

(No Model.)

G. R. JARMAN.
STEAM BLOWER.

No. 560,095.

Patented May 12, 1896.

Fig. 1

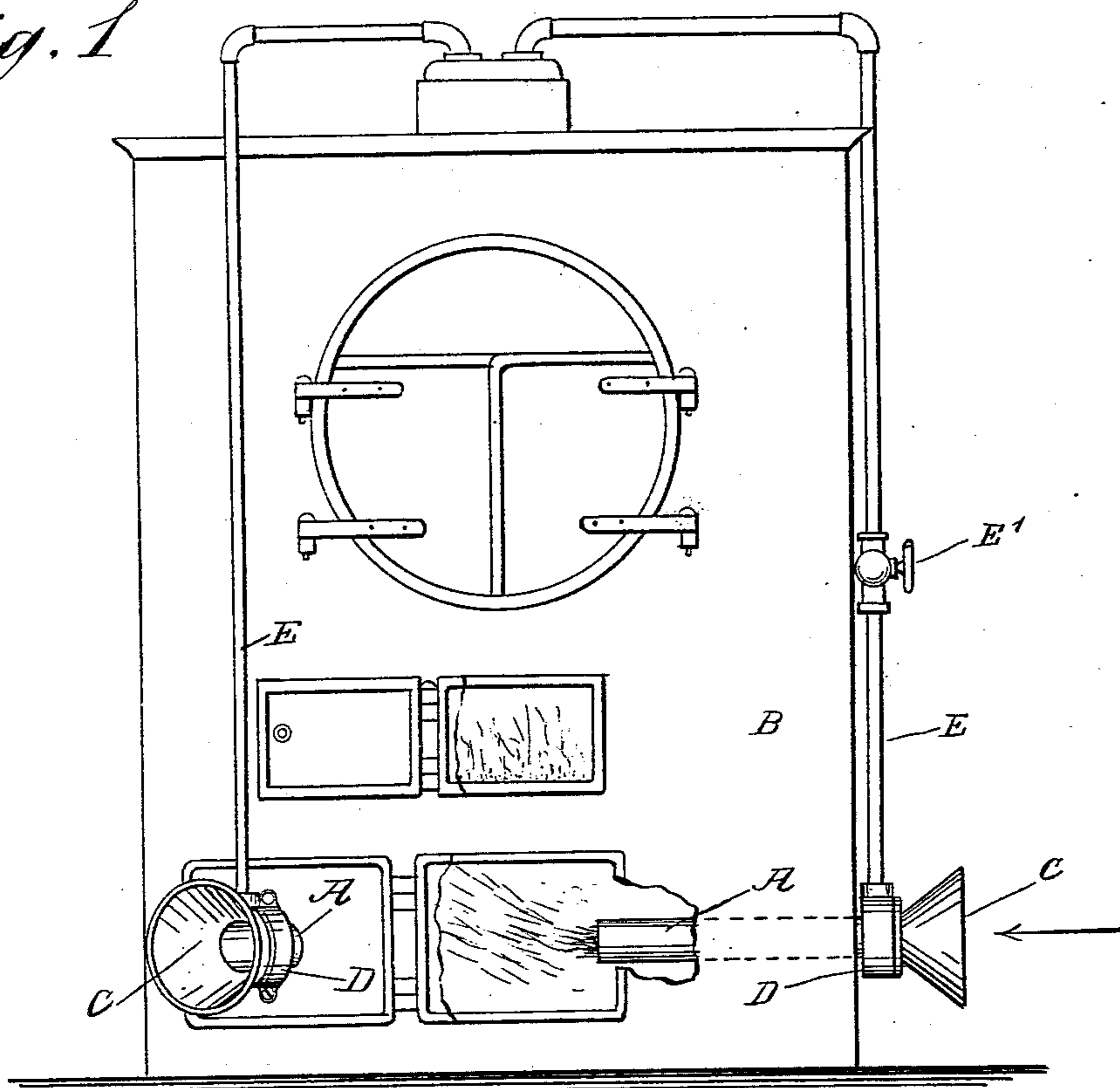


Fig. 2

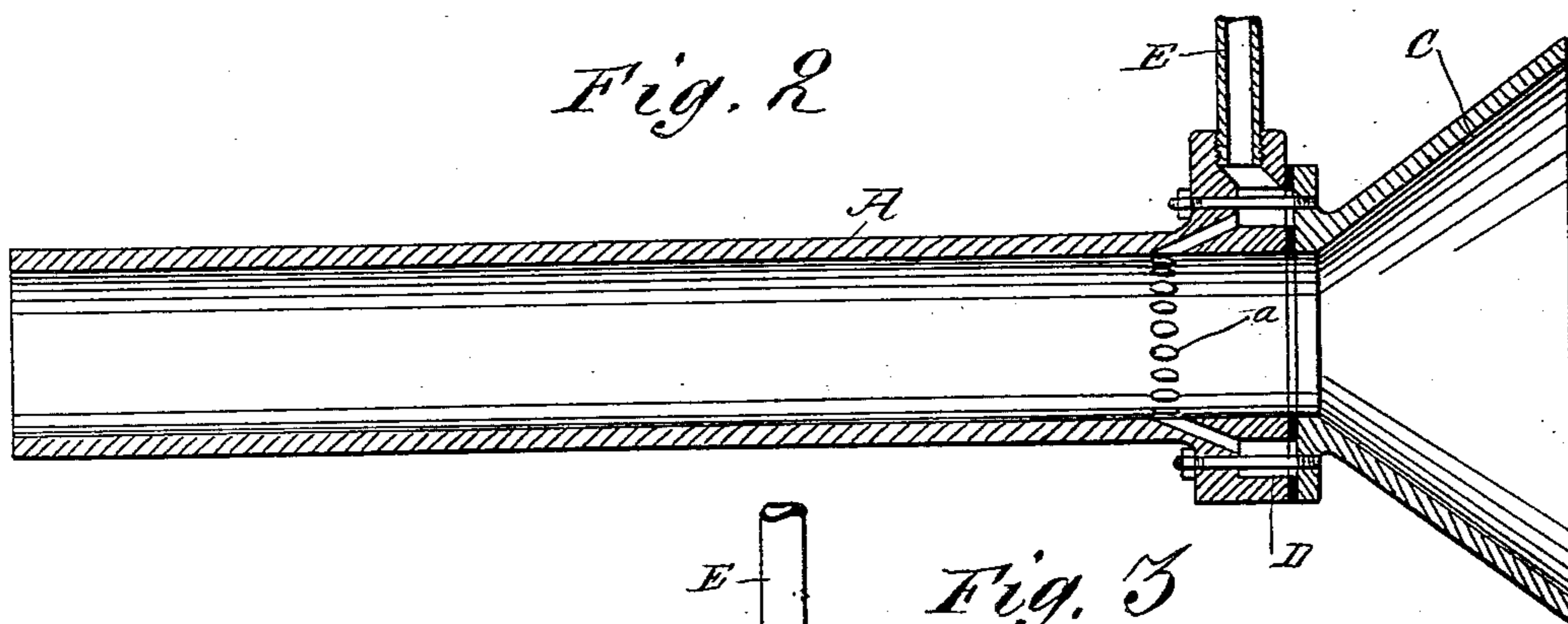
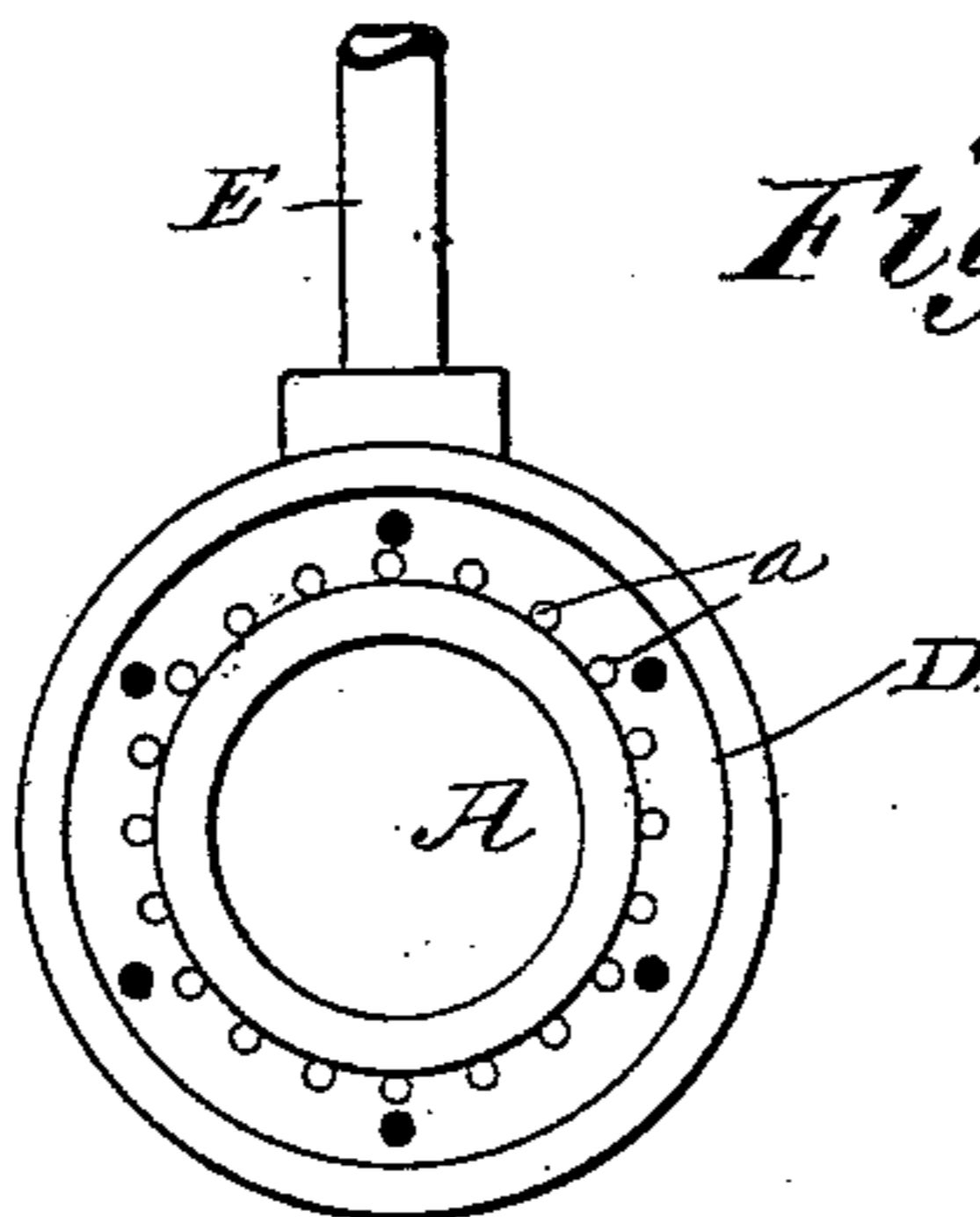


Fig. 3



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE R. JARMAN, OF DURHAM, NORTH CAROLINA, ASSIGNOR OF ONE-HALF TO GEORGE A. LATHROP, JR., OF RICHMOND, VIRGINIA.

STEAM-BLOWER.

SPECIFICATION forming part of Letters Patent No. 560,095, dated May 12, 1896.

Application filed January 28, 1896. Serial No. 577,205. (No model.)

To all whom it may concern:

Be it known that I, GEORGE R. JARMAN, of Durham, in the county of Durham and State of North Carolina, have invented a new and Improved Generator, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved generator which is simple and durable in construction and more especially designed for use on stationary engines or locomotive-boilers to produce a forced draft in a very simple and economical manner, to insure perfect combustion, and increase the capacity of the boiler.

The invention consists principally of a tube in the steam-chamber connected with a steam supply and provided with angular ports leading forwardly into the said tube to cause the steam passing through the said ports into the tube to travel forwardly and draw the air into the tube.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claim.

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

Figure 1 is a front elevation of a stationary boiler provided with the improvement, part being broken out. Fig. 2 is an enlarged sectional side elevation of the improvement, and Fig. 3 is an end elevation of the same with the air-inlet funnel removed.

The improved generator is provided with a tube A, attached to the boiler B in such a manner that its inner end discharges into the ash-pit under the grate-bars or other suitable part to insure perfect combustion of the burning fuel by an increased forced draft and an additional supply of oxygen. The outer end of the tube A is provided with a funnel C, through which passes the air from the outside to the tube, the said funnel C being bolted on and forming a cap for a steam-chamber D, formed in an enlargement integral with the outer end of the tube A and provided with a steam-supply pipe E, carrying a valve E' and connected with the dome of the

boiler, as indicated in Fig. 1. The steam-chamber D is made annular and surrounds the outer end of the tube A, and from the steam-chamber lead a series of obliquely-arranged ports *a* at the inside of the tube A, the said ports being arranged forwardly and downwardly, as plainly indicated in Fig. 2, so that the steam from the chamber D in passing through the said ports *a* into the tube A travels forwardly and draws in the air through the funnel C. This air mixes with the steam and the mixture passes into the burning fuel to insure a forced draft, and by the additional supply of oxygen causes a perfect combustion of the fuel. One, two, or more such tubes A may be employed on a boiler. The funnel C is provided at its smaller end with a flange serving to close the open side of the steam-chamber D in the enlarged end of the tube A, and said flange is held in place over the steam-chamber by means of bolts passing through said chamber.

It will be understood that by the arrangement described the device serves as an injector for supplying the boiler with a mixture of steam and air.

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

A device of the character described, comprising a tube having an enlarged end provided with an annular steam-chamber, one side of which is open at the end of the tube, said enlarged end of the tube being formed with a series of forwardly and downwardly extending ports communicating between the steam-chamber and the interior of the tube, a funnel having at its smaller end a projecting flange adapted to close the open side of the steam-chamber, and a series of bolts extending through the enlarged portion of the tube and the flange of the funnel to hold said funnel in place, said bolts being arranged across the steam-chamber, substantially as set forth.

GEORGE R. JARMAN.

Witnesses:

GEORGE A. LATHROP,
CHARLES A. ROSE.