

AUGUSTA M. RODGERS.
Improvement in Spark-Arresters.

No. 126,234.

Patented April 30, 1872.

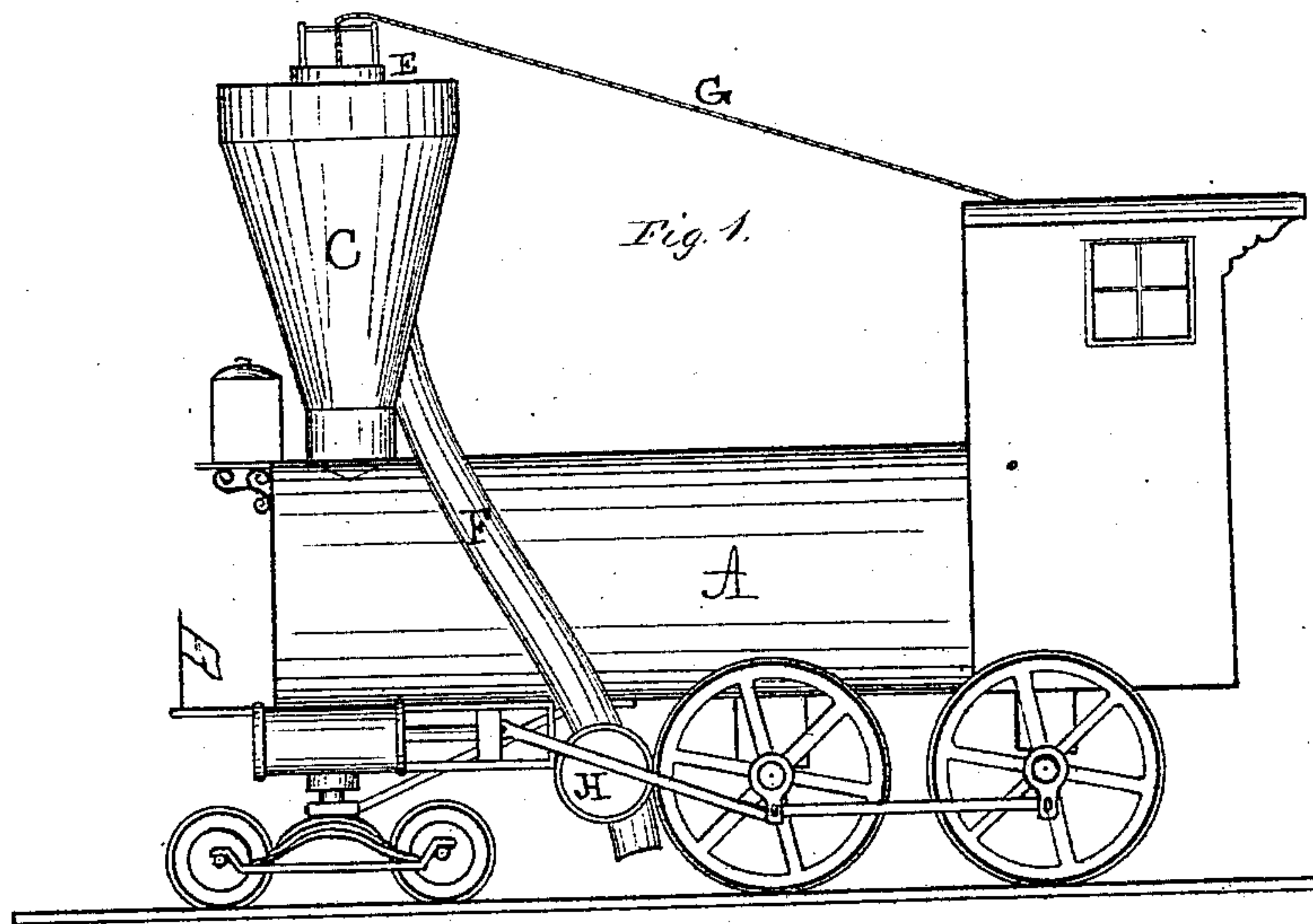
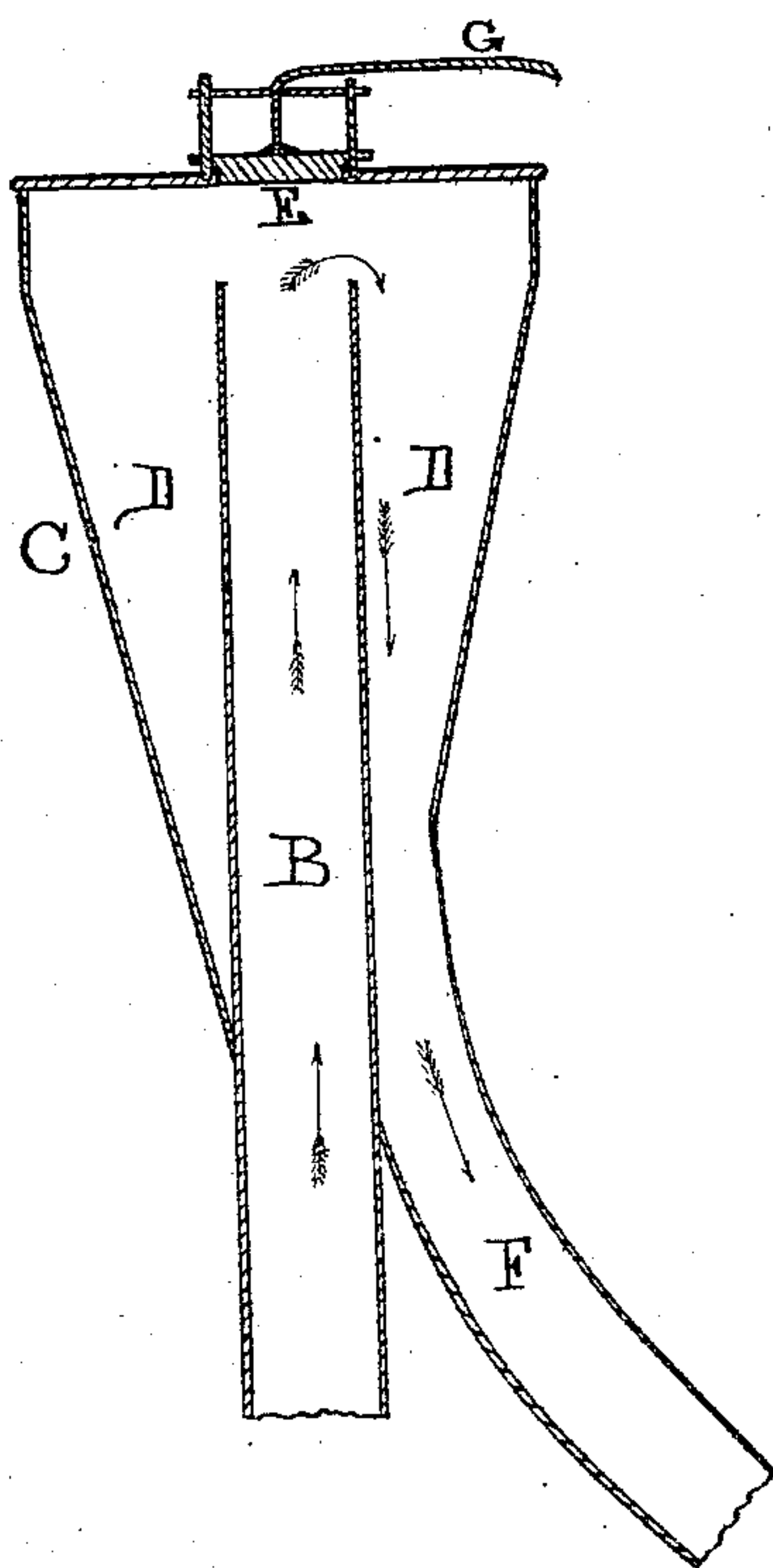


Fig. 2.



Witnesses:
Jacob E. Schiedt
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UNITED STATES PATENT OFFICE.

AUGUSTA M. RODGERS, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN SPARK-ARRESTERS.

Specification forming part of Letters Patent No. 126,234, dated April 30, 1872.

To all whom it may concern:

Be it known that I, AUGUSTA M. RODGERS, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Conveyers for Smoke, Cinders, &c., for Locomotive-Engines; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand and use the same, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a side view of an engine having my invention applied thereto. Fig. 2 is a central vertical longitudinal section of the portion illustrating my invention.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to a device for conveying smoke, cinders, &c., from a locomotive-engine so as to fully or partially prevent them from reaching the passengers. It consists of the chimney and an inclosing jacket therefor, conveying or draught pipes, a pressure-blower, and a safety-valve applied to the jacket, all of which will hereafter more fully be set forth.

Referring to the drawing, A represents a locomotive-engine, and B the chimney or pipe thereof. Surrounding this chimney is a jacket, C, (preferably of the shape of the ordinary smoke-stack,) forming a chamber, D, which has an opening at its top, covered by a valve, E, and also attached to it draught-pipes F, which extend down the sides of the engine toward the track or ground, either before, behind, or between the driving-wheels, or toward the rear, so as to be attached to and communicate with pipes or conduits connected to the tender and passenger-cars.

It will be seen that the outward communication of the chimney B is through the draught-pipes F, unless the valve E is opened, the uses of which will be explained. The valve is held on its seat by its own weight or suitable springs, and is guided on uprights secured to the top of the jacket C. It has connected to it an elevating cord or lever, G, which is arranged to be within convenient reach of the engineer.

H represents pressure or fan blowers, one or more, connected to and communicating

with the draught-pipes F, and receiving power through the medium of one or more pulleys or disks, whose peripheries are in contact with the wheels of the engine, or are operated by means of a small donkey-engine suitably located.

When the engine is in motion the valve is shut, and the chamber D will be found to be perfectly closed or tight except at the point of junction of the draught-pipes. The blower being operated, the steam, smoke, and cinders rising in the chimney B pass into the chamber D, and through the draught-pipes F, from whence they are forced toward the track or ground, or directed to connecting-pipes extending to the rear of the train, and thus conveyed away so as not to reach the passengers.

In cases of extra pressure of steam the valve E acts as a safety-valve, and will be forced open, thus relieving the chamber D of any injurious effects, but will afterward close again. When the pressure is ordinary the valve will remain on its seat, whereby steam and the products of combustion will be directed to the draught-pipes. The chamber D provides for sudden expansion of heated air or smoke.

When the disks of the blowers are to be operated by contact with the driving-wheels, their peripheries may be clad with rubber or other elastic substance. Springs may be arranged to press the disk against the wheels.

If it be desired to continue the draught of the furnace when the engine is at rest, the blower may be operated by a donkey-engine, or even by hand-power.

When the engine is at rest the valve E may be raised to allow the smoke to escape at the top of the jacket.

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

A conveyer for smoke, cinders, &c., consisting of the chimney B, jacket C, valve E, closed chamber D, draught-pipes F, and blower H, all constructed and arranged as shown, and for the purpose specified:

The above signed by me this 7th day of February, 1872.

A. M. RODGERS.

Witnesses:

ALFRED A. HART,
I. A. RODGERS.