

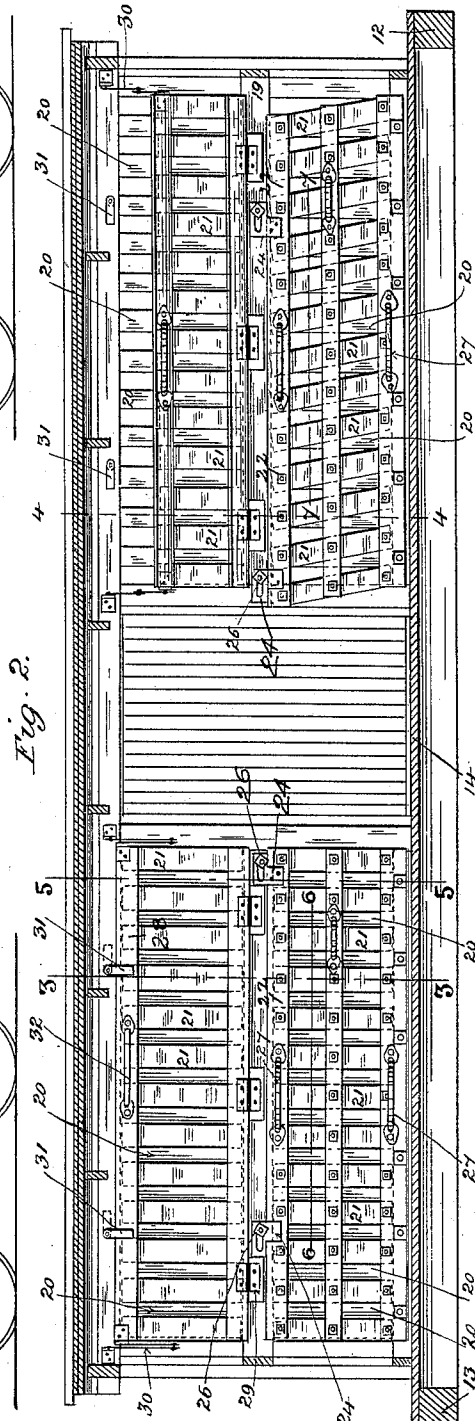
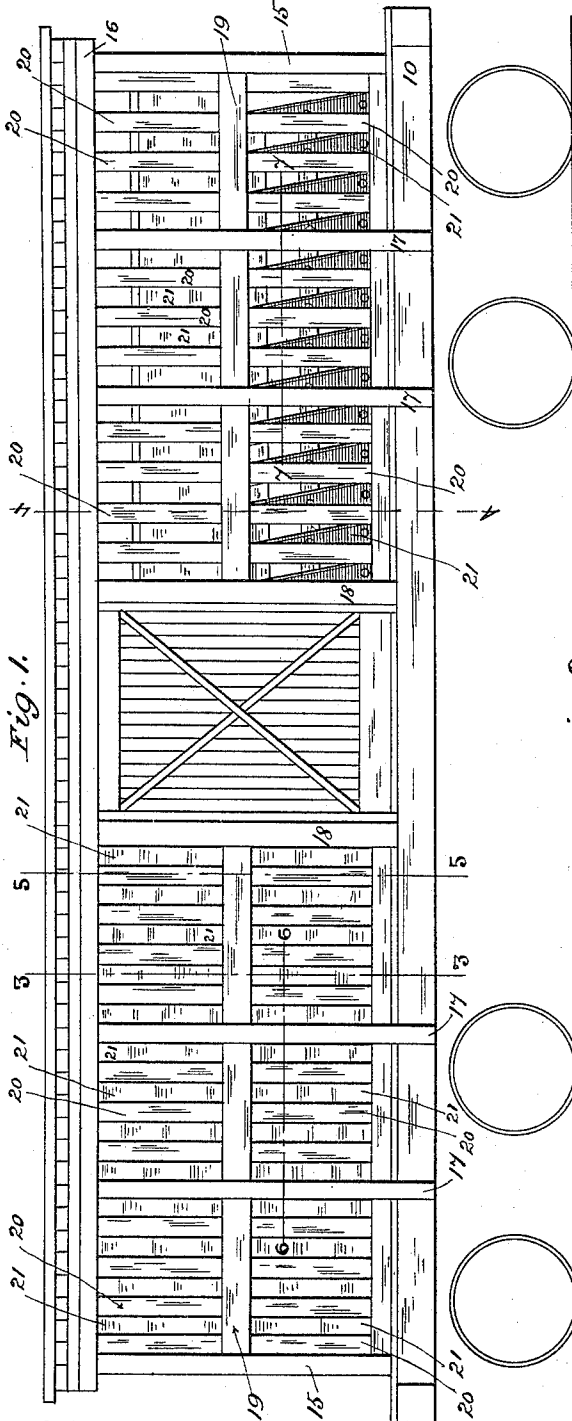
(No Model.)

2 Sheets—Sheet 1.

P. H. BEENCK.
COMBINATION STOCK AND FREIGHT CAR.

No. 584,261.

Patented June 8, 1897.



WITNESSES

W. R. Smith
S. G. Wells

INVENTOR

Peter H. Beenck

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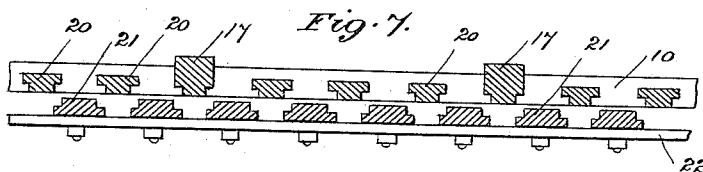
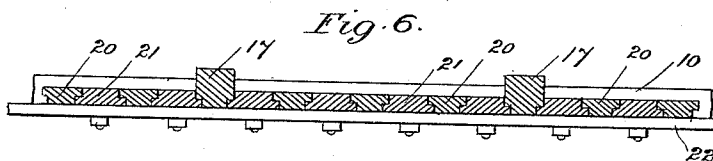
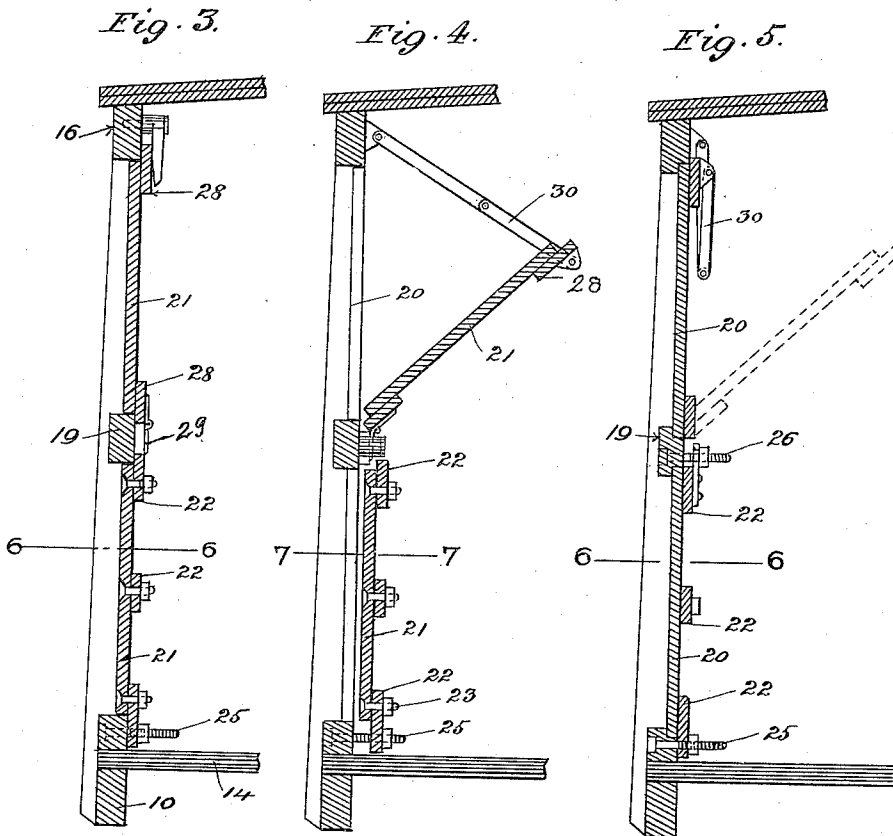
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UNITED STATES PATENT OFFICE.

PETER H. BEENCK, OF ST. LOUIS, MISSOURI.

COMBINATION STOCK AND FREIGHT CAR.

SPECIFICATION forming part of Letters Patent No. 584,261, dated June 8, 1897.

Application filed February 15, 1897. Serial No. 623,530. (No model.)

To all whom it may concern:

Be it known that I, PETER H. BEENCK, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in a Combination Stock and Freight Car, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to transformable cars; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

The object of my invention is to construct a car in such a way that it may be readily transformed from a closed box-car to a ventilated fruit or stock car.

Figure 1 is a side elevation of a car constructed in accordance with the principles of my invention, one end of the car being shown closed and the opposite end of the car being shown ventilated. Fig. 2 is a vertical sectional view taken longitudinally of the car shown in Fig. 1. Fig. 3 is a transverse sectional view through one wall of the car and taken approximately on the lines 3 3 of Figs. 1 and 2, said view showing the construction and relation of the parts when the car is closed. Fig. 4 is a view analogous to Fig. 3 and showing the construction and relation of the parts when the car is ventilated, said view being taken approximately on the lines 4 4 of Figs. 1 and 2. Fig. 5 is a view analogous to Fig. 3 and taken approximately on the lines 5 5 of Figs. 1 and 2. Fig. 6 is a horizontal sectional view through one wall of the car and taken approximately on the lines 6 6 of Figs. 1, 2, 3, and 5. Fig. 7 is a view analogous to Fig. 6 and taken approximately on the line 7 7 of Figs. 1, 2, and 4.

In the construction of a car in accordance with the principles of my invention the sills 10 and 11 form the side pieces of the bed of the car and the sills 12 and 13 connect the ends of said side pieces. The floor 13 rests upon the bed thus constructed. The corner-posts 15 extend upwardly from the corners of the bed and are connected by the plates 16 at their upper ends. The intermediate posts 17 are mounted in vertical positions intermediate of the corner-posts 15 and connect the sills with the plates. The intermediate

posts 18 are mounted approximately at the centers of the sides of the car and form the door-casing. The cross-pieces 19 are mounted in a horizontal position half-way between the plates 16 and the sills and connect the corner-posts 15 with the intermediate posts 18, said cross-pieces being also attached to the intermediate posts 17. The lower or grain wall is below the cross-pieces 19, and that portion of the wall which is above the cross-pieces I will designate the "upper" wall.

The grain-wall consists of the boards 20, fixed in vertical positions between the cross-pieces 19 and the sills, and the boards 21 are arranged alternately with said boards 20, there being rabbet-joints between the edges of said boards 20 and said boards 21. In the arrangement of the boards 20 the posts 17 take the places of a corresponding number of the boards 20, said posts also being constructed to form rabbet-joints with the boards 21. The cross-pieces 22 are placed against the inner faces of the boards 21 and transversely of said boards, and the bolts 23 are inserted through said cross-pieces and through said boards 21 in transverse and horizontal alinement with each other, as required to form pivotal connections between said boards and cross-pieces.

The slotted ears 24 are attached to the upper one of the cross-pieces 22 and project upwardly, the slots in said ears being arranged horizontally and in positions above said cross-pieces to which the ears are attached. The bolts 25 are inserted horizontally through the upper parts of the sills 10 and 11, and the bolts 26 are inserted horizontally through the cross-pieces 19 in positions to operate in the slotted ears 24. The boards 21 are cut to such a length that they will fit between the upper faces of the sills and the lower faces of the cross-pieces 19. The lower ones of the cross-pieces 22 are arranged to project downwardly from the lower ends of the boards 21 inside of the sills, and the upper ones of said cross-pieces 22 project upwardly from the upper ones of the boards 21 inside of the cross-pieces 19. The bolts 25, which are inserted through the sills, also pass through the lower ones of the cross-pieces 22 below the lower ends of the boards 21.

When it is desired to ventilate the lower part of the car, the nuts upon the bolts 25 and

26 are loosened and the handles 27, attached to the inner faces of the cross-pieces 22, are manually engaged and the boards 21 are withdrawn from their positions between the boards 20, as indicated in Fig. 7, and then the upper ends of said boards 21 are pushed in a direction longitudinally of the car, thus sliding the ears 24 upon the bolts 26 and swinging the upper ends of said boards 21 out of transverse alignment with the openings between said boards 20, as indicated in the ventilated ends of the car shown in Figs. 1 and 2. When it is desired to again close the lower part of the car, the boards 21 are righted up, the nuts upon the bolts 25 and 26 are tightened, thus bringing said boards 21 again in position between the boards 20.

In the construction of the upper part of the car the boards 20 are inserted between the cross-pieces 19 and the plates 16 and secured rigidly in position, and the boards 21 are arranged alternately between said boards 20, there being rabbet-joints between said boards 20 and 21, and said boards 21 are rigidly secured to the cross-pieces 28, the lower edges of said cross-pieces 28 extending downwardly from the lower ends of the boards 21 inside of the cross-piece 19, and the upper ones of said cross-pieces 28 extending upwardly from the upper ends of the boards 21 inside of the plates 16. The lower one of the cross-pieces 28 is connected to the cross-piece 19 by means of the hinges 29, said hinges being arranged to swing inwardly. The ends of the upper ones of the cross-pieces 28 are connected to the plates 16 by means of the folding rods 30, said rods 30 being of such a length that they will allow the upper ends of the boards 21 to swing inwardly to an angle of approximately forty-five degrees. The buttons 31 are attached to the inner faces of the plates 16, and their free ends turn downwardly to engage the inner faces of the upper cross-pieces 28.

When it is desired to ventilate the upper part of the car, the handles 32, attached to the inner faces of the upper cross-pieces 28, are manually engaged, the buttons 31 are turned to a horizontal position, and the boards 21 swing inwardly upon the hinges 29, thus producing a fodder-rack in addition to ventilating the car.

Thus it will be seen that I have constructed the wall of a car in sections, alternate ones of said sections being secured rigidly in position and the other ones of said sections being removably positioned between said alternate sections. The same construction may be applied to the end walls of the car.

It is obvious that the details of mounting

and operating the removable sections may be varied without departing from the spirit of my invention and that the sections may be arranged horizontally instead of vertically.

I claim—

1. In a transformable car, the grain-wall consisting of the boards 20 fixed in vertical positions, the boards 21 arranged alternately placed against the inner faces of the boards 20 and transversely thereof, the bolts 23 inserted through said cross-pieces 22 and through said boards 21 in transverse and horizontal alignment with each other as required to form pivotal connections between said boards 21 and said cross-pieces 22, and means of holding said boards 21 removably in position between said boards 20, substantially as specified.

2. In a transformable car, the grain-wall consisting of the boards 20 fixed in vertical positions, the boards 21 arranged alternately placed against the inner faces of the boards 20 and transversely thereof, the bolts 23 inserted through said cross-pieces 22 and through said boards 21 in transverse and horizontal alignment with each other as required to form pivotal connections between said boards 21 and said cross-pieces 22, the slotted ears 24 attached to the upper one of the cross-pieces 22 and projecting upwardly, the slots in said ears being arranged horizontally, bolts fixed in position to operate in said slotted ears 24, the lower one of the cross-pieces 22 projecting below the lower ends of the boards 21, bolts fixed in position to operate through the lower parts of said lower cross-pieces 22 as required to hold said boards 21 adjustably in position relative to said boards 20, substantially as specified.

3. In a transformable car, the upper wall consisting of the boards 20 fixed in vertical positions, the boards 21 arranged alternately between said boards 20, the cross-pieces 28 rigidly connecting said boards 21, the hinges 29 securing the lower ones of the cross-pieces 28 to the frame of the car, folding rods 30 connecting the ends of the upper ones of the cross-pieces 28 to the frame of the car as required to allow said upper cross-pieces 28 to swing inwardly, and means of holding said boards 21 in position between said boards 20 when desired, substantially as specified.

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

PETER H. BEENCK.

Witnesses:

EDWARD E. LONGAN,
MAUD GRIFFIN.