

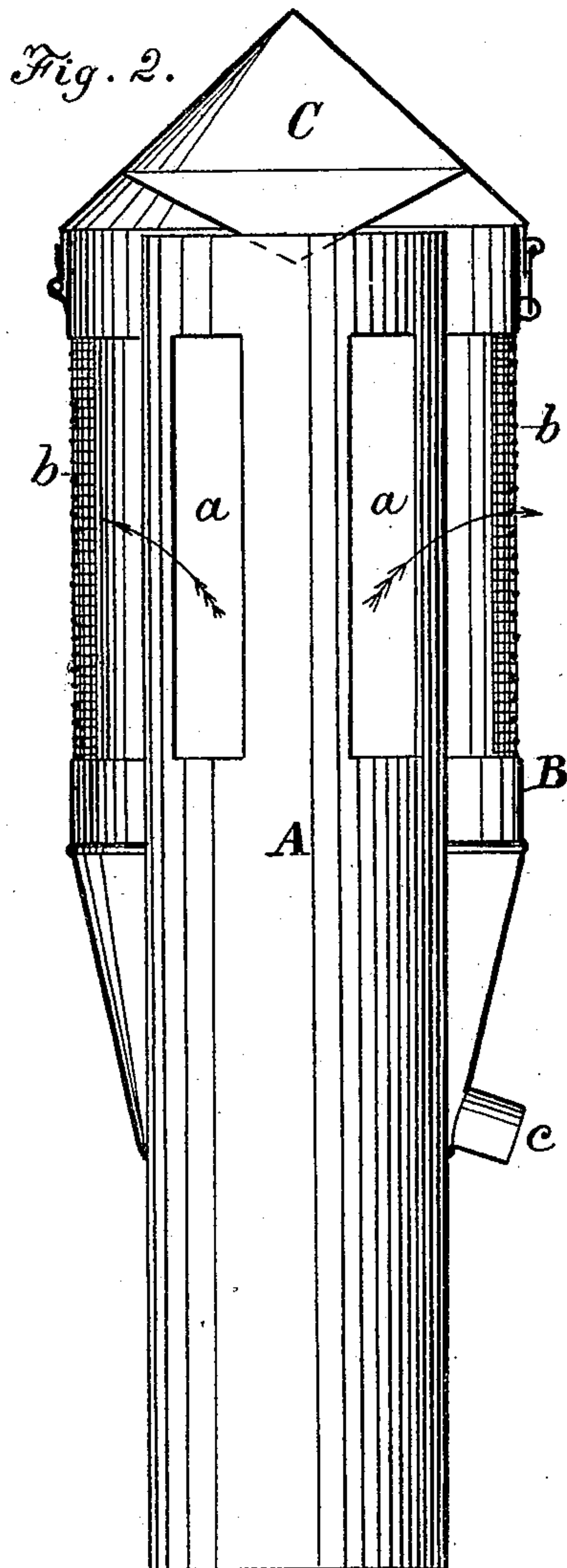
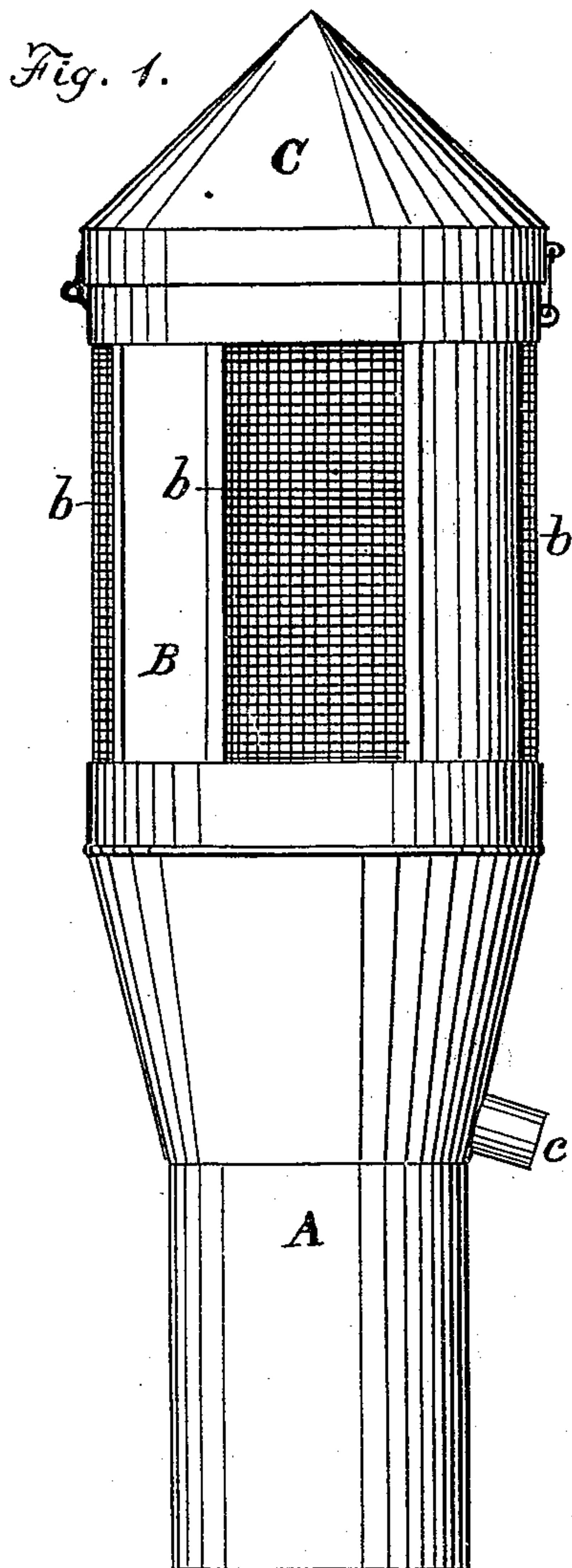
(No Model.)

N. SHOPTAUGH.

SPARK ARRESTER.

No. 282,933.

Patented Aug. 7, 1883.



Witnesses :
Theo. Mungen.
C. H. Bradford

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UNITED STATES PATENT OFFICE.

NICHOLAS SHOPTAUGH, OF BOONEVILLE, INDIANA.

SPARK-ARRESTER.

SPECIFICATION forming part of Letters Patent No. 282,933, dated August 7, 1883.

Application filed June 30, 1881. Renewed April 18, 1883. (No model.)

To all whom it may concern:

Be it known that I, NICHOLAS SHOPTAUGH, a citizen of the United States, residing at Booneville, in the county of Warrick and State of Indiana, have invented certain new and useful Improvements in Spark-Arresters; and I do hereby 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 make and use the same, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to spark-arresters for the smoke-stacks of locomotive and other engines; and it consists in certain improvements in the construction of the same, as hereinafter shown and described.

In the accompanying drawings, Figure 1 is a side view of a smoke-stack provided with the improved spark-arrester. Fig. 2 is a partly sectional view of the same.

In smoke-stacks as commonly constructed, with the screen or wire-cloth to retain the sparks placed at the top of the stack, it has been found that the upward blast, driving the sparks and particles of coal against the screen, causes it to become stopped up, thus greatly impeding the passage of air and smoke, and my invention is intended to overcome this difficulty.

A designates the main chimney, extending up to the top of the stack, and B the surrounding jacket, joining the chimney below, and arranged and constructed with a few inches of space between the main casing of the jacket

and that of the chimney within. C is the cap or cover of the stack, usually hinged thereto and made to entirely close the stack at the top.

The main stack or chimney A is provided with the side openings, *a*, for the passage of smoke, sparks, and products of combustion. The jacket B is also provided with openings having screens *b*, forming the spark-arrester, the screens being on about the same level or opposite the openings *a* in the main stack A. Thus it will be seen that the direct upward blast is broken, the top of the stack being closed, and the smoke, sparks, and particles pass out laterally from the stack A to the screens *b*, which prevent the exit of the sparks and particles. As the force of the blast is somewhat modified in passing from the stack A, the particles of coal are not driven against the screen so as to adhere to them and obstruct the exit of smoke, but such particles fall down between the casings of A and B, and may be discharged from the stack through the spout *c* at the bottom of the jacket B.

I claim—

A smoke-stack closed at the top and having the main chimney A provided with openings *a*, in combination with the jacket B, having screens *b*, constructed and arranged substantially as set forth.

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

NICHOLAS SHOPTAUGH.

Witnesses:

A. F. BROSHEARS,
J. B. ASHLEY.