

(No Model.)

C. POTTICARY
SPARK ARRESTER.

No. 430,298.

Patented June 17, 1890.

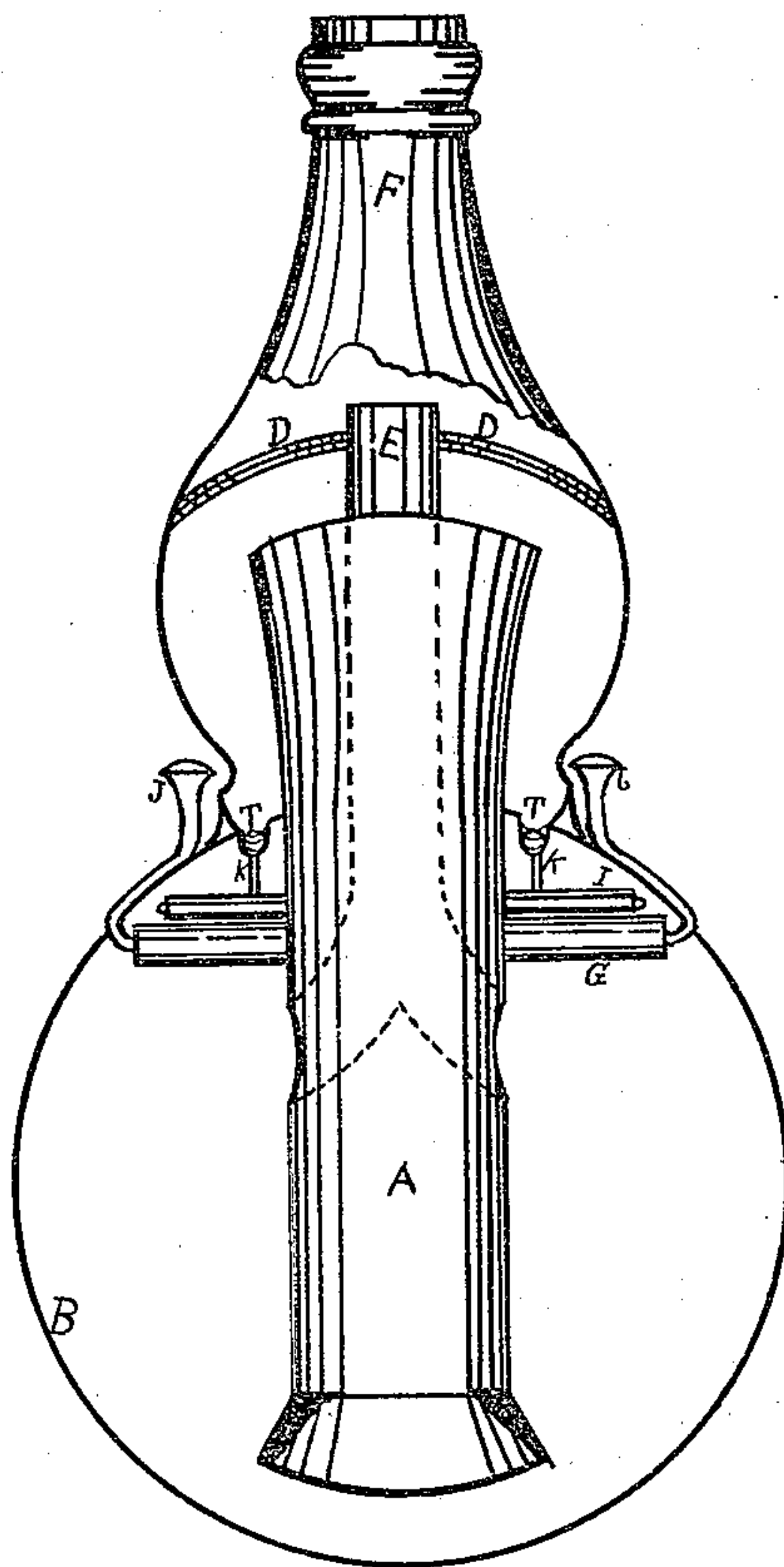


Fig. 1.

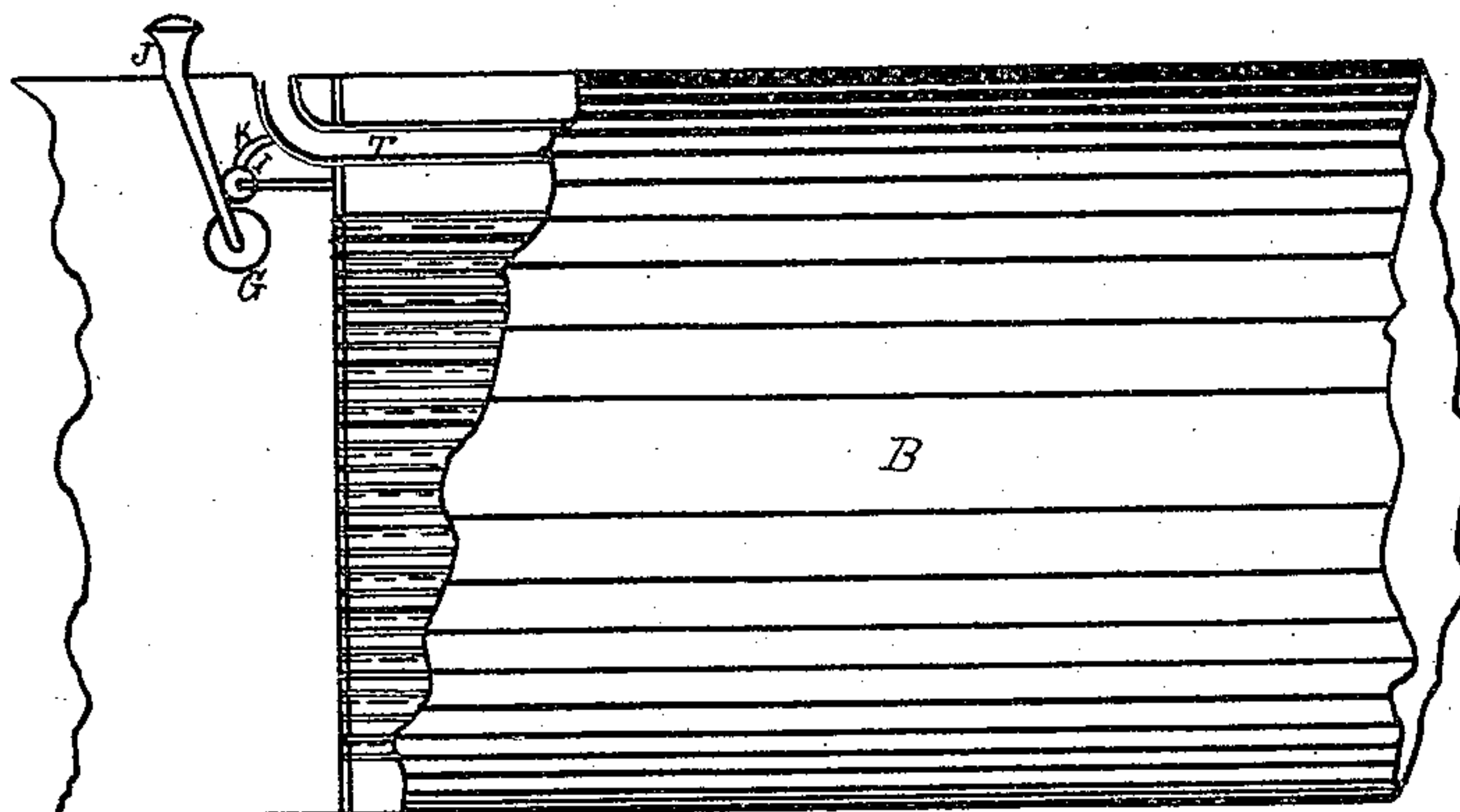


Fig. 2.

Witnesses.

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UNITED STATES PATENT OFFICE.

CHARLES POTTICARY, OF ST. THOMAS, ONTARIO, CANADA.

SPARK-ARRESTER.

SPECIFICATION forming part of Letters Patent No. 430,298, dated June 17, 1890.

Application filed November 4, 1889. Serial No. 329,189. (No model.) Patented in Canada September 17, 1889, No. 32,315.

To all whom it may concern:

Be it known that I, CHARLES POTTICARY, a citizen of the Dominion of Canada, residing at the city of St. Thomas, in the county of Elgin and Province of Ontario, Canada, have
5 invented a new and useful Spark-Arrester, of which the following is a specification.

The first part of my invention relates to improvements in "spark-arresters" in which an
10 exhaust-pipe operates in conjunction with a reflector or damper; and the object of this part of my improvement is to arrest the sparks without interrupting the draft.

The second part of my invention relates to
15 improvements in spark-arresters in which air-pipes and steam-pipes operate in conjunction with return-flues; and the object of this part of my invention is to convey the sparks and cinders from the stack of a locomotive or
20 other engine to the fire-box.

In the accompanying drawings, Figure 1 is an interior view of a boiler, showing the smoke-stack partly broken away, with my improvements applied; and Fig. 2 is a portion
25 of a boiler with parts broken away, showing my invention.

Similar letters refer to similar parts throughout the several views.

- 30 A is a draft or smoke pipe.
- B is the rim or shell of a boiler.
- D D are two concave perforated reflectors or dampers.
- E is an exhaust-steam pipe.
- F is a smoke-stack.
- 35 G is a pipe intended to receive air from the outside of the boiler.
- I is a steam-pipe.
- J J are air-funnels.

K K are steam-jets.

T T are return-flues, which lead back to the
40 fire-box.

I intend my invention to operate as follows: The sparks, cinders, and smoke after leaving the flues of the boiler will pass through the draft-pipe A and the stack F if the dampers
45 D D are open; but when the dampers are revolved, so that the perforations therein are closed, the sparks, cinders, and smoke will be drawn back to the fire-box by the suction of the exhaust through the return-flues T T. A
50 supply of air is provided by the funnels J J and conveyed to the larger pipe G. The pipe I is supplied with steam from the boiler, which is forced into the return-flues T T by the jets K K. The air-pipe G also communicates with
55 the return-flues T T by means of pipes inside of or surrounding the jets K K. Thus the return-flues are not liable to become foul or cloggy, and the air thus admitted to the fire-box will assist in the more perfect combustion
60 of the fuel.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, in a spark-arrester, of the exhaust-pipe E and revolving dampers or
65 reflectors D D, all substantially as set forth.
2. In a spark-arrester, the combination of the air-pipe G, the steam-pipe I with the return-flues T, the exhaust-pipe E, and the revolving dampers or reflectors D, substantially
70 as specified.

CHARLES POTTICARY.

Witnesses:

A. MCCRIMMON,
D. LONG.