(No Model.) 2 Sheets—Sheet 1.

J. A. BRILL.

CAR SEAT CONSTRUCTION.

No. 566,132. Patented Aug. 18, 1896.

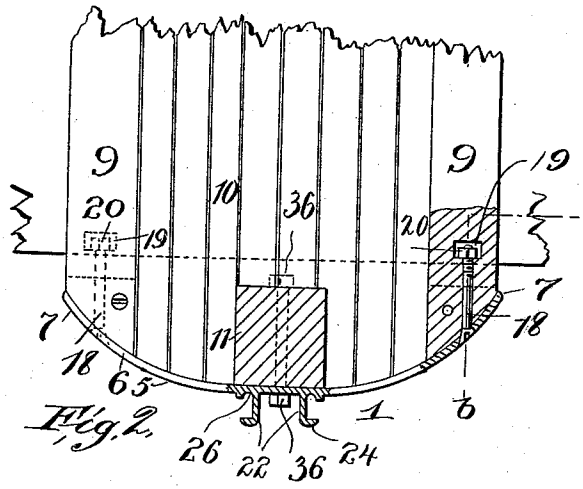

Fig. 2.

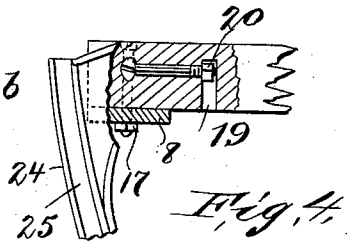

Fig. 4.

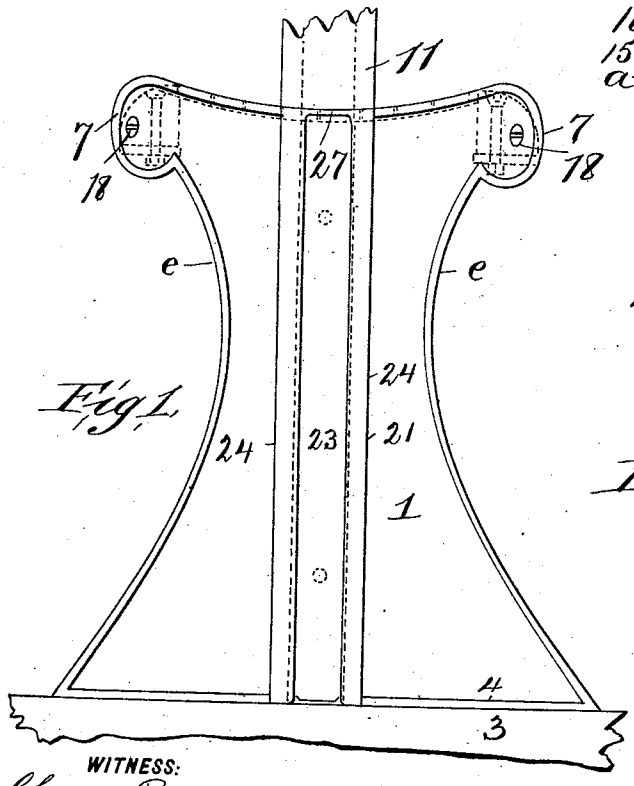

Fig. 1.

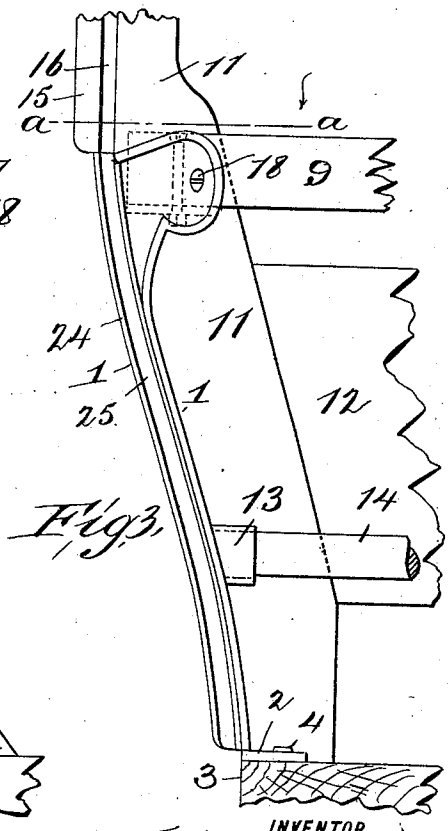

Fig. 3.

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(No Model.)

2 Sheets—Sheet 2.

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CAR SEAT CONSTRUCTION.

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Fig. 9.

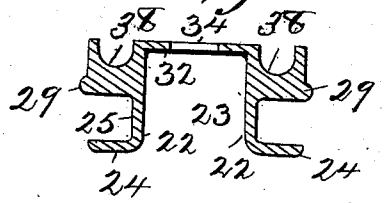


Fig. 6.

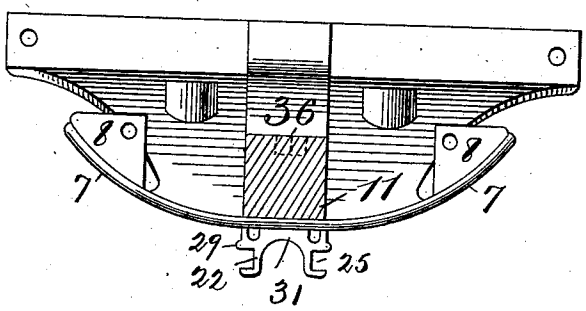


Fig. 10.

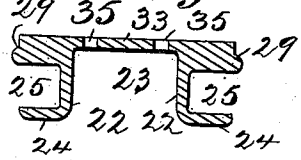


Fig. 5.

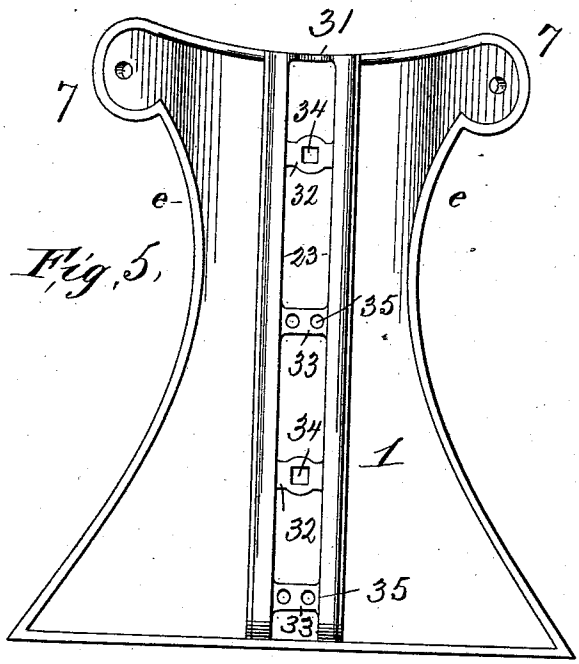
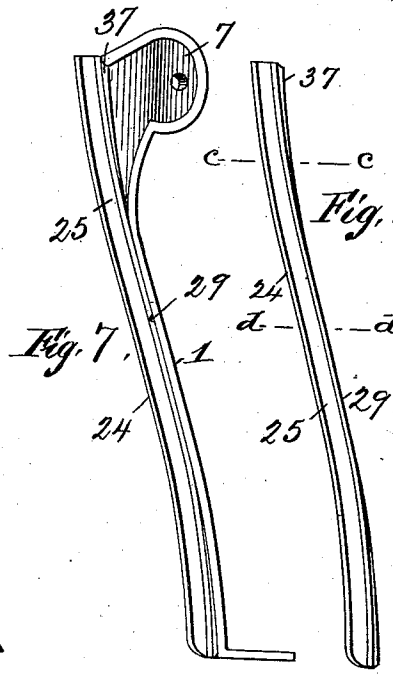


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN A. BRILL, OF PHILADELPHIA, PENNSYLVANIA.

CAR-SEAT CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 566,132, dated August 18, 1896.

Original application filed February 26, 1896, Serial No. 580,833. Divided and this application filed May 27, 1896. Serial No. 593,208. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. BRILL, a citizen of the United States, residing in the city and county of Philadelphia and State of Pennsylvania, have made certain new and useful Improvements in Car-Seat Constructions, of which the following is a specification.

My invention relates to seat constructions in which a panel at the seat end is employed; and it has special reference to the construction disclosed in an application filed by me for a like invention on the 26th day of February, 1896, Serial No. 580,833, of which this application is a division and to which cross-reference is here made.

My invention has for its object to provide an improved panel for supporting the seat ends, more especially in open cars, wherein curtains or the like are used to close the sides of the cars when necessary; and to this end my improvements consist, in this regard, in providing the exterior of the panel with a guideway or channel alining with the guideway or channel formed in the roof-stanchions in which the ends of the curtains or appurtenances thereof move, so as to allow of the curtain being lowered directly to the flooring of the car exterior to the seat end; and in this regard my invention relates to a specific improvement on the construction shown in said before-mentioned application, which improvement consists in making the external rib, wherein such groove or channel is formed, attachable or detachable from the exterior of the panel, and means are provided for detachably connecting the rib to the exterior of the panel and connecting the rib and panel to the stanchion.

My invention also resides in the construction and combination of parts hereinafter described, and further pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a side elevation of a seat end and a panel embodying my improvements, the car-sill and roof-stanchion being broken away. Fig. 2 is a plan view of Fig. 1, showing a fragment of the seat end and the method of attaching the seat-rails to the panel, said view being partly in section. Fig. 3 is a side elevation of Fig. 1. Fig. 4 is a fragmentary view, partly in section, taken approximately on the line *b b*, Fig. 2. Fig. 5 is a side elevation of my improved panel provided with a detachable exterior rib carrying the curtain-groove. Fig. 6 is a plan view of the panel, partly in section, with the attachable rib secured thereto, showing the method of securing the panel and rib to the stanchion. Fig. 7 is a side elevation of Fig. 5; Fig. 8, a side elevation of the detachable rib; Fig. 9, a transverse sectional view, enlarged, taken approximately on the line *c c*, Fig. 8; and Fig. 10, a like view taken approximately on the line *d d*, Fig. 8.

Similar numerals of reference indicate corresponding parts throughout the several views.

In the construction of street-cars, and especially that class designed for use in summer, wherein the seats run transversely of the car, it has been usual to employ a cast-iron panel (substituting the wooden one theretofore employed) for supporting the seat structure, to which the side rails of the seats or the roof-stanchion were secured. In the use of these panels, so far as I am now acquainted with the art, the stanchions were entirely without the outer perpendicular limits of the panels, and the grooves in the sides of the stanchion, in which the curtain bars or runners move, commenced or ended at the seat-level and were entirely within the outer limits of the panels, so that when the curtain was brought down to its lowest point the space between the seats at the opening of the aisle was entirely unprotected, or the stanchion was so combined with panels made of separable parts that the stanchion extended to or near the sill exterior to the panel-sections, a curtain-groove being formed in such exterior or exposed portion of the stanchion.

It is the object of my invention to provide a construction wherein the usual metal panel can be employed and provide means for enabling the curtain to be lowered directly to the floor of the car, and also to provide means whereby cars not so provided with my improvements can be readily altered.

In carrying out these improvements I employ the following construction:

At 1 in the drawings is indicated an imperforate or otherwise-formed cast-metal panel, of any desired shape, but preferably that shown herein, which is provided with an

inwardly-extending flange 2, which rests upon the outer longitudinal sill 3 of the car-frame, bolts 4 or other means being used to secure the panel through the flange to the sill.

The construction of the panels, &c., on both sides of the car being the same, a description of one will answer.

The panel herein illustrated has a contracted waist or central section, as indicated approximately at *e e*, Fig. 1, the bottom flaring outwardly and the sides being curved. From approximately at the line *e e* upward the panel is rounded inwardly, as shown most clearly at 5, Fig. 2, the top 6, Fig. 2, having outwardly-extending ears 7, which take the same curve as the curved top portion just before described. Inwardly-extending lugs 8 are formed on the panel at the rear of the ears 7, and these lugs support the side rails 9 of the seat, which, together with the intermediate planking 10, (which may be either boards or other suitable seat construction, as desired,) are conformed at their ends to meet the inward curve of the top of the panel, as shown in Fig. 2.

The roof-stanchion 11 (which may be secured to the sill in the usual or any desired way) passes upwardly from the sill, centrally of the panel, its inner face being cut or formed to conform to the inner surface of the panel, passing up through the boards 10 to the roof, and between the stanchions on both sides of the car extends a foot-board 12, between which and the parts composing the seat proper a saddle usually extends for supporting the seat intermediate of the panels, as shown more clearly in the patent to G. M. Brill, dated April 3, 1895, No. 538,036, to which cross-reference is here made. The panel may be provided with inwardly-extending lugs 13, between which and like lugs on the panel on either side of the car foot-rests 14 extend. It is also usual to employ tie-rods extending between the stanchions on both sides of the car under the seat to tie the stanchions together, and as these and the seat construction generally form no part of my present invention I have not illustrated the same.

The stanchion at the point where it is designed to leave the seat-level, which preferably takes the conformation of the panel, as shown in Fig. 1, is provided with an offset 15, in which a curtain-groove 16 is formed on both sides, the offset extending over the top of the panel. It is also usual to employ bolts 17, passing vertically through the lug 8 and side rail 9. To secure the rail in place thereon and to bind the panels on both sides together, it is usual to employ bedstead-bolts 18, the head of which is exterior to the ears 7, the bolt passing therethrough and into a channel in the end of the rail, the slot being formed on the under side of the rail to provide access to the nut 20 on the bolt, by means of which the panels are secured firmly to the rails 9.

To continue the groove 16 downward to the level of the car-flooring and exterior to the panel, I provide on the exterior of the panel, and centrally thereof, a rib 21, which, although I preferably form integrally with the panel, as described in my application before mentioned, may be formed so as to be detachable therefrom or attachable thereto, as hereinafter described, the construction claimed in the said before-mentioned application being herein repeated, in order that my invention, as claimed in this application, may be thoroughly understood. I shall first repeat the description of the invention claimed in said application and then the specific improvements claimed herein. This rib is preferably as wide as the stanchion, is constructed by forming two outwardly-extending flanges 22, which form, between them, a central external groove 23 for a purpose hereinafter described, and from the outer limits of the flanges 22 are further flanges 24, extending at right angles to the flanges 22, suitably rounded exteriorly, which flanges 24 form with the outer surface of the panel, which is preferably slightly enlarged at this point, a groove or channel 25, alining with the groove or channel 16 in the offset 15 of the stanchion 11, and forms a substantial continuation of the stanchion channel or groove down to the car-flooring, all of these parts forming the rib, integrally with themselves and with the panel.

Adjacent a portion of the flanges 22 and opening into the grooves 25 I form grooves 26 in the body of the panel for the purpose of affording space within which a rope may lie when employed in conjunction with a curtain-rod, said rope having lately come into use in connection with car-curtains, and in which groove the rope can lie without interfering with the movement of the curtain-pole in the groove 25.

Each rib on each of the panels on the same side of the car contains one of the two grooves in which the ends of the curtain-rods extending between the adjacent stanchions may operate.

The top of the channel 23, closed by a cross plate or web 27, Fig. 1, cast integrally with the rib and the bottom of the channel may likewise be closed if desired. This channel affords a place for the location of bolts, screws, and the like, which may be used for the purpose of tying the stanchions together from the exterior of the panel, or tying both the panels and the stanchions together, and also to permit of the passage of the screws therethrough to affix the panel directly to the stanchion, in either case the heads of the bolts or screws indicated in dotted lines, Fig. 1, being amply protected against injury from the exterior, and the thickness of the metal at this point reduced to lessen the weight.

The specific improvements claimed in this application will now be described, which, as before stated, consist in forming a rib having a side channel or channels and preferably an

intermediate exterior groove, the former acting as a guide for the curtain end and the latter as a recess for receiving the heads of bolts, &c., and providing means for securing the rib to the panel or securing the rib and panel to the stanchion.

The rib detached from the panel is illustrated in Figs. 8, 9, and 10 and enlarged in the two latter figures. It is preferably cast in one piece having the same flanges 22 forming the exterior channel 23 and the flanges 24, together with the flange 29, answering for the central portion of the panel, when the rib is integrally formed therewith, forming the grooves 25. These parts are preferably connected at the top by an integrally-formed cross-piece 31, and between the ends by integrally-formed cross-bars 32 33, provided with holes 34 35, the hole 34 being used for the passage of bolts 36 for securing the rib, panel, and stanchion together, as illustrated in Fig. 6, which bolt 36 may extend to the opposite stanchion and form a tie-bar, the holes 35 enabling screws to be used to directly connect the rib to the exterior of the panel independent of the bolts 36.

At the top of the rib the flanges 29 are provided with an offset 37, bringing the groove 25 clear to the top 36 of the panel, as shown more clearly in Fig. 7, the back of the flange 29 being cast with a groove 38, Fig. 9, concentric therewith and passing to nothing as it merges into the rear of the rib 29, as shown in Fig. 8 at line *c c*. This detachable rib can be used on panels not previously provided therewith, and which have been in use.

By the foregoing construction I obviate many of the difficulties incident to the use of panels having plane exteriors and those wherein the panel is of composite construction with exterior stanchions; and I further provide means economically made and expeditiously assembled for permitting the curtain to be lowered directly to the bottom of a seat or to the car-flooring, thereby giving ample protection to passengers.

I am aware that it is not new to provide a groove and a stanchion running to the car-flooring, so that the curtain could be lowered directly to the car-floor; but in that case the stanchion is either the sole support for the seat or the seat is pivoted between the stanchion, or there were two stanchions or side posts as wide as the seat, or there was a composite panel with exterior stanchions; but I believe myself to be the first to employ in the construction of car-seats a panel with an intermediate stanchion, the panel supporting the seat about or at each side of the stanchion, combined with an alining groove on the stanchion and panel and exterior to the panel for operating the ends of the curtain both down to and below the top of the seat or to the flooring, the panel being intermediate of the groove and stanchion.

Instead of forming the groove 16 in the stanchion, it may be formed by juxtaposed strips, a split tube, &c., and secured to the stanchion in any desired way.

It is apparent that changes and modifications can be made in the construction herein described without departing from the spirit of my invention.

Having described my invention, I claim—

1. The combination with a seat-panel, of a rib detachably secured to the exterior of the panel, and a longitudinal groove formed in the exterior of the rib, substantially as described.

2. The combination with a seat-panel, of a rib having a vertically-disposed groove, said rib being detachably secured to the exterior of the panel, substantially as described.

3. The combination with a seat-panel, of a detachable rib having integrally-formed flanges and cross-pieces uniting the flanges, and grooves formed in the sides of said flanges, substantially as described.

4. The combination with the seat-panel, of a detachable rib having integrally-formed flanges and cross-pieces uniting the flanges, grooves in the sides of the flanges, and apertures formed in the cross-pieces for the securement of the rib to the panel, substantially as described.

5. An attachable rib for a seat-panel having integrally formed therewith parallel flanges and cross-pieces uniting the flanges, and grooves formed in the sides of the flanges, substantially as described.

6. An attachable rib for a seat-panel, having integrally formed therewith parallel flanges, and cross-pieces uniting the flanges, apertures in the cross-pieces, and grooves in the sides of the flanges, substantially as described.

7. The combination of the car-sill and panel, the latter having a grooved detachable rib, the rib having cross-pieces, and means for securing the cross-pieces to the panel, substantially as described.

8. The combination with the car-sill, and the stanchion, of the panel having a grooved detachable rib, the latter having one or more cross-pieces, and means for connecting the stanchion with one or more of the cross-pieces, substantially as described.

9. The attachable rib, having integrally formed therewith the lateral flanges 29, the outwardly-extending flanges 22 and lateral flanges 24, forming the groove 25 and cross-pieces having holes for the passage of screws, substantially as described.

Signed at the city of Philadelphia, county of Philadelphia, and State of Pennsylvania, this 25th day of May, 1896.

JOHN A. BRILL.

Witnesses:
WM. T. RHODES,
ISAIAH MATLACK.