No. 671,173. Patented Apr. 2, 1901.

G. SIMPSON.

COMBINATION CAR.

(Application filed Oct. 4, 1900.)

(No Model.)

Fig. 1

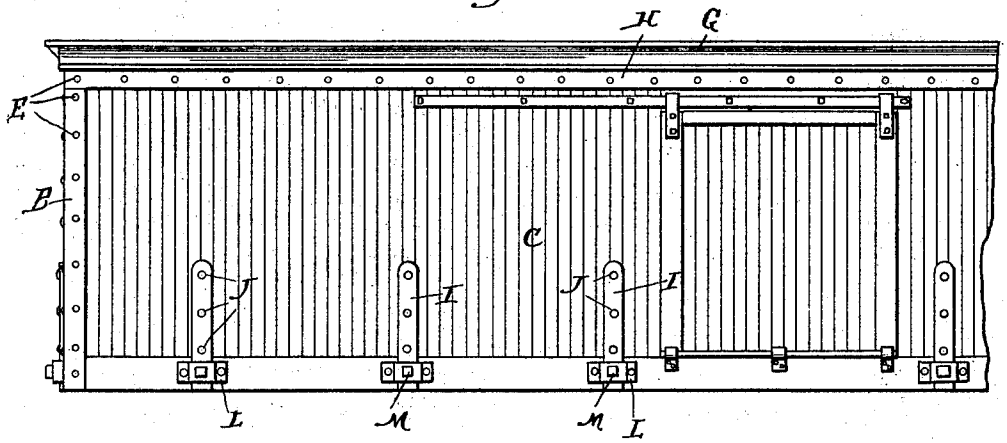


Fig. 2.

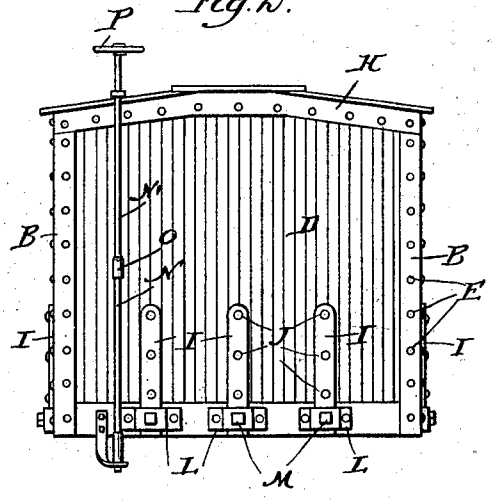


Fig. 3.

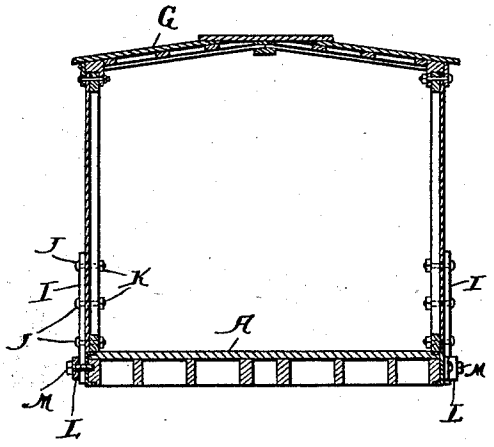
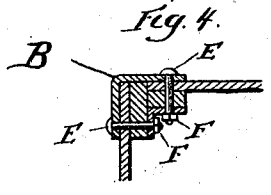


Fig. 4.



Witnesses:

H. B. Hallock.

L. A. Morrison

Inventor

George Simpson.

By Wm. C. Hazelton Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE SIMPSON, OF LOWRY CITY, MISSOURI.

COMBINATION-CAR.

SPECIFICATION forming part of Letters Patent No. 671,173, dated April 2, 1901.

Application filed October 4, 1900. Serial No. 31,985. (No model.)

To all whom it may concern:

Be it known that I, GEORGE SIMPSON, a citizen of the United States, residing at Lowry City, county of St. Clair, and State of Missouri, have invented a certain new and useful Improvement in Combination-Cars, of which the following is a specification.

My invention relates to a new and useful improvement in combination-cars, and has for its object to so construct the bodies of cars that varying types—such as flat, box, or cattle car bodies—may be used with one running-gear.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of a portion of a car made in accordance with my improvement; Fig. 2, an end view thereof; Fig. 3, a cross-section showing the arrangement of the stays and bolts for holding the sections of the car in place, and Fig. 4 an enlarged horizontal section of one of the corner-joints.

In carrying out my invention as here embodied, A represents the bottom of the car, to which may be attached the usual equipments—such as air-brakes, &c., but which are not here shown, as they form no part of my invention, and I have not deemed it necessary to illustrate the same.

In forming a box-car I utilize the double flanges B, which unite the corners of the sides C and the ends D and are attached thereto by the bolts E, having nuts F formed upon their inner ends. Likewise the top of the car G is attached to the sides and ends by the flange-strips H, which are also secured in place by similar bolts. The body of a car thus formed will be as rigid as those of ordinary construction and may be placed upon the bottom or floor and secured in place by the stays I, which are secured to the ends and sides by the bolts J, having the nuts K run upon the inner ends thereof. There are preferably three of these stays for each of the ends of the body of the car, and the lower ends of these stays are fitted in the sockets L and secured by the bolt M. This same construction is utilized when a stock and cattle car is to be formed upon the floor, the difference being that the ends and sides are of open-work, as is well known. The brake-rod is made in two sections N and N′, being connected by the slip-socket O, so that when the car is to be converted into a flat-car the section N′ will be removed with the body and the hand-wheel P removed therefrom and placed upon the upper end of the lower section. If it is desired to have narrow sides and ends if the car is to be used for shipping coal, brick, and the like, such sides and ends may be provided and connected together and secured in place in the same manner as described in connection with the full body, it of course being understood that the top would be omitted.

To take the car apart, the entire body of the box or cattle car can be lifted off by means of light derricks or cranes, or it may be taken apart in sections by removing the bolts from the flange-strips H, which will permit the removal of the roof, and then by the removal of the bolts E the sides and ends will be separated, and each in turn may be removed from the floor or bottom by the removal of the bolts M, which will permit the stays I to be withdrawn from the sockets L.

By my improved construction the body of a car can be constructed much cheaper than by the old method, and especially cattle-cars; but the principal advantage of my improvement is the fact that the trucks of a car may be used for a number of distinct purposes, such as a flat-car, a coal-car, a cattle or stock car, or a box-car, which by the present method of construction would require a separate car for each use, and as all cars are not in use at the same time, there being seasons that the demand for one kind of car is very great, while the other kinds are called into but little use, so that it is only necessary to have a number of bodies for the entire freight rolling-stock of a railroad company to be used to supply the demand of any particular kind of freight, thus reducing the necessary amount of such rolling-stock to at least two-thirds of

the present requirements and yet give greater shipping facilities.

Of course I do not wish to be limited to the exact details of construction here shown, as these may be varied within certain limits without departing from the spirit of my invention, the gist of which rests in the broad idea of providing a combination-car which may be converted into a number of forms for various kinds of freight.

Having thus fully described my invention, what I claim as new and useful is—

1. A combination-car consisting of a floor or bottom, sides and ends detachably secured together by double flange-strips, a top also secured to the sides and ends by flange-strips, stays secured to the sides and ends, sockets in which the lower ends of the stays project, and bolts for holding said stays rigidly in place whereby the car may be used as a flat-car, a stock or a box car, as specified.

2. The herein-described combination-car consisting of a bottom, sockets secured around the edges thereof, sides and ends, double flange-strips in which the ends of said sides and ends fit, bolts and nuts for securing these members together, stays bolted to the ends and sides projecting below the edges of said sides and ends and adapted to be secured within the sockets, a top, flange-strips secured to the edges of the top and adapted to be bolted to said sides and ends whereby a body is formed, and a brake-rod made in two sections, said sections being coupled together by a slip-socket, substantially as and for the purpose set forth.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

GEORGE SIMPSON.

Witnesses:
W. E. DAWSON,
LA RUE READING.