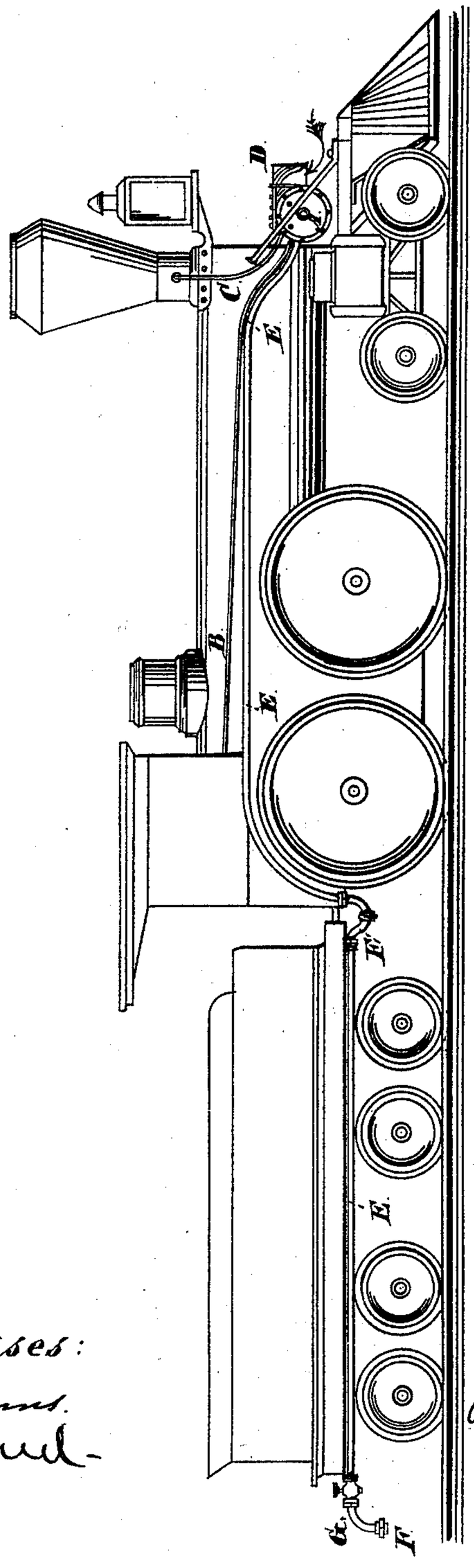
R. P. MORGAN, Jr.
Ventilating Cars.

No. 223,375. Patented Jan. 6, 1880.



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UNITED STATES PATENT OFFICE.

RICHARD P. MORGAN, JR., OF BLOOMINGTON, ILLINOIS.

VENTILATING CARS.

SPECIFICATION forming part of Letters Patent No. 223,375, dated January 6, 1880.

Application filed September 8, 1879.

To all whom it may concern:

Be it known that I, RICHARD PRICE MORGAN, Jr., of the city of Bloomington, in the county of McLean and State of Illinois, have invented a new and useful Improvement in Ventilating Railway Passenger and Other Cars, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing.

The object of my invention is to pass into the body of the cars sufficient quantities of atmospheric air free from cinders, smoke, dust, and other impurities, by the combination of an air-pump worked by steam from the locomotive, conducting-pipes, couplings, and flexible connections thereof between the cars, and also between the cars and the tender and the tender and locomotive, as shown in the accompanying drawings.

Connected with the locomotive-engine at any convenient point is placed an air pump or blower worked by a small independent steam-engine which takes steam from the locomotive-boiler. This air-pump and steam-engine are shown in the drawing at A, immediately in front of the boiler and smoke-stack of the locomotive; but they may be placed elsewhere on the locomotive if found more convenient.

B represents a pipe, which conducts steam from the locomotive-boiler to the small engine which works the air-pump, and which may be connected with the boiler of the locomotive, as represented in the drawing, or at any other convenient point.

C represents the exhaust-pipe of the independent engine, discharging into the smoke-stack of the locomotive.

D represents a hood placed in front of the locomotive-boiler, and opening downward and forward, from which a pipe leads, and is connected with the inlet or receiving port of the air pump or blower.

E represents a pipe passing from the air-pump backward toward the rear of the locomotive and train. This pipe may be located underneath the locomotive or otherwise, according to the location of the air-pump, and extend by suitable connections throughout the train.

F represents flexible connections between the fixed pipes or main air-conduit E, between the tender and locomotive, and also between the cars of the train and the train and tender.

From the principal air-conduit E branch pipes are to be constructed of suitable size, leading into the cars as often and at such points as may be desirable. If the main air-conduit E is placed underneath the floor of the cars, as perhaps may be most convenient, the branch pipes may discharge air through suitable openings in the floor of the cars at or near the stoves or other heating apparatus. The air-pipes should be metal and fastened to the body of the cars, and should be of sufficient diameter to afford free passage of the air.

G represents a stop cock or valve, one of which is to be placed in each end of the sections of main conduit or air-pipe under each car, to prevent the escape of the air through the mains at the rear of the trains.

What I claim as my invention is—

1. The combination, with the locomotive of railway-trains, of an air pump or blower, an independent steam-engine connected with and worked by steam from said locomotive, an exhaust-pipe of the independent engine, connected with and discharging into the smoke-stack, and suitable pipes and connections connecting the air pump or blower with the cars in rear of the locomotive, substantially as and for the purpose herein shown and described.

2. The combination, with the locomotive of railway-trains, of an air pump or blower connected by suitable pipes and connections with the cars in rear of the locomotive, and a hood, D, placed in front of the locomotive-boiler, and opening downward and forward, and a pipe leading from said opening and connected with the inlet or receiving port of the air pump or blower, substantially as and for the purpose herein shown and described.

Dated at Bloomington, Illinois, August 22, A. D. 1879.

RICHARD PRICE MORGAN, Jr.

Witnesses:
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