D. B. DENNISON.

Spark-Arresters.

No. 134,261. Patented Dec. 24, 1872.

Fig. 1.

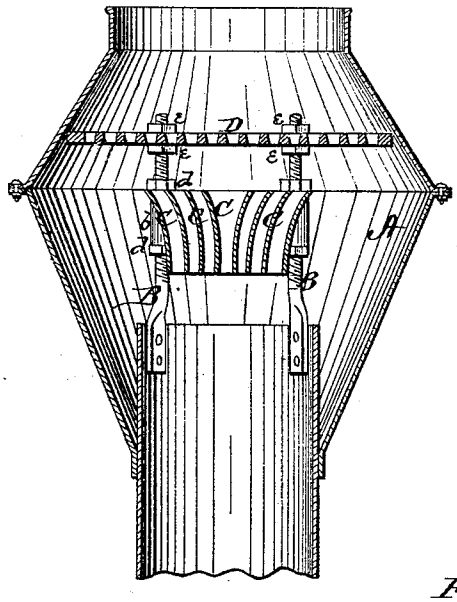


Fig. 2.

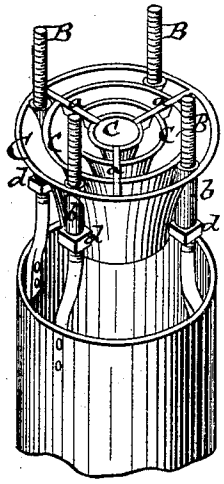
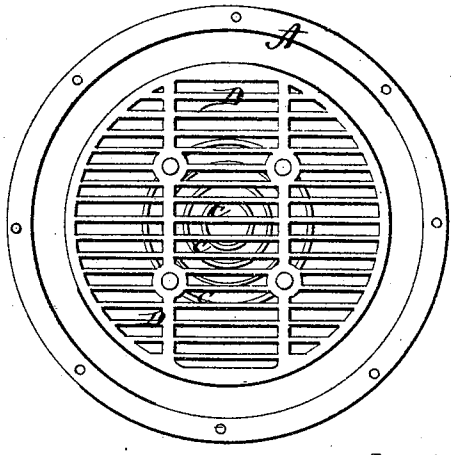


Fig. 3.



Witness:

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UNITED STATES PATENT OFFICE.

DAVID B. DENNISON, OF OTTUMWA, IOWA.

IMPROVEMENT IN SPARK-ARRESTERS.

Specification forming part of Letters Patent No. **134,261**, dated December 24, 1872.

To all whom it may concern:

Be it known that I, DAVID B. DENNISON, of Ottumwa, in the county of Wapello and in the State of Iowa, have invented certain new and useful Improvements in Smoke-Stacks; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The ordinary spark-arrester for smoke-stacks of coal-burning locomotives consists of a single cone about sixteen inches at the top, which runs down about the same distance to a point. This throws the sparks in a circle, cutting the netting and stack out in a very short time. To obviate this difficulty is the object of my invention; and it consists in a series of flaring rings placed concentrically within each other, and a grate elevated a suitable distance above the same, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a vertical section of a smoke-stack with my spark-arrester attached within the same; Fig. 2 is a perspective view of the series of concentric flaring rings; and Fig. 3 is a plan view of the stack with spark-arrester.

A represents an ordinary smoke-stack for locomotives, provided on the inside with four vertical screw-bolts, B B, to receive the spark-arrester. C C represent a series of flaring rings placed concentrically within each other, and connected by ribs *a a*. On the exterior of the outer ring C are formed four sleeves or tubes, *b b*, to fit on the screw-bolts B B, and held at any desired height on the same by means of nuts *d d*. Above the rings C C is placed a grate, D, adjusted upon the bolts B B by nuts *e e*. The series of concentric and flaring rings C C will distribute the sparks and exhaust steam evenly over the whole surface of the grate D, thus giving better draft and wearing out the grate evenly.

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

The combination, with a smoke-stack, A, of the series of concentric flaring rings C C and the grate D, all substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 16th day of October, 1872.

DAVID B. DENNISON.

Witnesses:
CYRUS B. LEWIS,
S. D. PIERCE.