

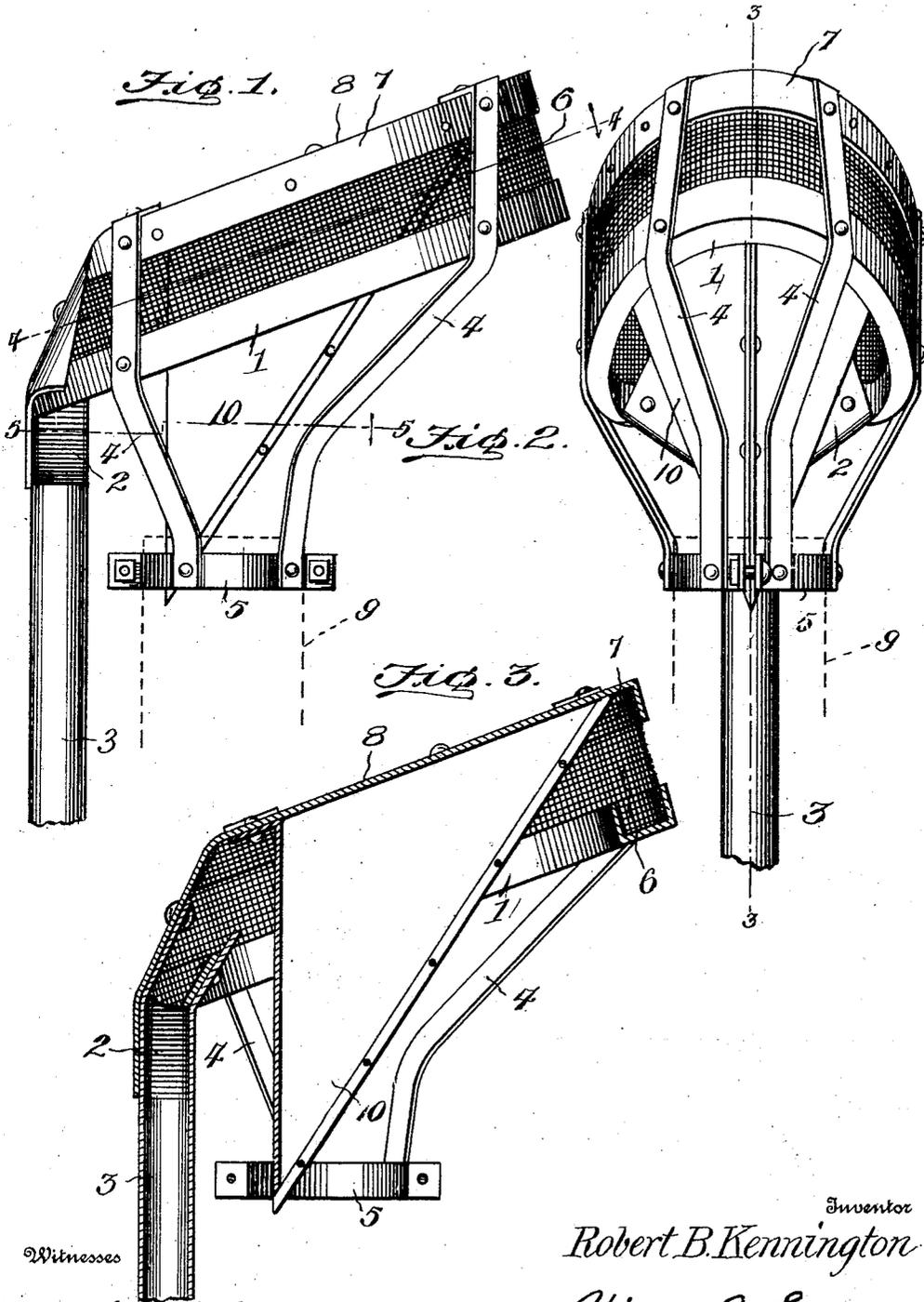
No. 880,309

PATENTED FEB. 25, 1908.

R. B. KENNINGTON.  
SPARK ARRESTER.

APPLICATION FILED AUG. 9, 1907.

2 SHEETS—SHEET 1.



Witnesses

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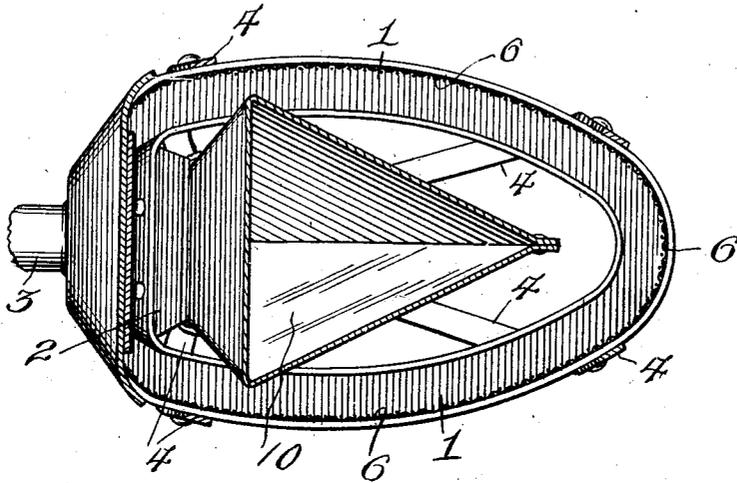
Attorney

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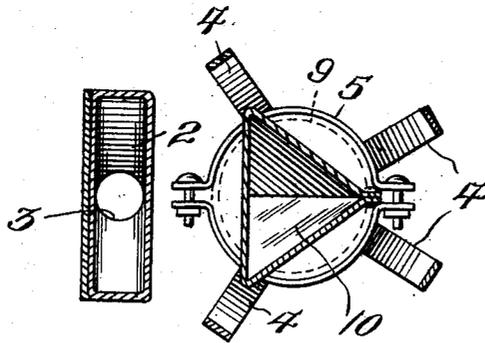
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2 SHEETS—SHEET 2.

*Fig. 4.*



*Fig. 5.*



Witnesses

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# UNITED STATES PATENT OFFICE.

ROBERT B. KENNINGTON, OF FITZPATRICK, GEORGIA.

## SPARK-ARRESTER.

No. 880,309.

Specification of Letters Patent.

Patented Feb. 25, 1908.

Application filed August 9, 1907. Serial No. 387,863.

*To all whom it may concern:*

Be it known that I, ROBERT B. KENNINGTON, a citizen of the United States, residing at Fitzpatrick, in the county of Twiggs and State of Georgia, have invented new and useful Improvements in Spark-Arresters, of which the following is a specification.

This invention relates to spark arresters; and it has for its object to provide a device which shall be readily applicable to the smoke stacks of locomotives, as well as stationary engines, for the purpose of preventing the escape of cinders and comparatively large particles of fuel which are carried by the draft through the smoke stack, and which are apt to cause disastrous fires if permitted to escape in an ignited condition and which, under all circumstances, are obnoxious and detrimental.

Further objects of the invention are to simplify and improve the construction and operation of this class of devices.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawing has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawing, Figure 1 is a side elevation of a spark arrester constructed in accordance with the invention. Fig. 2 is a front view of the same. Fig. 3 is a vertical sectional view taken on the plane indicated by the line 3—3 in Fig. 2. Fig. 4 is a sectional view on the line 4—4, Fig. 1. Fig. 5 is a similar view on the line 5—5, Fig. 1.

Corresponding parts in the several figures are denoted by like characters of reference.

The improved spark arrester comprises a gathering trough 1 which may be suitably constructed of sheet metal, and approximately horseshoe-shaped, as will best appear by reference to Fig. 2 of the drawings, said trough being supported in an inclined position so that sparks and cinders entering into said trough will slide in a downward and rearward direction into the transversely dis-

posed rear portion 2 of the trough which is connected at its lowest portion with the upper end of the discharge tube 3.

The trough is provided with supporting brackets 4—4, the lower ends of which are riveted or otherwise secured upon a clamping ring 5 composed of detachably connected segments or sections which may be firmly clamped or otherwise secured upon the chimney or smoke stack for the purpose of securing the spark arrester in position thereupon.

Secured upon the outer wall of the trough 1 is an upwardly extending foraminous wall 6 of wire netting or other suitable material, the upper edge of which is secured upon the downturned flange 7 of a top piece or cap 8 which is supported in position above the trough by the upwardly extended upper extremities of the supporting brackets 4—4. The cap 8 combines with the foraminous wall 6 and with the trough 1 to form a hood which is supported in an inclined position above the discharge end of the smoke stack or funnel, which latter has been indicated in dotted lines, at 9, in Figs. 1 and 2 of the drawing.

Secured upon the underside of the cap 8 is a downward extending deflector 10, preferably constructed of sheet metal, and of inverted conical, pyramidal or other suitable and appropriate shape and dimensions, the point of extremity or apex of said deflector being projected into the upper extremity of the smoke stack or funnel, as will readily appear by reference to Figs. 1 and 2 of the drawing.

In the operation of this device, the sparks, cinders and other products of combustion escaping through the smoke stack or funnel will be guided by the deflector 10 in an outward direction, and the finer particles, with the gases of combustion, will escape through the foraminous wall 6, while the coarser particles will gravitate into the trough 1, and owing to the inclined position of said trough and to the formation of the transverse portion thereof, said coarse particles will naturally seek an exit through the discharge pipe 3 whereby, in the case of a locomotive smoke stack, the said coarse particles and cinders may be conducted to the track, to be there utilized as filling and ballast. When the invention is applied to an ordinary smoke stack of a stationary or other engine, the cinders and coarse particles may be conveyed to a suitable receptacle.

Having thus fully described the invention, what is claimed as new is:

1. In a spark arrester, a horseshoe-shaped trough supported in an inclined position, a foraminous wall connected with and extending upwardly from the outer wall of the trough, a cap member connected with the upper edge of the foraminous wall, and a deflector secured upon the underside of the cap.
2. In a spark arrester, a horseshoe-shaped trough, supporting brackets connected with said trough and extending above the latter, a flanged cap member connected with the ex-

tended ends of the brackets and supported thereby above the trough, a discharge pipe connected with the latter and a downward extending deflector secured upon the underside of the cap; said deflector being provided with a terminal point or apex at its lower extremity.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT B. KENNINGTON.

Witnesses:

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RICHARD A. HARRISON.