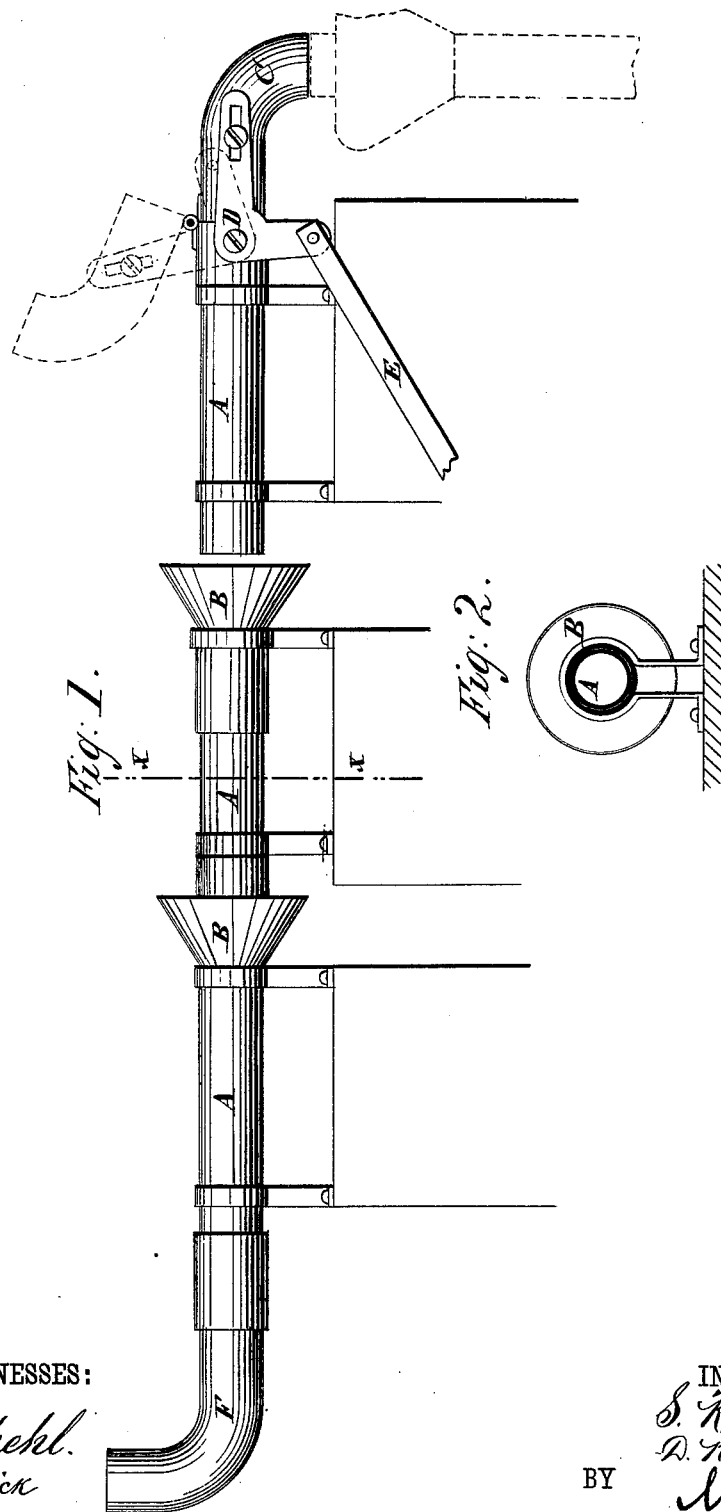


S. RATHER & D. RATHER, Jr.
Smoke and Cinder Conductor for Railroad-Trains.

No. 219,762.

Patented Sept. 16. 1879.



WITNESSES:

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SAMUEL RATHER AND DANIEL RATHER, JR., OF HOLLY SPRINGS, MISS.

IMPROVEMENT IN SMOKE AND CINDER CONDUCTORS FOR RAILROAD-TRAINS.

Specification forming part of Letters Patent No. **219,762**, dated September 16, 1879; application filed May 31, 1879.

To all whom it may concern:

Be it known that we, SAMUEL RATHER and DANIEL RATHER, Jr., of Holly Springs, in the county of Marshall and State of Mississippi, have invented a new and useful Improvement in Smoke and Cinder Conductors for Railroad-Trains, of which the following is a specification.

Figure 1 is a side view of our improved device. Fig. 2 is a cross-section of the same, taken through the line *xx*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved device for attachment to the cars of railroad-trains to receive the smoke and cinders from the locomotive and conduct them to the rear of the trains, to prevent the passengers from being annoyed by the entrance of the said smoke and cinders into the cars, and which shall be simple in construction, effective in operation, and convenient in use, allowing the cars to be connected and disconnected with the same facility as if the attachment were not applied to them.

The invention consists in arranging tubes with funnel-shaped mouth-pieces on top of the cars, and connecting them with a curved hinged tube, provided with suitable mechanism for operation by hand, as hereinafter fully described.

To the top of each car is attached a tube, A, by means of brackets or other suitable supports. To the forward end of each tube A is attached a funnel-shaped mouth-piece B, which should be made detachable, so that it may be attached to one or the other end of the tube A, according as one or the other end of the car is to be forward. The tubes A are so arranged upon the cars that the rear end of each forward tube A may be directly opposite the forward end of the next rear tube, so that the smoke and cinders, as they issue from the rear end of the forward tube, may enter the funnel B, attached to the forward end of the rear tube.

To the forward end of the tube A, attached

to the engine, is hinged a tube, C, which is curved downward, so as to fit over the top of the smoke-stack, to receive the smoke and cinders as they rise from the said smoke-stack and guide them into the tube A.

To the side of the forward end of the tube A, attached to the engine, is pivoted the angle of an angle-lever, D, the forward arm of which extends along the side of the rear part of the curved tube C, and has a longitudinal slot formed in it to receive the rivet or bolt by which it is secured to the said tube C.

To the end of the lower arm of the angle-lever D is pivoted the end of a rod or lever, E, which extends into such a position that it may be conveniently reached and operated by the engineer to raise and lower the curved pipe C.

When the train is standing still and there is no draft through the tubes A, the curved tube C should be raised to allow the smoke and cinders to escape from the smoke-stack freely; but when the train is in motion the curved tube C should be lowered, to receive the smoke and cinders and guide them back through the set of tubes A.

If desired, a curved tube, F, may be attached to the rear end of the tube A of the rear car, which may be turned to discharge the cinders upward or downward, or to one or the other side, as may be desired.

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

The tubes A, arranged on top of cars and provided with funnel-shaped mouth-pieces, in combination with curved hinged tube C and the lever D, slotted near one end and attached at the other to a hand-lever, E, as and for the purpose specified.

SAMUEL RATHER.
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Witnesses:

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