

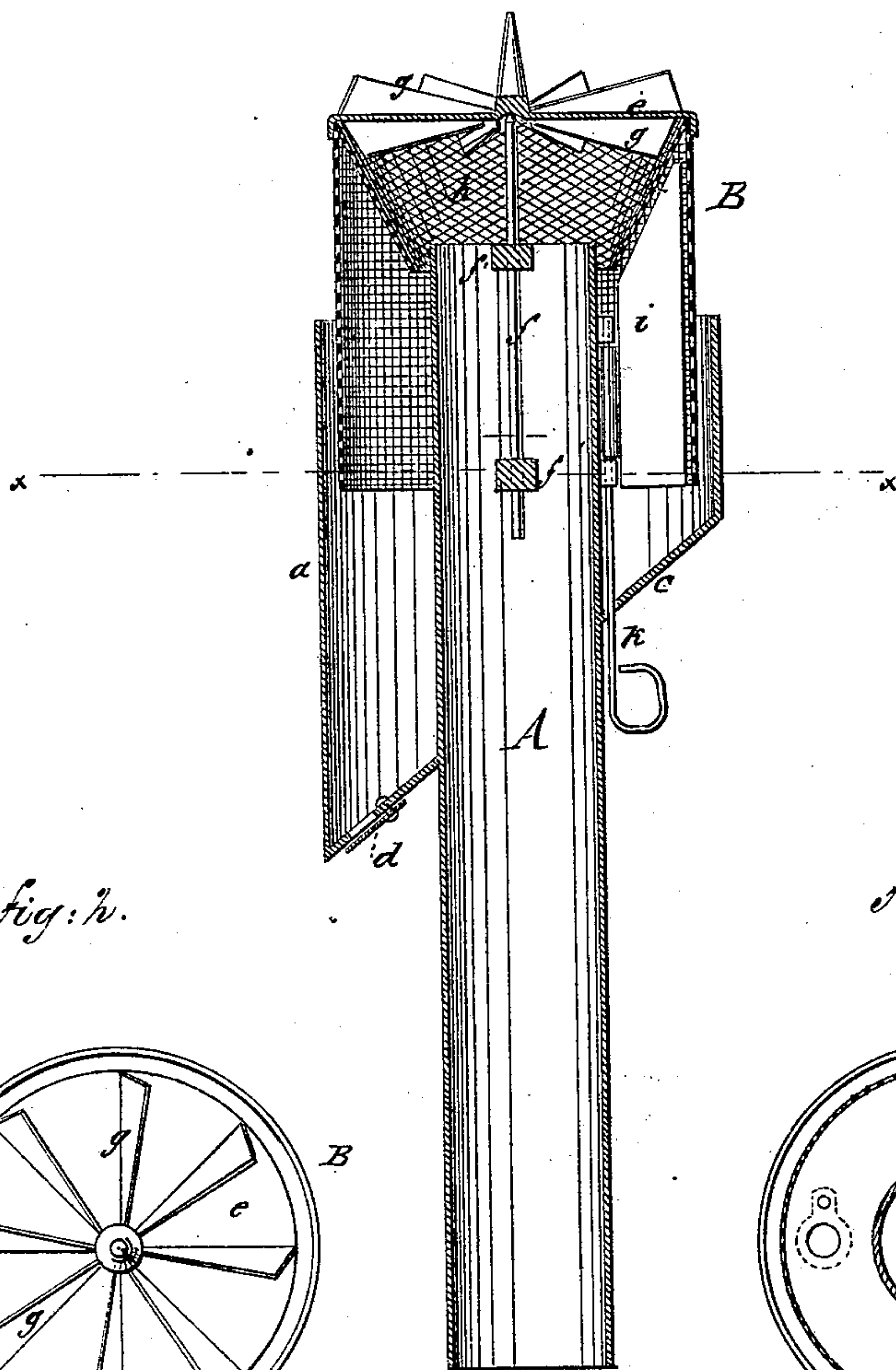
(No Model.)

J. J. KEAN.  
Spark Arrester.

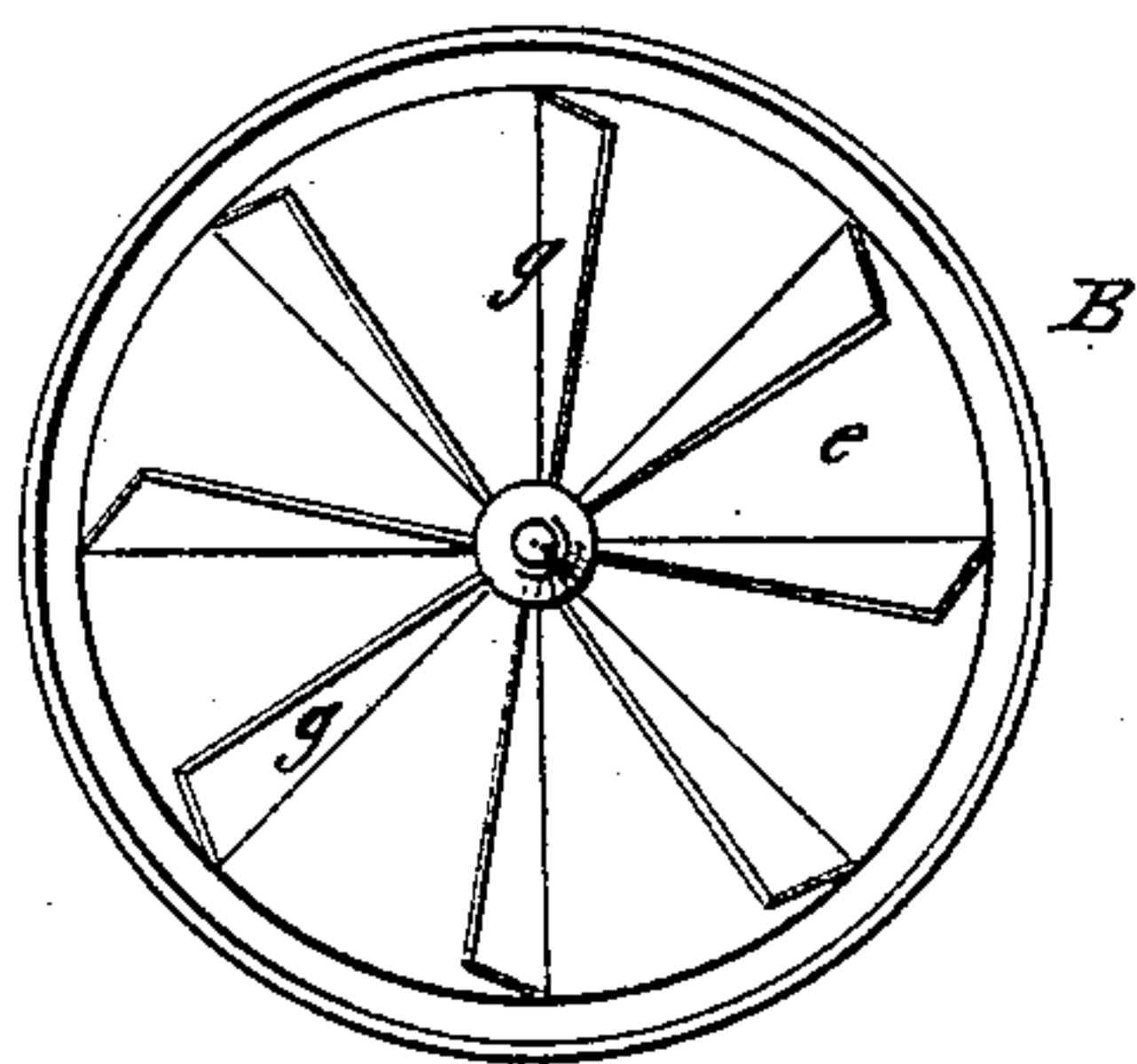
No. 236,437.

Patented Jan. 11, 1881.

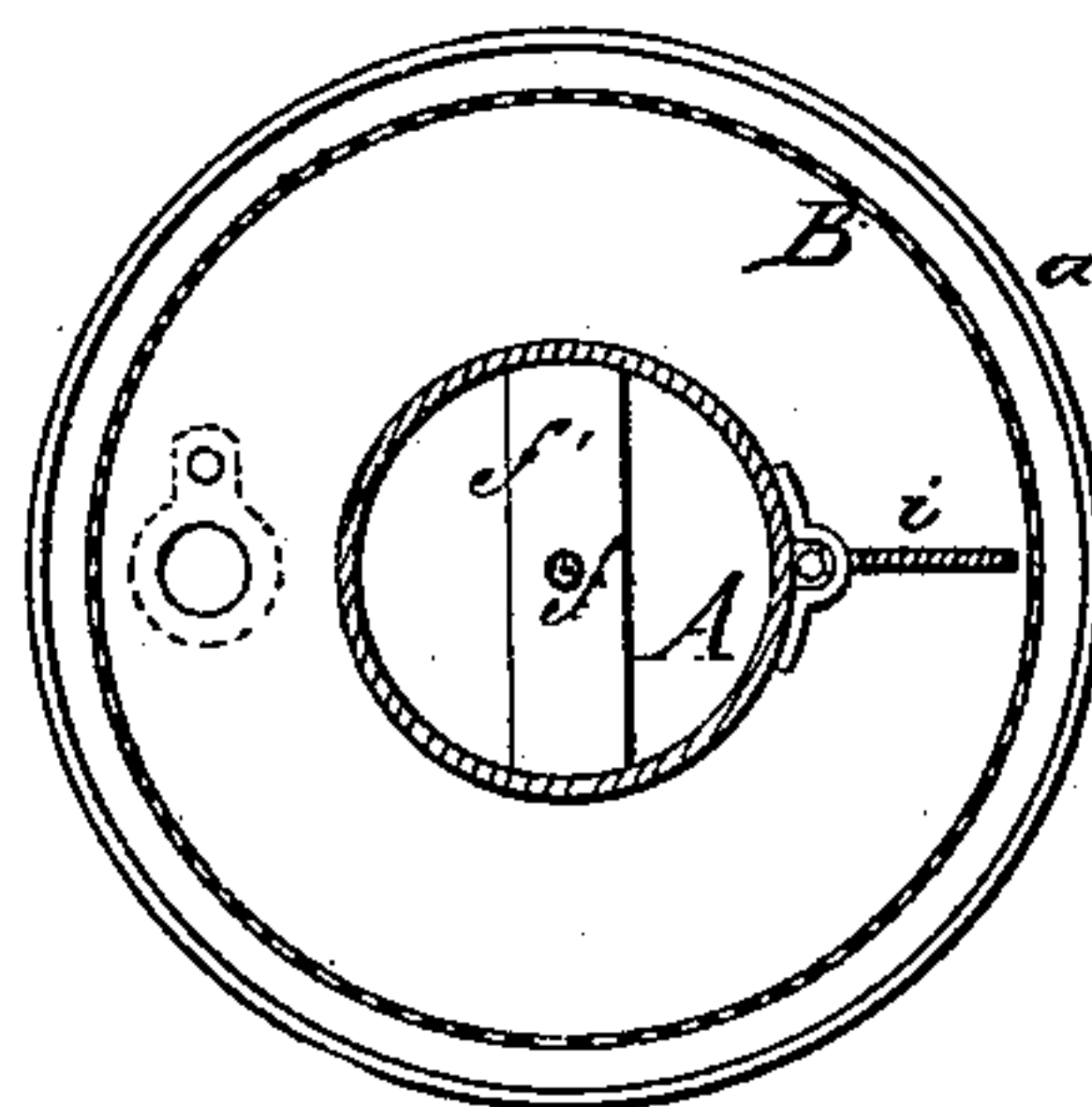
*Fig: 1.*



*Fig: 2.*



*Fig: 3.*



WITNESSES:

*Chas. Nida.*  
*C. Sedgwick*

INVENTOR:

*J. J. Kean*  
BY *Munn & Co.*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JAMES J. KEAN, OF SAN FRANCISCO, CALIFORNIA.

## SPARK-ARRESTER.

SPECIFICATION forming part of Letters Patent No. 236,437, dated January 11, 1881.

Application filed May 24, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES J. KEAN, of the city and county of San Francisco, and State of California, have invented a new and useful Improvement in Spark-Arresters, of which the following is a specification.

My improvements relate to spark-arresters for locomotive and other smoke pipes or flues; and my invention consists in a turret closed at the top and formed with sides of perforated material, which is fitted to revolve upon the smoke-stack and with a receiving-chamber for the sparks; also, in a conical and perforated sleeve, which is fitted within the turret and assists in breaking up the sparks; and in a movable scraper for cleaning the inner surface of the turret.

In the accompanying drawings, forming part of this specification, Figure 1 is a vertical section of my improved spark-arrester. Fig. 2 is a plan view, and Fig. 3 is a horizontal section on line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

A is the smoke-pipe, at the upper end of which is fitted a cylinder, *a*, that forms a chamber around the smoke-pipe, and is closed at the bottom by an inclined plate, *c*. The bottom plate, *c*, is apertured at the lowest point and fitted with a slide, *d*, over the apertures, that may be opened to remove the accumulations of refuse in the chamber, or in case of a locomotive smoke-pipe a pipe will lead from the aperture to the fire-box to carry away such refuse.

B is the revolving turret, which consists of a cylinder of wire-gauze or perforated material provided with a closed cap, *e*. This turret rests upon a pintle, *f*, that projects above the pipe A from the cross-bars *f'*, whereby the turret is supported with its lower portion within the chamber around the smoke-pipe, and the turret is also free to revolve upon the pintle *f*. On the upper and under side of the

cap there are fixed radial fans *g*, which cause the revolution of the turret by the action on them of the heated air within or the outer air. Beneath the cap *e* is fixed a sleeve, *h*, of wire-gauze, which is in the shape of an inverted truncated cone and terminates below the top of the pipe A.

Upon one side of pipe A is hinged a scraper, *i*, with its hinge-pin extending down through the plate *c* to form a handle, *k*, by which the scraper *i* may be turned in or out of contact with the perforated sides of the turret B. The upper end of scraper *i* is cut at an incline for contact with the outer surface of sleeve *h*. By this construction the scraper *i* serves to scrape the wire-gauze clean when the turret revolves. The turret B acts to arrest the sparks, and they are broken up by contact with the sleeve *h* and perforated sides of the turret before falling upon the bottom *c* of the chamber.

The refuse that collects in the cylinder *h* may be removed by opening the slide at the bottom. It is not necessary that the turret revolve continuously, but only when the scraper is to be used.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

1. As an improvement in spark-arresters, the turret B, provided with the sides of perforated material and fitted with the perforated frustum *h*, combined with the smoke-pipe, having a cylinder, *a*, fitted at its upper end, substantially as shown and described.

2. In spark-arresters, the chamber formed around the smoke-pipe by the cylinder *a*, having an inclined bottom plate, *c*, and delivery-slide *d*, combined with the turret B, of perforated material, fitted over the top of the smoke-pipe, substantially as described and shown.

JAMES J. KEAN.

Witnesses:

HENRY J. WAGNER,  
FRED. HOLTZ.