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R. LAMB.

SPARK ARRESTER.

APPLICATION FILED FEB. 28, 1907.

Fig. 1.

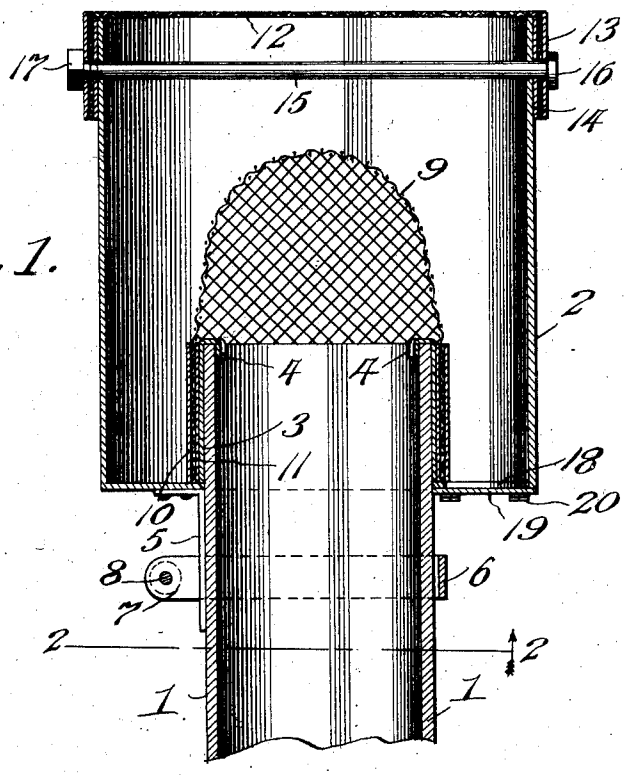
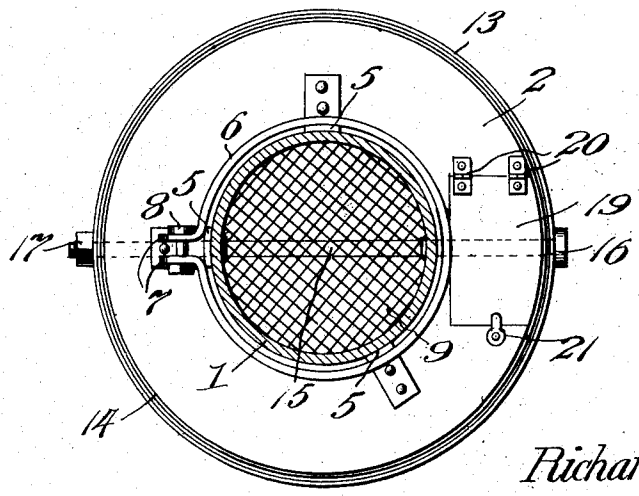


Fig. 2.



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SPARK-ARRESTER.

No. 865,189. Specification of Letters Patent. Patented Sept. 3, 1907.

Application filed February 28, 1907. Serial No. 359,755.

To all whom it may concern:

Be it known that I, RICHARD LAMB, a citizen of the United States, residing at Lawrence, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Spark-Arresters, of which the following is a specification.

This invention relates to spark arresters of the type employed on the upper ends of smoke stacks or other flues for arresting the heated particles of fuel which pass off with the smoke and other products of combustion, and has for its objects to provide a comparatively simple, inexpensive device of this character which may be readily applied for use, one whereby the sparks will be effectually caught and precipitated into the receptacle or drum, and one wherein said drum may be readily cleaned when circumstances require.

With these and other objects in view, the invention comprises the novel features of construction and combination of parts as will be hereinafter described.

In the accompanying drawings, Figure 1 is a vertical longitudinal section through the upper portion of a flue equipped with a spark arrester embodying the invention. Fig. 2 is a reverse plan view of the device partly in section, the section being taken on the line 2—2 of Fig. 1.

Referring to the drawings, 1 designates a smoke stack or flue which projects at its upper end centrally into a hollow drum or casing 2 provided at intervals around the central flue receiving opening with upstanding arms 3 having at their upper ends overturned engaging portions or hooks 4 adapted to seat over the upper end of the flue for supporting the drum in place thereon, the drum being further sustained in position on the flue by means of depending supporting arms or standards 5 riveted or otherwise attached at their upper ends to the bottom of the drum and engaged at a point between their ends by a clamping ring or band 6 formed to embrace the flue 1 and having at its meeting ends outwardly projecting ears 7 perforated for the reception of a transverse clamping-bolt 8.

Applied over the upper end of the flue and within the drum 2 is a dome-shaped openwork spark arresting member consisting of a hood or screen 9 composed of wire fabric, as shown, and having its lower edge secured between a pair of stiffening rings or bands 10, 11, of which the latter is removably fitted on that portion of the flue within the drum, while applied over the upper end of the latter is a top cover, comprising a screen formed by a sheet 12 of wire gauze or other openwork fabric engaged at its edge between a pair of sheet metal stiffening hoops or bands 13, 14, combining to form a rim, which fits removably on the drum; the top cover being secured in place by means of a fastening member or bolt 15 entered through suitable openings or perforations formed in the rim and drum and having at one end a head 16 and tapped on its other end a nut 17. It is to be observed in this connection that the screen fabric 12 is of finer texture than that composing the shield 9.

Formed in the bottom of the drum 2 is a discharge opening 18 normally closed by means of a door 19 connected at one end to the drum by means of hinges 20 and engaged at its other end by a pivoted latch button 21 for holding the door in closed position.

In practice, the heated particles of fuel which pass upward through the flue 1 with the smoke and other products of combustion, will come in contact with the hood or screen 9, and such particles as are too large to pass through said hood will be caught thereby and precipitated into the flue, while the finer particles and smoke will pass through the meshes of the hood and thence to the finer screen 12 by which the remaining solid particles will be arrested and precipitated into the bottom of the drum. When it is desired to clean the drum, owing to accumulation of material therein, the top cover including the screen 12 is removed by first unscrewing the nut 17 and removing the bolt 15, after which the latch 21 is moved to non-engaging position and the door 19 allowed to swing open, whereupon a broom or the like may be employed for sweeping the collected material through the discharge opening 18. After the drum has been cleaned, the door is again closed and the top cover applied over the upper end of the drum in the manner heretofore explained and as will be readily understood.

Having thus described the invention, what I claim is:—

1. In a spark arrester, a drum having a flue engaging aperture in the bottom thereof, upward projecting arms adjacent to said aperture and having terminal hooks, and downward engaging arms adjacent to said aperture, in combination with a clamping ring engaging the downward extending arms, a flue engaging screen hood disposed within the drum exterior of the upward extending arms, and a top cover detachably engaging the drum and including a screen of finer texture than the hood with the drum.

2. In a spark arrester, a hood having a flue engaging aperture in the bottom thereof and provided with a door and means for securing said door in closed position, means for mounting and supporting the drum upon a flue, a flue engaging screen hood supported within the drum, and a top cover detachably engaging the drum and including a screen of finer texture than the hood screen within the drum.

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

RICHARD LAMB.

Witnesses:
E. T. LAMB,
JOHN T. LAMB.