

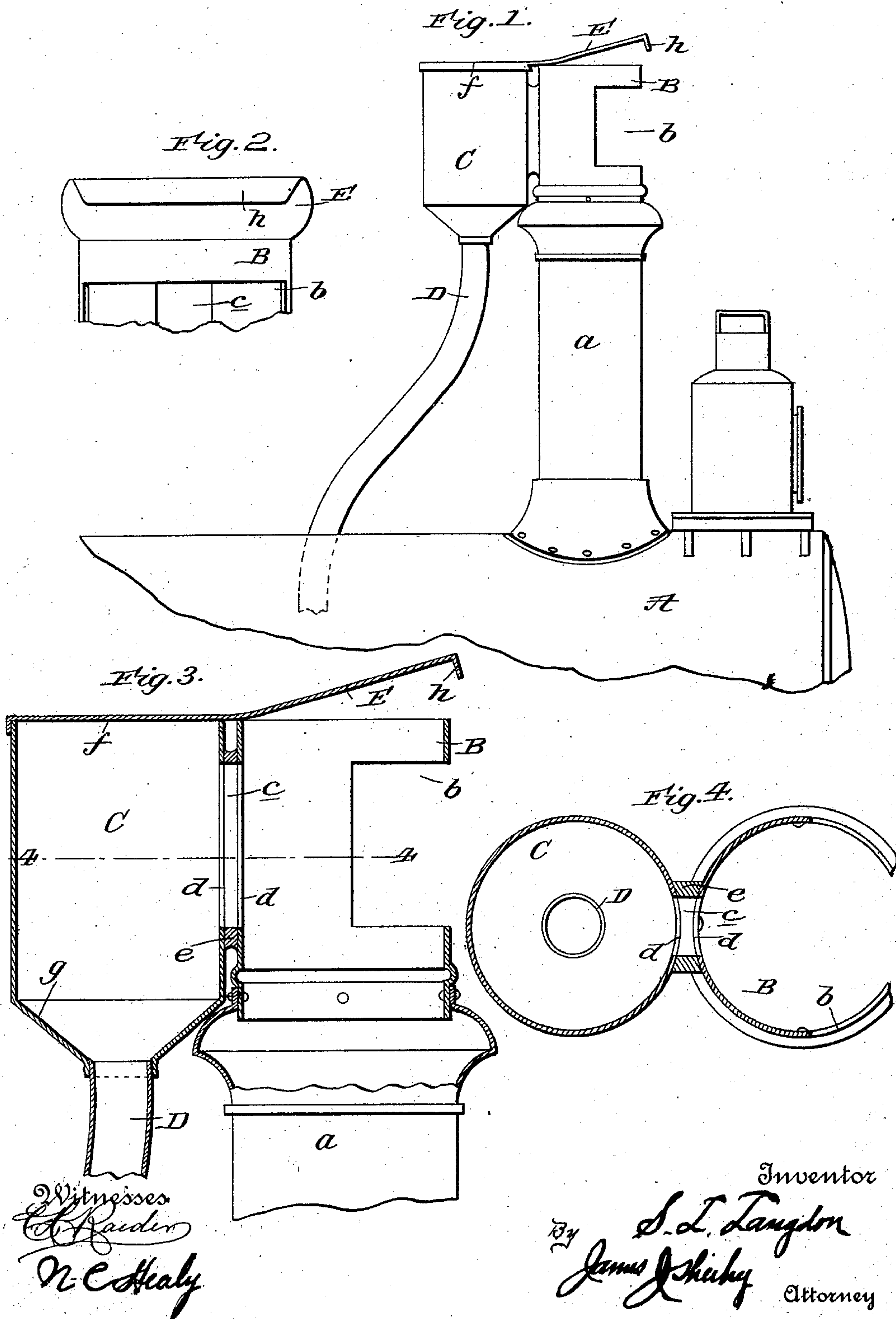
No. 693,281.

Patented Feb. 11, 1902.

S. L. LANGDON.  
CINDER OR SPARK ARRESTER.

(Application filed Dec. 5, 1901.)

(No Model.)





# UNITED STATES PATENT OFFICE.

SYLVESTER L. LANGDON, OF MAGNOLIA, MISSISSIPPI.

## CINDER OR SPARK ARRESTER.

SPECIFICATION forming part of Letters Patent No. 693,281, dated February 11, 1902.

Application filed December 5, 1901. Serial No. 84,815. (No model.)

*To all whom it may concern:*

Be it known that I, SYLVESTER L. LANGDON, a citizen of the United States, residing at Magnolia, in the county of Pike and State of Mississippi, have invented new and useful Improvements in Cinder or Spark Arresters, of which the following is a specification.

My invention relates to cinder and spark arresters or catchers—i. e., devices adapted to be arranged on locomotive smoke-stacks for the purpose of arresting cinders and sparks and preventing the former from annoying the passengers on a train and the latter from causing fires; and it consists in a certain peculiar construction, the novelty, utility, and advantages of which will be fully understood from the following description and claims when taken in conjunction with the accompanying drawings, in which—

Figure 1 is a side elevation of a portion of a locomotive equipped with my improved device; Fig. 2, an enlarged detail front elevation of the device; Fig. 3, an enlarged longitudinal vertical section of the device in position on the stack, and Fig. 4 a horizontal section taken in the plane indicated by the line 4 4 of Fig. 3.

Similar letters of reference designate corresponding parts in all the views of the drawings, referring to which—

A is a locomotive having a smoke-stack *a* and the other usual appurtenances, and B C are the body and the cinder and spark receiver, respectively, of my improved arrester or catcher. The body B, which is preferably of circular form in horizontal section and open at its lower and upper ends, is disposed vertically upon and riveted or otherwise rigidly connected to the upper end of the stack *a*, as best shown in Fig. 3, and is provided in its forward side with an opening *b* of about the proportional size illustrated. The cinder and spark receiver C is disposed vertically at the back of and fixedly connected to the body A, and the interiors of the two are connected by a port or passage *c*, formed in the present embodiment of the invention by coincident openings *d* in their adjacent walls and strips *e*, interposed between said walls. The top of the receiver C is preferably closed, as indicated by *f*, and its bottom *g* by preference is dishd and connected to a depending pipe D.

This pipe D may be arranged to extend down at the side of the locomotive to a point adjacent to the road-bed or may be carried to the ash-pan of the locomotive, as desired, for a purpose presently described.

E is a cap which extends forwardly and upwardly from the upper edge of the body A, so as to rest over the upper end of the same, and terminates at its forward edge in a depending flange *h*. Said cap is shown as forming a continuation of the top of the receiver C, but may obviously be formed separately from said top without departing from the scope of my invention.

In the practical operation of my improvements it will be observed that without interfering with the draft in the stack *a* or the escape of smoke therefrom the cap E is calculated to stop the cinders and sparks blown upwardly in the stack by the steam-exhaust and deflect the same back into the body B; also, that the opening *b* in the front side of said body B enables the strong current of air, due to the motion of the locomotive, to force such cinders and sparks through the port or passage *c* into the receiver C and from thence through the pipe D to the road-bed below the locomotive or into the ash-pan of the locomotive.

It follows from the foregoing that when the locomotive of a train is equipped with my improvements the windows of the cars may be left open with little or no liability of the passengers getting cinders in their eyes or having their persons and clothes begrimed with cinders and soot; also, that the liability of sparks escaping from the locomotive and causing fires is reduced to a minimum.

I have entered into a detailed description of the construction and relative arrangement of parts embraced in the present and preferred embodiment of my invention in order to impart a full, clear, and exact understanding of the same. I do not desire, however, to be understood as confining myself to such specific construction and arrangement of parts, as such changes or modifications may be made in practice as fairly fall within the scope of my claims.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a cinder or spark arresting locomotive



uptake, the combination of a hollow, upright  
body or uptake proper open at its upper end,  
and having closed sides, and also having an  
opening in its front, a receiver disposed in  
5 rear of and communicating with the hollow  
body or uptake proper, and a cap disposed  
over the upper end of the hollow body or up-  
take proper and resting in a plane above the  
sides and front of said body or uptake proper.  
10 2. A cinder and spark arrester for locomotives comprising an upright hollow body open  
at its lower and upper ends and having an  
opening in its forward side, an upright re-  
ceiver disposed in rear of and connected to  
15 and communicating with the hollow body,  
and having a dished bottom, a pipe commu-

nicating with the receiver and depending  
from the dished bottom, a wall forming the  
top of the receiver, and a cap forming a con-  
tinuation of said wall; said cap extending for- 20  
wardly and upwardly from the rear portion  
of the upper end of the body so as to rest over  
and above the same, and terminating at its  
forward edge in a depending flange.

In testimony whereof I have hereunto set 25  
my hand in presence of two subscribing wit-  
nesses.

SYLVESTER L. LANGDON.

Witnesses:

SAM WOLFE,  
J. H. PRICE.