

No. 651,968.

Patented June 19, 1900.

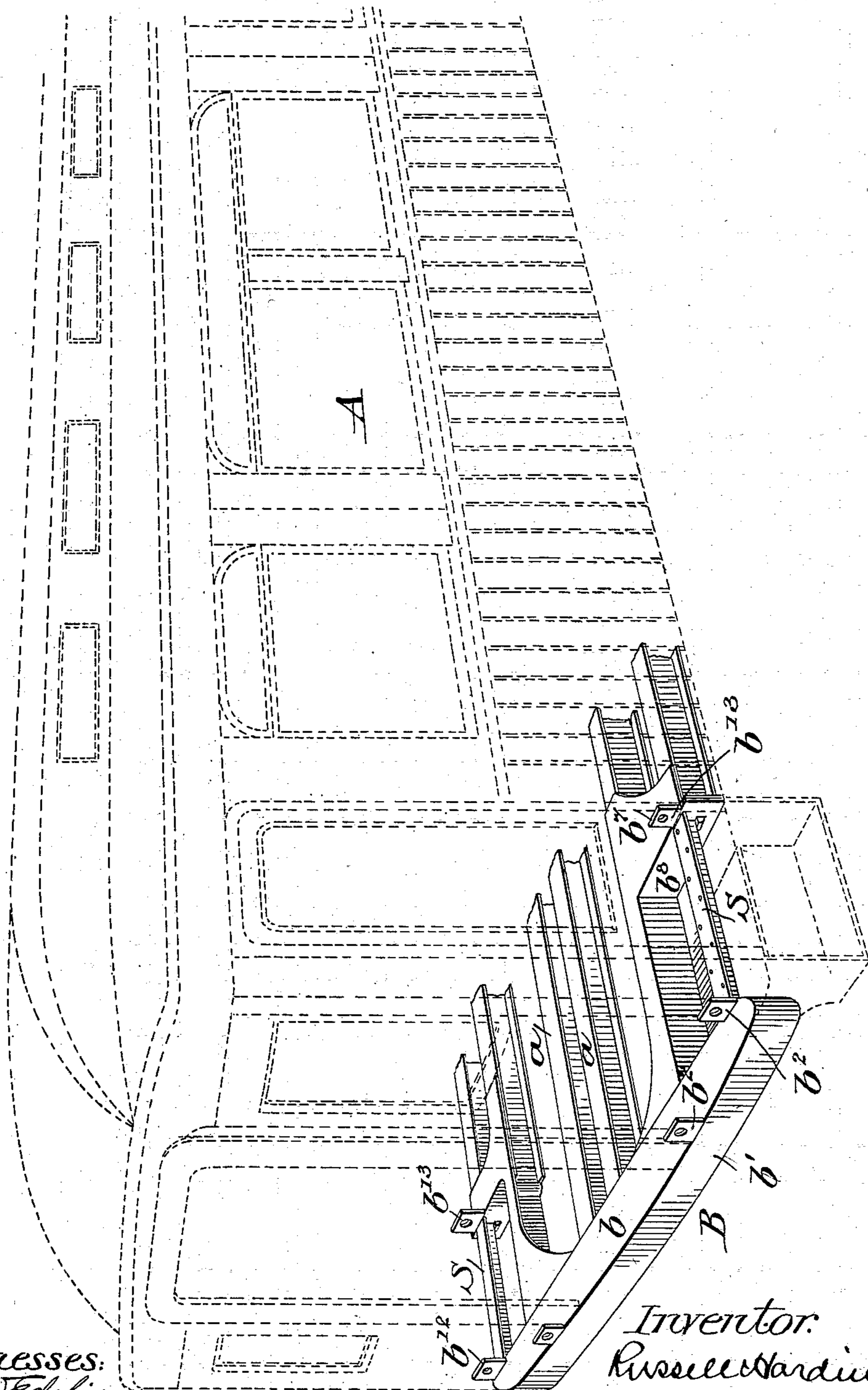
R. HARDING.
RAILWAY CAR.

(Application filed Oct. 23, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



Witnesses:

D. W. Edelin.

J. E. Hutchinson Jr.

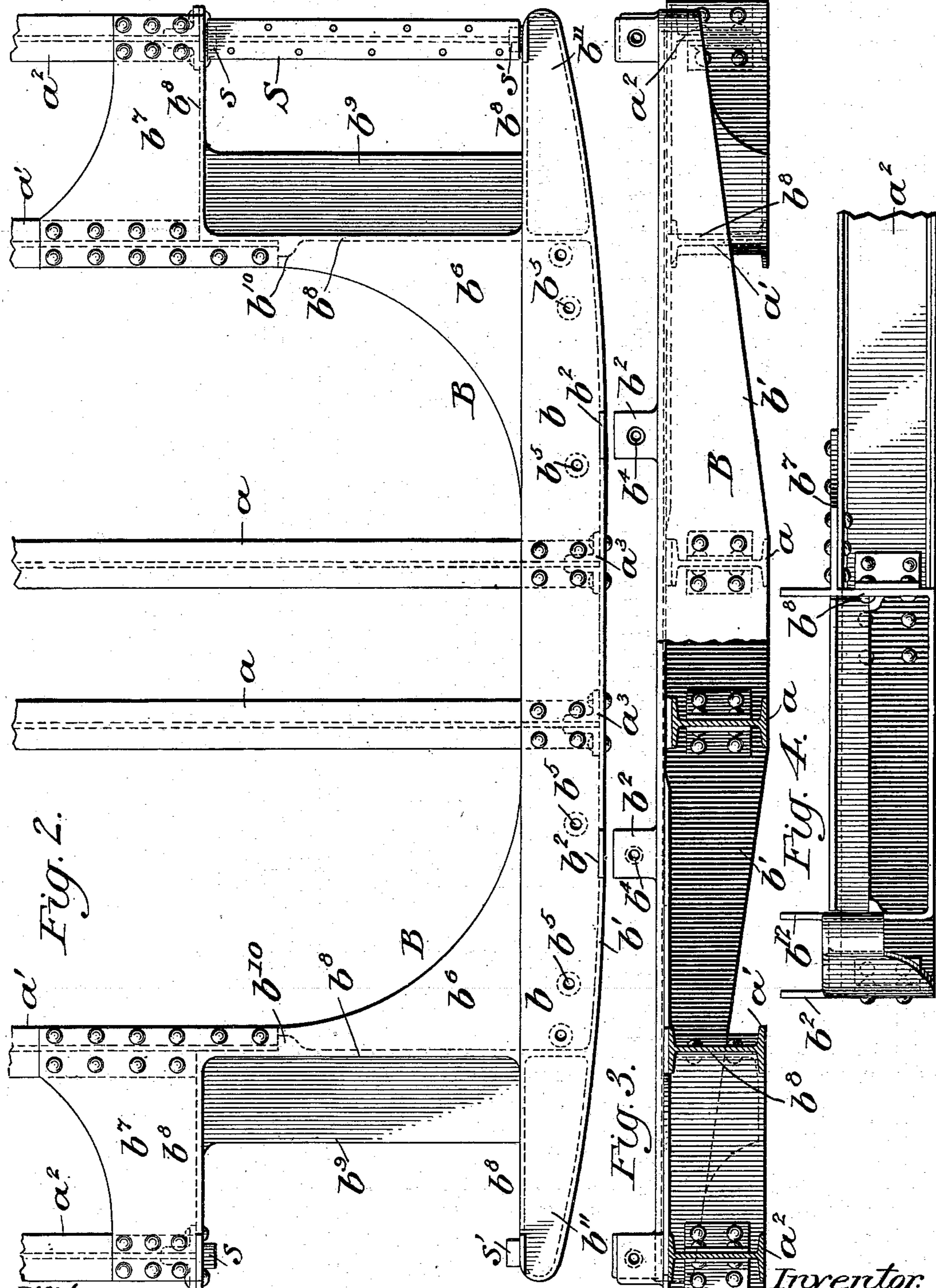
Inventor:
Russell Harding
By his attys.
Rennie & Goldborough

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2 Sheets—Sheet 2.



Witnesses:
D. W. Edlin
J. E. Hutchinson Jr.

Inventor:
R. Harding
By his attorneys
Paine & Goldborough

UNITED STATES PATENT OFFICE.

RUSSELL HARDING, OF ST. LOUIS, MISSOURI.

RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 651,968, dated June 19, 1900.

Application filed October 23, 1899. Serial No. 734,572. (No model.)

To all whom it may concern:

Be it known that I, RUSSELL HARDING, a citizen of the United States, residing at St. Louis, in the State of Missouri, 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 invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to railway-cars, and more particularly to the construction of the end sill and platform connection with the car-frame proper.

In the ordinary construction of cars it is customary to make the floor-frame of the car of longitudinal sills extending the length of the car-body only and then to connect the ends of such sills together by an end or transverse sill, the car-platform being thereafter attached to the end of the floor-frame as an independent structure. This construction forms a joint between the platform and the end of the car-frame proper, which in case of collision breaks either upward or downward and permits one car to telescope with the one next adjacent.

My invention aims, among other things, to overcome this objection; and it consists of the parts and combinations that will be hereinafter more fully described, and definitely pointed out in the claims.

In the drawings, Figure 1 is a view in perspective of a car provided with my improvement, the car-body and other parts being indicated in dotted lines. Fig. 2 is a plan view of one end of the floor-framing, the superstructure being omitted. Fig. 3 is a half-rear and half-front elevation of the same, parts being shown in section. Fig. 4 is a side elevation of one end of the floor-framing, showing the step-opening.

In the drawings, A represents the usual car-body, the longitudinal sills $a a$ of which are usually only coextensive in length therewith. In my present improvement, however, these sills $a a$ are extended beyond the ends of the car-body approximately the length of the platform and connect with the end sill B, as at a^3 , Fig. 2, so that any blow struck upon the end sill is directly transmitted to the cen-

tral longitudinal sills. The end sill may be of any desired form; but I preferably make it with an upper plate b extending the full width of the platform or floor-framing and provide it with a strengthening-flange b' , to which and the upper plate b the ends of the central sills $a a$ are preferably secured. To provide means for securing the upper framing of the car, I form on the end sills B the projecting lugs or flanges b^2 , which may be perforated at b^4 for the usual securing-bolts, perforations b^5 being likewise formed in the plate b of the sill, through which the usual brake-staffs, uncoupling-rods, rods for operating the folding vestibule, and the like may be passed.

To provide for the step-opening in passenger-cars, the end sill has projecting from it between its ends the step-plates $b^6 b^6$, and at suitable distances from the end sill these plates are formed with the abutting plates b^7 , to which the side and intermediate sills $a^2 a'$ of the floor-frame are secured. The under side of the plates b, b^6 , and b^7 I preferably form with a web $b^8 b^8$, extending around the step-opening, and unite these webs by the projecting portion b^9 , which serves as a strengthening-web and may constitute a step of the car, if desired. The web b^8 , under the step-plate b^7 , is preferably formed with a shoulder b^{10} , against which the end of the intermediate sills $a' a'$ may abut, and both the intermediate and side sills $a' a^2$ are or may be secured to the under web of the step and abutting plates $b^6 b^7$, respectively.

Attached to or formed as part of the webs $b^8 b^8$, extending from the plate b^7 and the outer portion b^{11} of the end sill, are the lugs or projections $s s'$, respectively, which support between them the T-piece S, preferably, though not necessarily, forming part of the trap-door for closing the step-opening. This piece S forms a compression-strut between the exposed and otherwise unprotected end b^{11} of the end sill and the side sills a^2 of the floor-framing, so that a blow struck upon the overhanging portion of the end sill will be transmitted through the said strut to the longitudinal sills of the car.

As a means for giving additional support to the superstructure, the projecting lugs b^{12}

are formed on the step side of the end sills, and corresponding lugs b^{13} are formed on the step side of the plate b^7 .

While I have preferably shown and described my invention as formed of steel or metal castings, it is to be understood that I do not limit myself in this respect, as the parts thereof may be formed of any material suitable for the purpose, and I may also employ any form of draft-rigging for hauling the cars.

From the foregoing it will be apparent that any blow struck upon the end sill will be directly transmitted to the longitudinal sills of the floor-framing, and by dispensing with the independent platform the liability of telescoping is greatly diminished.

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

1. In a car, the combination of the center longitudinal sills extending the entire length of the car including the platform, side sills, an end sill secured to the center longitudinal sills, and a removable strut interposed between the end of the side sills and the end sill.

2. In a car, the combination of the center longitudinal sills extending the length of the car including the platform, an end sill secured to the center longitudinal sill, and provided with a step-opening, said end sill being connected to the side sills, and a strut spanning the step-opening between the ends of the side sills and the end sill.

3. In a car, the combination of the center longitudinal sills extending the length of the car including the platform, an end sill connected to the center longitudinal sills and provided with a step-plate and an abutting plate forming a step-opening, side longitudinal sills secured to the abutting plate, and a strut interposed between the end of the side

longitudinal sills and the end sills and spanning the step-opening.

4. In a car, the combination of the center longitudinal sills extending the length of the car including the platform, an end sill connected to the center longitudinal sills and provided with a step-plate and an abutting plate, intermediate and side sills secured respectively to the step and abutting plates, and a strut interposed between the end of the side sill and the end sill.

5. In a car, the combination of the longitudinal sills extending the entire length of the car including the platform, the end sill provided with a flange or web extending therefrom and to which the longitudinal sills are secured, lugs projecting from the end sill to which the superstructure is adapted to be secured, and holes in said end sill for the passage of staffs and rods.

6. In a car, the combination of center longitudinal sills extending the entire length of the car including the platform, an end sill having a step-plate and an abutting plate, side sills secured to the abutting plate, and a projection carried by the end sill and abutting plate, a removable strut supported on said projections and spanning the step-opening.

7. In a car, an end sill comprising an upper transverse plate, step-plates projecting therefrom between the ends of said upper plate, abutting plates, said plates being provided with projecting webs, strengthening webs joining the said plates and lugs formed on said plates adapted for the attachment of the superstructure.

In testimony whereof I affix my signature in presence of two witnesses.

RUSSELL HARDING.

Witnesses:

F. J. W. LEON,
J. H. BIGGERSTAFF.