

L. H. SCHWEBEL.
Spark-Arrester.

No. 211,268.

Patented Jan. 7, 1879.

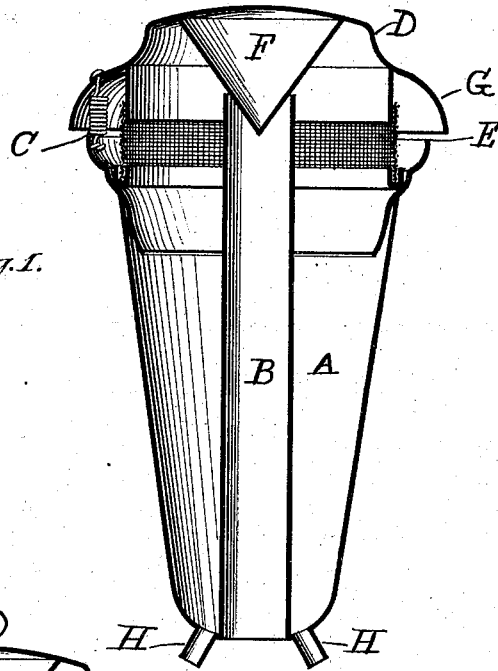


Fig. 1.

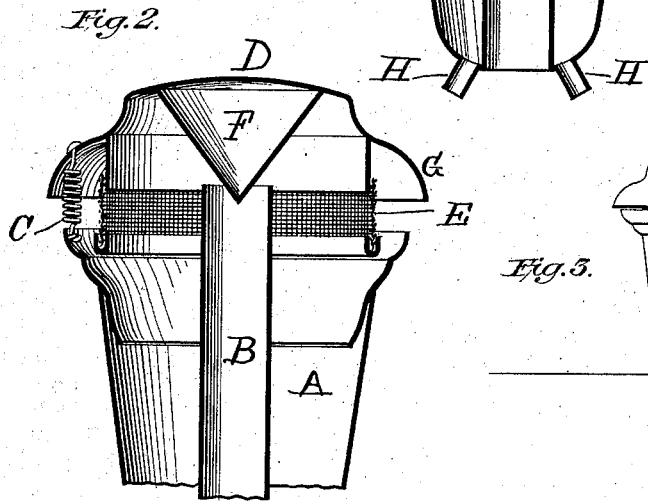


Fig. 2.

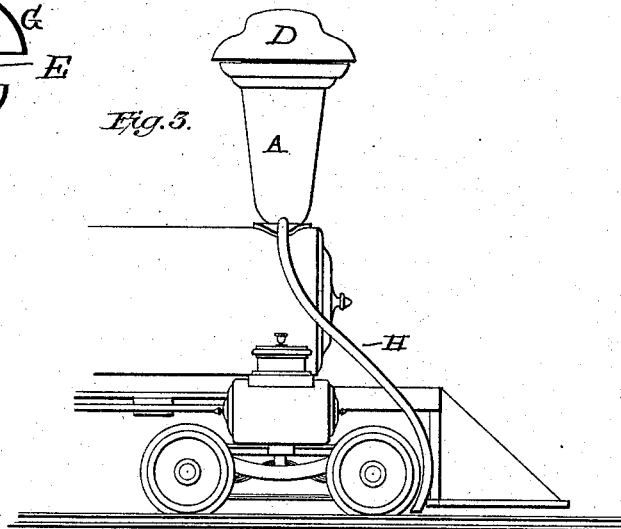


Fig. 3.

WITNESSES

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LOUIS H. SCHWEBEL, OF MULLICA HILL, NEW JERSEY.

IMPROVEMENT IN SPARK-ARRESTERS.

Specification forming part of Letters Patent No. **211,268**, dated January 7, 1879; application filed November 21, 1878.

To all whom it may concern:

Be it known that I, LOUIS H. SCHWEBEL, of Mullica Hill, in the county of Gloucester and State of New Jersey, 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 thereof, 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, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a vertical sectional view of a spark-arrester embodying the improvements in my invention, showing the flue closed. Fig. 2 is a similar view showing the flue open, and Fig. 3 is a side elevation of the device applied to a locomotive.

This invention has relation to spark-arresters for locomotives; and it consists in the improvements in the construction of the same hereinafter fully described, and particularly pointed out in the claim.

In the accompanying drawings similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to arrest and extinguish the sparks and convey the cinders beneath the locomotive; and to this end I provide a stack, A, flaring from the bottom toward the top, in which I place the flue B, around which the stack A forms a chamber. To the upper end of the stack A, I secure, by means of retracting-springs C, a cap, D, provided with an internal annular screen, E, and a deflector, F. The cap D is provided with downwardly-curved flanges G, which project over the upper end of the stack A.

The upper end of the flue B rises slightly

higher than the top of the stack A, in order that the retracting-springs C, operating upon the cap D, may draw the conical deflector F down into the mouth of the flue B to close it.

Tubes H H lead from the bottom of the chamber surrounding the flue B, and extend nearly to the track, as shown in Fig. 3.

The operation of the invention is as follows: The exhaust-steam and sparks from the engine pass up the flue B, the steam raises the deflector F and escapes through the screen E beneath flange G, while the sparks are arrested by said screen, and, falling to the bottom of the chamber around the flue B, pass out through the tubes H.

It will be observed that the retracting-springs C tend always to cause the conical deflector F to close the mouth of the flue B, which latter is only opened by the intermittent action of the exhaust-steam upon the deflector F.

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

A spark-arrester consisting of the stack A, forming a chamber around the flue B, and provided with the tubes H, in combination with the flue B and the flanged cap D G, provided with the deflector F and the internal annular screen, E, and secured to said stack by the retracting-springs C, constructed and arranged substantially as and for the purpose set forth.

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

L. H. SCHWEBEL.

Witnesses:

W. G. STILES,
FRANK GALT.