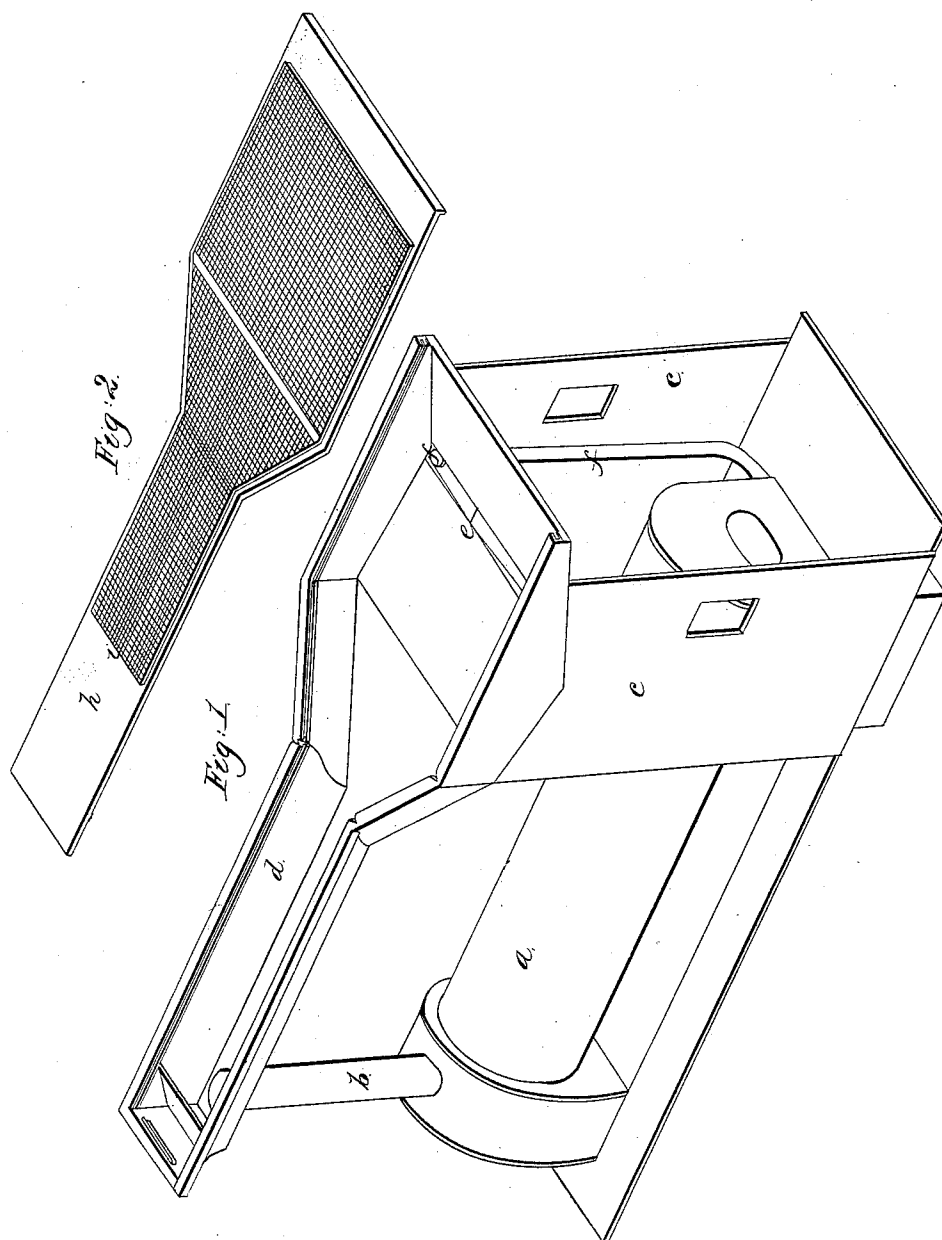


T. W. Pratt,
Spark Arrester,
Patented Mar. 13, 1849.

N^o 6,168.



UNITED STATES PATENT OFFICE.

T. WILLIS PRATT, OF SPRINGFIELD, MASSACHUSETTS.

HORIZONTAL SPARK-ARRESTER.

Specification of Letters Patent No. 6,168, dated March 13, 1849.

To all whom it may concern:

Be it known that I, T. WILLIS PRATT, of Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Spark-Arresters, and that the following is a full, clear, and exact description of the principle or character which distinguishes them from all other things before known, and of the usual manner of making, modifying, and using the same, reference being had to the accompanying drawings, which form a part of the same, in which—

Figure 1, is an isometrical view. Fig. 2, is a representation of the top removed.

The nature of my invention consists in the formation of a spark arrester, and its connection with the fire box of a locomotive so as to give great surface for wire gauze, or perforated plate for the passage of the smoke, and a ready discharge for the sparks into the fire box, while at the same time the symmetry of the engine is kept up, and a very small surface is exposed to the resistance of the air, in running.

In the drawing, the wheels and engine are dispensed with, the boiler *a*, and appendages and the smoke stack *b*, together with the engineer's station *c*, being all that is required to illustrate the attachment of my spark arrester to the engine. These parts are like similar ones on the ordinary engines now in use. From the top of the smoke stack *b*, a broad flat pipe *d* leads back horizontally to the engineer's station *c* behind the fire box, before it reaches which it gradu-

ally spreads in width till it becomes as broad as the whole top of said station, which it completely covers. The bottom of this pipe is shaped like an inverted roof, or hopper over the station, and its top for its whole length is flat; at the most depressed point of the bottom at *e* there is a sunk spout extending across laterally and inclined downward from its center, toward the ends each way, it terminates in a descending pipe *f* that extends down into the fire box, as clearly shown in Fig. 1. The top *h* of the horizontal pipe *d* is solid from its front end, (as clearly represented in Fig. 2, where it is shown removed from its place) to the point *i* about one third the length of the narrow part of the pipe the remainder of the top, is either a fine gauze screen, or a perforated plate, and gives a sufficient space for the easy escape of the smoke, while the sparks are driven straight forward, and lodge in the broad end, where they are gradually transferred through the pipes *f* into the fire, and are consumed.

Having thus fully described my improved spark arrester, and its application, what I claim therein as new, and for which I desire to secure Letters Patent, is,

The cap or horizontal pipe with perforated top, expanded, and connecting with the fire box, substantially in the manner, and for the purpose set forth.

T. WILLIS PRATT.

Witnesses:

A. D. BRIGGS,
I. B. WYMAN.