A. W. FOOTE.

Stove-Pipe Drums.

No. 140,999. Patented July 22, 1873.

Fig. 1.

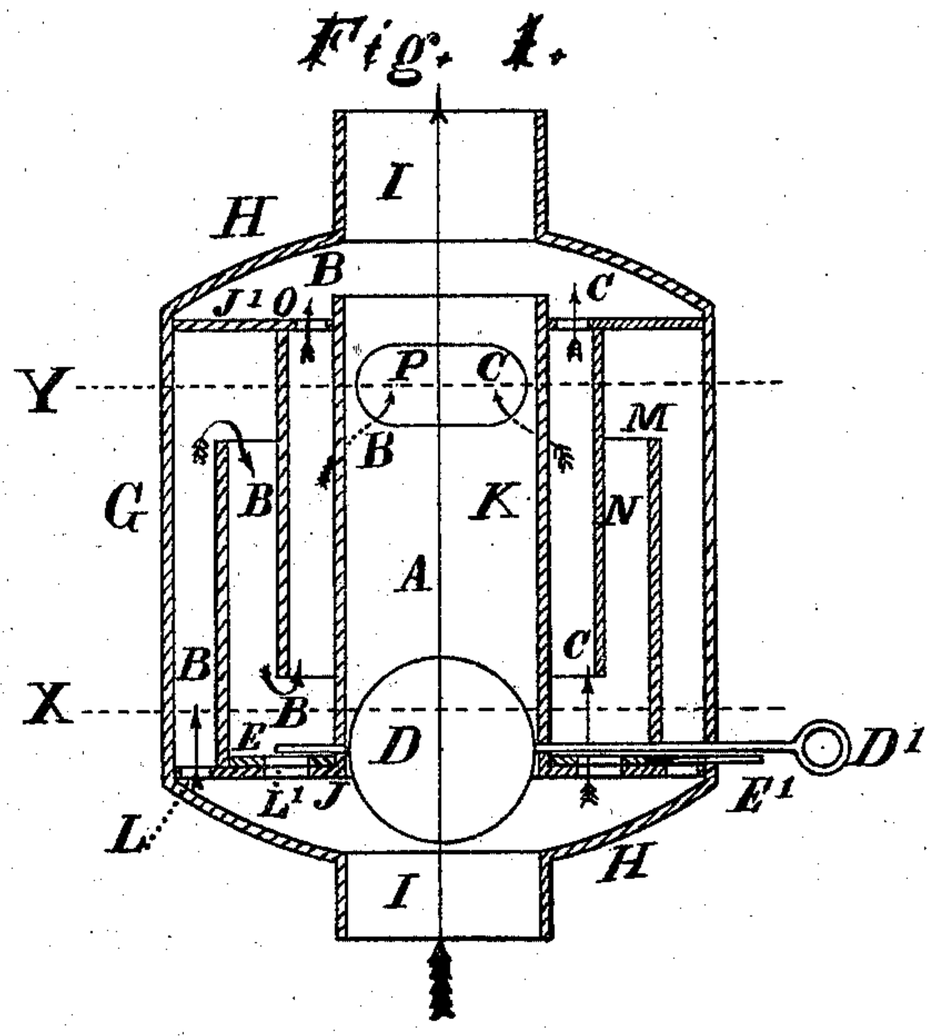


Fig. 2.

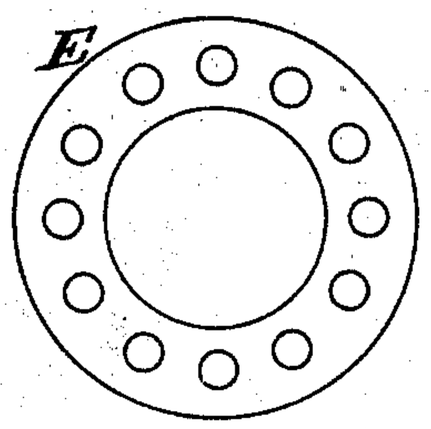


Fig. 3.

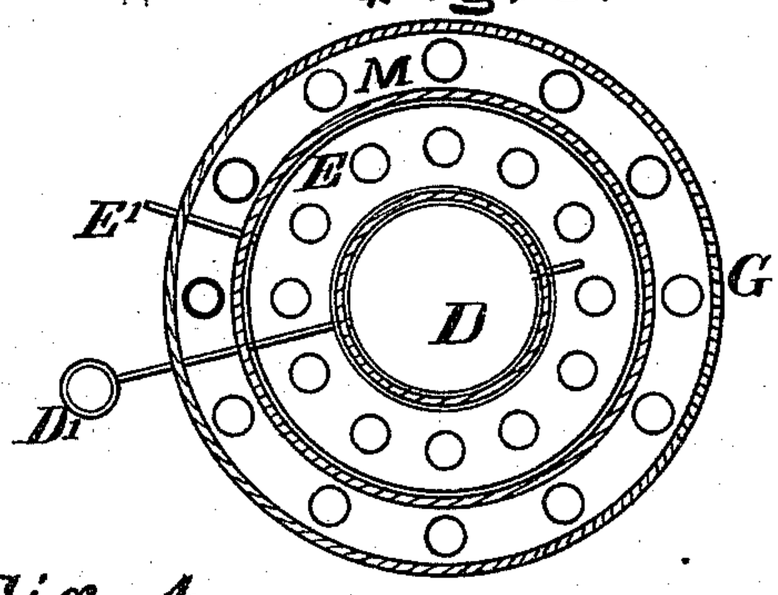
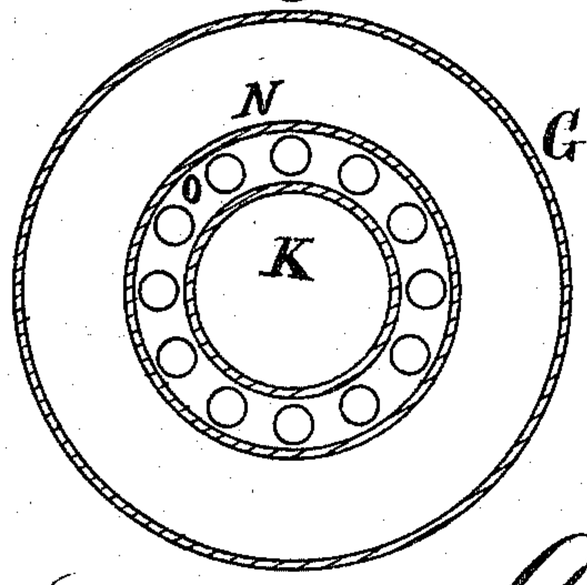


Fig. 4.



Witnesses,
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UNITED STATES PATENT OFFICE.

ALBERT W. FOOTE, OF BUFFALO, NEW YORK.

IMPROVEMENT IN STOVE-PIPE DRUMS.

Specification forming part of Letters Patent No. **140,999,** dated July 22, 1873; application filed January 28, 1873.

To all whom it may concern:

Be it known that I, ALBERT W. FOOTE, of the city of Buffalo, in the county of Erie and State of New York, have invented a new and Improved Stove-Pipe Drum, of which the following is a specification:

This invention relates to the construction of drums for stove-pipes for regulating the force of the draft; and it consists in the peculiar construction by which the smoke is diverted from its direct course through the pipe and forced to travel a circuitous route alternately up and down, and finally back again into the pipe. This is effected by means of a drum or cylinder of a diameter sufficiently larger than the stove-pipe to admit of two other cylinders being supported therein, one by each head. These interior cylinders are supported by opposite heads, and each reaches to within an inch or thereabout of the other head. A pipe, of a size corresponding with that of the stove-pipe, forms the central or direct passage in which a common disk-damper is supported. Convex heads, having collars for the stove-pipe, are attached at their peripheries to each end of the outside drum. A second perforated ring-damper is arranged upon a seat having corresponding perforations. The lower drum-head has another annular set of perforations between the outside cylinder and the one next in size. The upper drum-head has also a set of annular perforations around the central flue and between it and the cylinder next in size.

In the accompanying drawing; Figure I is a vertical section through and in line with the axis of the damper. Fig. II is a plan view of the perforated ring-damper. Fig. III is a section on line X, Fig. I. Fig. IV is a similar section on line Y, Fig. I.

Like letters of reference designate like parts in each of the figures.

G is the outside cylinder or case. Each end thereof has a convex head, H, provided with a flange, I, for the stove-pipe. Flat inner heads J J′ are arranged inside, and at each end of the outer case a central passage, K, is formed through these two flat heads, which forms a direct connection between the disjointed stove-pipes. An ordinary disk-damper, D, is arranged in this central passage and operated by a damper-rod, D′, from the outside. The inner head J has two circular rows of perforations, L and L′. A circular perforated damper, E, is arranged over the circle of perforations L′, with a projecting rod, E′, extending through the outer case for turning it to open and close the holes regulated by it. The inner head J has a cylinder, M, suspended from between the two circular rows of perforations L and L′, which extends to within a short distance of the head J′. The head J′ has a similar cylinder, N, but of a smaller size, suspended from around a circular row cf perforations, O, to within a short distance of the head J. The central pipe has two openings, P, forming a communication with the annular space inclosed between the cylinder N and central pipe K.

The operation is as follows: A direct draft, as shown by the arrow A, Fig. I, is established through the machine, when the damper D is open. The damper D being closed and E opened the draft takes the course shown by the arrows C. Both dampers being closed the draft enters the outside circle of perforations in the flat head J and travels the course shown by the arrows B.

This damper is self-cleaning, as there are no surfaces upon which the soot can settle which are not subjected to the constant action of the draft. All the horizontal surfaces are provided with perforations, through which a constant current of smoke is passing.

I claim—

1. The combination of the central damper D and circular or ring damper E, as shown or described.

2. The combination of the flat inner head J and its suspended cylinder M with the opposite flat inner head J′ and its suspended cylinder N, substantially as shown or described.

3. The combination of the elements of the first claim with the perforations L in the head J, for the purpose set forth.

ALBERT W. FOOTE.

Witnesses:

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