

P. M. LOW.
 SPARK ARRESTER ATTACHMENT.
 APPLICATION FILED JUNE 5, 1908.

911,827.

Patented Feb. 9, 1909.

Fig. 1.

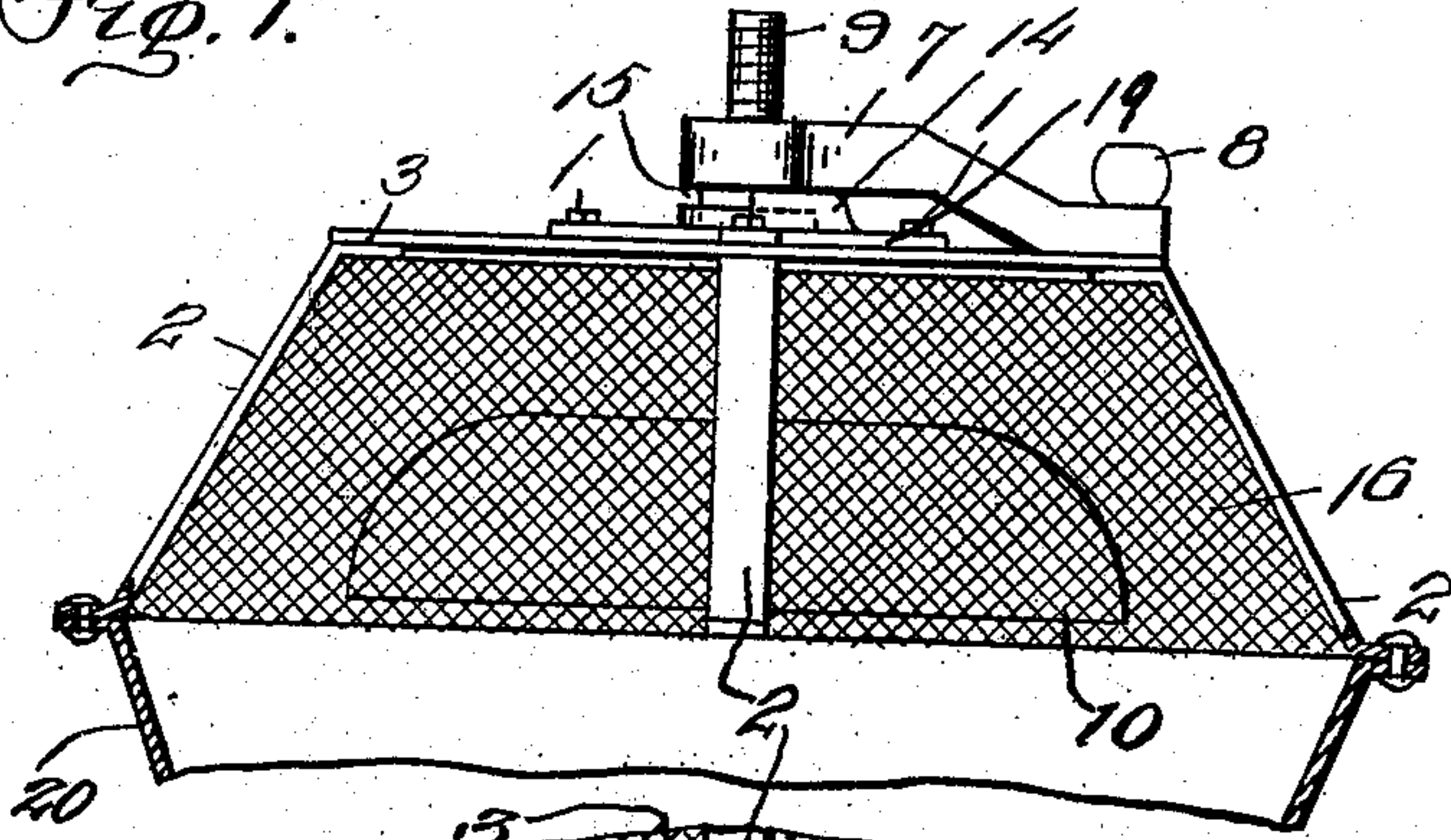


Fig. 2.

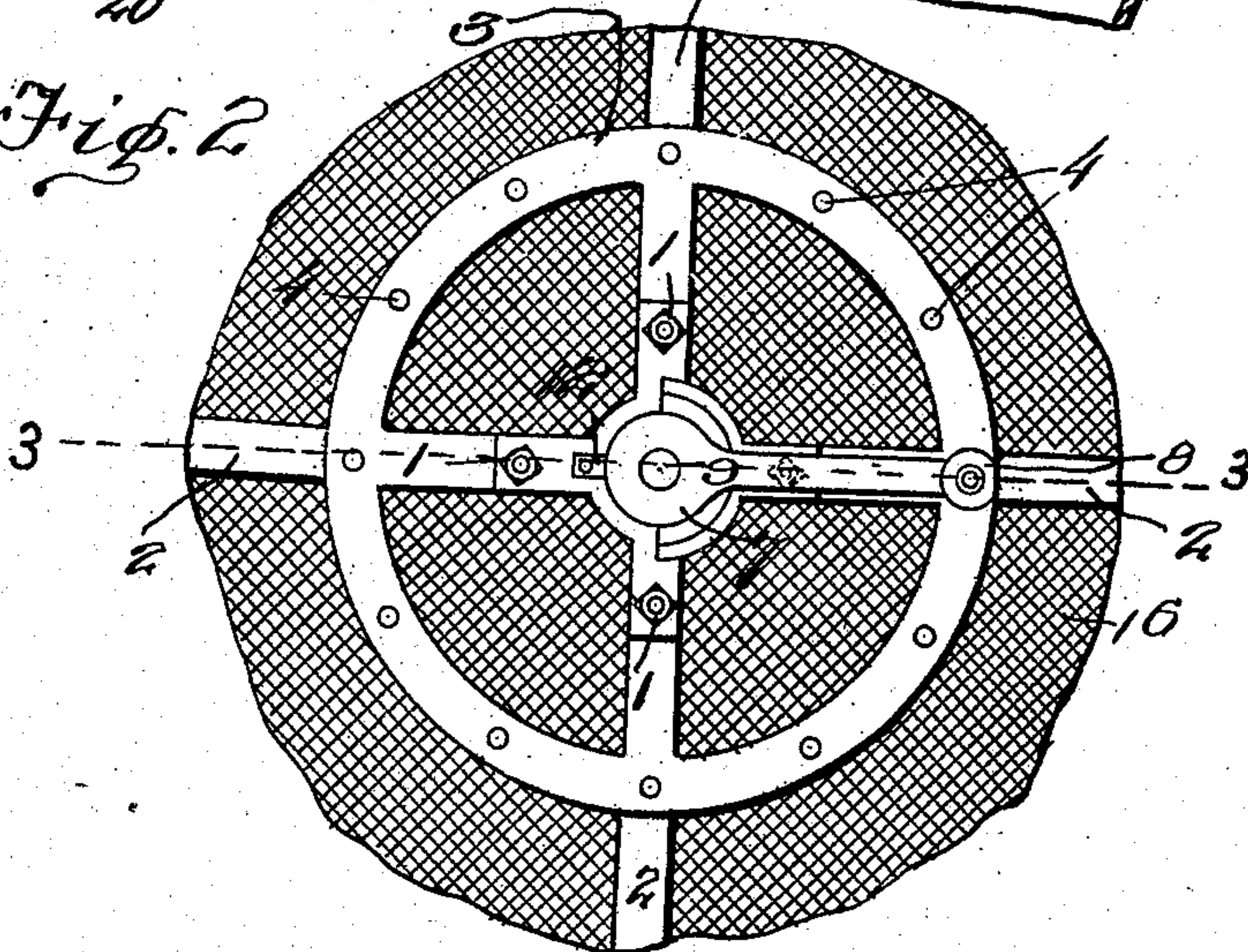
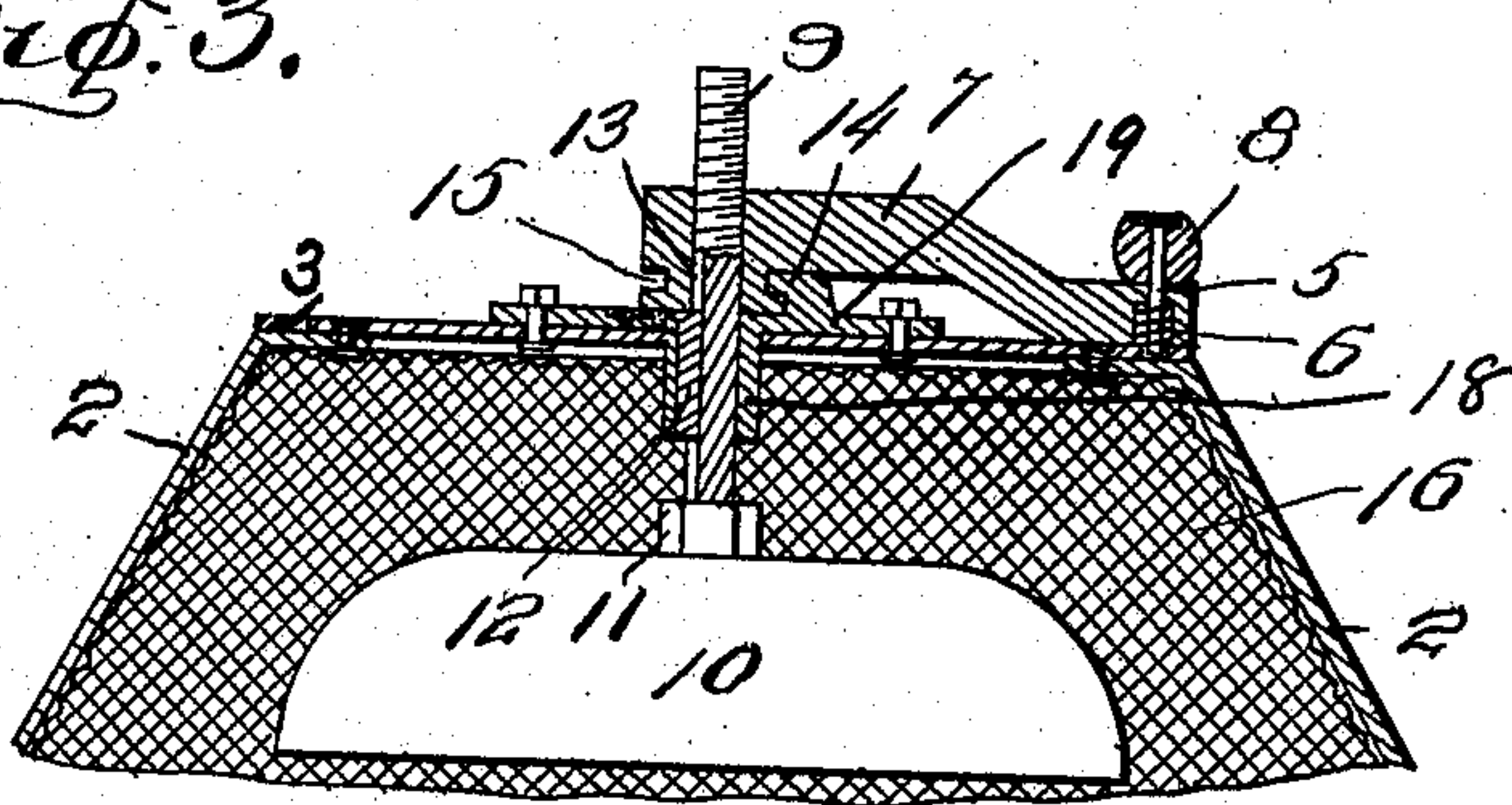


Fig. 3.



Witnesses
J. A. Armstrong
E. H. Bond

Inventor
Philip M. Low
 By *Cochran & Co.*
 Attorneys

UNITED STATES PATENT OFFICE.

PHILIP MARTIN LOW, OF PORTLAND, OREGON.

SPARK-ARRESTER ATTACHMENT.

No. 911,827.

Specification of Letters Patent.

Patented Feb. 9, 1909.

Application filed June 5, 1908. Serial No. 436,774.

To all whom it may concern:

Be it known that I, PHILIP MARTIN LOW, a citizen of the United States, and resident of Portland, in the county of Multnomah, in the State of Oregon, have invented certain new and useful Improvements in Spark-Arrester Attachments, of which the following is a specification.

This invention relates to certain new and useful improvements in spark arresters or attachments to smokestacks, and it has for its objects among others to provide an improved attachment or appliance which can be readily adjusted at any time without delay or the employment of a wrench to adjust the cone to such position as to cause to be burned nearly if not fully, one-half of the smoke gases that ordinarily escape from a locomotive stack, thus materially increasing the fuel economy.

The attachment does not materially increase the weight or detract from the appearance of the stack. There is a direct draft from the furnace to the open air. The draft is increased or decreased according to the adjustment of the cone and means are provided for preventing accidental displacement and for locking the parts in any adjusted position.

The improvement is applicable to stacks on all devices that burn coal, wood, oil, straw or other material and is a positive safeguard against setting of fires. It catches all particles of oil that happen to be carried through the stack which otherwise would spoil the paint work, or, if it came in contact with any part of the person of a passenger, it would burn him or possibly do further damage. It may be used upon steamboats, stationary, traction engines or the like. Means are provided for preventing the cone from being driven up by the force of the exhaust, and I aim also at further improvements in the details of construction whereby better results are attained.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a side elevation of my improved attachment with the upper end of

the stack in section. Fig. 2 is a top plan. Fig. 3 is a section on the line 3—3 of Fig. 2.

Like numerals of reference indicate like parts throughout the several views.

Referring to the drawings, the attachment is shown as bolted into position by bolts 1 on top of the cone-supporting irons 2 of the stack, the portions of the latter not shown being of the usual or any approved form such, for instance, as seen in my Patent #459,179. This attachment comprises the plate 3 having in its upper face a plurality of holes or openings 4 into which is designed to engage a locking bolt, soon to be described. This locking bolt 5 is designed to engage into the proper opening when desired, being aided in seating itself in said opening by means of a spring 6 around said bolt and seated in a socket or chamber in the handle 7. The bolt 5 has a knob or handle 8 which also serves as a means for manipulating the handle 7.

9 is a screw to which the cone or deflector 10 is attached in any well known way, 11 being a locking nut for locking the same in position. This screw is prevented from turning by means of a key 12 which has a sliding fit in a key-way 13 running the entire length of the threaded portion of the screw, as seen clearly in Fig. 3. The handle 7 is provided with a threaded hole in one end in which this screw is received, thus constituting a nut, which in reality forms a crank. By raising the spring handle 8 so as to withdraw the bolt 5 from its opening in the plate 3, the crank can be turned so as to raise or lower the screw and consequently the cone and when in its adjusted position the spring around the bolt forces the same into the opening in the plate and thus holds the same in its adjusted position.

The cone is prevented from being driven or forced upward by the force of the exhaust by means of a lock nut 19, having a depending tubular portion 18 and the flange 14, seen best in Fig. 3, which engages in the groove 15 of the handle nut.

From the above it will be seen that the cone can be easily and quickly adjusted up or down as may be required at any time without delay or the use of a wrench or other extraneous device. It can be applied to any form of stack 20 and the reticulated portion or covering 16 prevents the escape of oil or sparks.

The attachment is designed to have the same relative position to the stack as the device shown in my patent hereinbefore referred to.

- 5 Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What is claimed as new is:—

- 10 1. A smokestack attachment comprising cone-supporting irons, a plate thereon, a lock nut on said plate and having a flange and depending portion, a cone, a screw carrying the same and cooperating with said lock nut and a handle having a threaded
15 opening receiving said screw, and an annular groove cooperating with said flange to prevent vertical displacement of the handle and

cone and means for locking said handle in the desired position.

2. A smokestack attachment comprising 20 cone-supporting irons, a plate thereon having a plurality of openings, a lock nut on said plate and having a flange, a cone, a screw carrying the same and cooperating with said lock nut and a handle having a threaded opening 25 receiving said screw and an annular groove cooperating with said flange to prevent vertical displacement of the handle and cone, and a spring-actuated bolt on the free end of said handle for engagement with said openings. 30

PHILIP MARTIN LOW.

Witnesses:

J. D. STEVENS,
W. I. BARNES.