(No Model.)

J. E. ZIMMERMAN.

SPARK ARRESTER.

No. 488,864. Patented Dec. 27, 1892.

Fig: 2.

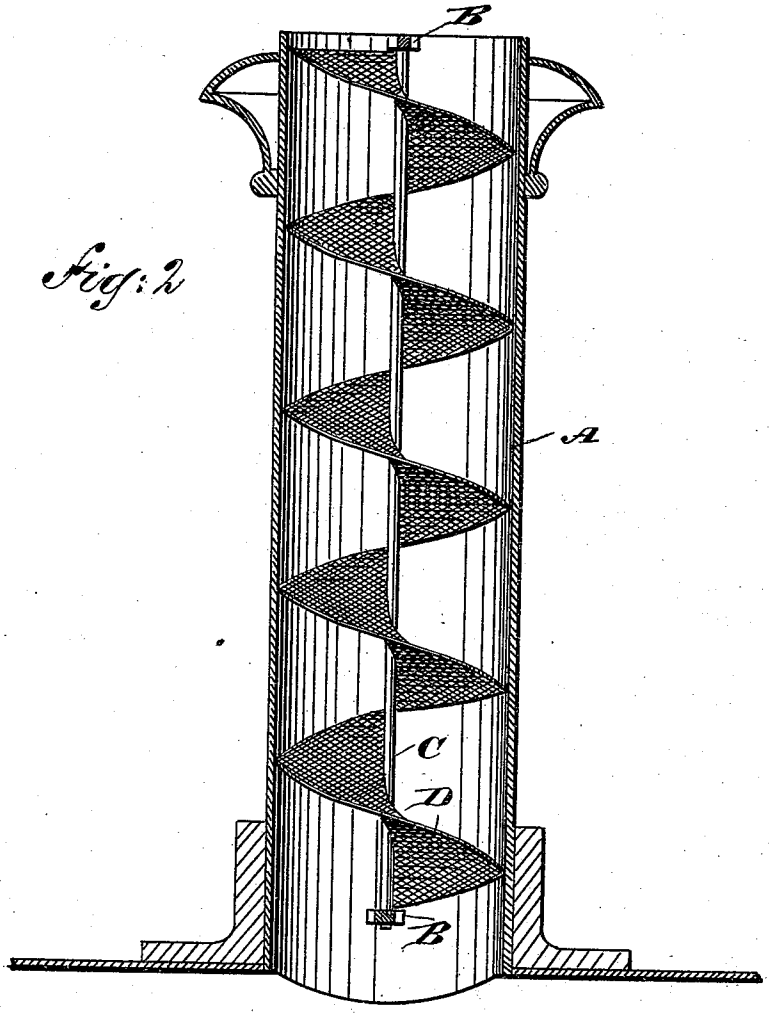
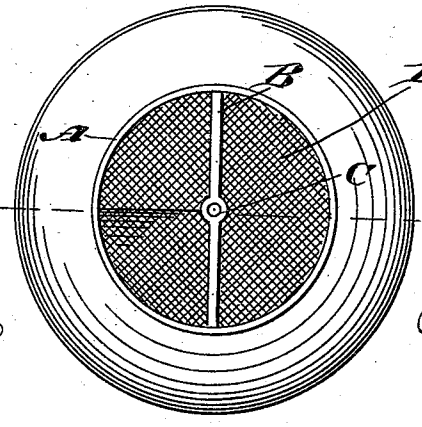


Fig: 1.



WITNESSES:

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JOHN E. ZIMMERMAN, OF TRINIDAD, COLORADO.

SPARK-ARRESTER.

SPECIFICATION forming part of Letters Patent No. 488,864, dated December 27, 1892.

Application filed August 27, 1892. Serial No. 444,267. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. ZIMMERMAN, of Trinidad, in the county of Las Animas and State of Colorado, have invented a new and Improved Spark-Arrester, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved spark arrester, which is simple and durable in construction, and arranged to prevent the escape of sparks and cinders from the smoke stack by intercepting or breaking and extinguishing the spark or cinder.

The invention consists of a plate formed of wire netting and arranged spirally in the smoke stack.

The invention also consists of certain parts and details, and combinations of the same, as will be hereinafter described and then pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is plan view of the improvement; and Fig. 2 is sectional side elevation of the same on the line 2—2 of Fig. 1.

The smoke stack A, of the usual construction supports near its upper and lower ends the cross bars B, in which is secured a rod C, extending centrally in the smoke stack A and on which is fastened a plate D, arranged spirally within the smoke stack and made of wire netting. The outer edges of the spiral wire netting plate touch the inner surface of the smoke stack A so that all sparks and cinders passing up the smoke stack have to travel on the spiral plate and are consequently forced against the same once or several times, so that their upward movement is finally interrupted or the spark or cinder breaks and is thus extinguished before passing out of the upper end of the spiral and out of the smoke stack to the ground.

It will be seen that the cinders and sparks traveling along the spiral are kept a long time within the smoke stack before reaching the upper end thereof, so that the cinders or sparks will readily cool and be extinguished if not broken before passing out of the smoke stack.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent,—

1. The combination with the smoke stack open at both ends and having imperforate side walls, of a continuous spiral wire netting sheet therein with its outer marginal edge contacting with the inner walls of the stack, substantially as set forth.

2. The combination with the open-ended imperforate smoke stack having a central vertical rod C, and end supports B B therefor, of the continuous wire netting sheet D proceeding spirally about said rod for its axis and contacting at its outer marginal edge with the inner walls of the stack, substantially as set forth.

JOHN E. ZIMMERMAN.

Witnesses:
LEO R. SOTTLICH,
H. M. ZIMMERMAN.