

(No Model.)

J. A. JONES.
SPARK ARRESTER.

No. 308,500.

Patented Nov. 25, 1884.

Fig. 1.

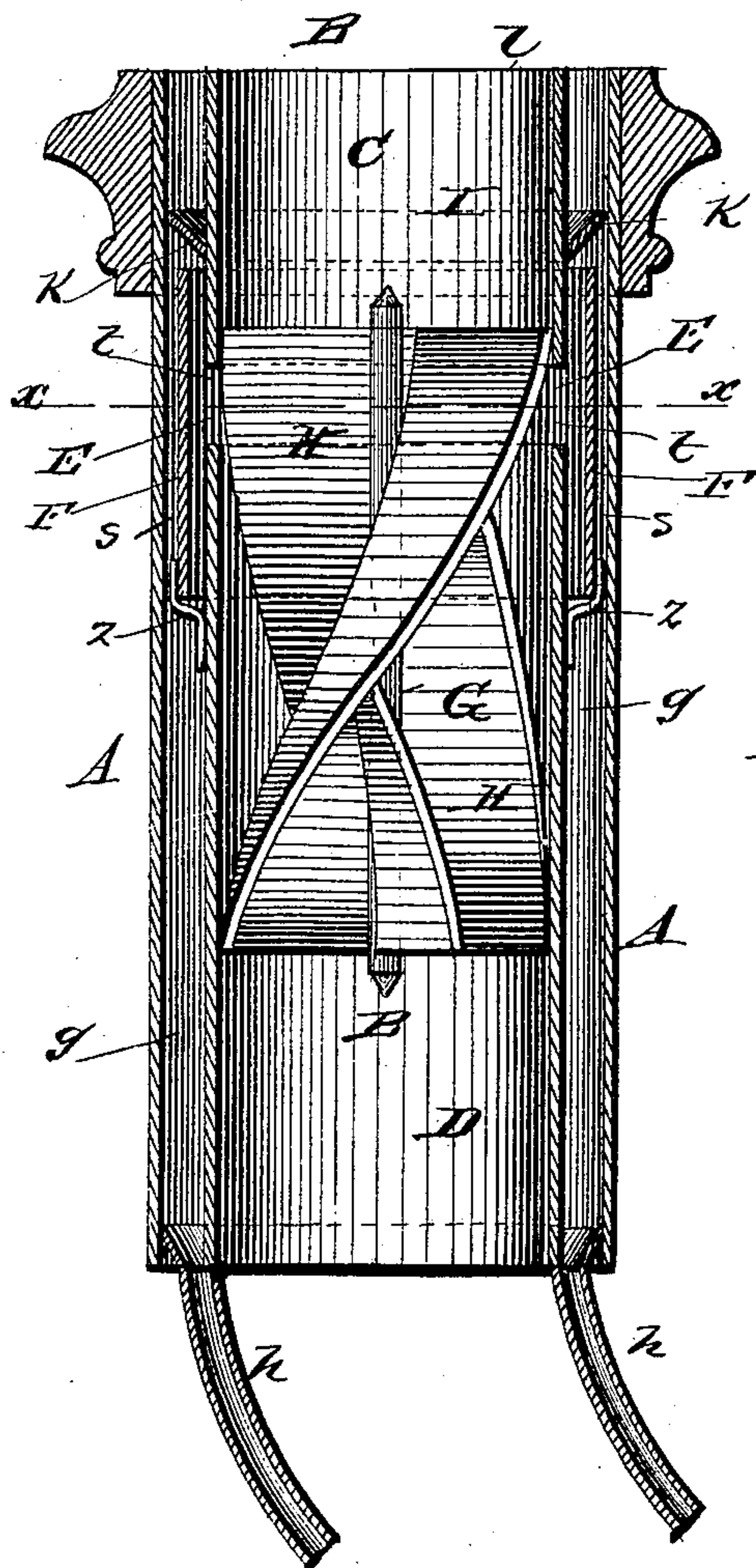


Fig. 2.

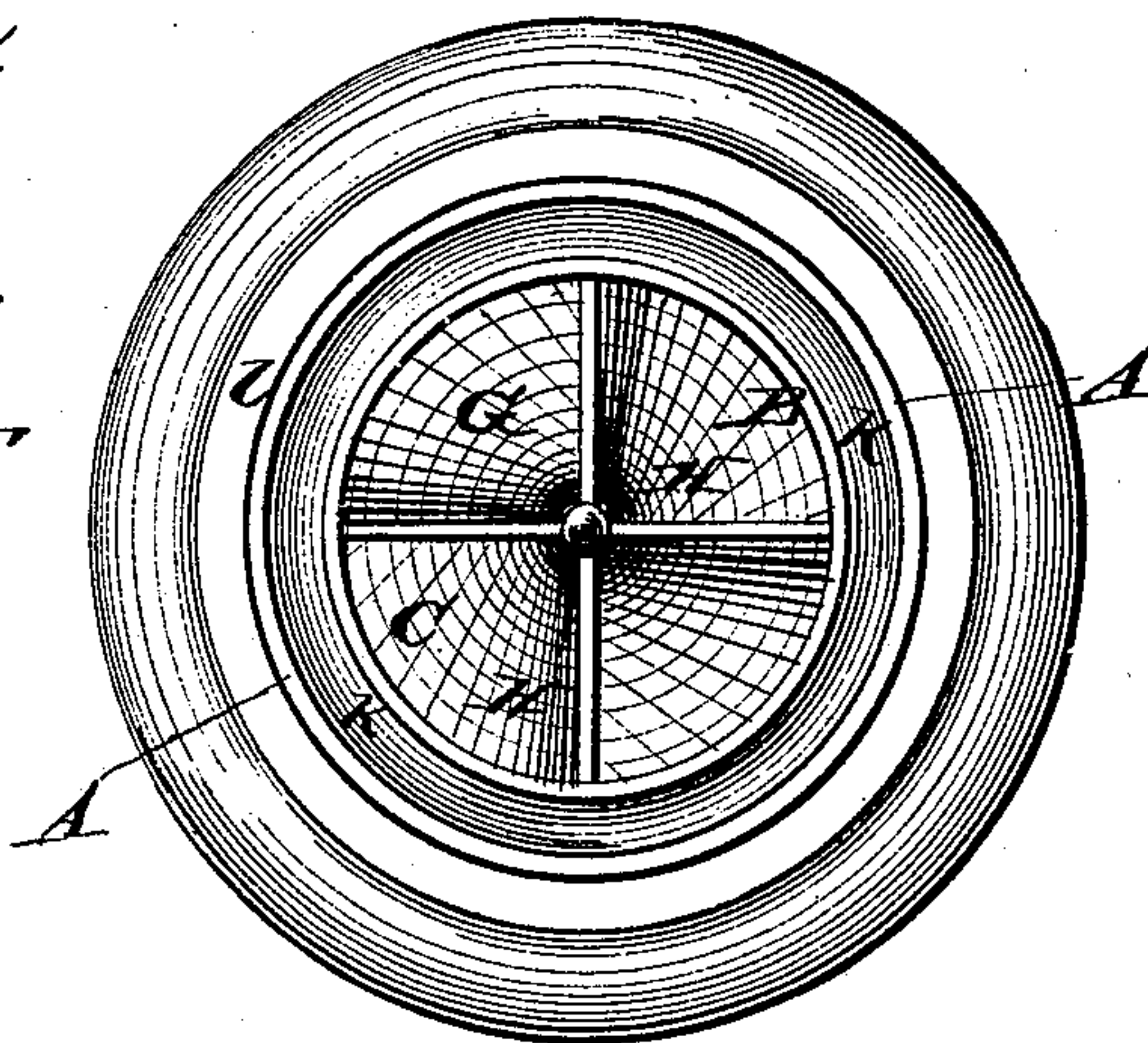
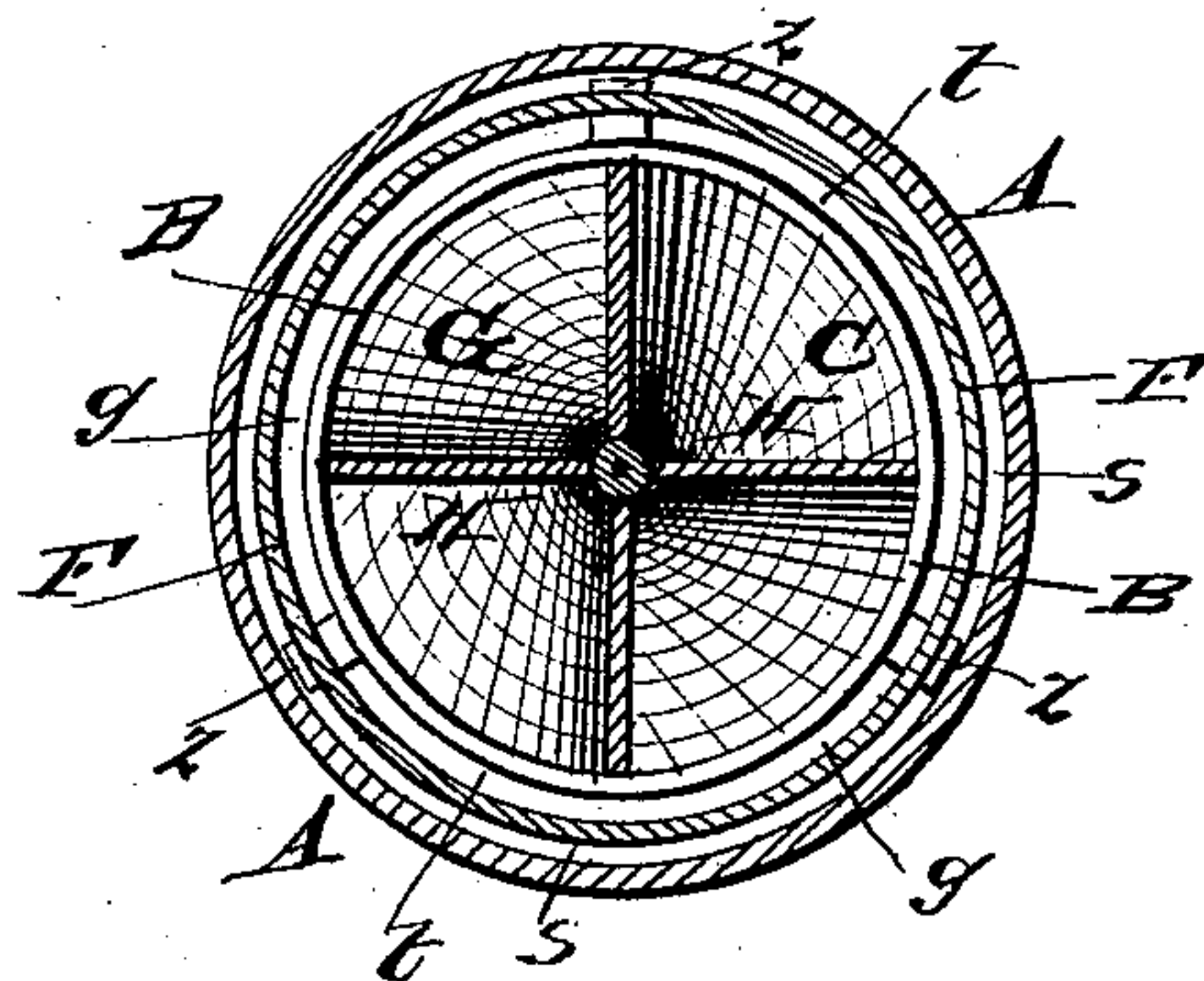


Fig. 3.



WITNESSES

Philip Levasi.

E. H. Davis

INVENTOR

James A. Jones

by Anderson & Smith

Attorneys

UNITED STATES PATENT OFFICE.

JAMES A. JONES, OF TYLER, TEXAS.

SPARK-ARRESTER.

SPECIFICATION forming part of Letters Patent No. 308,500, dated November 25, 1884.

Application filed May 23, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. JONES, a citizen of the United States, residing at Tyler, in the county of Smith and State of Texas, have
5 invented certain new and useful Improvements in Spark-Arresters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to
10 make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a vertical sectional view of my device. Fig. 2 is a top view
15 of the same, and Fig. 3 is a transverse sectional view.

This invention has relation to means for preventing the discharge of burning cinders or
20 sparks from smoke-stacks, especially those of locomotive-engines; and it consists in the construction and novel arrangement of devices, as hereinafter set forth, and pointed out in the appended claim.

In the accompanying drawings, the letter A
25 designates the wall of a smoke-stack, and B an interior cylinder, consisting of an upper portion, C, and a lower portion, D, these portions being separated by an annular opening or interval, E.
30

Between the portions of the inner cylinder and the inner wall of the outer cylinder is arranged an interspace or flue, *g*, which at its lower end communicates with pipes or passages *h*, leading to a box or reservoir at some
35 convenient point under the engine.

Around the upper portion, C, of the inner cylinder is secured an upwardly-flaring collar-flange, *k*, above which the top of the cylinder-
40 section extends upward even with the top of the stack, as indicated at *l*. The flange *k* forms the top of the interspace or flue *g*, which communicates with the main smoke-passage I

through the inner cylinder by the annular opening E. The upper portion of the flue *g*,
45 or that portion around the opening E, is subdivided into two cylindrical passages, *s* and *t*, by an intermediate cylindrical guard or partition, F, which is designed to prevent the
50 burning cinders which pass through the opening E from the main smoke-passage I from returning into said passage on the downward current.

In the upper part of the main smoke-passage I, and bridging the annular opening E,
55 is located a spiral guide, G, having wings H, which extend from the central or axial line, where they intersect, outward, to the inner walls of the upper and lower sections, C and D, of the inner cylinder.
60

By means of the spiral guide-wings H the burning cinders or sparks are directed through
the opening E into the cylindrical flue *g*, whence they are conducted into a box or reservoir.
65

The intermediate partition, F, may be conveniently supported by lugs *z*, extending outward from the wall of the lower section, D, of the inner cylinder.

Having described this invention, what I
70 claim, and desire to secure by Letters Patent, is—

The combination, with the stack, of the upper and lower portions, C and D, of the inner cylinder, separated by the annular opening E,
75 the spiral wing-guide G, the collar-flange between the stack-wall and the section C, and the cylindrical partition F below said collar-flange in the flue *g*, substantially as specified.

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

JAS. A. JONES.

Witnesses:

ADAM STEPHENS,

GEORGE H. PLOWMAN.