Nov. 16, 1926. 1,607,511

S. E. BRADY

CONVERTIBLE CAR

Filed June 8, 1925 4 Sheets-Sheet 1

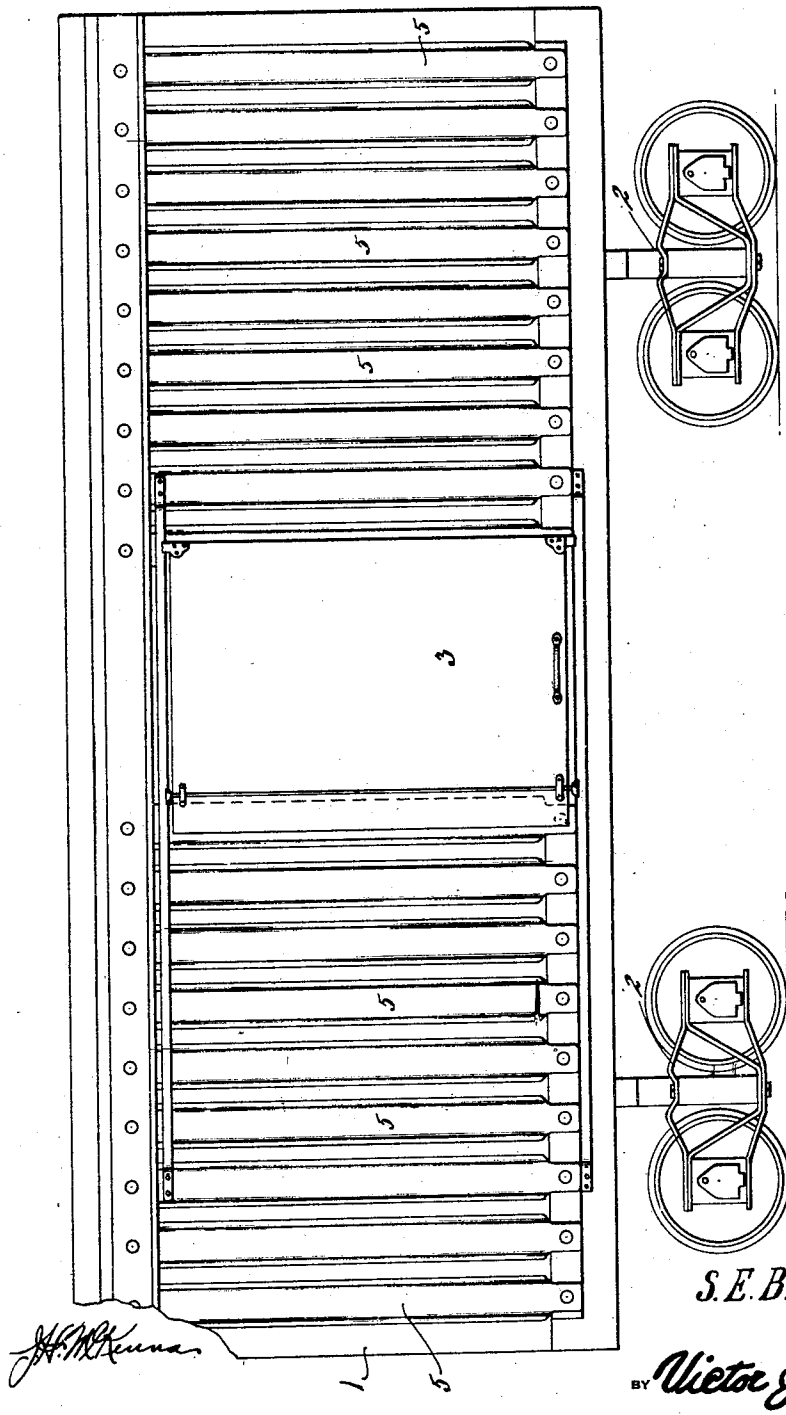

Fig. 1.

S.E. Brady,

INVENTOR

BY Victor J. Evans,

ATTORNEY

WITNESS:

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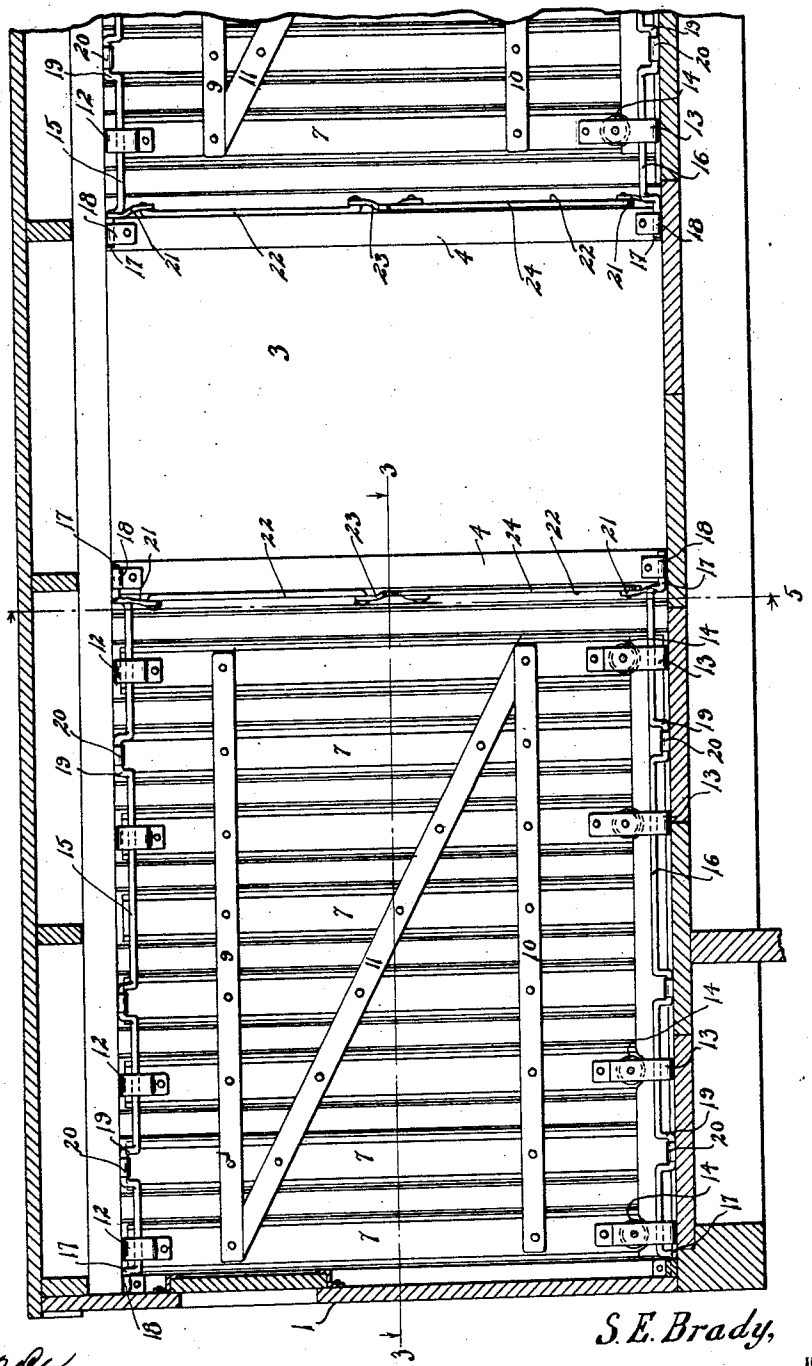

Fig. 2.

S. E. Brady, INVENTOR

BY Victor J. Evans, ATTORNEY

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S. E. BRADY

CONVERTIBLE CAR

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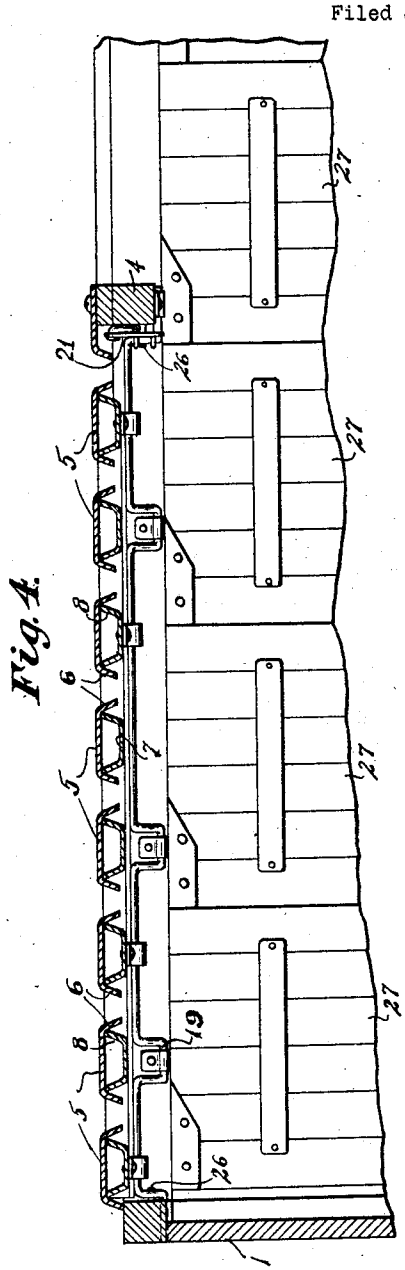

Fig. 4.

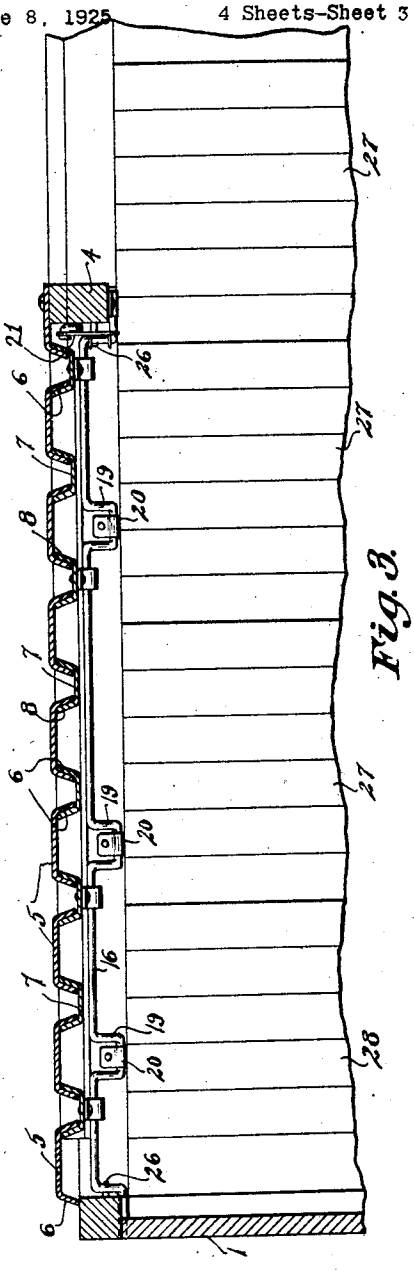

Fig. 3.

S. E. Brady, INVENTOR

BY Victor J. Evans, ATTORNEY

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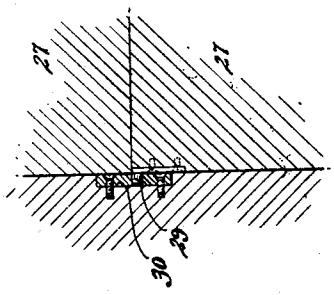

Fig. 7.

Fig. 6.

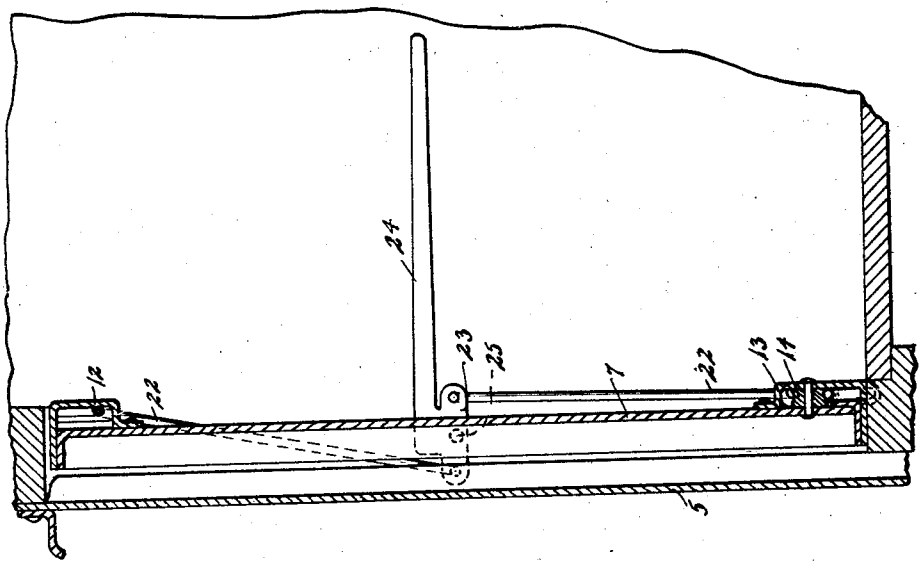

Fig. 5.

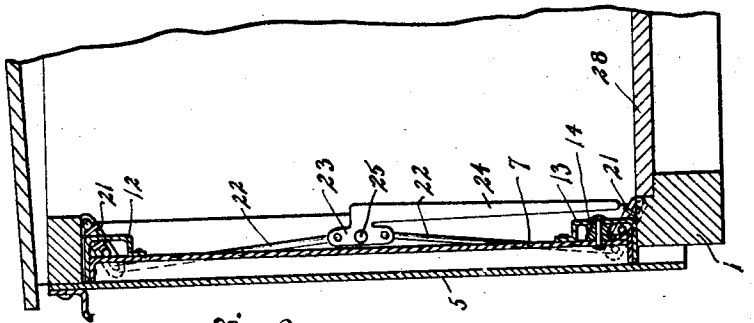

Fig. 8.



WITNESS:

S. E. Brady,
INVENTOR

BY Victor J. Evans,
ATTORNEY

Patented Nov. 16, 1926. 1,607,511

UNITED STATES PATENT OFFICE.

STEPHEN E. BRADY, OF NOEL, MISSOURI.

CONVERTIBLE CAR.

Application filed June 8, 1925. Serial No. 35,758.

The object of this invention is the provision of a convertible railway car.

Another object is to construct a railway car having outer spaced vertical slats forming the sides thereof and having inner spaced slats which are connected together, and supported on means whereby the said inner slats may be bodily moved and held directly opposite and in contacting relation with the outer slats, as when the car is to be ventilated in the shipping of live stock or perishable merchandise and also wherein the said inner connected slats may be moved to bridge the space between the outer slats and forced and held in tight contact therewith, as when the car is to be employed for shipping merchandise, etc.

A still further object is the construction of a railway car in which the sides thereof, opposite the central doorways therein, are formed of vertically arranged spaced slats of metal and which have inwardly directed angle edges, while similar slats having outwardly directed angle edges are connected together and mounted for movement upon rails having offset pivotally supported portions, there being lever operated means for swinging the rails, whereby to draw the inner connected slats away from the outer slats to permit of the said inner slats being moved bodily on the rails to arrange the same opposite and in a line with the outer slats or to arrange the said inner slats between the outer slats, a reverse movement of the lever forcing the flanged edges of the inner slats into tight contacting engagement with the flanged edges of the outer slats and whereby one-half or all of the car may be closed or opened to suit weather conditions, as well as the conditions of the materials hauled in the car.

A still further object is the provision of a railway car which may be readily converted from an open or ventilated car into a closed car and which has its floor constructed of platforms, all except one of the end platforms being hingedly secured to the side sills of the car frame, and whereby upon the removal of the said end platform the remaining platforms may be swung on their pivots to arrange their under faces uppermost, and thereby present a clean floor surface, the removable platform being also reversely arranged and positioned at the opposite end of the car, and whereby the car in addition to being employed for hauling freight, such as live stock and merchandise, may be likewise employed as an immigrant car.

With the above broadly stated objects in view, and others which will present themselves as the nature of the invention is better understood, reference is to be had to the drawings which accompany and form part of this application.

In the drawings;

Figure 1 is a side elevation of a railway car in accordance with this invention.

Figure 2 is an enlarged central vertical longitudinal sectional view taken through the major portion of the car.

Figure 3 is a horizontal sectional view approximately on the line 3—3 of Figure 2.

Figure 4 is a similar sectional view but showing the inner wall or connected slats moved between the outer slats, as when the car is to be ventilated, the construction also disclosing the platforms providing the floor reversely positioned with respect to the showing in Figure 3.

Figure 5 is a sectional view approximately on the line 5—5 of Figure 2.

Figure 6 is an enlarged substantially similar sectional view but showing the levers swung to arrange the inner slats or side of the car for slidable movement on the rails constituting the track.

Figure 7 is a fragmentary plan view with parts in section, to illustrate the hinged connection between one of the floor platforms and one of the side sills of the car.

Fig. 8 is an enlarged perspective view showing the offset links and a lug attached thereto.

The frame of the car 1 is of the usual construction, and the car body is mounted on the trucks 2 in the usual manner. The car is of the freight carrying type and is provided at its center with oppositely arranged openings for the usual doors 3. The vertical posts at the sides of the door-ways are indicated by the numerals 4.

Between the posts 4 and the ends of the car there are vertically arranged slats 5. These slats are in spaced relation and formed of metal. The edges of the slats are flanged, as at 6. The flanges are inwardly directed and form an obtuse angle. The slats 5 provide the fixed sides of the car.

The improvement embodies movable sides which are also in the nature of vertically disposed slats 7 that have their edges flanged, as at 8. These flanges are directed at out-

ward angles, and the distance between the flanges 8 of the slats 7 equals the distance between the body of the slats 5 and their flanges 6. In other words, the flanges 8 of the slats 7 are designed to receive thereagainst the inwardly directed flanges 6 of the slats 5 when the inner side sections are moved to cover the space between the outer slats and thus convert the car from an open or ventilated car to a closed car. The manner in which this is accomplished will presently be apparent.

The inner slats constituting the side members of the car are connected together on their inner faces by upper and lower cleats 9 and 10, respectively, and a brace cleat 11 angled between the opposite ends of the said cleats 9 and 10.

The slats 7 at the ends of the inner side sections of the car as well as certain of the intermediate slats 7, have secured on their inner faces, adjacent to their top and lower edges, substantially U-shaped brackets 12 and 13, respectively, the lower brackets 13 being of a greater length than the upper brackets 12. The lower brackets 13 have journaled therein, adjacent to the upper portions thereof, grooved rollers 14. Passing freely through the brackets 12 and 13, there are rails 15 and 16, respectively, these rails constituting a track on which the inner side members of the car may slide. The rails are preferably in the nature of cross sectionally round metal rods and have their ends offset, as at 17, and formed with straight extensions which are journaled in suitable bearings 18, respectively at the ends of the car and on the posts 4. In addition to the offset ends 17, the rails 12 and 13 are formed with cranked portions 19, respectively, which are journaled in suitable bearings 20, respectively on the inner side sills of the car and on the upper roof supporting sills. Either integrally formed with or fixedly secured to the offset ends 17 of the rails, at the portions thereof opposite the posts 4, there are angularly directed lugs 21, and to each of these lugs there is pivotally secured a link 22, respectively. The confronting ends of the links 22 are spaced and are pivotally secured to the ends of a substantially T-shaped head 23 of an operating lever 24. Each of the operating levers has its head portion 23 centrally pivoted, as at 25, to the respective posts 4. When the levers are operated to swing the cranked tracks 15 and 16 upwardly with respect to the car, the track 16 will engage with the rollers 14 so that the inner and connected series of slat sections may be moved bodily a limited distance on the said track 16 to either open or close the car, (see Figure 4).

By reference to the drawings it will be noted that the slats constituting the inner sides of the car are of a slightly less length than the fixed slats constituting the outer sides of the car. When any of the levers 24 are swung to horizontal position the link connection between the T-head of the said lever and the rails constituting the track, will cause the said levers to swing upon their offset supports, and consequently arrange the inner slats inwardly of the car and out of the path of contact with the flanges of the fixed slats, which permits the inner sides being slid longitudinally on the track. Suitable stop means 26 on the inner face of the posts 4 and on the end posts of the car frame limit the sliding movement of the inner slats in both directions, so that when the side sections are moved their limit in one direction the slats thereof will be arranged directly to the rear of the outer fixed slats. By swinging the lever to its initial vertical position, the rails of the tracks will be swung toward the fixed side of the car, moving the movable side thereof so that the slats constituting the same will be received in the slats constituting the fixed side, as disclosed in Figure 4. This provides a ventilated car. Now when the lever is swung as first described, and the sides are moved on the rails in an opposite direction the stop elements will contact the slat 7 when all of the said slats 7 are arranged to bridge the space between the slats 5. By again swinging the lever to horizontal position, the tracks will cause the slats 7 to be moved toward the fixed slats 5 and likewise bring their flanges 8 to engage with the inner faces of the flanges 6 of the said slats 5. This arrangement is disclosed in Figure 3 and the car is thus converted from a ventilated to a closed car.

With a construction as above described, it will be noted that the sides from either end of the central doorways may be closed or opened. By this arrangement any of the side sections may be ventilated or closed. Also by this arrangement one end of the car may be closed and the other end opened for ventilation. This is a very desirable feature of the invention, inasmuch as one end of the car may be employed for human freight and may be partitioned from the other end of the car in which live stock or other merchandise is conveyed.

After the car has been employed for conveying live stock to its destination, the floor of the car must be thoroughly cleaned for the reception of goods other than live stock to be returned in the car. To provide for this I construct the floor of the car in sections, all of the sections, except one of the end sections, being indicated in the drawings by the numeral 27, the remaining platform being indicated by the numeral 28. The platforms 27 and 28 are of the same size and the platforms 27 have secured on the oppo-

site corners thereof trunnions 29 that are received in keepers 30 fixed on the side sills of the car frame. By this arrangement when the platform 28 is removed the platforms 27 may be swung upon their pivots to arrange their under faces uppermost so that any filth or dirt on the said platforms will be removed therefrom. The platform 28, is, of course, first removed and reversely arranged on the second end of the car.

The simplicity of my construction, and the many advantages thereof, will, it is thought be perfectly apparent to those skilled in the art to which such invention relates without further detailed description. It is, of course, to be understood that I am not to be restricted to the precise structural features herein set forth nor to size, proportion or material employed and, therefore, I hold myself entitled to make such changes from the illustrated embodiment herein set forth, as fairly fall within the scope of what I claim.

Having described the invention, I claim:—

1. A railway car having a fixed side of outer vertically disposed slats, and an inner side of connected slats, a track on which the inner side is mounted for slidable movement, whereby to bring the slats of the inner side in alignment with or to bridge the space between the outer slats and means for locking the inner side to arrange the slats thereof in either of said positions.

2. A railway car having sides comprising outer vertically fixed slats, an inner side comprising spaced connected slats, supporting means for the inner side to permit of the said side sliding thereon to permit the slats thereof being arranged directly opposite the outer slats or to bridge the spaces between the upper slats, the mount for the inner side being supported in a manner to move the slats thereon away from the outer slats for the sliding of the inner side and toward the outer slats for contacting engagement therewith.

3. A freight car construction having fixed sides comprising vertically disposed connected slats formed with inwardly directed angle edge flanges, and a movable side also constructed of vertically arranged slats having outwardly directed flanged sides, longitudinally arranged rails at the top and bottom of the car and constituting a track, said rails having offset pivotally supported portions, substantially U-shaped brackets on the inner side through which the rails pass, and the lower brackets having grooved wheels journaled therein which rest for limited travel on the lower rail when the latter is swung on its pivots in one direction, lever operated means for swinging the rails to move the inner side away from the outer side and to permit of the inner side sliding on said rails, said operating means comprising a lever having a T-head which is centrally pivoted to a support, links pivoted to the ends of the head, offset lugs on the rails to which the links are pivoted, stop means for engaging the opposite ends of the inner side when the slats thereof are brought opposite the outer slats or in a position to bridge the space between the outer slats, and said operating means for the track designed to be moved to initial position to bring the slats of the inner sides to engage with the outer slats when moved to either of its mentioned positions.

In testimony whereof I affix my signature.

STEPHEN E. BRADY.