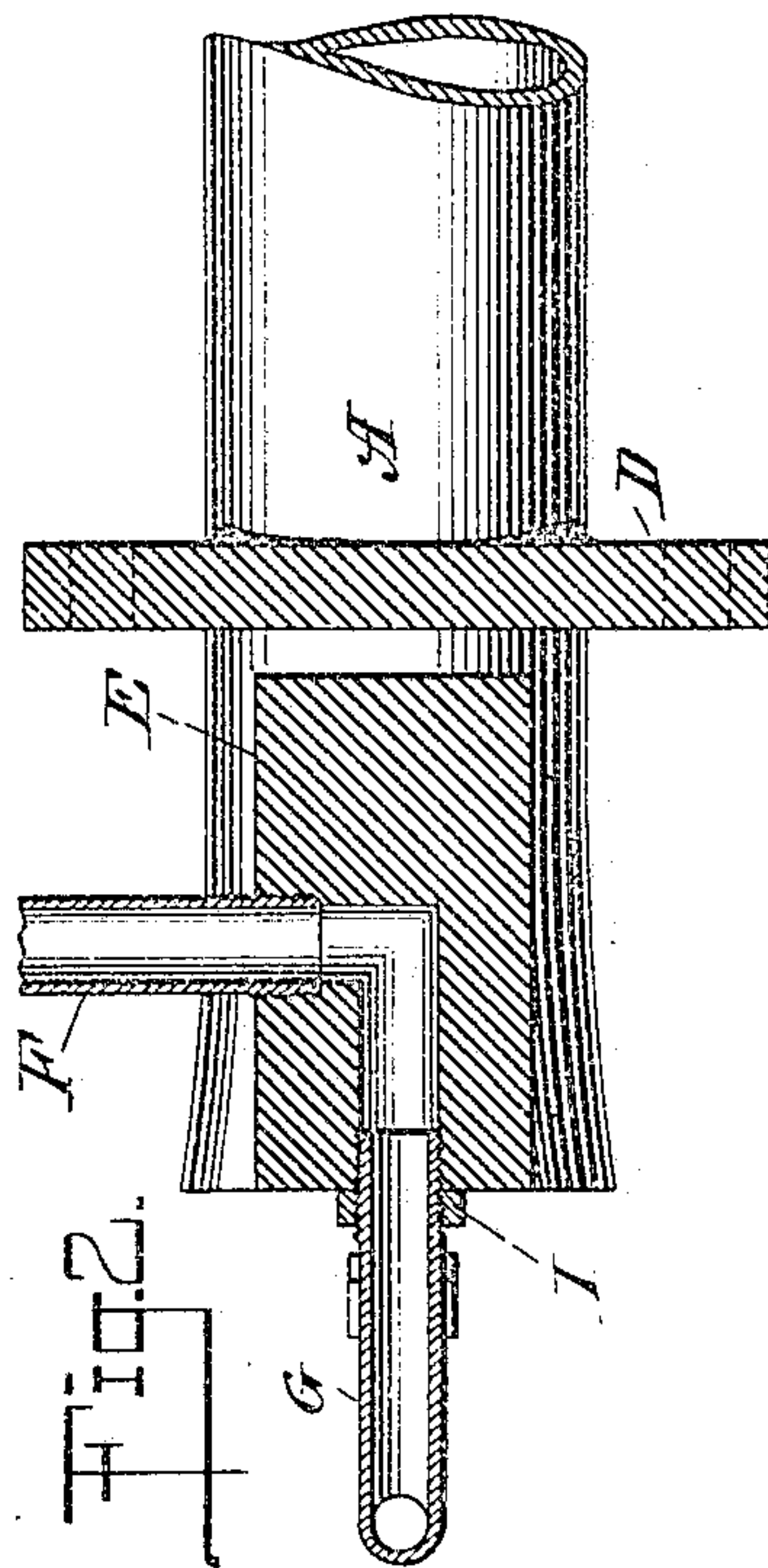


Fig. 2.

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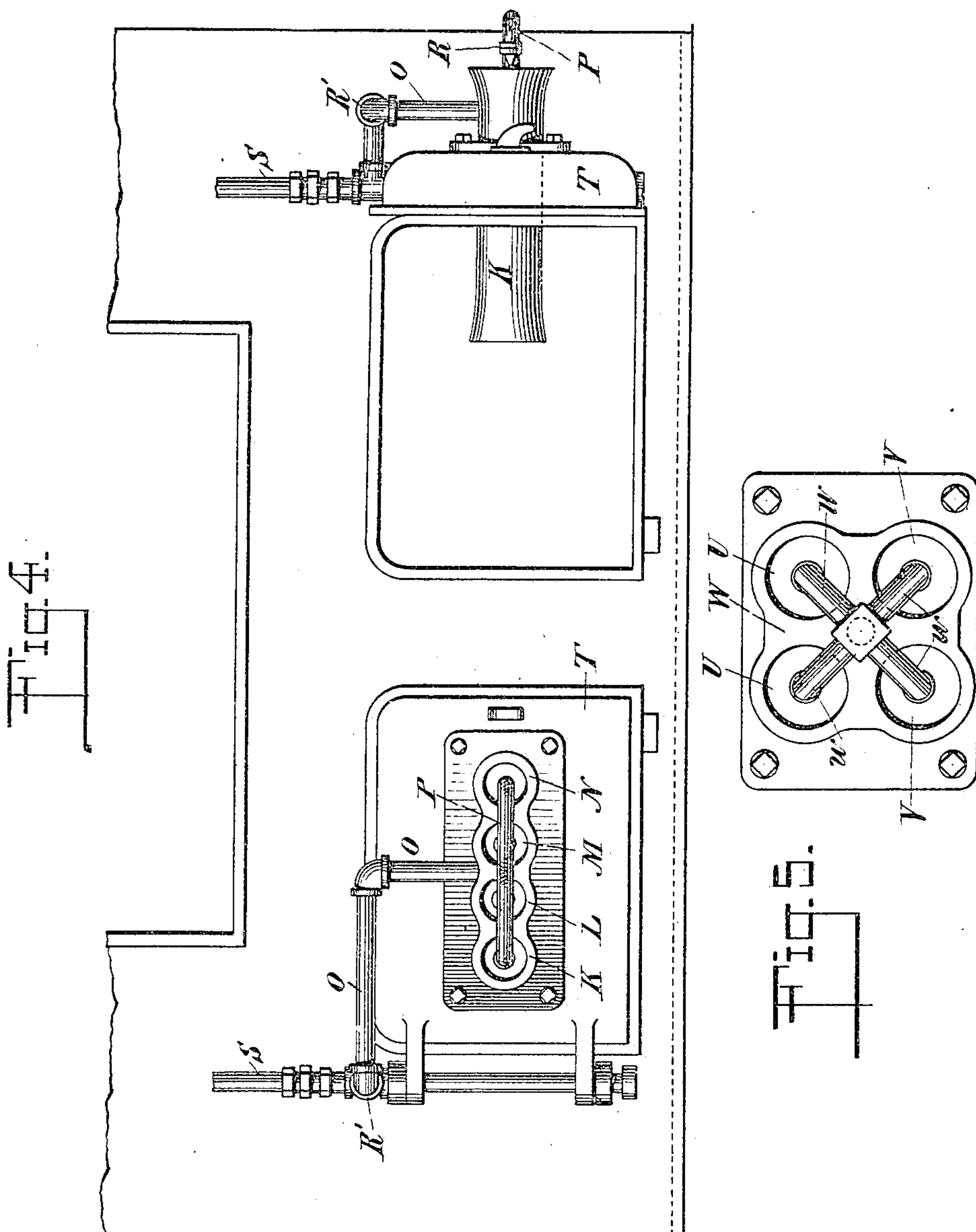
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M. Van Nortwick.
D. A. Hughes.

Charles D. Lee Inventor
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UNITED STATES PATENT OFFICE.

CHARLES T. COE, OF KEARNEY, NEW JERSEY.

STEAM-JET BLOWER.

SPECIFICATION forming part of Letters Patent No. 787,279, dated April 11, 1905.

Application filed March 22, 1904. Renewed March 16, 1905. Serial No. 250,406.

To all whom it may concern:

Be it known that I, CHARLES T. COE, a citizen of the United States, and a resident of Kearney, in the county of Hudson and State of New Jersey, have made and 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, the object of the same being to devise a device of this character which shall be simple and economical to manufacture and which shall be more effective than those now commonly used.

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

In the accompanying drawings, Figure 1 is a top plan view of a steam-jet blower constructed in accordance with my invention. Fig. 2 is a sectional view taken on the line 2 2 of Fig. 1. Fig. 3 is an end view thereof. Fig. 4 shows a modified form applied to furnace-doors, one door being open and the other door being closed. Fig. 5 is another modified form.

Referring to the drawings, A B represent two tubes or cylinders joined at their rear ends by means of the web C and near their forward ends by the flange D, the latter being adapted to be bolted or otherwise secured to the wall of the ash-pit below the furnace-grate in the usual manner. Between the tubes and forward of the flange D is the steam box or chest E, connecting the forward ends of said tubes or cylinders and assisting in strengthening the union of the same. Into the upper side of said chest or box E is tapped the steam-supply pipe F, and from the forward end of said chest or box leads the steam-pipe G, the latter being bifurcated and bent backwardly, as illustrated in Fig. 1, the extreme end of each of the arms being provided with the nozzle H, located centrally with respect to the tubes A and B in order to direct the steam into and through the latter, said pipe G being secured

in place in the forward end of said chest or box E by means of the lock-nut I or other suitable fastening.

In practice those portions of the tubes back of the flange D are projected through the furnace-wall below the furnace-grate, said flange being secured to the wall itself, the forward ends of the tubes and remaining portions of the tubes projecting from the front side of the wall and having supplied thereto steam through the pipe F, which connects to the boiler at one end and to the steam-chest E at the opposite end, the effect being that as the steam issues from the nozzle H into and through the tubes A B it will carry with it a large quantity of air through said tubes and into the ash-pit below the fire-bed.

If it is desired to attach the blower to the furnace-door, as is done in many instances, I provide the blower with four tubes, as illustrated in Fig. 4, instead of two. In order to allow the door to swing open, it is necessary to form the tubes much shorter in length, and in such instance to secure the same amount of air with the short tubes it is necessary to increase the number thereof. It is evident, of course, that the four tubes may be arranged in any desired manner with relation to each other, those in Fig. 4 (lettered K L M N) being arranged in a horizontal row joined together with webs, as in the case of two tubes before described, and having a steam-chest located between the two central tubes, a pipe O leading thereto and pipe P leading therefrom, the latter having branches, as illustrated in Fig. 4, and provided with nozzles R, located centrally with relation to each tube, the pipe O being provided with the swing-joint R', secured to the pipe S, leading from the boiler, in order to allow the door to swing open.

It will be understood, of course, that I do not limit my invention to the number of tubes employed nor to the relative arrangement thereof—as, for instance, in Fig. 5 I have shown one pair of tubes U U, located above a second pair of tubes V V, the steam-chest W being located between the tubes, as

in the case of the single pair shown in Fig. 1, a pipe and nozzle *w* being provided for each tube, as in the former instances.

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

1. A steam-jet blower, consisting of several tubes secured together at their front and rear ends, and connected by a steam-chest located between the same, a steam-supply pipe
10 leading into said steam-chest and an outlet-pipe leading from the latter and provided with a nozzle for each tube and located centrally with relation to the latter, substantially as described.
15

2. A steam-jet blower consisting of two parallel tubes secured together at their rear ends by means of a web and at their forward

ends by means of a flange, adapted to be secured to the wall of the ash-pit, a steam-chest located between and connecting said tubes and having a steam-supply pipe leading therein and an outlet-pipe leading therefrom, the latter being bifurcated and provided on each end with a nozzle, each nozzle
25 being located centrally with relation to its respective tube, substantially as described.

Signed at New York, borough of Manhattan, in the county of New York and State of New York, this 18th day of March, A. D. 1904.
30

CHARLES T. COE.

Witnesses:

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T. A. HUGHES.