No. 761,737. PATENTED JUNE 7, 1904.

W. WELLMAN.

RAILWAY CAR.

APPLICATION FILED MAR. 19, 1904.

NO MODEL.

Fig. 1.

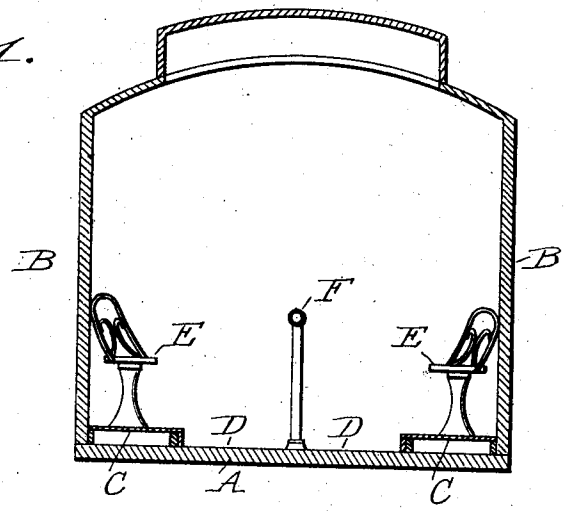
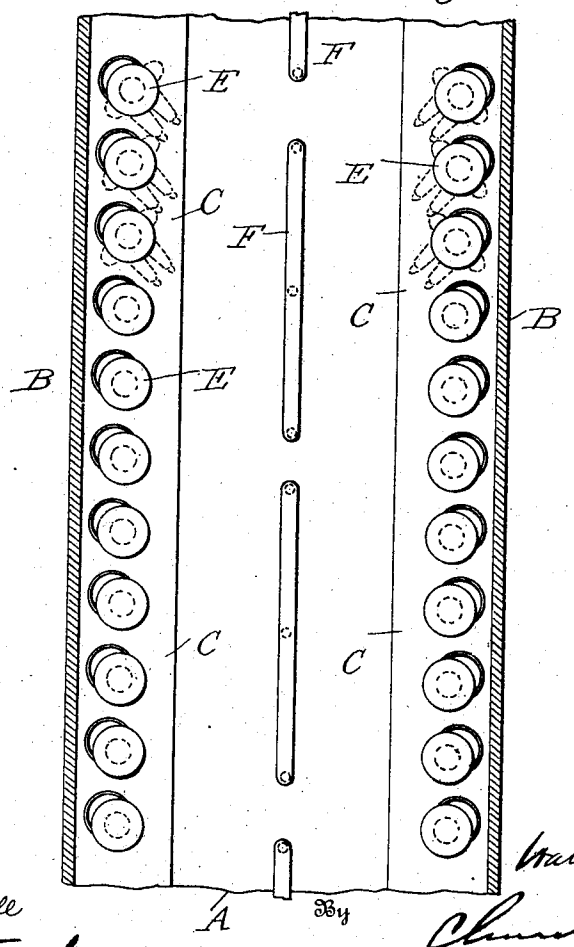


Fig. 2.



Witnesses

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No. 761,737. Patented June 7, 1904.

UNITED STATES PATENT OFFICE.

WALTER WELLMAN, OF WASHINGTON, DISTRICT OF COLUMBIA.

RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 761,737, dated June 7, 1904.

Application filed March 19, 1904. Serial No. 198,933. (No model.)

To all whom it may concern:

Be it known that I, WALTER WELLMAN, of Washington, District of Columbia, have invented certain new and useful Improvements in Railway-Cars; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

The method of seating passengers in cars herein described is believed to overcome certain objections to all existing methods. Space is so valuable in all railway-cars, especially in urban and interurban cars, that managers of lines are constantly tempted to crowd people together, to narrow the aisle-space, and to permit aisles to be filled with standing passengers, greatly to the inconvenience of the traveling public. While of course it is impossible when seating capacity is not equal to demand to avoid the use of aisles by standing passengers, it is possible to minimize the inconvenience and annoyance which now result from the methods employed. With seats and aisles occupying the same level of the car-floor and when (as is usual in all or in part of urban cars) passengers are seated with their backs to the sides of the car the feet of seated passengers extend into the aisle, there to be trod upon or kicked by passengers standing or passing to and fro. How great is this annoyance, both to seated passengers and to those who are in danger of stumbling over the feet of seated passengers, every one knows. It is proposed to remedy this difficulty, in part at least, by placing the side seats upon a platform elevated a few inches—say three or four inches—above the aisle. The height should not be great enough to produce any danger of passengers stumbling or falling and just high enough to separate the aisle from the seat-platform; the seat-platform to be wide enough to hold not only the seated passengers, but their legs and feet, so that the inconvenience and annoyance of interference between the feet of seated and walking passengers may be removed. The broadest part of the human anatomy, speaking of the average, is at the shoulders. It is at the shoulder-line that most space is needed; yet in seating passengers side by side, whether in transverse seats or longitudinal seats, shoulders are brought square against shoulders—the maximum of width of persons in juxtaposition with the maximum of his neighbors. The result is uncomfortable crowding unless a space of twenty inches or more is given to each passenger. For comfort each passenger should have a shoulder-space of twenty inches or more. He does not need as much space for any other part of his body. Give him ample shoulder-space, so that he need not sit cramped or humped and may use his arms freely in turning his newspaper or magazine, and he will gladly submit to close quarters in other respects, especially if the seats are so arranged as to keep people off his toes.

An ideal seating arrangement comprises these features: First, ample shoulder-room; second, place for feet where they will not be trod upon and with room to extend the legs a little or to vary their position; third, an individual seat; fourth, facing forward or approximately forward in the car; fifth, to be seated so that passengers in the aisle do not rub against the shoulders of seated passengers, as is the case with the outer of two persons placed side by side in a transverse double seat. The system herein proposed is believed to contain all these advantages, in combination with the raised seat-platform hereinbefore described. Thus in the present invention I provide individual seats like stools, supported by a single upright, thus taking little floor-space and leaving room for the feet and legs of passengers and for parcels, valises, electric car-heaters, &c., and said seats are placed facing obliquely forward, so that the legs and feet of each passenger project alongside of the next forward seat, but are over the raised platform and out of the way of passengers standing or passing in the aisle.

Referring to the accompanying drawings, Figure 1 is a diagrammatic section through a car embodying the present improvements.

Fig. 2 is a similar view looking downwardly on a section of the car, showing the seat arrangement and passengers seated in said seats.

Like letters of reference in both figures indicate the same parts.

The letter A indicates diagrammatically the bottom or floor, and B the side walls, of the car, while C indicates platforms extending along each side of the car and slightly elevated above the floor or tread surface of the aisle-space, (indicated at D.) The platforms in an ordinary car should be approximately twenty-five inches wide, and the seats (indicated at E) should be approximately fourteen inches wide and placed about three inches from the side of the car and spaced nineteen inches apart. To afford additional space, the seats should be on a single standard, and by reference to Fig. 2 it will be seen that each seat is made to face diagonally forward. While by this arrangement each passenger may have to sit very near his neighbor, as space must be economized, he is not thrown directly against his neighbor's person and there is no question of one passenger occupying more than his alotted space. By the oblique arrangement of the seats he is given ample shoulder-room, with space for the free movement of his arms without danger of contact with his neighbor and without requiring him to sit in a hampered or scrouged posture. His shoulders are away from the aisle and free from being bumped or rubbed by passengers standing or passing in the aisles. His legs and feet project alongside of the next forward seat, but ample room is left by the arrangement described for his feet to rest on the platform, with room for shifting the position of his legs and without danger of having his feet stepped upon or trampled by the aisle passengers. In the center of the aisle there is preferably arranged a hand-railing F, formed in sections, as indicated in Fig. 2, with spaces between the sections, thus dividing the aisle passengers into two streams, one of which may be moving in one direction while the other is moving in the opposite direction, and at the same time by providing the spaces between the hand-rails passengers may readily move from one stream into the other, so as to pass out at either end of the car. In addition, the hand-rails afford a ready means whereby the passengers standing in the aisles may support themselves against being thrown about by the train movements.

The system described admits of seats being located as close together as eighteen inches, and by comparison with other cars now in common use it will be seen that the system will admit of seating fifty persons in forty feet of car-space and leave a wide center aisle, whereas the capacity of a car having side seats with the passengers placed with their backs to the windows is no greater, and the aisle-space is largely occupied by the passengers' feet and legs. The individual side seats have an advantage over the double side-seat arrangements not only in leaving a much wider aisle, but in affording facilities for the passengers to enter or leave the cars without the necessity of climbing past his neighbor and without the danger of being walked upon and crowded by the aisle passengers, and consequently in congested urban travel the passengers' movements are greatly facilitated, to say nothing of the increased comfort and convenience.

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

1. In a railway-car the combination with the car-body, of raised platforms extending longitudinally of the car at each side of the aisle-space and individual seats mounted on said platform; substantially as described.

2. In a railway-car the combination with the car-body having a center aisle, of raised platforms at each side of said aisle extending longitudinally of the car-body and individual seats mounted on said platforms and facing diagonally forward; substantially as described.

3. In railway-car construction the combination with the car-body having a central aisle-space extending longitudinally thereof and sectional hand-rails located centrally of said aisle-space, of raised platforms at each side of said aisle-space and extending longitudinally of the car-body and individual seats located on said platforms and arranged to face diagonally forward; substantially as described.

4. In a railway-car the combination with seats arranged in series longitudinally at each side of the car, of a depressed aisle between said series of seats and a hand-rail; substantially as described.

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