No. 857,471. PATENTED JUNE 18, 1907.

H. L. LARISEY.

SMOKE AND CINDER CONDUCTOR.

APPLICATION FILED NOV. 24, 1905.

Fig. 1

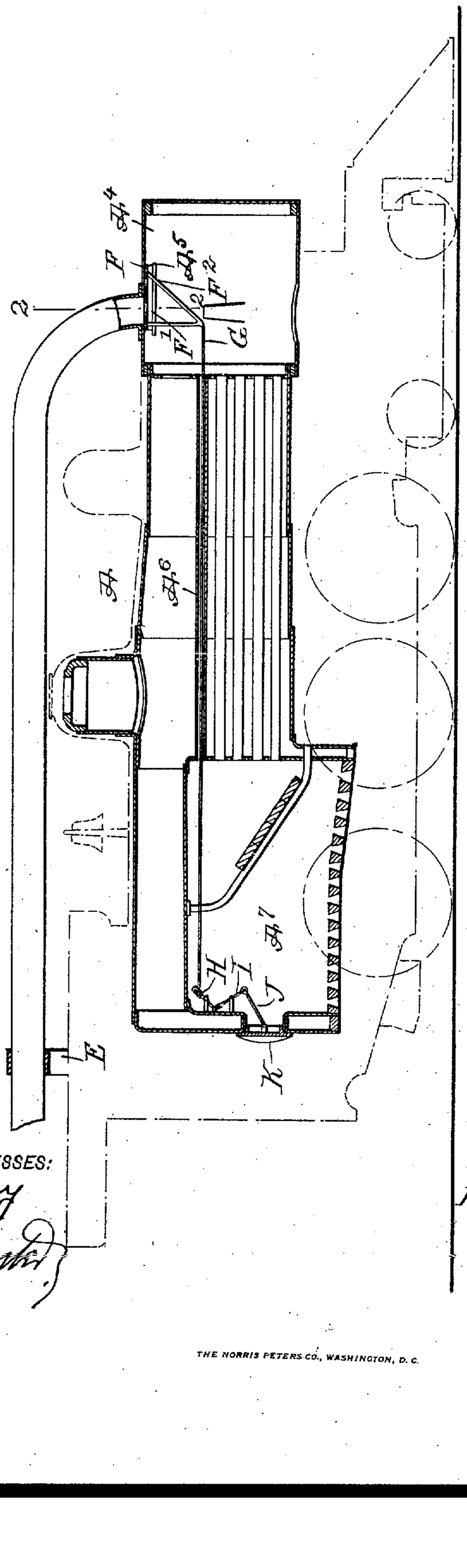

Fig. 2

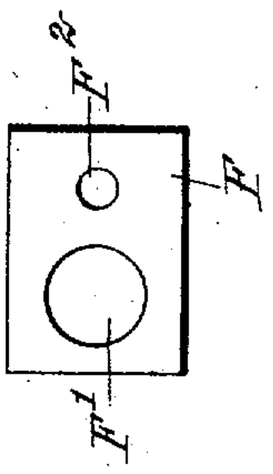

Fig. 2

WITNESSES:

J. A. Brophy

Herbert Hosford

INVENTOR

Henry Leon Larisey

BY Munn & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

HENRY LEON LARISEY, OF CHARLESTON, SOUTH CAROLINA.

SMOKE AND CINDER CONDUCTOR.

No. 857,471. Specification of Letters Patent. Patented June 18, 1907.

Application filed November 24, 1905. Serial No. 288,901.

To all whom it may concern:

Be it known that I, HENRY LEON LARISEY, a citizen of the United States, and a resident of Charleston, in the county of Charleston and State of South Carolina, have invented a new and Improved Smoke and Cinder Conductor, of which the following is a full, clear, and exact description.

The invention relates to railroad trains, and its object is to provide a new and improved smoke and cinder conductor, arranged to conduct the smoke and cinders from the smoke box of the locomotive back over the locomotive tender and cars of the train, to increase the draft and prevent back draft in the fire box when the doors thereof are opened, to insure a free exhaust and thus relieve the locomotive engine of back pressure.

The invention consists of novel features and parts and combinations of the same which will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a longitudinal sectional elevation of a locomotive provided with the improvement; Fig. 2 is an enlarged transverse section of the same, on the line 2—2 of Fig. 1; and Fig. 3 is a plan view of the valve.

In the drawing A is a locomotive and B the smoke and cinder conductor having its forward end secured to the smoke box A^4 of the locomotive. This conductor extends rearwardly over the locomotive and is held in a support E projecting from the locomotive. It is to be understood that the conductor is to extend to the rear of a train so that the smoke and cinders passing into the conductor leave the same at the rear of the train, thus preventing them from entering the cars.

In order to prevent back draft in the locomotive, the following arrangement is made: The entrance end of the conductor B is adapted to be closed by a valve F fitted to slide longitudinally on suitable guideways A^5 arranged within the smoke box A^4, as plainly shown in Figs. 4 and 5. The valve F is connected, at its under side, with a rod G extending rearwardly through one of the smoke flues A^6 of the locomotive boiler, the rear end of the rod G extending in the fire box A^7 and connecting with a lever H pivotally connected with a lever I connected by a link J with the firing door K, so that when the latter is opened, then a sliding motion is given to the valve F by the connection above described, so that the valve F is moved from its normally open position into a closed position, to disconnect the conductor B from the smoke box A^4 of the locomotive. When the firing door K is closed, a return sliding movement is given to the valve F to move the same into an open position to connect the smoke box A^4 with the conductor B for the escape of the smoke and cinders, as previously explained.

In order to provide a free exhaust of the locomotive engine in either of the two positions of the valve F, the latter is provided with openings F′ and F^2 of which the large opening F′ is usually in register with the smoke stack and the small opening F^2 is adapted to register with the exhaust nozzle at the time the door K is opened, to allow at all times a free escape of the exhaust steam into the conductor B, no matter whether the valve F is open or closed.

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

1. A smoke and cinder conductor for railroad trains, comprising a conducting tube leading from the smoke box of the locomotive, and a valve controlling the admission of the smoke and cinders to the said tube and connected with the firing door of the locomotive furnace, to close the valve on opening the firing door.

2. A smoke and cinder conductor for railroad trains, comprising a conducting tube leading from the smoke box of the locomotive, and a valve controlling the admission of the smoke and cinders to the said tube and connected with the firing door of the locomotive furnace, to close the valve on opening the firing door, the said valve having openings adapted to register with the exhaust nozzle for the passage of the exhaust steam.

3. A smoke and cinder conductor for railroad trains, comprising a conducting tube leading from the smoke box of the locomotive, a valve controlling the admission of the smoke and cinders to the said tube, and a rod and lever mechanism connecting the said valve with the firing door of the locomotive furnace.

4. A smoke and cinder conductor for rail-

road trains, comprising a conducting tube leading from the smoke box of the locomotive, a valve controlling the admission of the smoke and cinders to the said tube, and a rod and lever mechanism connecting the said valve with the firing door of the locomotive furnace, the said rod extending from the smoke box through one of the smoke tubes of the boiler into the fire box thereof.

5. In a smoke and cinder conductor for railroad trains, the combination with a locomotive, of a conducting tube leading from the smoke box of the locomotive, a valve within the smoke box for closing the end of the conducting tube opening into the smoke-box, and a lever mechanism for operating the valve from the firing door of the locomotive.

6. In a smoke and cinder conductor for railroad trains, the combination with a locomotive, of a conducting tube leading from the smoke-box of the locomotive and extending rearwardly, a valve mounted to slide within the smoke-box below the end of the conducting tube opening into the smoke-box, a rod secured to the valve and extending rearwardly through one of the smoke flues of the locomotive boiler, a pivoted lever to which the rod is pivoted, a second pivoted lever pivoted to the first named lever, and a link connecting said second lever with the firing door of the locomotive.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY LEON LARISEY.

Witnesses:

GEO. HENRY HOPKINS, Jr.,

A. F. SELLENEIT.