(No Model.) 2 Sheets—Sheet 1.

# A. BIERSTADT.

## RAILWAY CAR.

No. 559,965. Patented May 12, 1896.

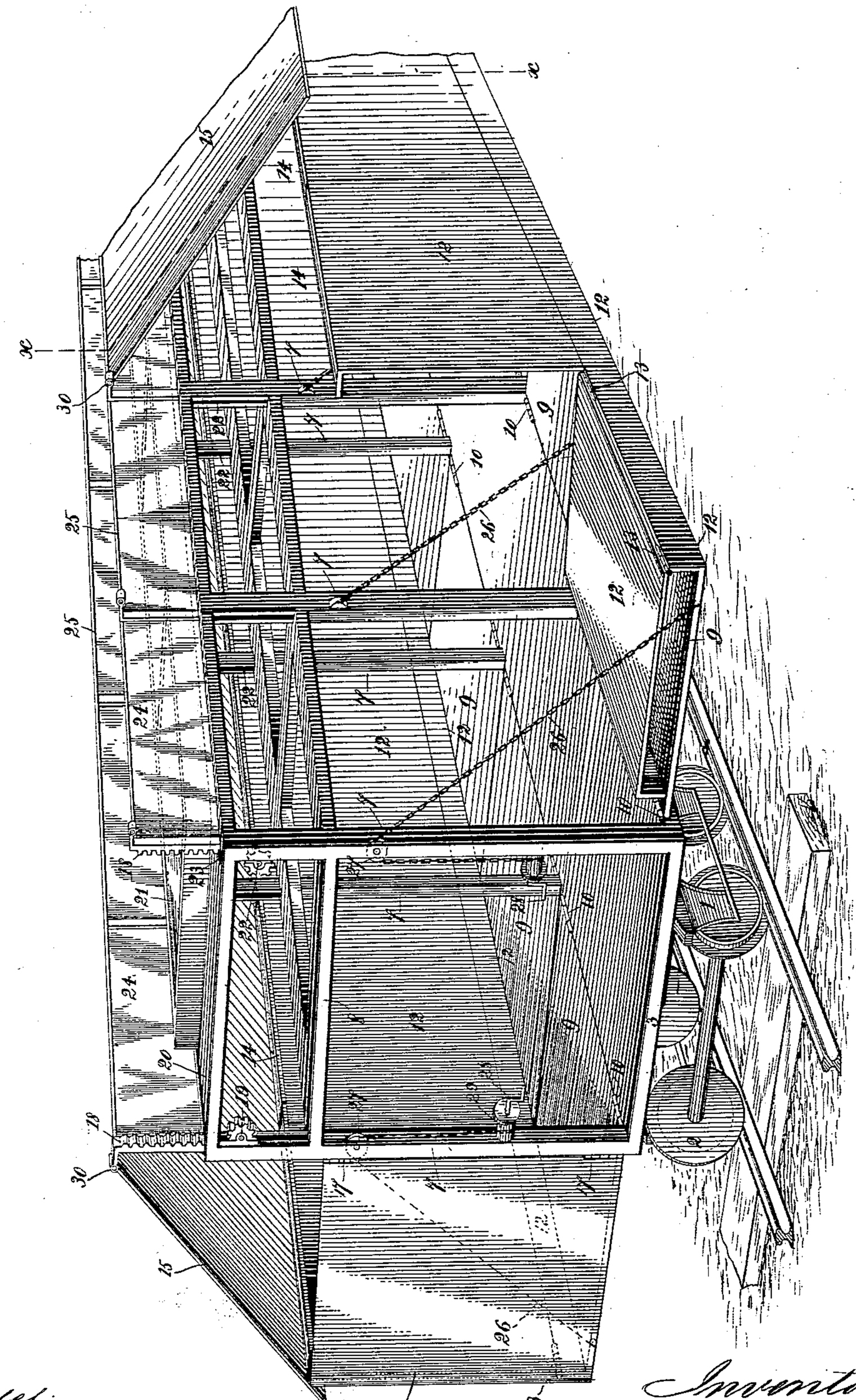

FIG. 1.

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(No Model.) 2 Sheets—Sheet 2.

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## RAILWAY CAR.

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Fig. 2.

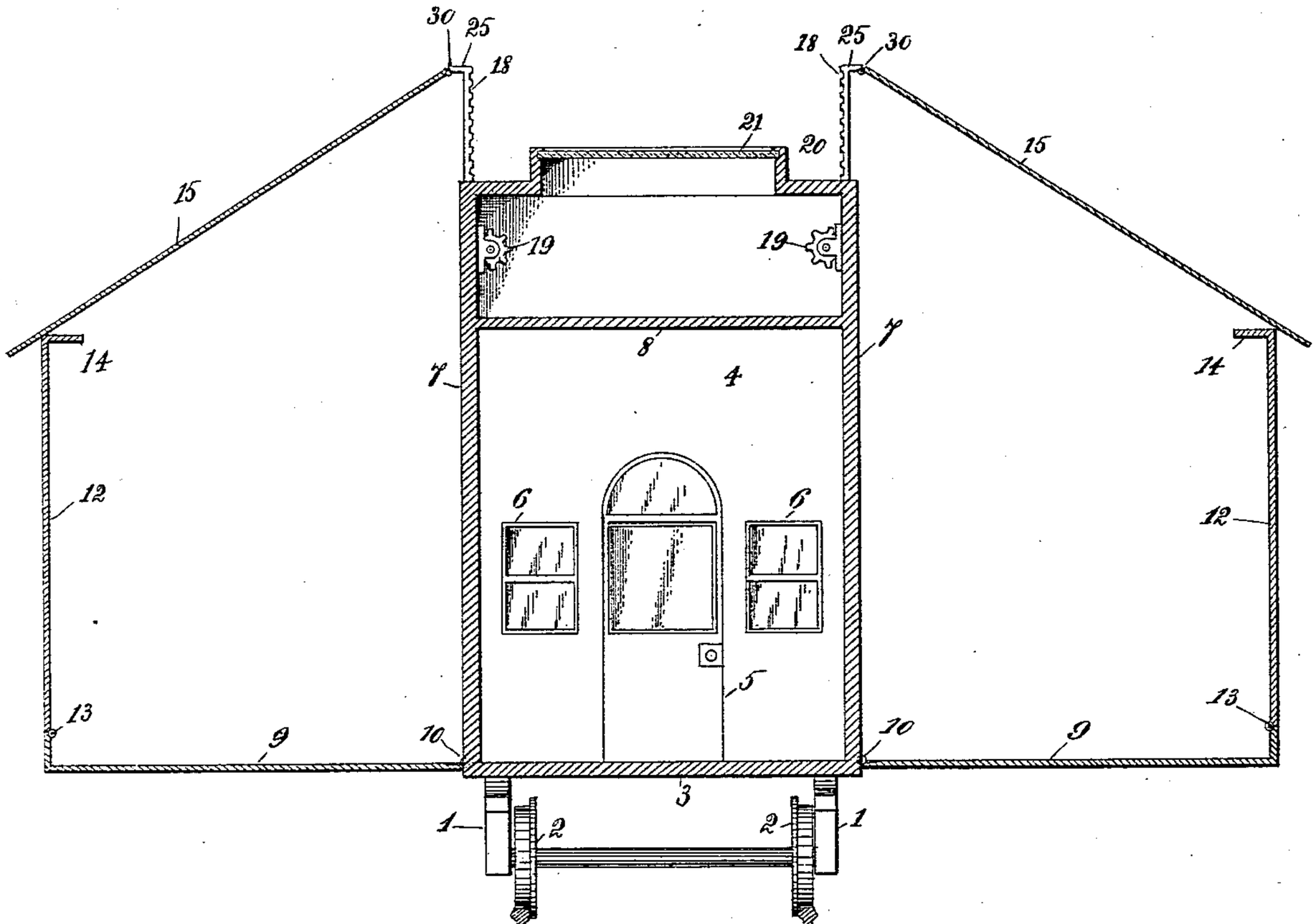
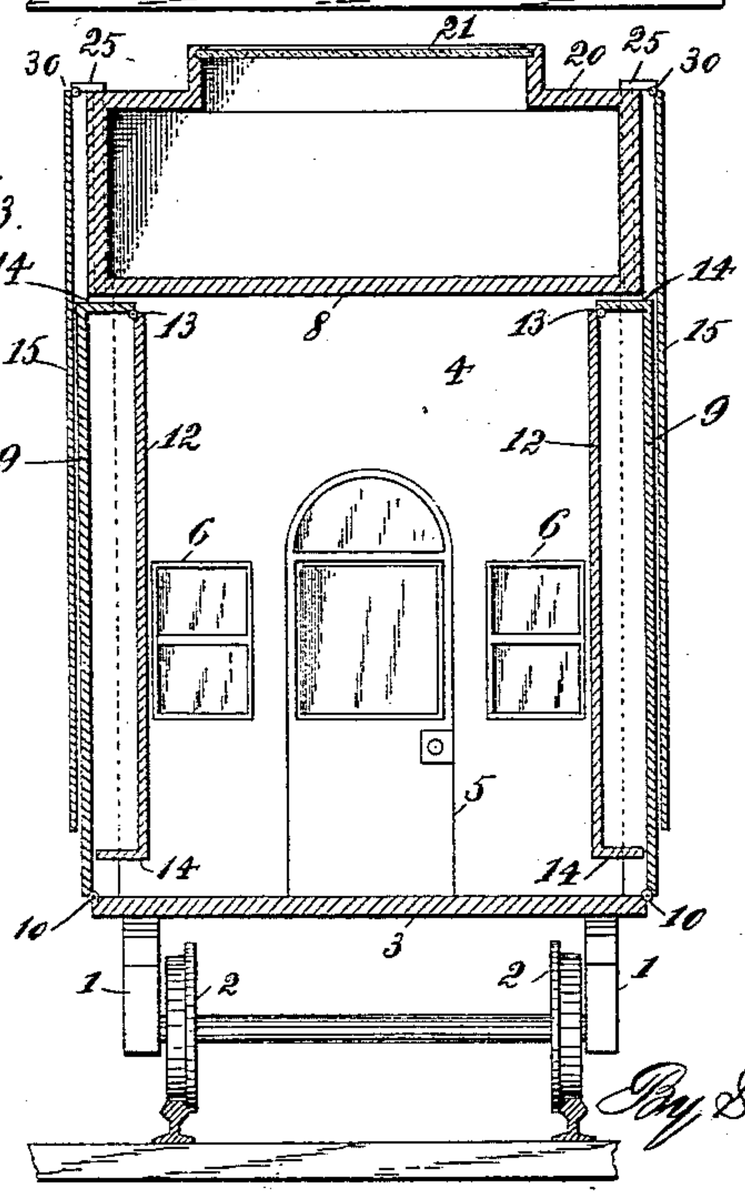



Fig. 3.




Witnesses:
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Inventor:
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# UNITED STATES PATENT OFFICE.

ALBERT BIERSTADT, OF NEW YORK, N. Y.

## RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 559,965, dated May 12, 1896.

Application filed June 12, 1893. Renewed October 15, 1895. Serial No. 565,807. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT BIERSTADT, a citizen of the United States, residing at New York, in the county and State of New York, have invented a new and useful Improvement in Railway-Cars or other Like Vehicles, of which the following is a specification.

The object of my invention is to provide a railway-car or other like vehicle the side walls of which will be movable and extensible, so as to form wings and thereby enlarge the car so that it may be suitable for the purpose of exhibiting pictures and other like purposes, including chapel and church purposes, &c.

A further object of my invention is to provide a railway-car or other like vehicle with the side walls above mentioned and at the same time provide a space in the said walls when closed for carrying the pictures or other articles to be exhibited, so that the articles will not be injured and so as to avoid the trouble of rehanging the pictures when it is desired to exhibit them.

To that end my invention consists in a railway-car or other like vehicle provided with ordinary trucks and running-gear, and with a side wall which is made to swing outwardly, so as to form an enlargement of the body part of the car, and which wall is provided with a space for carrying the pictures or other articles to be exhibited, as more particularly hereinafter described, and pointed out in the claims.

The invention is shown and described as applied to a railway-car.

Figure 1 is a view in perspective of my improved car with the walls cut off and the side walls partly opened. Fig. 2 is a view of a cross-section of my improved car, taken on the line $x\,x$ of Fig. 1. Fig. 3 is a view of a cross-section of my improved car with the sides closed, the supports for the roof of the car being shown in dotted lines.

In the accompanying drawings the numeral 1 represents the ordinary truck for a railway passenger-car provided with wheels 2.

3 denotes the floor of the car, and 4 the end walls, which are provided with doors 5 and windows 6 of the ordinary construction; 7, upright posts attached rigidly to the floor and extending up to and attached to the roof.

8 denotes a portion of the roof of the car.

9 denotes a portion of the side wall secured by a hinge or other suitable device to the floor, which portion when opened or moved outwardly forms the wing floor.

10 denotes the hinges last above mentioned.

Secured at right angles to the portion 9 at its outer end when opened and at its upper end when closed is a short strip of wood 11 or other suitable material.

12 denotes a portion of the side wall, which portion is secured to the strip 11 by hinges or other suitable device, and when opened in connection with the said strip forms the side of the wing.

13 denotes the hinges last above referred to.

Attached at right angles to and secured to the portion 12 at its lower edge when folded and to its upper edge when unfolded is a short strip of wood 14 or other suitable material. These strips 11 and 14 serve as a guard to prevent the portions 9 and 12 when in their folded position (see Fig. 3) from striking together, and thereby preventing damage to the picture when attached to the portion 12 when the car is in transit.

The portions 12 when extended and raised may be fastened by any suitable means.

15 denotes a portion of the side wall of the car connected to the roof of the car, as at 30, which portion is raised outwardly and upwardly and allowed to rest on the portion 12, thereby forming a roof for the wing.

16 denotes a portion hinged to the upright post 7 and which when moved outwardly forms the end wall of the wing.

17 denotes the hinges last above referred to.

The parts 9, 11, 12, 14, and 16 when closed form the side wall of the car and when closed may be held in place by any suitable device. The roof is supported by the upright posts 7. To these posts, at their upper ends, is attached a rack-and-pinion device 18 and 19, by which means the portion 15 may be raised.

20 is the monitor roof, made of wood or other suitable material and provided with a raised portion 21, extending nearly the length of the car and made, preferably, of glass for the purpose of admitting light. This roof is supported by the upright posts 7. These posts at their upper ends have grooves 22,

through which the racks move. The sides of the monitor roof at its outer edges are slotted, as at 23, to permit the glass 24, which is inserted between and attached to the racks, to slide up and down when desired. 25 is a bar or rod, of iron or other suitable material, attached to the tops of the racks, to which the portions 15 are hinged.

26 denotes the chains attached to the portion 9 near its outer edge and passing over pulleys 27, fastened to the upright posts 7, by which chains the said portion 9 is lowered and raised and held in position when extended or unfolded. These chains are operated by means of an ordinary crank 28 on a windlass or drum 29, to which they are attached in the ordinary manner.

The operation in enlarging the car is as follows: The portion 15 is raised sufficiently high to allow the part 9 to be lowered and the part 12 to be raised to a perpendicular position. The part 9 is lowered by means of the chains 26. The portion 12 is then turned outwardly and upwardly on its hinges until it is at right angles to the portion 9. The portion 15 is then lowered until it rests near its outer edge upon the top of that portion 13 which forms the side of the extension.

The operation in closing the car is merely the reverse of that in enlarging it.

The car is preferably divided into three sections, as the parts forming the extension would be too heavy to be easily moved if there were less than that number, although it is obvious that it might be made in one section.

It is obvious that the car may be of any suitable size and may be made of the material that is ordinarily used in the construction of cars, preferably that used in the construction of Pullman cars.

The car when closed will be preferably of the size of ordinary Pullman cars and as are generally arranged to be attached to passenger-trains.

Any suitable means may be used for lowering and raising the parts 9, and any suitable device may be used in place of the various hinges shown and described, also any suitable means for raising and lowering the portion 15 may be used, without departing from the spirit of my invention.

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

1. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly from the floor of the car to form a wing floor and a portion attached to and adapted to swing upwardly from said swinging portion, substantially as described.

2. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor and a portion attached to and adapted to swing upwardly from said swinging portion, substantially as described.

3. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor and a portion attached to said swinging portion at its upper end when folded and extending inwardly at right angles thereto, substantially as described.

4. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor, a portion attached to said swinging portion at its upper end when folded and extending inwardly at right angles thereto and a portion adapted to swing upwardly from said last-mentioned portion, substantially as described.

5. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor, a portion attached to said swinging portion at its upper end when folded and extending inwardly at right angles thereto and a portion adapted to swing upwardly from said last-mentioned portion and having attached at its lower end when folded, a portion extending outwardly at right angles thereto, substantially as described.

6. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor, a portion attached to said swinging portion at its upper end when folded and extending inwardly at right angles thereto, a portion adapted to swing upwardly from said last-mentioned portion and having attached at its lower end when folded a portion extending outwardly at right angles thereto and a portion adapted to swing upwardly and in a direction at right angles to the roof of the car to form a wing roof, substantially as described.

7. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing downwardly and outwardly from the floor of the car to form a wing floor, a portion attached to said swinging portion at its upper end when folded, and extending inwardly at right angles thereto, a portion adapted to swing upwardly from said last-mentioned portion and having attached at its lower end when folded a portion extending outwardly at right angles thereto, a portion adapted to swing upwardly and in a direction at right angles to the roof of the car to form a wing roof and a portion adapted to swing in a direction at right angles to the wing floor, substantially as described.

8. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly

and downwardly from the floor of the car to form a wing floor, a portion attached to said swinging portion at its upper end when folded and extending inwardly at right angles thereto and a portion adapted to swing upwardly from said last-mentioned portion and having attached at its lower end when folded, a portion extending outwardly at right angles thereto, and a portion adapted to swing upwardly and in a direction at right angles to the roof of the car to form a wing roof, means for extending the same upwardly from the roof and a portion adapted to swing in a direction at right angles to the wing floor, substantially as described.

9. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly from the floor of the car to form a wing floor, means for lowering, raising and supporting said portion and a portion attached to and adapted to swing upwardly from said swinging portion, substantially as described.

10. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor, means for lowering, raising and supporting said portion and a portion attached to and adapted to swing upwardly from said swinging portion, substantially as described.

11. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor, means for lowering, raising and supporting said swinging portion and a portion attached to said swinging portion at its upper end when folded and extending inwardly at right angles thereto, substantially as described.

12. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor, means for raising, lowering and supporting said swinging portion, a portion attached to said swinging portion at its upper end when folded and extending inwardly at right angles thereto and a portion adapted to swing upwardly from said last-mentioned portion, substantially as described.

13. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor, means for raising, lowering and supporting said swinging portion, a portion attached to said swinging portion at its upper end when folded and extending inwardly at right angles thereto and a portion adapted to swing upwardly from said last-mentioned portion and having attached at its lower end when folded a portion extending outwardly at right angles thereto, substantially as described.

14. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor, means for raising, lowering and supporting said swinging portion, a portion attached to said swinging portion at its upper end when folded, and extending inwardly at right angles thereto, a portion adapted to swing upwardly from said last-mentioned portion and having attached at its lower end when folded, a portion extending outwardly at right angles thereto and a portion adapted to swing upwardly from and in a direction at right angles to the roof of the car to form a wing roof, substantially as described.

15. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor, means for raising, lowering and supporting said swinging portion, a portion attached to said swinging portion at its upper end when folded and extending inwardly at right angles thereto, a portion adapted to swing upwardly from said last-mentioned portion and having attached at its lower end when folded a portion extending outwardly at right angles thereto, a portion adapted to swing upwardly from and in a direction at right angles to the roof of the car to form a wing roof and a portion adapted to swing outwardly and in a direction at right angles to the wing floor, substantially as described.

16. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor, means for raising, lowering and supporting said swinging portion, a portion attached to said swinging portion at its upper end when folded and extending inwardly and at right angles thereto and a portion adapted to swing upwardly from said last-mentioned portion and having attached at its lower end when folded a portion extending outwardly at right angles thereto, a portion adapted to swing upwardly from and in a direction at right angles to the roof of the car to form a wing roof and means for extending the same upwardly from the roof, and a portion adapted to swing outwardly and in a direction at right angles to the wing floor, substantially as described.

17. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing upwardly from and in a direction at right angles to the roof of the car to form a wing roof and means for extending the same upwardly from the roof, substantially as described.

18. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly from the floor of the car to form a wing floor,

a portion attached to and adapted to swing upwardly from said swinging portion, and a portion adapted to swing upwardly from and in a direction at right angles to the roof of the car to form a wing roof, substantially as described.

19. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor, a portion attached to and adapted to swing upwardly from said swinging portion, and a portion adapted to swing upwardly from and in a direction at right angles to the roof of the car to form a wing roof, substantially as described.

20. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor, a portion attached to and adapted to swing upwardly from said swinging portion, a portion adapted to swing upwardly from and in a direction at right angles to the roof of the car to form a wing roof and a portion adapted to swing in a direction at right angles to the wing floor, substantially as described.

21. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor, a portion attached to and adapted to swing upwardly from said swinging portion, and a portion adapted to swing upwardly from and in a direction at right angles to the roof of the car to form a wing roof, means for extending the same upwardly from the roof and a portion adapted to swing in a direction at right angles to the wing floor, substantially as described.

22. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly from the floor of the car to form a wing floor, means for raising, lowering and supporting said portion, a portion attached to and adapted to swing upwardly from said swinging portion, and a portion adapted to swing upwardly from and in a direction at right angles to the roof of the car to form a wing roof, substantially as described.

23. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted so swing outwardly and downwardly from the floor of the car to form a wing floor, means for raising, lowering and supporting said portion, a portion attached to and adapted to swing upwardly from said swinging portion, and a portion adapted to swing upwardly from and in a direction at right angles to the roof of the car to form a wing roof, substantially as described.

24. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor, means for raising, lowering and supporting said portion, a portion attached to and adapted to swing upwardly from said swinging portion, and a portion adapted to swing upwardly from and in a direction at right angles to the roof of the car to form a wing roof and a portion adapted to swing in a direction at right angles to the wing floor, substantially as described.

25. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor, means for raising, lowering and supporting said portion, a portion attached to and adapted to swing upwardly from said swinging portion, a portion adapted to swing upwardly from and in a direction at right angles to the roof of the car to form a wing roof, means for extending the same upwardly from the roof and a portion adapted to swing in a direction at right angles to the wing floor, substantially as described.

26. A railway-car or other like vehicle having a side wall composed of swinging portions adapted when opened or unfolded to form a wing and when closed to form a space or casing adapted to hold a picture or other like article, substantially as described.

27. A railway-car or other like vehicle having a side wall composed of outwardly-swinging portions adapted when opened or unfolded to form a wing and when closed to form a space or casing adapted to hold a picture or other like article, substantially as described.

28. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly to form a wing floor, a portion attached to and adapted to swing upwardly from said swinging portion and a portion attached to said upwardly-swinging portion at its lower end when folded and extending outwardly at right angles thereto, substantially as described.

29. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly to form a wing floor, a portion attached to and adapted to swing upwardly from said swinging portion a portion attached to said upwardly-swinging portion at its lower end when folded and extending outwardly at right angles thereto, and a portion adapted to swing upwardly to form a wing roof, substantially as described.

30. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly to form a wing floor, a portion attached to and adapted to swing upwardly from said swinging portion a portion attached to said upwardly-swinging portion at its lower end when folded and extending outwardly at right angles thereto, a portion adapted to

swing upwardly to form a wing roof, and a portion adapted to swing at right angles to the wing floor, substantially as described.

31. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly to form a wing floor, a portion attached to and adapted to swing upwardly from said swinging portion and a portion adapted to swing upwardly to form a wing roof, substantially as described.

32. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly to form a wing floor, a portion attached to and adapted to swing upwardly from said swinging portion a portion adapted to swing upwardly to form a wing roof, and a portion adapted to swing outwardly at right angles to said floor, substantially as described.

33. A railway-car or other like vehicle provided with a side wall or walls composed in part of a portion adapted to swing outwardly to form a wing floor, a portion attached to and adapted to swing upwardly from said swinging portion, and a portion adapted to swing outwardly and at right angles to said floor, substantially as described.

34. A railway-car or other like vehicle having a side wall composed of swinging portions adapted when opened or unfolded to form a wing and when closed to form a space or casing adapted to hold a picture or other like article, and an extensible roof, substantially as described.

35. A railway-car or other like vehicle having a side wall composed of outwardly-swinging portions adapted when opened or unfolded to form a wing and when closed to form a space or casing adapted to hold a picture or other like article, and an extensible roof, substantially as described.

36. A railway-car or other like vehicle provided with an extensible roof and a side wall or walls composed in part of a portion adapted to swing outwardly from the floor of the car to form a wing floor and a portion attached to and adapted to swing upwardly from said swinging portion, substantially as described.

37. A railway-car or other like vehicle provided with an extensible roof and a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor and a portion attached to and adapted to swing upwardly from said swinging portion, substantially as described.

38. A railway-car or other like vehicle provided with an extensible roof and a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor and a portion attached to said swinging portion at its upper end when folded and extending inwardly at right angles thereto, substantially as described.

39. A railway-car or other like vehicle provided with an extensible roof and a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor, a portion attached to said swinging portion at its upper end when folded and extending inwardly at right angles thereto and a portion adapted to swing upwardly from said last-mentioned portion, substantially as described.

40. A railway-car or other like vehicle provided with an extensible roof and a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor, a portion attached to said swinging portion at its upper end when folded and extending inwardly at right angles thereto and a portion adapted to swing upwardly from said last-mentioned portion and having attached at its lower end when folded a portion extending outwardly at right angles thereto, substantially as described.

41. A railway-car or other like vehicle provided with an extensible roof and a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly from the floor of the car to form a wing floor, a portion attached to said swinging portion at its upper end when folded and extending inwardly at right angles thereto, a portion adapted to swing upwardly from said last-mentioned portion and having attached at its lower end when folded a portion extending outwardly at right angles thereto and a portion adapted to swing upwardly and in a direction at right angles to the roof of the car to form a wing roof, substantially as described.

42. A railway-car or other like vehicle provided with an extensible roof and a side wall or walls composed in part of a portion adapted to swing downwardly and outwardly from the floor of the car to form a wing floor, a portion attached to said swinging portion at its upper end when folded, and extending inwardly at right angles thereto, a portion adapted to swing upwardly from said last-mentioned portion and having attached at its lower end when folded a portion extending outwardly at right angles thereto a portion adapted to swing upwardly and in a direction at right angles to the roof of the car to form a wing roof and a portion adapted to swing in a direction at right angles to the wing floor, substantially as described.

43. A railway-car or other like vehicle provided with an extensible roof and a side wall or walls composed in part of a portion adapted to swing outwardly to form a wing floor, a portion attached to and adapted to swing upwardly from said swinging portion and a portion attached to said upwardly-swinging portion at its lower end when folded and extending outwardly at right angles thereto, substantially as described.

44. A railway-car or other like vehicle provided with an extensible roof and a side wall or walls composed in part of a portion adapted

to swing outwardly to form a wing floor, a portion attached to and adapted to swing upwardly from said swinging portion, a portion attached to said upwardly-swinging portion at its lower end when folded and extending outwardly at right angles thereto, and a portion adapted to swing upwardly to form a wing roof, substantially as described.

45. A railway-car or other like vehicle provided with an extensible roof and a side wall or walls composed in part of a portion adapted to swing outwardly to form a wing floor, a portion attached to and adapted to swing upwardly from said swinging portion, a portion attached to said upwardly-swinging portion at its lower end when folded and extending outwardly at right angles thereto, a portion adapted to swing upwardly to form a wing roof, and a portion adapted to swing at right angles to the wing floor, substantially as described.

46. A railway-car or other like vehicle provided with an extensible roof and a side wall or walls composed in part of a portion adapted to swing outwardly to form a wing floor, a portion attached to and adapted to swing upwardly from said swinging portion and a portion adapted to swing upwardly to form a wing roof, substantially as described.

47. A railway-car or other like vehicle provided with an extensible roof and a side wall or walls composed in part of a portion adapted to swing outwardly to form a wing floor, a portion attached to and adapted to swing upwardly from said swinging portion, a portion adapted to swing upwardly to form a wing roof, and a portion adapted to swing outwardly and at right angles to said floor, substantially as described.

48. A railway-car or other like vehicle provided with an extensible roof and a side wall or walls composed in part of a portion adapted to swing outwardly to form a wing floor, a portion attached to and adapted to swing upwardly from said swinging portion, and a portion adapted to swing outwardly and at right angles to said floor, substantially as described.

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