

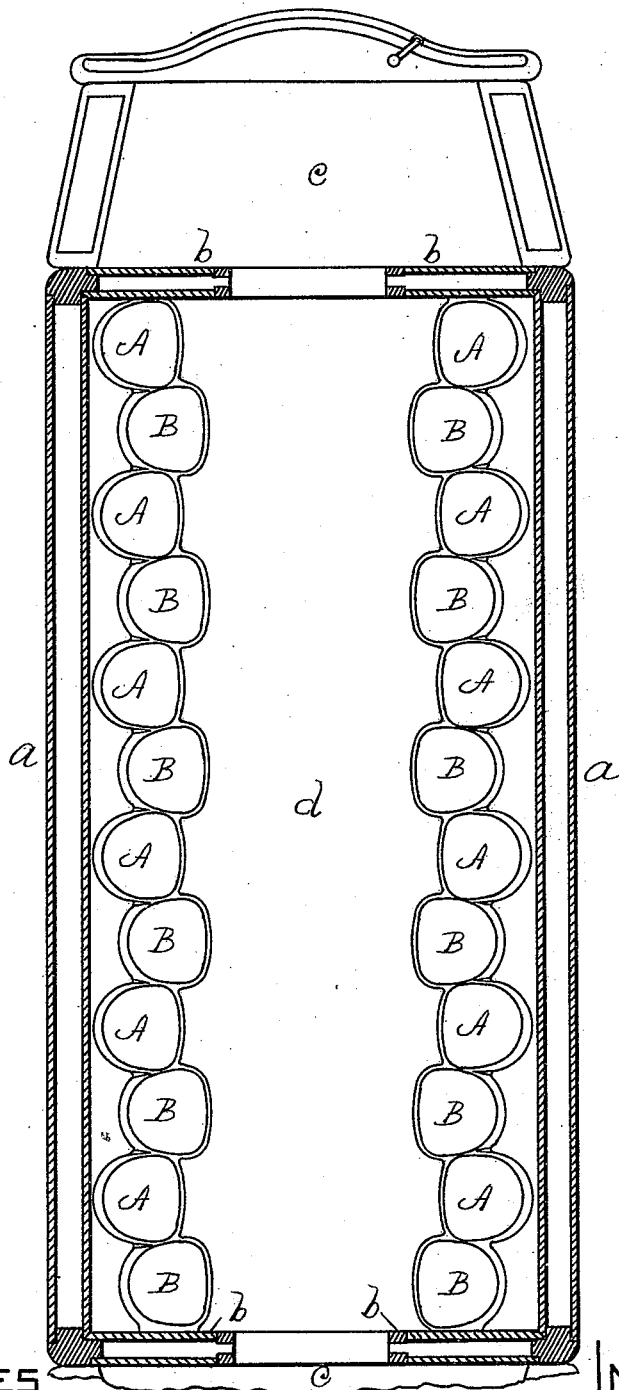
(No Model.)

3 Sheets—Sheet 1.

G. B. BOLTON.
STREET CAR.

No. 493,242.

Patented Mar. 14, 1893.



WITNESSES
J. M. Hartnett.
A. S. Belcher

FIG. 1.

INVENTOR

Gilman B. Bolton
By *his Atty*
Henry Williams

(No Model.)

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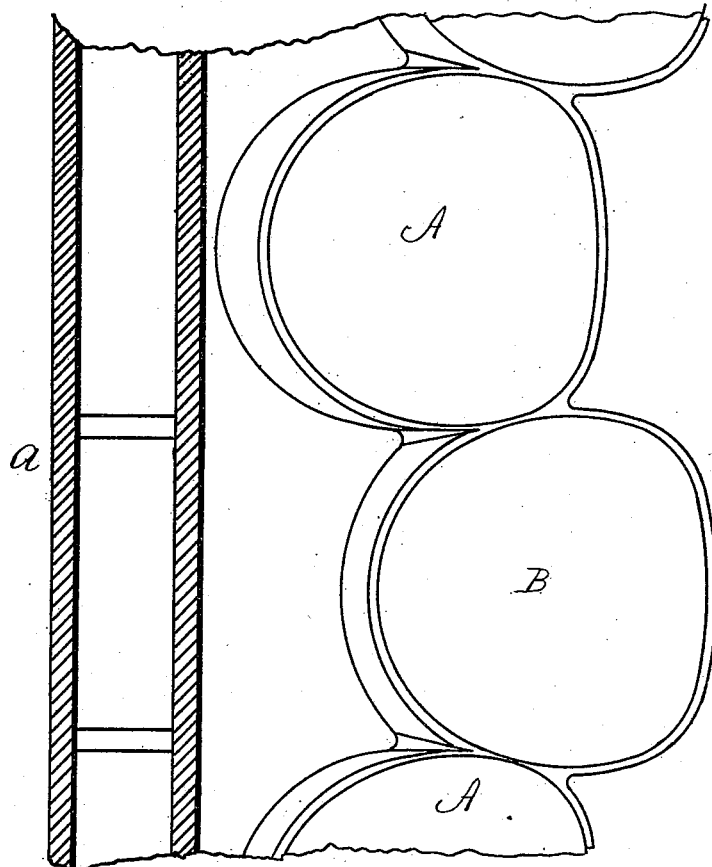


Fig. 2 -

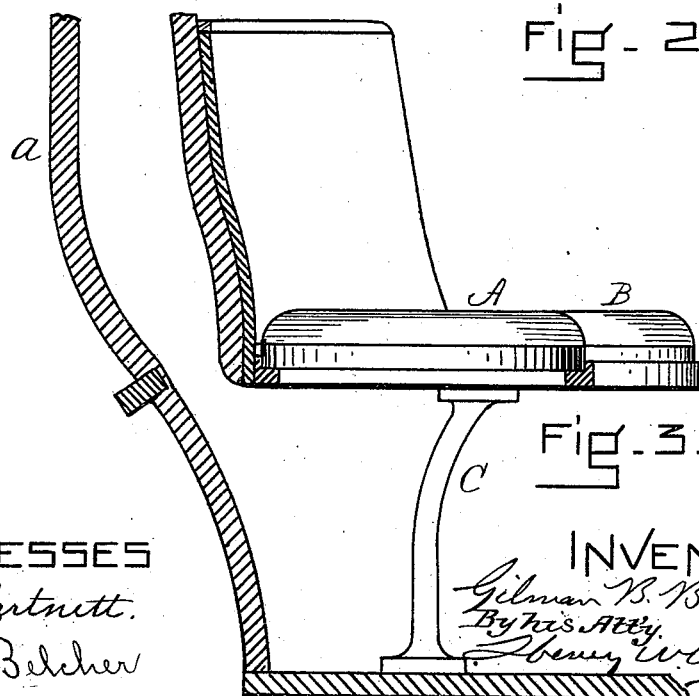


Fig. 3 -

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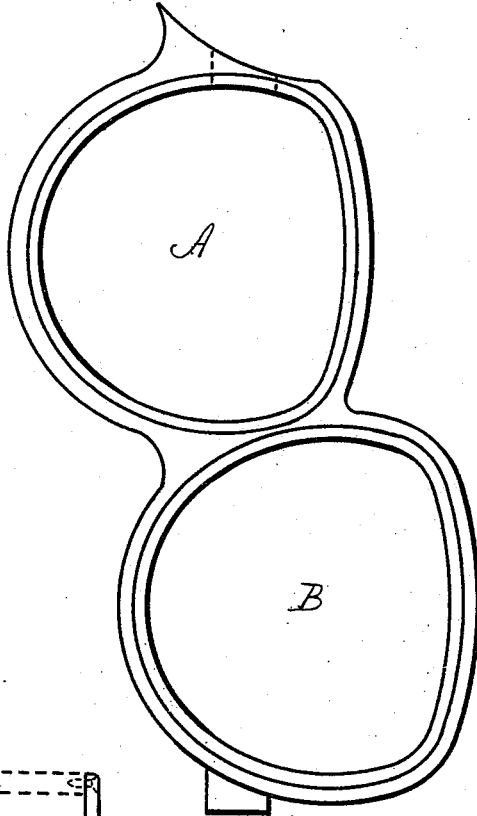


Fig. 4-

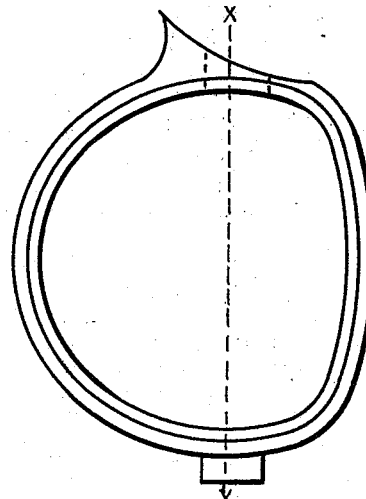


Fig. 5-

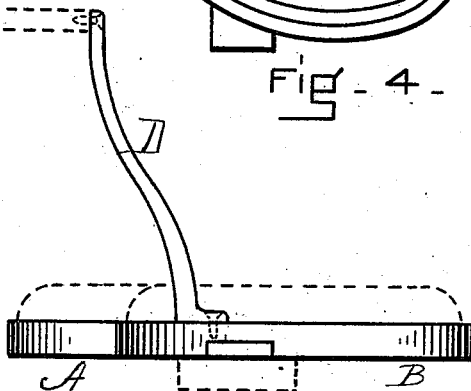


Fig. 6-

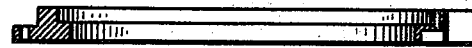


Fig. 7-

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UNITED STATES PATENT OFFICE.

GILMAN B. BOLTON, OF WAVERLY, ASSIGNOR OF ONE-HALF TO FRED H. HENRY, OF WAKEFIELD, MASSACHUSETTS.

STREET-CAR.

SPECIFICATION forming part of Letters Patent No. 493,242, dated March 14, 1893.

Application filed November 15, 1892. Serial No. 452,062. (No model.)

To all whom it may concern:

Be it known that I, GILMAN B. BOLTON, a citizen of the United States, residing at Waverly, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in the Construction and Arrangement of Car-Seats, of which the following is a specification.

This invention relates particularly, but not necessarily exclusively, to the construction and arrangement of seats in street cars, and it has for its object to provide on each side of the car a greater seating capacity in the same length of car than has previously been accomplished. For instance, a car of length to seat eleven persons on a side, can, by my invention, be adapted to seat twelve persons on a side and each person be allowed as much sitting space as when the car was adapted to seat eleven on a side. And moreover, in my improvement, while there are no partitions or arms, each person has one seat and no more, and cannot easily encroach on his neighbor's space or occupy more room than he is entitled to, as is the case when a car is provided with two long side benches without partitions.

The nature of the invention is fully described below and illustrated in the accompanying drawings, in which

Figure 1 is a horizontal section of a street car provided with seats constructed and arranged in accordance with my invention, the seats being shown in plan view. Fig. 2 is a similar view enlarged of a portion of the same. Fig. 3 is an enlarged cross vertical section of a portion of the car, the seats being shown in elevation. Fig. 4 is an enlarged plan view of a pair of seats made integral. Fig. 5 is a similar view of a single detached seat. Fig. 6 is an end elevation of a pair of seats showing a back on the forward seat. Fig. 7 is a vertical section on the line *x* Fig. 5.

Similar letters of reference indicate like parts.

a represents the sides, *b* the ends, *c* the platforms and *d* the floor of a street car such as is usually furnished with two rows of seats or benches backing against the sides and facing inward and holding usually twenty-two sitting passengers, eleven on a side, provided

that no passenger takes up more space than he is entitled to.

A B are my improved seats, twelve being shown on each side of the car. It will be noticed that all the seats *A* are located next to the walls or sides of the car, while all the seats *B* are located somewhat in advance of the seats *A*, *i. e.*, nearer toward the middle of the aisle. Moreover, it will be seen that the seats *A B* are alternately arranged. Furthermore, each seat has its side edges, and preferably its rear edges, curved as shown, *i. e.*, the side and back edges constitute substantially or approximately an arc of a circle, while the front edge is nearly straight. Now if these seats *A B* were placed in a straight line running centrally through each seat they could not be got into a car of the length illustrated. But as every other seat is placed forward as shown, they do not touch each other at their broadest parts, but each extends a little beyond the adjoining seats, *i. e.*, the forward seats *B* lap or extend by the seats *A* in front, and the seats *A* lap or extend by the seats *B* behind. The aggregate space thus gained is equal to the width of one seat, so that twelve seats are placed in the space originally occupied by a bench or seat accommodating eleven passengers. Moreover, each seat is distinct and separate and a passenger could not with any convenience to himself occupy more than one. It will be seen that as no two neighboring passengers are directly abreast of each other, their shoulders and elbows do not touch, but overlap without interfering and each of the twelve passengers has more room than if occupying a long seat with ten others.

For convenience' sake, I propose to make the seats in pairs, each pair being integral as shown in Fig. 4, and fitting the next pair, an odd seat, Fig. 5, being constructed for an end seat if desired.

The seats may be supported in any desired manner, as by legs *C*, (Figs. 3 and 6,) and the forward seats *B* (and the rear ones if desired) may have backs as *D*, Fig. 6.

The spaces at the rear of the seats *B* may be boarded in and used for packages, &c., or may be left open and used for umbrellas &c., or may be otherwise utilized as desired.

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

1. A row of individual seats in a car, arranged as described and consisting of alternate seats situated near the car wall or side and alternating seats situated somewhat in advance of said wall seats, whereby additional seating space is made available, substantially as set forth.

2. A row of individual seats in a car, each seat having substantially convex or curved sides, said seats being situated alternately rearward toward the wall or side of the car, and forward toward the aisle or center, whereby additional seating space is made available, substantially as described.

3. A row of individual seats in a car, arranged as described and consisting of seats situated not on a straight line but alternately rearward and forward, whereby additional seating space is made available, substantially as set forth.

4. A row of individual seats in a car, arranged as described and consisting of seats situated not on a straight line but alternately rearward and forward, and each seat being broader at its broadest portion than the space between its two adjoining seats at their broadest portions, substantially as described.

GILMAN B. BOLTON.

Witnesses:

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J. M. HARTNETT.