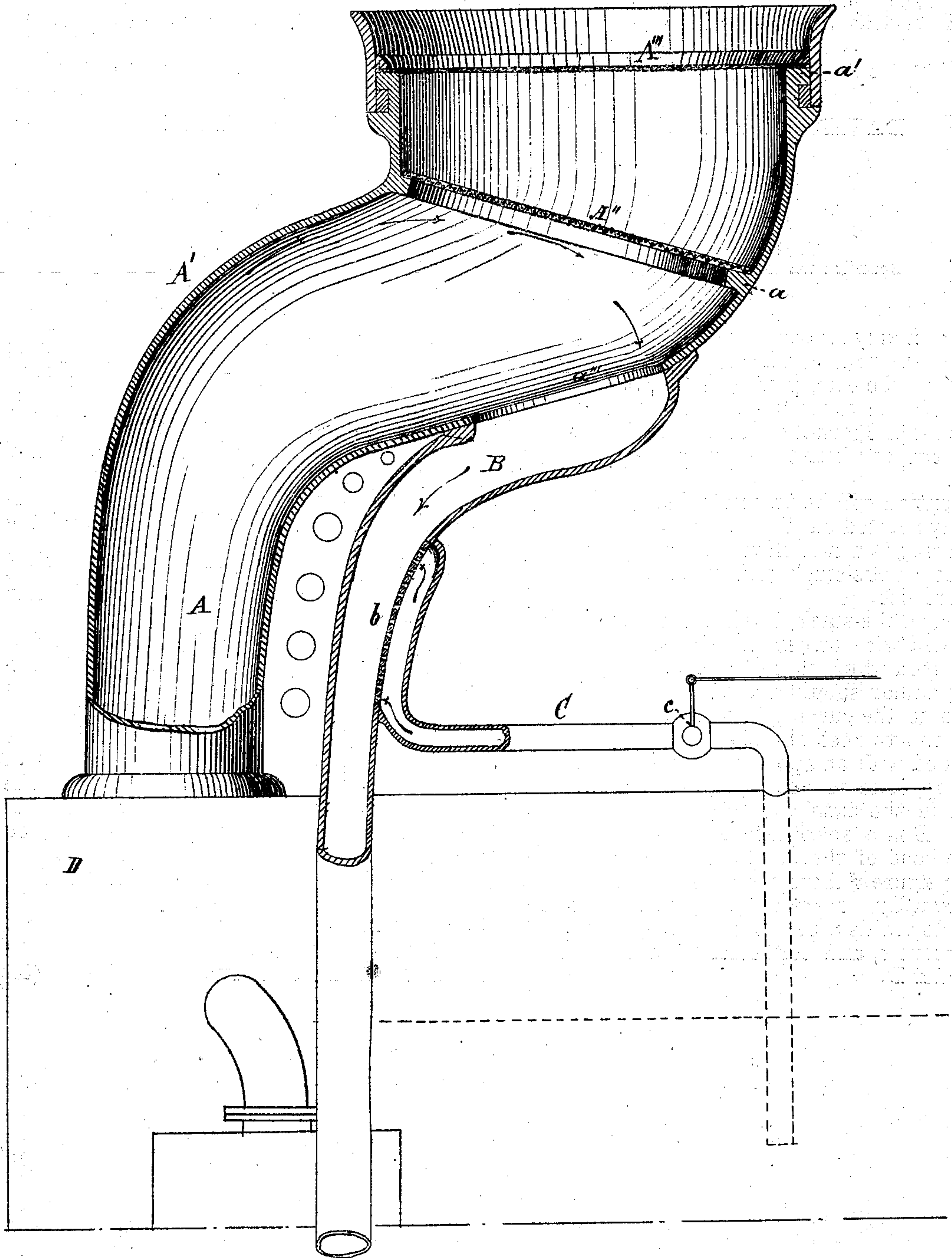


(94.)

DAVID R. PROCTOR.
Improvement in Spark Arresters.

No. 122,058.

Patented Dec. 19, 1871.



Witnesses:

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UNITED STATES PATENT OFFICE.

DAVID R. PROCTOR, OF GLOUCESTER, MASSACHUSETTS.

IMPROVEMENT IN SPARK-ARRESTERS.

Specification forming part of Letters Patent No. 122,058, dated December 19, 1871.

To all whom it may concern:

Be it known that I, DAVID R. PROCTOR, of Gloucester, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Spark-Arresters for Locomotive Smoke-Stacks, of which the following is a specification:

The invention will be first fully described and then clearly pointed out in the claim.

The drawing is a side elevation, partly in section, of the smoke-stack and other parts connected therewith.

A is the smoke-stack, having the curve A^1 , and provided with screens $A^2 A^3$. $a a^1$ are the shoulders upon which these screens are supported. The annular shoulder a is placed at an obtuse angle to the curve A^1 , so as to cause the screen A^2 also to rest obliquely. The stack is also provided with an aperture, a^3 , obliqued in a direction opposite to that of screen A^2 , and is connected in the usual way with a locomotive-boiler, D. B is a spark-discharge pipe placed under the bend of the stack, made to register with the aperture a^3 therein, and passing over the boiler outwardly. b are sundry perforations in the rear side of this pipe. C is a spray-pipe, having cock-valve c , and connected with the locomotive-boiler D.

The mode of operation is as follows: The sparks, cinders, &c., pass from boiler D up into the pipe A, strike the curve A^1 , are reflected against the arrester-screen A^2 , pass through pipe B, are sprinkled with a water-jet from spray-pipe C, and are finally discharged beyond the engine. The sparks and cinders are thus not only prevented from annoying passengers, but are rendered harmless before they pass out into the open air.

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

1. The combination of a smoke-stack and a spark-and-cinder discharge-pipe, B, having perforations b , with a spray-pipe, C, connected with the boiler, as and for the purpose set forth.

2. A smoke-stack having curve A^1 , oblique screen A^2 , and oblique aperture a^3 , combined with pipe B, arranged to discharge the sparks and cinders therefrom, in the manner described.

The above specification of my invention signed by me this 25th day of October, A. D. 1871.

DAVID R. PROCTOR.

Witnesses:

SOLON C. KEMON,
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(94)