D. J. TIMLIN.

Spark-Arrester.

No. 215,694. Patented May 20, 1879

Fig. 1.

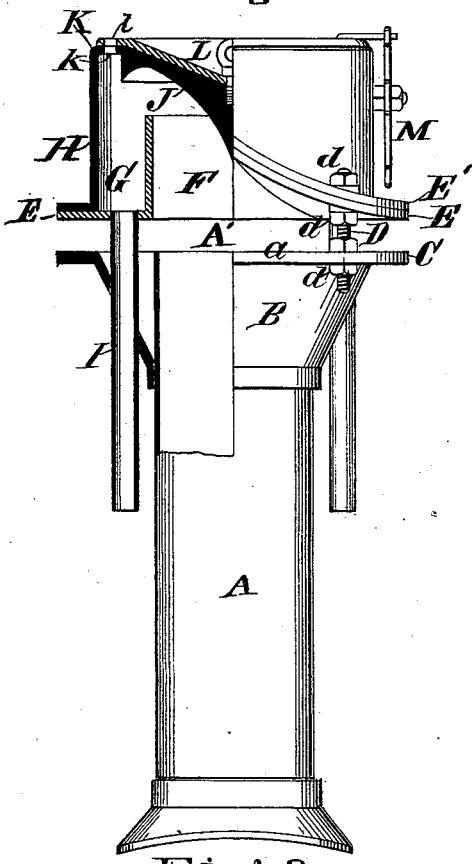



Fig. 2.

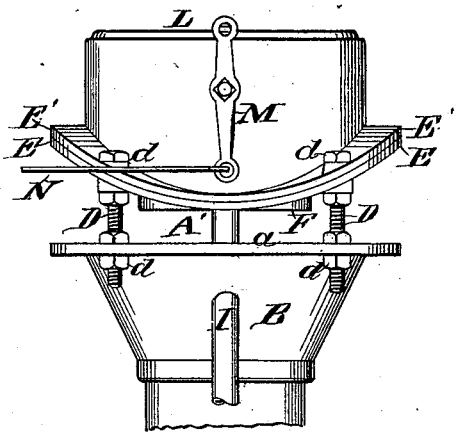



Fig. 3.

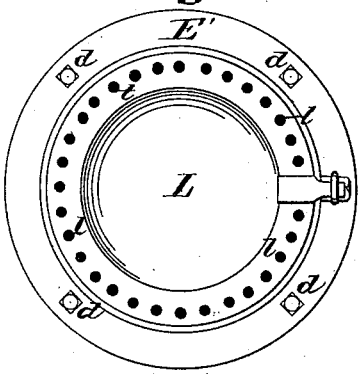
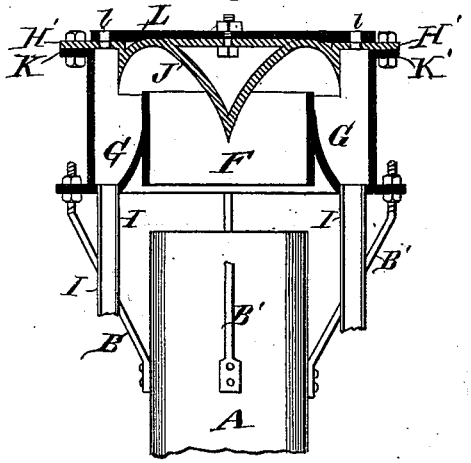



Fig. 4.




Attest.

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By Knight Bros.

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# UNITED STATES PATENT OFFICE.

DAVID J. TIMLIN, OF FLORISANT, MISSOURI.

## IMPROVEMENT IN SPARK-ARRESTERS.

Specification forming part of Letters Patent No. **215,694**, dated May 20, 1879; application filed March 18, 1879.

*To all whom it may concern:*

Be it known that I, DAVID J. TIMLIN, of Florisant, in the county of St. Louis and State of Missouri, have invented a certain new and useful Improvement in Spark-Arresters for Locomotive and other Smoke-Stacks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My improvement relates to the cap of the stack; and consists, first, in providing a cap having a central pipe or throat directly over the body of the stack, above which is a deflector, which deflects the cinders outward and downward into an annular trough, from which they are discharged through pipes extending down each side of the stack; secondly, in the combination, with the body of the stack, of a cap, constructed substantially as described, and made adjustable to regulate the distance onto the ground or into a chamber beneath the locomotive.

The throat-pipe is preferably of somewhat larger diameter than the body or flue A, so that all the ascending sparks will enter it. Said throat-pipe is not in contact with the body A, so that there is a space, A′, between them through which the smoke may escape.

The sparks ascend the pipe F, and impinge against the deflector J. The deflector J is conical at the center, and the outer portion is curved downward, so as to project the sparks down into the chamber G. While the sparks or cinders (which are much heavier than the smoke) are carried by their momentum into the chamber G, the smoke escapes between the top *a* of the body of the stack and the bottom of pipe F. A portion of the smoke may also escape through the holes or orifices *k* in the top plate, K, of the cap if the holes are open.

3. In combination with the cap constructed substantially as set forth, with a top, K, having orifices *k*, the rotatable valve or damper L, for the purpose set forth.

4. The combination, with the pipe F, deflector J, and spark-chamber G, of the inclined plate or flange constituting the bottom of the chamber G, and acting to deflect the sparks to the discharge-pipes I.

DAVID J. TIMLIN.

Witnesses:
CHAS. W. HULLAND,
CHAS. CASTELLO.