M. C. W. C. BRITTON.
Spark-Arrester.

No. 220,958. Patented Oct. 28, 1879.

Fig. 1.

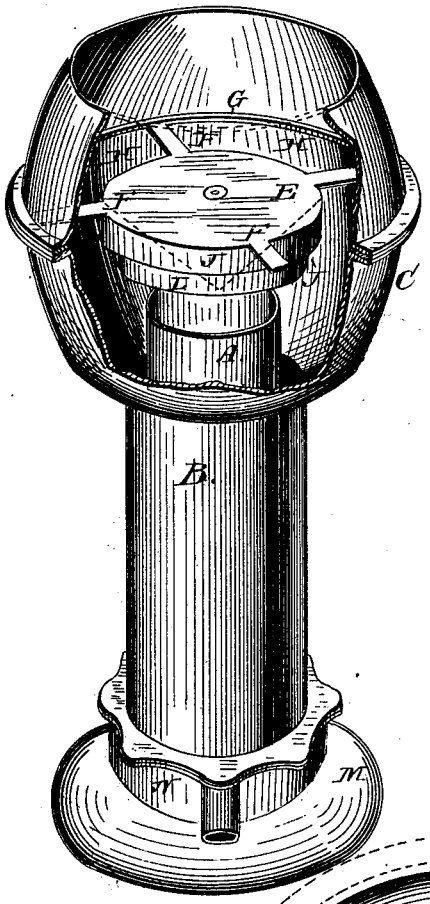


Fig. 2.

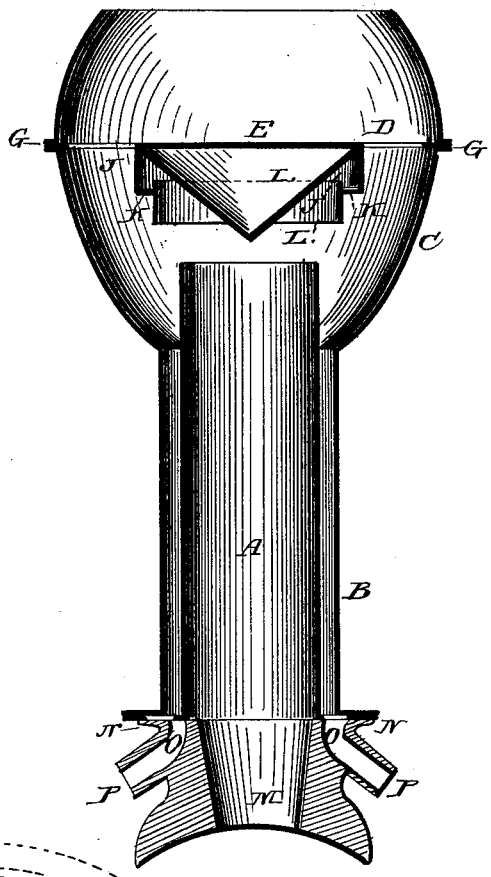
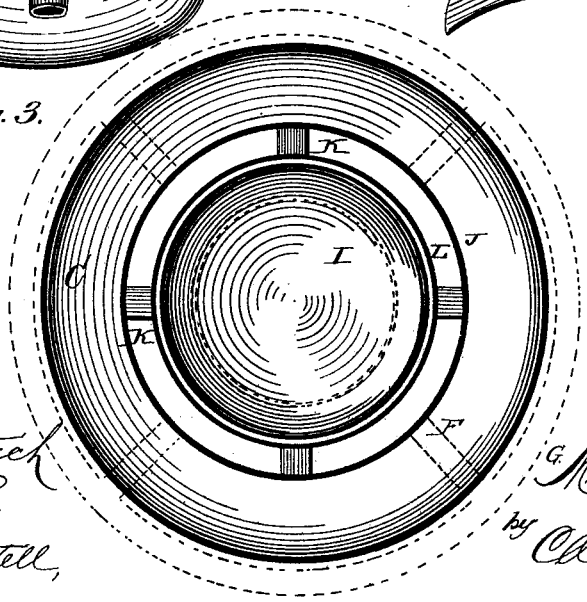


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

MERRITT C. W. C. BRITTON, OF NEW YORK, N. Y.

IMPROVEMENT IN SPARK-ARRESTERS.

Specification forming part of Letters Patent No. **220,958**, dated October 28, 1879; application filed September 12, 1879.

To all whom it may concern:

Be it known that I, MERRITT CASH WALDRON CONKLIN BRITTON, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Spark-Arresters; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a view in perspective, part of the outer stack or casing having been broken away for the purpose of better showing the construction. Fig. 2 is a vertical sectional view; and Fig. 3 is a horizontal cross-section.

In the several figures of the drawings corresponding parts are denoted by like letters of reference.

This invention has relation to spark-arresters for locomotive and other engines; and it consists in certain improvements in the construction of the same, which will be hereinafter fully described, and particularly pointed out in the claim.

Spark-arresters, as heretofore constructed, have been deficient in several respects—notably in this, that whenever provision has been made for effectually arresting the sparks the draft has been more or less impeded. To obviate this and the bad results arising therefrom is the object of my present invention.

In the drawings hereto annexed, A represents the smoke-stack proper, which is surrounded by an outer cylinder or casing, B, carrying at its upper end, in the large or bulging portion C, a diaphragm, D, consisting of a disk, E, of about the diameter of the outer cylinder, connected by rods F to a ring, G, which is secured in any suitable manner in the casing. There are, it will thus be observed, large openings or spaces, H H, between disk E and the casing.

Upon the under side of disk E is secured a conical projection, I, at the base of which and edge of the disk is secured a downwardly-projecting rim, J. The lower edge of the latter is provided with inward-projecting arms K K, carrying a rim, L, adjusted within rim J, and projecting below the latter.

The smoke-stack A is secured upon a base, M, having a shoulder or terrace, N, which forms the bottom of the space between cylinders A B. Said terrace is provided with slanting recesses O O, having spouts P P, which discharge at any suitable points.

In operation the products of combustion pass up through stack A and strike the cone I. The sparks and cinders, whose velocity is thus deadened, strike the rim J at the base of the cone, and from thence drop down between rims J L into the space between the cylinders A B, from whence they are carried off through the spouts or openings above alluded to. The smoke, on the contrary, passes through the openings H H, and escapes through the smoke-stack.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The herein-described improved spark-arrester, consisting of the base M, having recesses O and spouts P, cylinders A B, and diaphragm G F E I J K L, all arranged and operating substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

M. C. W. C. BRITTON.

Witnesses:
R. V. ATKINSON,
GEO. W. STANTON.