

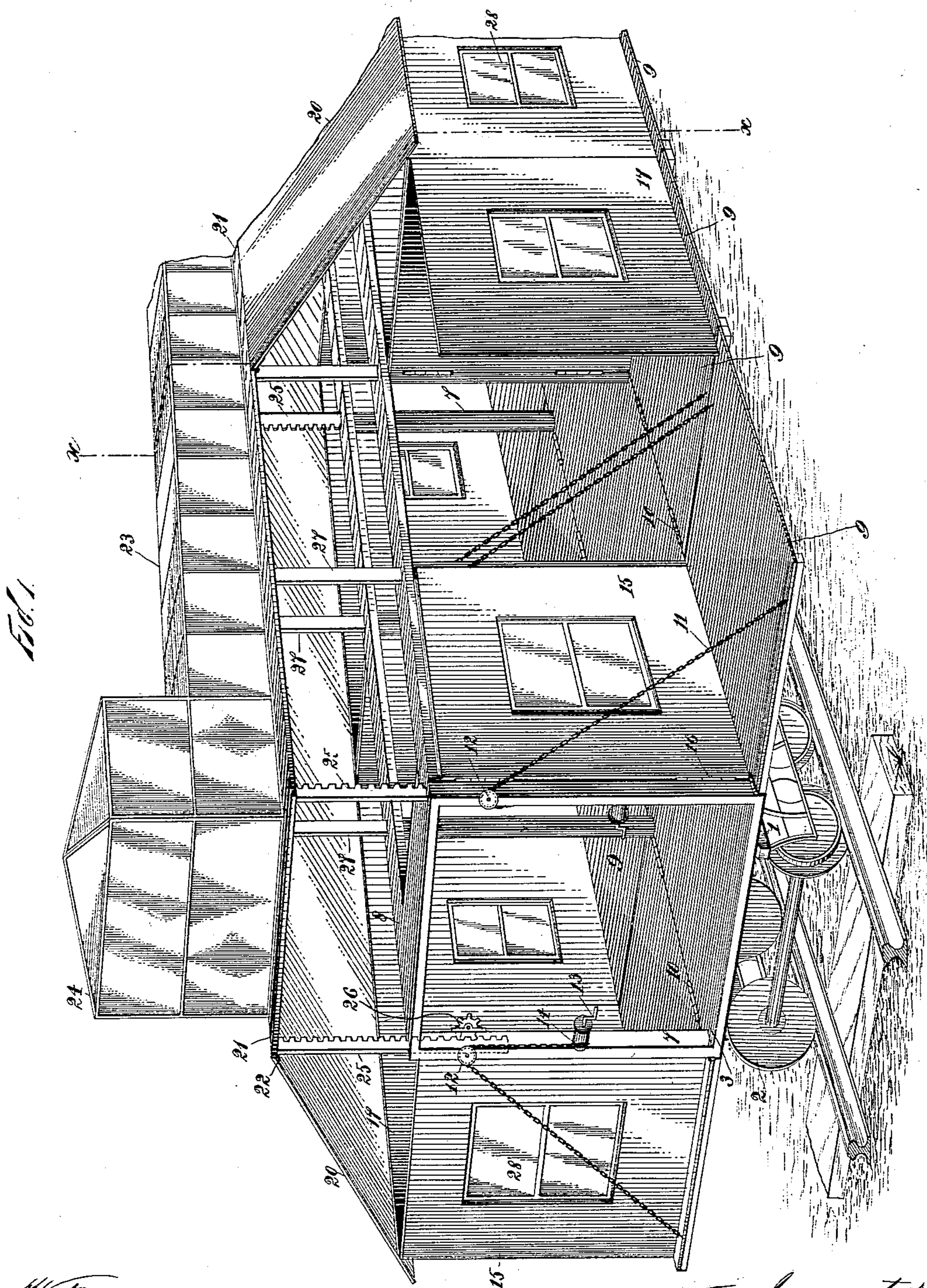
(No Model.)

2 Sheets—Sheet 1.

A. BIERSTADT.
RAILWAY CAR.

No. 559,964.

Patented May 12, 1896.



Witnesses:
John Buckler,
Charles F. Patterson.

Inventor:
Albert Bierstadt
By Simonds, Burdett & Frothingham
his Attorneys.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

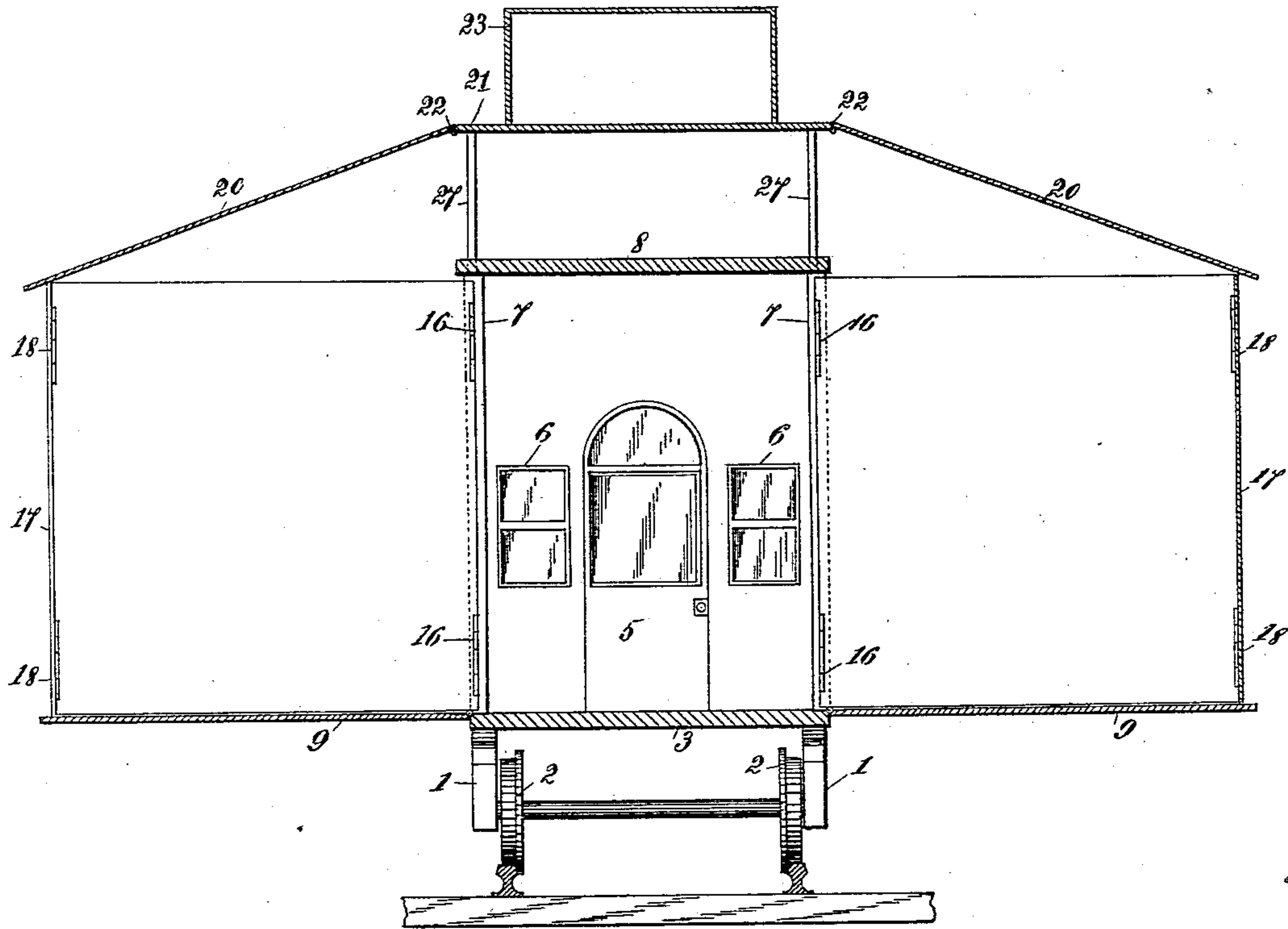
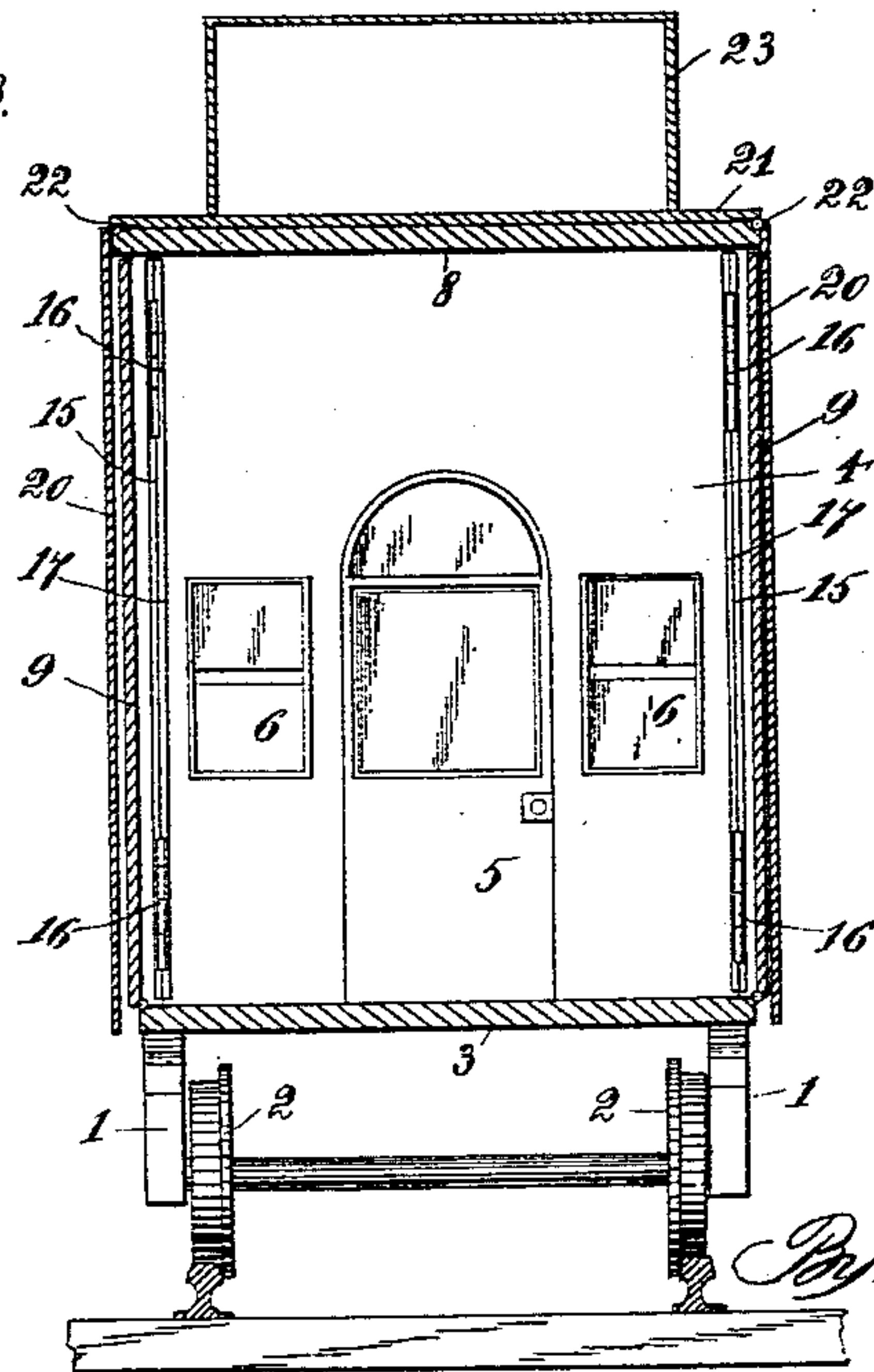


Fig. 3.



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UNITED STATES PATENT OFFICE.

ALBERT BIERSTADT, OF NEW YORK, N. Y.

RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 559,964, dated May 12, 1896.

Application filed June 2, 1893. Renewed October 15, 1895. Serial No. 565,806. (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 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 wall or walls of which will be movable and extensible so as to form wings, and thereby enlarge the car to such an extent as to be suitable for the purposes of lecturing, exhibiting pictures or other articles, camping out, &c. This car can be used also for chapel and church purposes, also theaters, &c.

To that end my invention consists of a vehicle provided with ordinary trucks and running-gear and with a side wall or walls which are made to extend and preferably to unfold and swing outwardly so as to form wings, as more particularly hereinafter described, and pointed out in the claims.

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

Referring to the drawings, Figure 1 is a view in perspective of my improved car with the end cut off, with the monitor roof raised, and the side walls partly unfolded. Fig. 2 is a view of a cross-section, taken on the line *xx* of Fig. 1. Fig. 3 is a view of a cross-section of my improved car with the monitor roof lowered and the side walls closed.

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

3 denotes the floor of the body of the car, which is attached in the usual manner to the trucks.

4 denotes the end walls, which are provided with doors 5 and windows 6 of the ordinary construction.

7 denotes upright posts attached rigidly to the floor and extending up to and attached to the part 8, which forms a portion of the roof.

9 denotes a portion of the side wall hinged to the floor, which portion when opened and moved outwardly on its hinges forms the wing floor.

10 denotes the hinges last above referred to.

11 denotes the chains attached to the portion 9 near its outer end and passing over

pulleys 12, fastened to the upright posts 7, by which means the said portion 9 is lowered and raised and held in position when extended or unfolded. These chains are operated by a crank 13 on a windlass or drum 14, to which they are attached in the ordinary manner.

15 denotes a portion of the side wall hinged to the upright posts 7, and which when extended outwardly on its hinges forms the end wall of the wing.

16 denotes the hinges last above referred to.

17 is a portion of the side wall hinged to the portion 15, and which when turned outwardly on its hinges forms a part of the side wall of the wing.

18 denotes the hinges last above referred to. The portions 17 when extended may be fastened by any suitable means.

20 denotes a portion of the side walls hinged to the monitor roof 21, which portion when raised forms the wing-roof.

22 denotes the hinges last above referred to. The part 20, when closed, forms the outside portion of the side walls of the car, and when thus closed may be held in place by any suitable device. The roof 8 of the car is supported by the upright posts 7. The monitor roof 21 is provided with a raised portion 23, made preferably of glass and wood. One portion of this may be higher than the other, as at 24. This portion when extended forms a second story to the car, which may be utilized as a place of observation. This portion is raised and lowered by means of a rack-and-pinion device 25 and 26, attached to the upright posts 7, and when raised is held in place by the said rack-and-pinion device and also by the posts 27, which are extensions of the upright posts 7 and adapted to be raised and lowered, as desired, by any suitable means. The side and end walls of the wing are provided with windows 28.

The operation in enlarging the car is as follows: The portion 20 is raised by hand or by any suitable means sufficiently high to allow the part 9 to be lowered. The part 9 is then lowered by means of the chains 11. The portion 15 is then turned outwardly on its hinges until it is at right angles to the upright posts 7. Then the portion 17 is turned outwardly on its hinges until it is at right

angles to the portion 15. The portion 20 is lowered until it rests at its outer edge upon that portion 17 which forms the side of the wing.

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 might obviously be made in one section.

It is also obvious that the car may be of any suitable size and may be made of the material 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 with passenger-trains.

It is obvious that the monitor roof may be stationary and not capable of being raised without departing from the spirit of my invention.

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 monitor roof 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 and downwardly to form a wing floor and a portion adapted to swing outwardly and in a direction at right angles to the said floor, 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 to form a wing floor, a portion adapted to swing outwardly and in a direction at right angles to the said floor and a portion adapted to swing outwardly from and in a direction at right angles to said last-mentioned swinging part, 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 downwardly and outwardly to form a wing floor, a portion adapted to swing outwardly and in a direction at right angles to the said floor, a portion adapted to swing outwardly from and in a direction at right angles to said last-mentioned swinging part and a portion adapted to swing outwardly and upwardly to form a wing roof, 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 to form a wing floor and

means for raising, lowering and supporting said swinging portion and a portion adapted to swing outwardly and in a direction at right angles to the said floor, 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 to form a wing floor and means for raising, lowering and supporting said swinging portion, a portion adapted to swing outwardly and in a direction at right angles to the said floor and a portion adapted to swing outwardly from and in a direction at right angles to said last-mentioned swinging part, 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 to form a wing floor and means for raising, lowering and supporting said swinging portion, a portion adapted to swing outwardly and in a direction at right angles to the said floor, a portion adapted to swing outwardly from and in a direction at right angles to said last-mentioned swinging part and a portion adapted to swing outwardly and upwardly to form a wing roof, substantially as described.

7. A railway-car or other like vehicle provided with an extensible roof and means for raising and lowering said roof and a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly to form a wing floor, substantially as described.

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

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

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

11. A railway-car or other like vehicle pro-

vided with an extensible roof and means for raising and lowering said roof, a side wall or walls composed in part of a portion adapted to swing outwardly and downwardly to form a wing floor and means for raising, lowering and supporting said swinging portion, substantially as described.

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

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

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

15. A railway-car or other like vehicle having a side wall composed of swinging portions and an extensible roof, substantially as described.

16. A railway-car or other like vehicle having a side wall composed of outwardly-swinging portions and an extensible roof, 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 outwardly to form a wing floor and a portion adapted to swing outwardly and in a direction at right angles to the said floor, 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 to form a wing floor, means for supporting said swinging portion and a portion adapted to swing outwardly and in a direction at right angles to the said floor, substantially as described.

19. A railway-car or other like vehicle provided with an extensible roof, means for raising and lowering said roof and a side wall or walls composed in part of a portion adapted to swing outwardly to form a wing floor, substantially as described.

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

24. A railway-car or other like vehicle provided with an extensible roof and a side wall or walls composed in part of a swinging portion, substantially as described.

25. 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, substantially as described.

26. 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 to form a wing floor, substantially as described.

27. 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, and a portion adapted to swing outwardly and in a direction at right angles to the said floor, substantially as described.

28. 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 adapted to swing outwardly and in a direction at right angles to the said floor, and a portion adapted to swing outwardly from and in a direction at right angles to said last-

mentioned swinging portion, substantially as described.

29. 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 adapted to swing outwardly and in a direction at right angles to the said floor, a portion adapted to swing outwardly from and in a direction at right angles to said last-mentioned swinging portion 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 an extensible roof, and a side wall or walls composed in part of a portion adapted to swing outwardly and in a direction at right angles to the floor of the car, substantially as described.

31. A railway-car or other like vehicle provided with an extensible roof, a side wall or walls composed in part of a portion adapted to swing outwardly and in a direction at right angles to the floor of the car, and a portion adapted to swing outwardly from and in a direction at right angles to said last-mentioned swinging part, substantially as described.

32. 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 roof, substantially as described.

33. A railway-car or other like vehicle pro-

vided with an extensible roof, a side wall or walls composed in part of a portion adapted to swing upwardly to form a wing roof, and a portion adapted to swing outwardly and in a direction at right angles to the floor of the car, substantially as described.

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

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

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

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