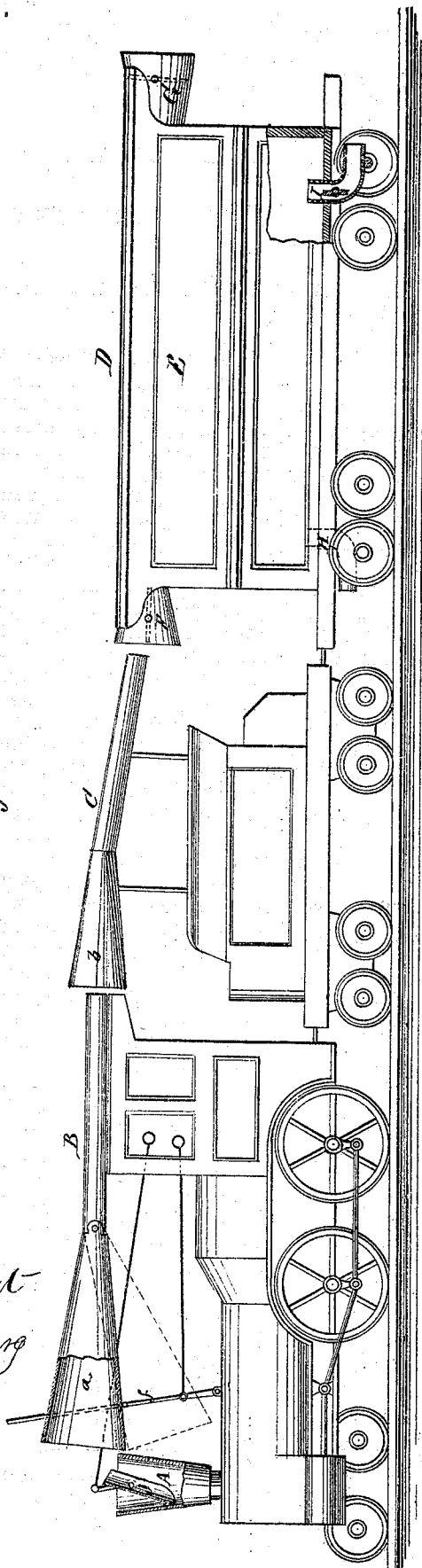


Stanley Greacen's Imp^d R.R. Cars.

No. 122,601.

Patented Jan. 9. 1872.

Fig. 1.



Witnesses:
Rufus Hoyt
Edw. Wattenberg

Fig. 3.

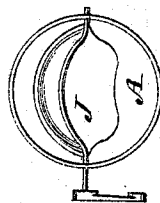
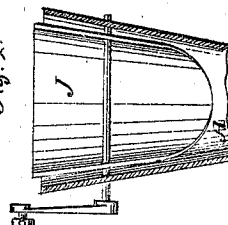


Fig. 2.



Inventor:

Stanley Greacen
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Atty

UNITED STATES PATENT OFFICE.

STANLEY GREACEN, OF NEW YORK, N. Y.

IMPROVEMENT IN SMOKE AND CINDER CARS FOR RAILROADS.

Specification forming part of Letters Patent No. 122,601, dated January 9, 1872; antedated December 26, 1871.

To all whom it may concern:

Be it known that I, STANLEY GREACEN, of the city, county, and State of New York, have invented a new and improved Smoke-Car for Railroads; and I do hereby declare that the following is a full and exact specification of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The object of this invention is to provide a means whereby the smoke, cinders, and exhaust steam will be confined in such manner as will prevent such annoyances from entering the car-windows, setting fire to property along the line of railway, and at the same time in nowise check the draught of the furnace in the locomotive. Numerous efforts have been made heretofore to accomplish this desirable result, but generally without success.

My invention consists in providing each train with a car immediately in the rear of the tender, or elsewhere, so constructed as to receive the exhaust steam and the products of combustion directly from the locomotive, confining them in such car wherein the steam and smoke will be partially condensed, the cinders falling to the bottom of the car, where they are quenched in water, the uncondensed steam and smoke finding exit through suitable openings made in the car for that purpose.

In the accompanying sheet of drawings, Figure 1 represents a side view of my invention, and Figs. 2 and 3 detailed views of deflector.

Similar letters of reference indicate corresponding parts in the several drawings.

The smoke, cinders, and steam are conveyed through the smoke-stack A and sectional tubes B and C to the open orifice F into the car E. The car E may be constructed of sheet metal or otherwise, and when in use is entirely closed at the top, ends, sides, and bottom, except that into either end, near the roof, or in any other desirable place, are fitted the two orifices F and G and through the floor the outlet-pipes H and I. Now, it will be seen that as the smoke, cinders, and steam are discharged from the smoke-stack A, the current of air produced by the motion of the train will drive them into the mouth of the tubular section B,

(which is made funnel-shaped at its front end for the purpose of catching the smoke and air;) thence it passes into and through the tube C, and finally through the orifice F into the smoke-car E. The cinders entering with the smoke will fall to the floor of the car, where they may be quenched, if desired, by converting said floor into a shallow tank filled with water, while most of the exhaust steam and smoke will probably be condensed, and that which remains will find exit through the outlet pipes H and I. The ends of these outlet-pipes that protrude through the floor of the car E are provided with swivel-turns or elbows, so that the escaping smoke, &c., will be directed toward the rear of the train. The orifices F and G are each provided with a valve, so that in whichever way the car E is propelled the rear one of said orifices will be closed and thus prevent the smoke, &c., from passing directly through the car. The car E is provided with suitable man-holes through which to remove the accumulated cinders, &c., when necessary. It will be seen by reference to the drawing, Fig. 1, that the front end or bell-mouth of the tube section B is jointed in such manner as will admit of its being lowered or raised when passing under bridges crossing the track. This may be done in any desirable way, and I do not wish to limit myself to the manner shown in my model and drawing.

To insure the smoke, cinders, &c., passing into the tubular passages, I place in the smoke-stack of the locomotive, near the top, a deflector, J, (see Figs. 2 and 3,) which may be controlled from the cab of the engine by the engineer. In order to maintain and increase the draught the tubular section C, which passes over the tender, is also provided with a bell-mouth, b. If it shall be found advantageous to retain the smoke and steam in the smoke-car E, to more certainly insure their being condensed, it may be accomplished by dividing said smoke-car into compartments with wire nettings, thus offering obstruction to the steam and smoke and prevent their passing at once through the outlet-pipes into the open air. Although the car E is provided with two outlet-pipes, as shown in Fig. 1, yet it is intended to close the forward one of said

outlets when the train is in motion, and allow the uncondensed steam and smoke to escape through the rear one only.

To insure the lowering of the funnel-mouth *a* when approaching a bridge crossing the track, a small obstruction, *d*, may be placed on a post or other suitable fixture, so that as the train approaches the bridge the support *f* will be brought in contact with said obstruction, and said funnel-mouth will drop by gravity to a level that will enable it to clear the bridge. The bridge being passed it will again be raised to its proper elevation by means of a rod leading into the cab, or by any other desirable means.

Instead of having for the reception of the smoke, &c., a separate car, as shown at E, the same result may be obtained, if desirable, by constructing the tender in such manner as to perform all the functions of said car E.

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

1. The car D E, for receiving and confining the smoke from the locomotive in the manner described, and provided with inlets and outlets, when said car is separate from the tender or other car, so that it can be placed at any part of the train and separately detached for repair or other purposes, substantially as herein described.

2. In combination with the above and with tubes B C leading thereto, the hinged tube-section *a*, and means for lowering it automatically, substantially as described, for the purpose specified.

STANLEY GREACEN.

Witnesses:

H. L. WATTENBERG,
RUFUS HOYT.

(94)