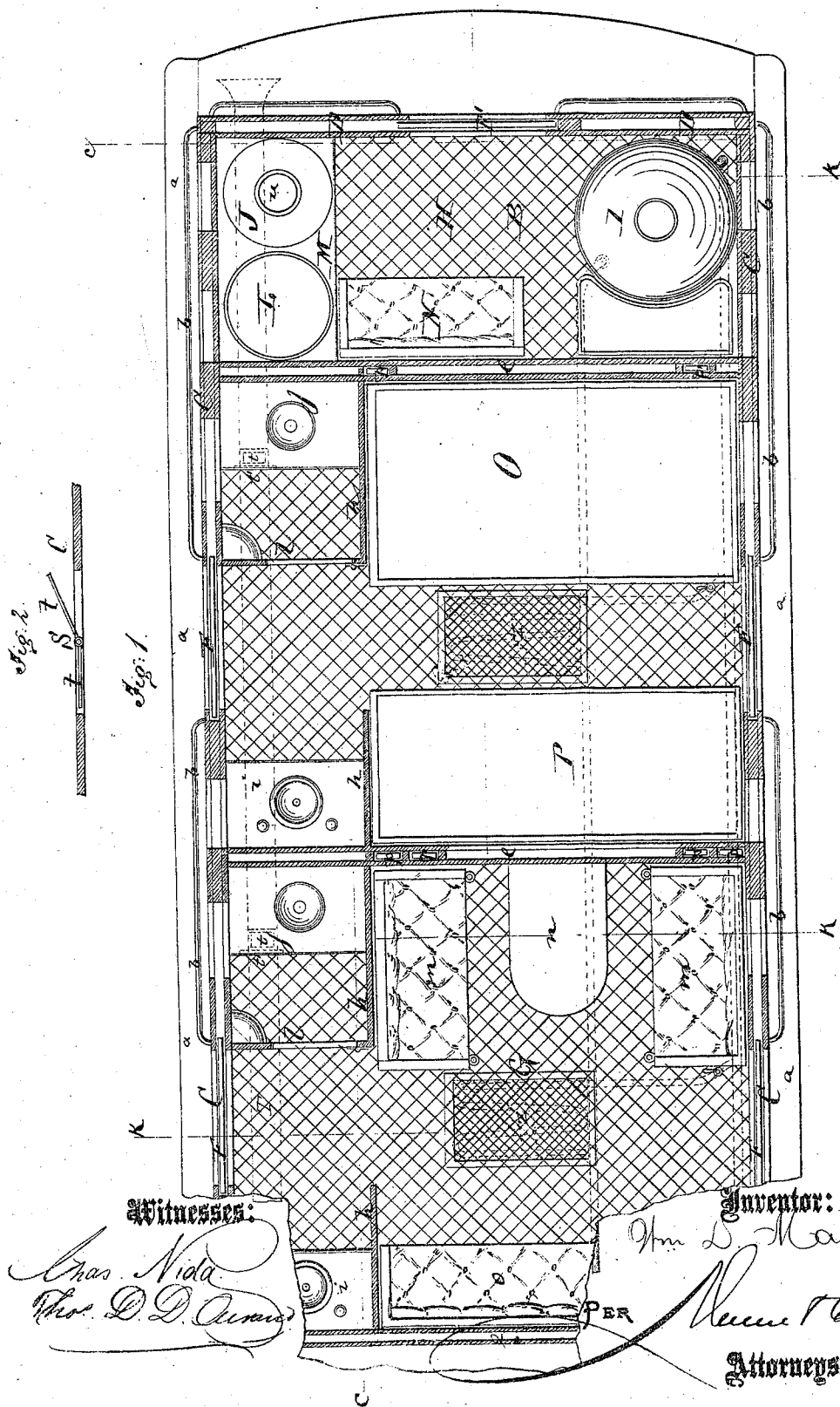


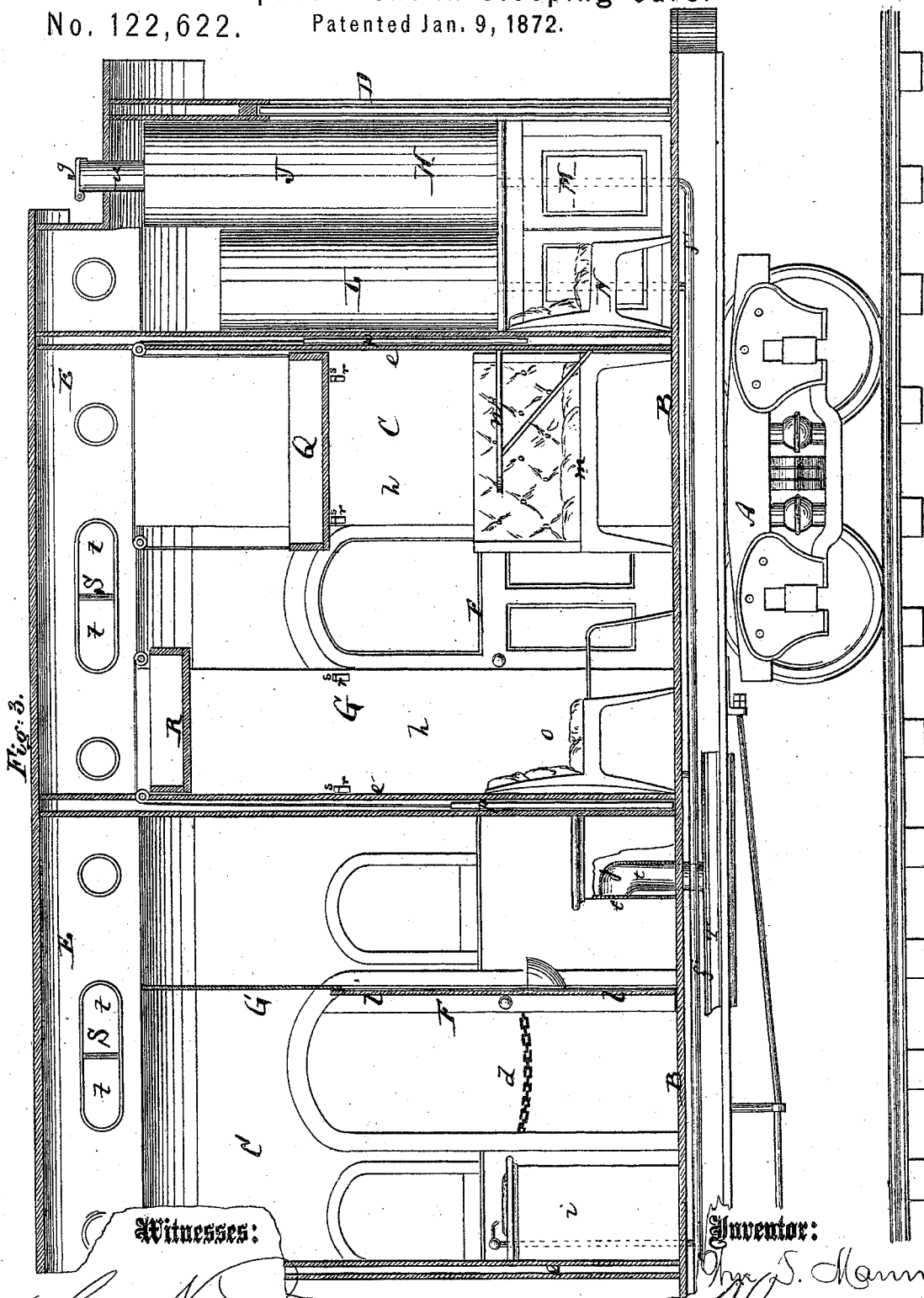
WILLIAM D. MANN.
Improvement in Sleeping Cars.

No. 122,622.

Patented Jan. 9, 1872.



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Witnesses:

Chas. Nida.
Thos. D. D. Quinn

Inventor:

Wm. S. Mann
Per

Attorneys.

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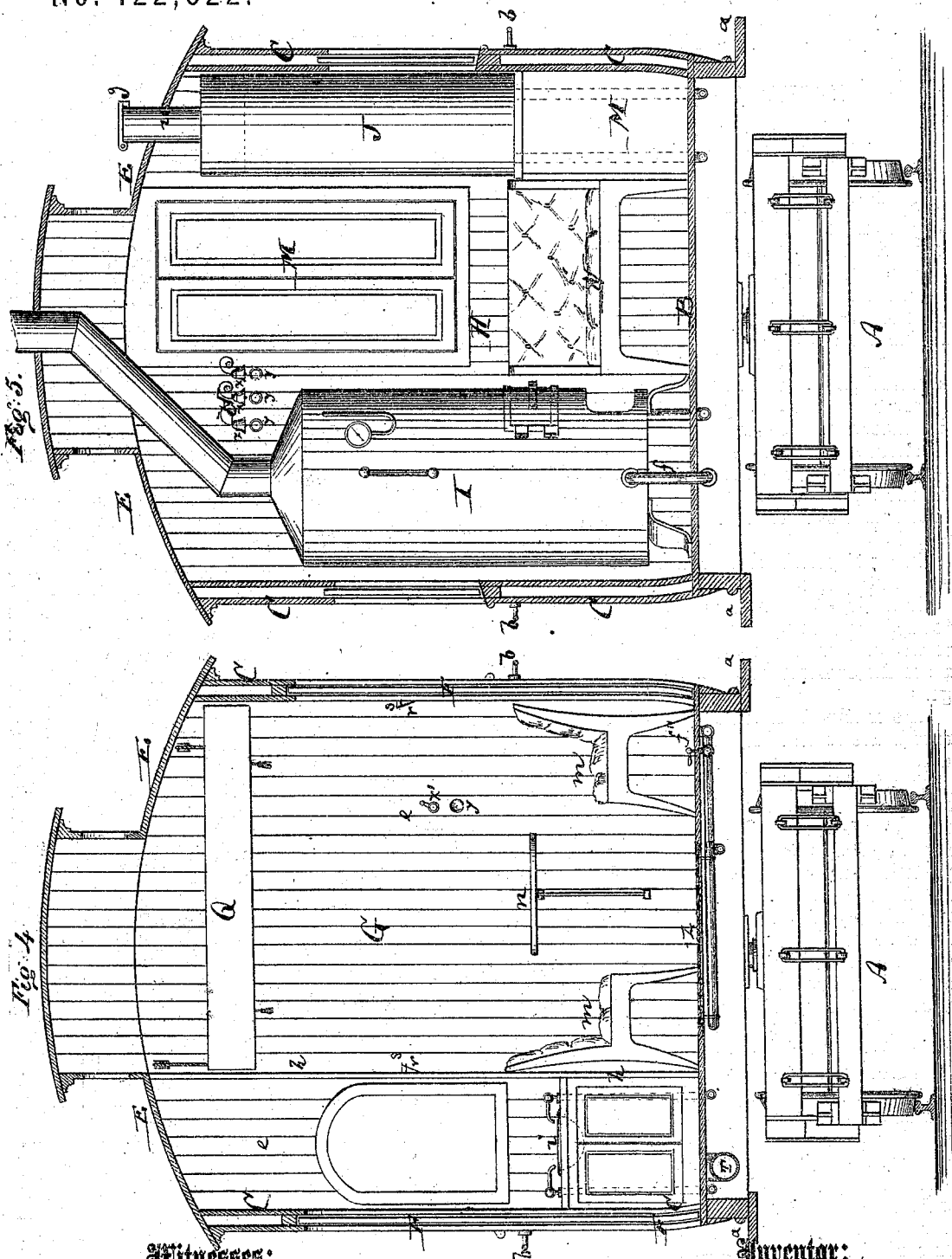
WILLIAM D. MANN.

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Cas. Nida
Thos. D. Q. Curran

Inventor:

Wm. D. Mann

PER

Wm. T. C.
Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM D. MANN, OF MOBILE, ALABAMA.

IMPROVEMENT IN COMPARTMENT-CARS FOR RAILWAYS.

Specification forming part of Letters Patent No. 122,622, dated January 9, 1872.

Specification describing a new and useful Improvement in Compartment Railway Cars, invented by WILLIAM D. MANN, of Mobile, in the county of Mobile and State of Alabama.

In the accompanying drawing, which forms part of this specification, Figure 1 is a horizontal sectional plan view of a portion of one of my improved cars. Fig. 2 is a detailed view and horizontal section of one of the roof-ventilators of the car. Fig. 3 is a vertical longitudinal sectional elevation of the car, the line *c c* in Fig. 1 indicating the plane of section. Fig. 4 is a transverse sectional elevation of the car on the lines *k k*, Fig. 1. Fig. 5 is a transverse sectional elevation of the car on the lines *c k*, Fig. 1.

Similar letters of reference indicate corresponding parts.

These improvements are more especially intended for through cars employed upon long routes of travel; and their object is to promote the comfort and convenience of passengers.

The trucks *A*, floors *B*, sides *C*, ends *D*, and roof *E* are to be constructed in the usual manner.

The interior of the car *I* divide into any suitable number of separate and independent compartments, by means of double partitions, *e*, rising from the floor to the roof. The double partitions are slightly separated, so as to leave an air-space between them, which effectually insulates the several compartments from each other, and also serves to contain the bed-weights, to be hereafter described. Access is had to the several compartments by the side doors *F*, which slide laterally within the side walls of the car, as shown. Each door-way is provided with a guard-chain, *d*, attached by suitable fastenings to the door-posts. When the car is in motion one of the ends of the chains *d* is intended to be locked, as a safeguard to passengers against falling if the door is opened when the car is in motion. A foot-board, *a*, extends entirely around the car, the exterior of which is also provided with hand-rails, to facilitate the safe passage of attendants from one compartment of the car to another when in motion. The several compartments are subdivided by means of half-partitions *h* into two chambers, the smaller of which serves as a wash room; and besides suitable washing apparatus contains also a water-closet, as will be hereinafter more fully

described. The larger or main compartment *G* is provided upon one side with the ordinary seats *m m* facing each other; and between them a folding-table, *n*, may be arranged. These seats form part of a sleeping-couch at night, the table being then folded up, and the space between the seats *m m* being supplied with suitable cross-bars and cushioned boards, upon which a mattress is placed, forming a comfortable double bed, *O*, which is arranged across the car so as to be at right angles to the line of the movement of the car. At *o* is another seat or sofa, also arranged across the car, and provided with folding-cushions and mattress to be made up at night into a comfortable single bed, *P*, which is also arranged at right angles to the line of motion of the car. Above the seats *m* I arrange a movable bed, *Q*, which is suspended at its four corners by cords, which pass over pulleys in the upper part of the car, the extremities of the cords having balance-weights *p* attached, which latter rise and fall in the space between the compartment-partitions, before mentioned, by which the weights are concealed from view. When the bed *Q* is not in use it is pushed up out of the way against the ceiling of the car, and is there held by bolts or other fastenings to the partition walls of the car. When in use the bed *Q* is pulled down until it rests upon the brackets *r*, the upper surfaces of which are provided with rubber springs, *s*, which greatly relieve the bed from the jarring motion of the car, and increase the comfort of the bed. *R* is another bed, arranged above the seat *o*, and also arranged at right angles to the line of motion of the car. The bed *R* is also suspended like the bed *Q*, and like it, also, provided with weights *p*, which rise and fall in the compartment-partition. The bed *R* is also provided with springs *s* upon its brackets *r*, as shown.

The heating and water-supplying apparatus, for the car are arranged in a compartment, *H*, by themselves at one end of the car, access to which compartment is had through the end door *F'*. This apartment is also intended for the occupation of the attendant or porter, and may be styled the porter's room. This apartment *H* is provided with signal-bells *x*, and speaking-pipes *y*. The bell-wires and pipes extend, substantially as shown in the drawing, to the several passenger-compartments, so that passengers may readily communicate with the

attendant, who may at all times quickly pass through the door F' , and on the foot-board a to any of the compartments. x' are the bell-pulls. The heater I is provided with hot-water pipes f , which extend either under or upon the floor of the car into each of the compartments; and in each of the compartments I place a coil, f' , of the hot-water pipes, supplied with valves f'' , and so arranged either in the floor, covered by an open grating, z , or in any other convenient position, so that each compartment may be warmed independently of the other compartments, whereby the occupants of a compartment may regulate the warmth of the atmosphere to suit their pleasure. J L are water-tanks. The supply-pipe of tank J rises, as shown at u , through the car-roof, and is closed by a cover. Suitable pipes lead from these water-tanks passing under the car floor to the wash-rooms of the respective compartments, where wash-stands i and faucets are provided. One of the tanks J supplies wash-water to the several compartments, and the other tank L supplies ice-water for drinking purposes to each compartment, the tank L being so made as to receive ice. The occupants of each compartment are thus conveniently supplied at all times with drinking water and with wash-water. Each of the wash-rooms is also supplied with a water-closet, j , each closet being shut off from the wash-room by partition and door l .

In the bay of the roof of the car I provide suitable deflecting ventilators S , the glasses of which, t , are hinged so as to be set in the proper position required by the direction of the car movement.

By the arrangement of the interior parts and apparatus of the car in the manner herein set forth I am enabled to construct a through-passenger car suitable for a given number of passengers, which is much lighter in weight than the ordinary palace or compartment-cars of similar capacity, thus rendering my improved car more economical for transportation. My improvement also presents the advantage of being narrower in width than the ordinary compartment-cars of the same passenger capacity. My improved car is, therefore, a safer car, and is less liable to be thrown from the track, the angle of stability being better than the ordinary on account of diminished width of my improved car. The accommodations and arrangements of parts for passengers, as herein described, are also superior in my improved car to any that have heretofore been constructed.

The atmosphere and interior of each compartment is entirely shut off and isolated from the other compartments, and each compartment is also fully supplied with all necessary conveniences of beds, water arrangements, heating apparatus, and ventilators. The arrangement of the beds at right angles to the movement of the car I have found to contribute greatly to the comfort of passengers, by preventing that insecure and disturbing sen-

sation produced by the rolling or swaying motion of the car, and ordinarily experienced by passengers when reclining upon beds that are arranged in ordinary manner—that is, longitudinal with the direction of the movement of the car. In each compartment, between the seats, and also between beds, a passage-way to the wash-room and water-closet is provided. For the purpose of securing the more perfect ventilation of each compartment I make use of a ventilating-flue, T , at the bottom of the car, and extending the whole length thereof. The extremities of the flue may be provided with flaring mouths to catch the air as the car moves along, and force the air through the flues. Any suitable filtering arrangement, such as a water-filter, or deflecting air-filter, may be employed in connection with said flue for the purpose of filtering and purifying the air, and preventing the ingress of dust into the car. Branch-pipes t extend from the flue T to some convenient position in the wash-chambers of each compartment, and the branch pipes are provided with suitable rotary or fan-valves or dampers t' , by which the ingress of air from the flue into each compartment may be conveniently regulated. By the use of this ventilating flue T and its dampers, in connection with the ventilating-windows and other ordinary ventilators, the atmosphere of each compartment may be readily purified and perfect ventilation maintained.

Having thus described my invention, I claim as new in the construction of compartment railway-cars and desire to secure by Letters Patent—

1. The berths or couches arranged athwart the car, and connected with weights in the hollow transverse partitions forming the isolated compartments of the car, substantially as herein shown and described.
2. The arrangement of the guard-chains with the sliding doors of the car, as and for the purpose specified.
3. The arrangement of the wash-room and main compartment, in respect to each other, in the manner herein shown and described.
4. The arrangement of the doors of the two rooms of each compartment, in the manner herein shown and described, whereby a direct passage-way through both rooms and through the car is obtained, as set forth.
5. The combination of a wash-room and water-closet with each compartment of the car, substantially as herein shown and described.
6. The arrangement of speaking-tubes to extend from each of the compartments to the porter's room, substantially as described.
7. The arrangement of the bells or signal apparatus, to extend from each of the compartments to the porter's room, substantially as shown and described.

WILLIAM D. MANN.

Witnesses:

T. B. MOSHER,
CHAS. A. PETTIT.

(121)