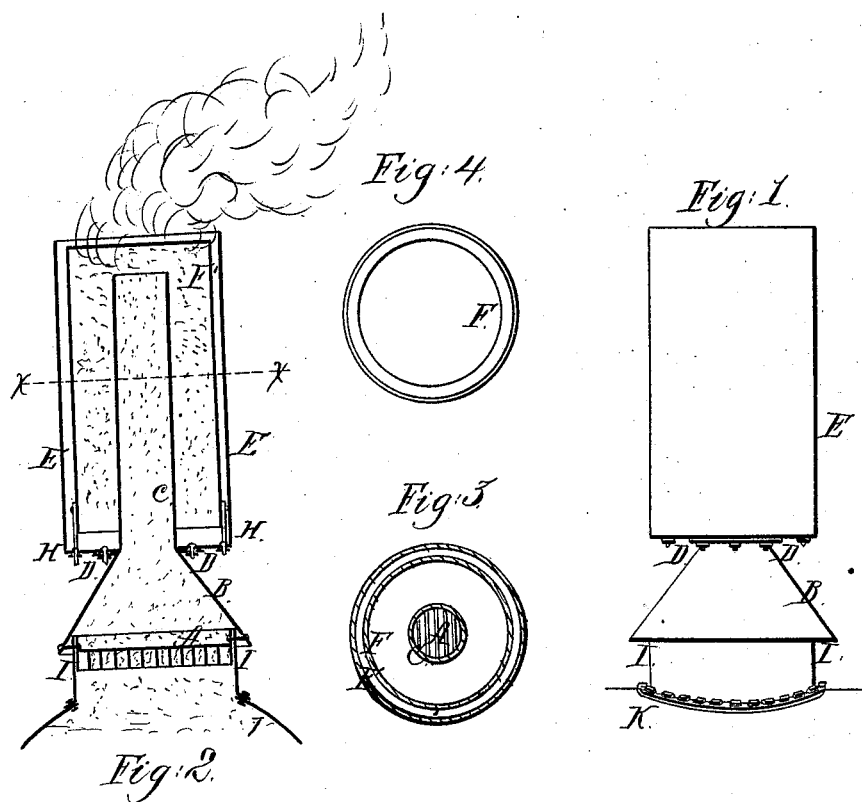


N. Turbutt,
Spark Arrester,
Nº 1,425, Patented Dec. 7, 1839.



UNITED STATES PATENT OFFICE.

NICHOLAS TURBUTT, OF FREDERICKTOWN, MARYLAND.

SPARK-CATCHER.

Specification of Letters Patent No. 1,425, dated December 7, 1839.

To all whom it may concern:

Be it known that I, NICHOLAS TURBUTT, of Fredericktown, Frederick county, State of Maryland, have invented a new and useful Apparatus for Arresting the Sparks which Usually Escape Through the Chimneys of Locomotive or other Engines, called "Turbutt's Spark-Catcher," which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

The nature of my invention consists in placing a circular horizontal grate A in a vertical cylinder I, bolted to the top of the ordinary smoke box K in the manner of the common chimney, and in placing an inverted funnel B over said grate, the smaller end of which being the same diameter as the chimney C, which is inserted into the upper and smaller part of the funnel, and the larger end of a diameter somewhat greater than the grate which it covers, and in placing a horizontal circular plate D around the chimney, upon which the smaller sparks that pass through the grate are received and consumed, a perpendicular circular rim or case E being raised upon said circular plate around the periphery thereof and rising above an inner circular case or cap F, placed over the top of the chimney C for arresting the sparks.

To enable persons skilled in the art to make and use this apparatus I will proceed to describe its construction and operation.

Figure 1 is a representation of the outside of the apparatus. Fig. 2 is a vertical section. Fig. 3 is a horizontal section at the line $x-x$ of Fig. 2. Fig. 4 is a top view.

Similar letters refer to similar parts in the figures.

The vertical cylinder is made of any required diameter and depth and is bolted to the top of the smoke box of the engine.

The bars of the grate A are placed parallel at such a distance apart as to arrest the

large cinders and riveted to the sides of the cylinder. The inverted funnel B is made of such diameter at the large end as to cover the cylinder I, to which it is secured by rivets or bolts. The upper or smaller end of the funnel is a little less in diameter than the chimney C and is inserted into the same. The chimney C is made in the usual manner.

The circular case F surrounding the chimney has a cap over its upper end placed at a suitable distance above the top of the chimney, against which the ascending sparks strike and are turned downward, falling on the circular plate D, the lower end of said case F being without any bottom and raised and supported by standards at a suitable height above said circular plate to allow the smoke to pass under its edge and ascend between the inner case F and the outer case E and pass off into the air above through said outer case, which is open at its upper end. The inner case F is of greater diameter and length than the chimney, and the outer case is of greater diameter and length than the inner case.

The circular plate D which forms the bottom of the outer case E and upon which the sparks are collected is secured in a permanent manner around the chimney and small end of the funnel by rivets, braces, &c.

In using this apparatus for house chimneys the grate may be omitted—also the inverted funnel.

The invention claimed and desired to be secured by Letters Patent consists in—

The arrangement of the grate A, inverted funnel B circular plate D and rim E around the same in combination with the ordinary chimney C and case F for arresting the sparks as described.

NS. TURBUTT.

Witnesses:

EZRA HOUCK,
M. E. BARTEIS.