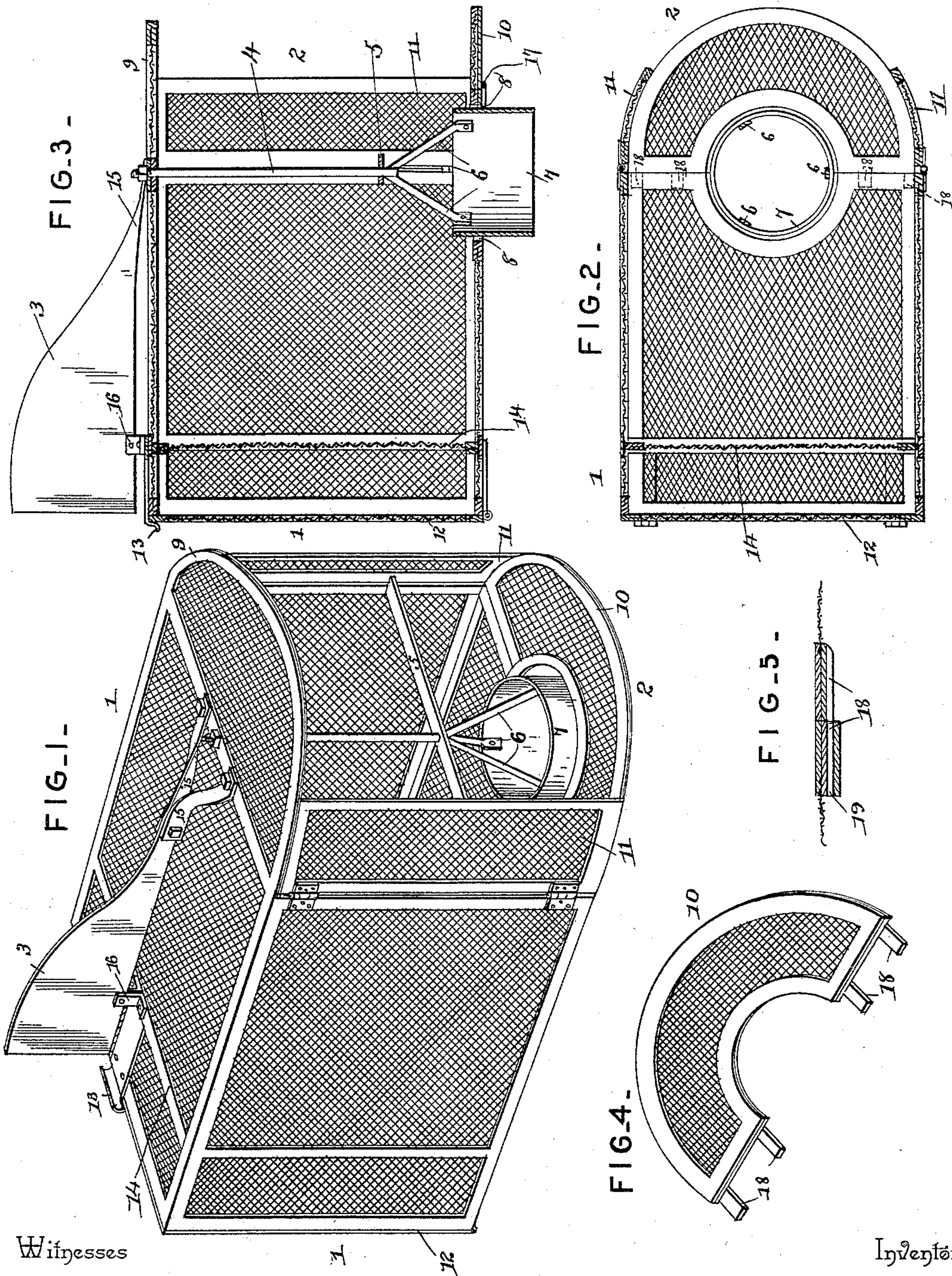


(No Model.)

H. M. HANSON.
SPARK ARRESTER.

No. 462,127.

Patented Oct. 27, 1891.



Witnesses

Inventor

Jas. K. McEachran
J. F. Riley

By his Attorneys,

Henry M. Hanson

Cash & Co.

UNITED STATES PATENT OFFICE.

HENRY M. HANSON, OF MILAN, MINNESOTA.

SPARK-ARRESTER.

SPECIFICATION forming part of Letters Patent No. 462,127, dated October 27, 1891.

Application filed June 22, 1891. Serial No. 397,079. (No model.)

To all whom it may concern:

Be it known that I, HENRY M. HANSON, a citizen of the United States, residing at Milan, in the county of Chippewa and State of Minnesota, have invented a new and useful Spark-Arrester, of which the following is a specification.

The invention relates to improvements in spark-arresters.

The object of the present invention is to provide a device adapted to be arranged at the tops of chimneys, smoke-stacks, and the like to catch the sparks and cinders without interfering with the draft of an engine or furnace.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a spark-arrester constructed in accordance with this invention. Fig. 2 is a horizontal sectional view. Fig. 3 is a vertical longitudinal sectional view. Fig. 4 is a detail view of the lower extension. Fig. 5 is a detail sectional view.

Referring to the accompanying drawings, 1 designates a spark-arrester, consisting of a wire-gauze casing rectangular in cross-section, designed to be rotatively mounted on a chimney or smoke-stack and having an open end 2, which is always presented to the wind and permits a free and unobstructed draft. The casing is provided at its top with a vane 3, which holds the open end 2 always to the wind, and the pivotal point of the spark-arrester is at the front or open end 2, so that the body of the spark-arrester is arranged back of the chimney or smoke-stack to catch the sparks, cinders, and other solid particles given off by combustion.

The spark-arrester is mounted on a vertical shaft 4, which is journaled in the top of the casing and in a cross-bar 5 and is provided at its lower end with a tripod 6, the legs of which are secured within a collar 7. This collar may be secured to the top of a chimney or smoke-stack, or the tripod may be directly secured to the chimney or smoke-stack, and the bottom of the casing is provided with a circular opening 8 to receive the collar 7. The front

or open end of the casing is provided with segmental top and bottom extensions 9 and 10, which project beyond the shaft 4, and hinged at the sides of the casing are doors 11, which may be opened to facilitate cleaning the spark-arrester. The rear end of the spark-arrester has a hinged door 12, which is secured by a catch 13, and is adapted to be opened to clean the arrester, and arranged adjacent to the door 12 is a transverse partition 14. The cinders and sparks collect in the arrester and bank up against the transverse partition and in the space between the transverse partition and the door, as the force of the sparks and cinders is exerted directly upon the transverse partition and some are forced through the latter. The vane 3 tapers toward its front end, which is secured to the casing by divergent plates 15, and the rear end of the vane is supported by angle-plates 16. The hinged doors 11 are secured by a tie-wire 17, which is arranged beneath the bottom extension 10. The top extension 9 is preferably formed integral with the top of the casing; but the bottom extension 10 is detachable, and is provided at its ends with tongues 18, which engage suitable sockets 19 of the bottom of the casing.

It will be seen that the spark-arrester is simple and inexpensive in construction and adapted to be readily attached to a chimney or smoke-stack, and is capable of catching sparks and cinders without interfering with the draft.

What I claim is—

1. A spark-arrester comprising the casing having one end open and being constructed of gauze, a vertical shaft journaled in the casing and adapted to be secured to a chimney, smoke-stack, or the like, a vane arranged at the top of the casing, the door closing the back of the casing, and the transverse partition arranged adjacent the door and forming a space between it and the same, substantially as described.

2. A spark-arrester comprising the casing constructed of gauze and having its front end open and its rear end provided with a door and having an opening in its bottom, the segmental extensions located at the front end of the frame, the side doors hinged to the casing and closing against the extensions, and the

vertical shaft journaled in the casing, substantially as described.

3. A spark-arrester comprising the casing constructed of gauze and having its front end
5 open and its rear end provided with a door and having an opening in its bottom, the transverse partition, the vertical shaft journaled in the casing and provided at its lower end with a tripod, the upper segmental extension rigidly secured to the top of the casing,
10 the lower extension detachably secured to the

bottom of the casing, the doors 11, hinged to the casing and closing against the curved edges of the extensions, and the vane arranged on top of the casing, substantially as described. 15

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

HENRY M. HANSON.

Witnesses:

J. J. STENNES,
O. K. OPJORDEN.