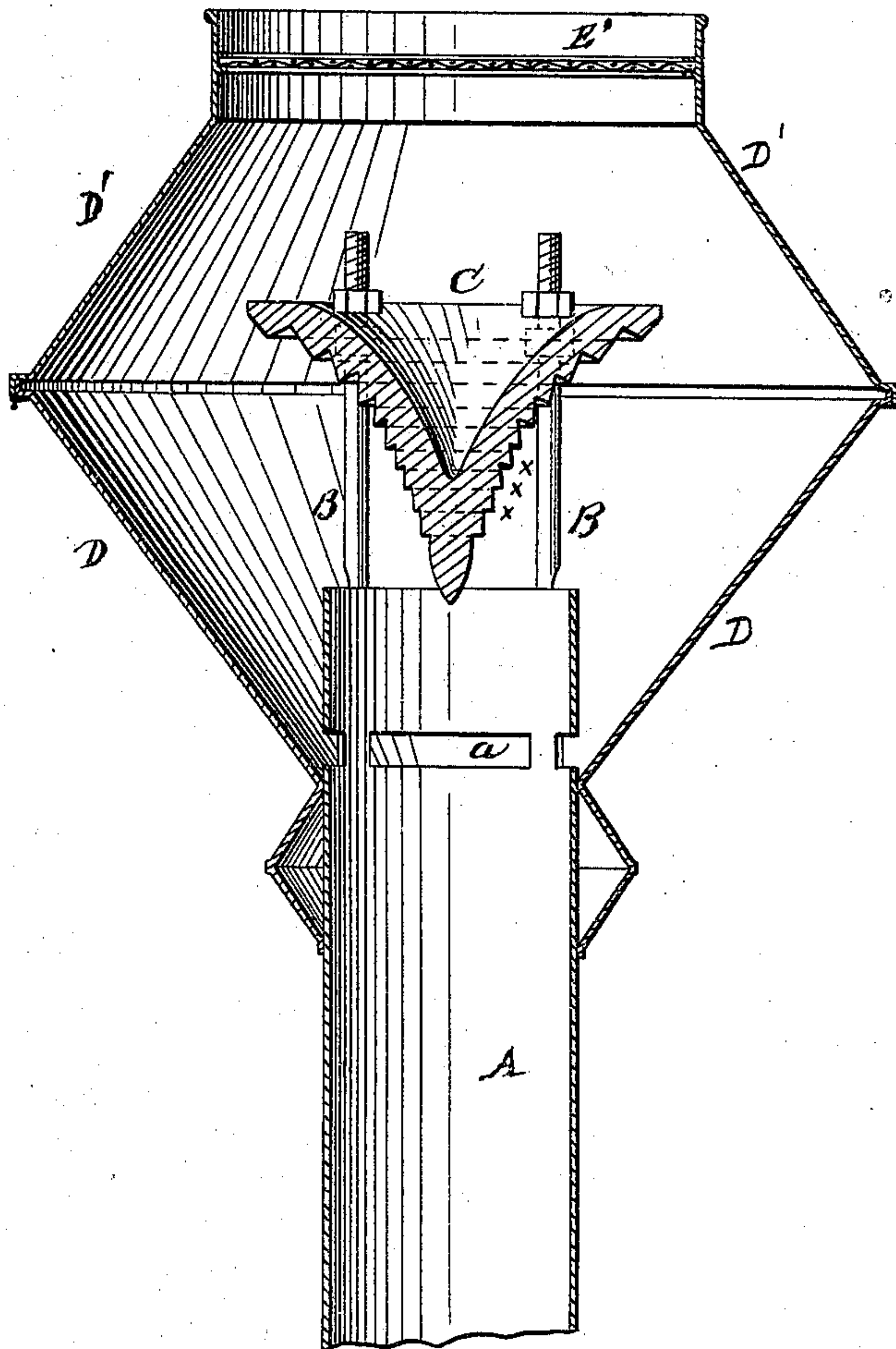


M. BRASSILL.

Spark-Arresters for Locomotives.

No. 143,664.

Patented Oct. 14, 1873.



WITNESSES

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By

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# UNITED STATES PATENT OFFICE.

MICHAEL BRASSILL, OF HARTFORD, CONNECTICUT.

## IMPROVEMENT IN SPARK-ARRESTERS FOR LOCOMOTIVES.

Specification forming part of Letters Patent No. 143,664, dated October 14, 1873; application filed August 27, 1873.

*To all whom it may concern:*

Be it known that I, MICHAEL BRASSILL, of Hartford, in the county of Hartford and in the State of Connecticut, have invented certain new and useful Improvements in Smoke-Stacks for Locomotives; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the employment of an inverted concave corrugated cone in combination with the peculiar construction of the smoke-stack of an engine, as will be hereinafter described.

In the annexed drawings, A represents the smoke-stack of an engine or locomotive, D and D' being the head of the same, the two portions of the head being in the form of truncated cones with their bases connected together. In the top of the smoke-stack is placed a wire screen, E'. B B represent three or more rods of metal, provided on their upper ends with screw-threads, which project upward from the body of the stack and into its head. These rods support an inverted concave cone, which is provided with a series of corrugations, *x x x*. These corrugations are so formed that their edges are sharp and project slightly downward. This cone can be made of metal and hollow, so that it will not be too heavy. It can be adjusted to or from the mouth of the body of the stack.

In the use of this device it will readily be seen that when the sparks and cinders fly up the stack they strike with force against the edges of the corrugations on the cone and are cut or broken, and then deflected against the sides of the head of the stack, and then against the wire screen. Thus it will be seen that, by the time they pass away from the stack, they are reduced to powder, or broken up into such fine pieces that they cannot do any damage by communicating fire to surrounding objects.

*a a* represent apertures in the stack, which allow cinders or trash to pass down the stack again when they lodge below the mouth of the stack.

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

The combination, with the head D D', of the smoke-stack A, having openings *a a*, rods B B, adjustable deflector C, with corrugations *x x*, and the screen E', all constructed and arranged substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of August, 1873.

MICHAEL BRASSILL.

Witnesses:

D. L. ABERDEIN,  
FRED. R. TIFFANY.