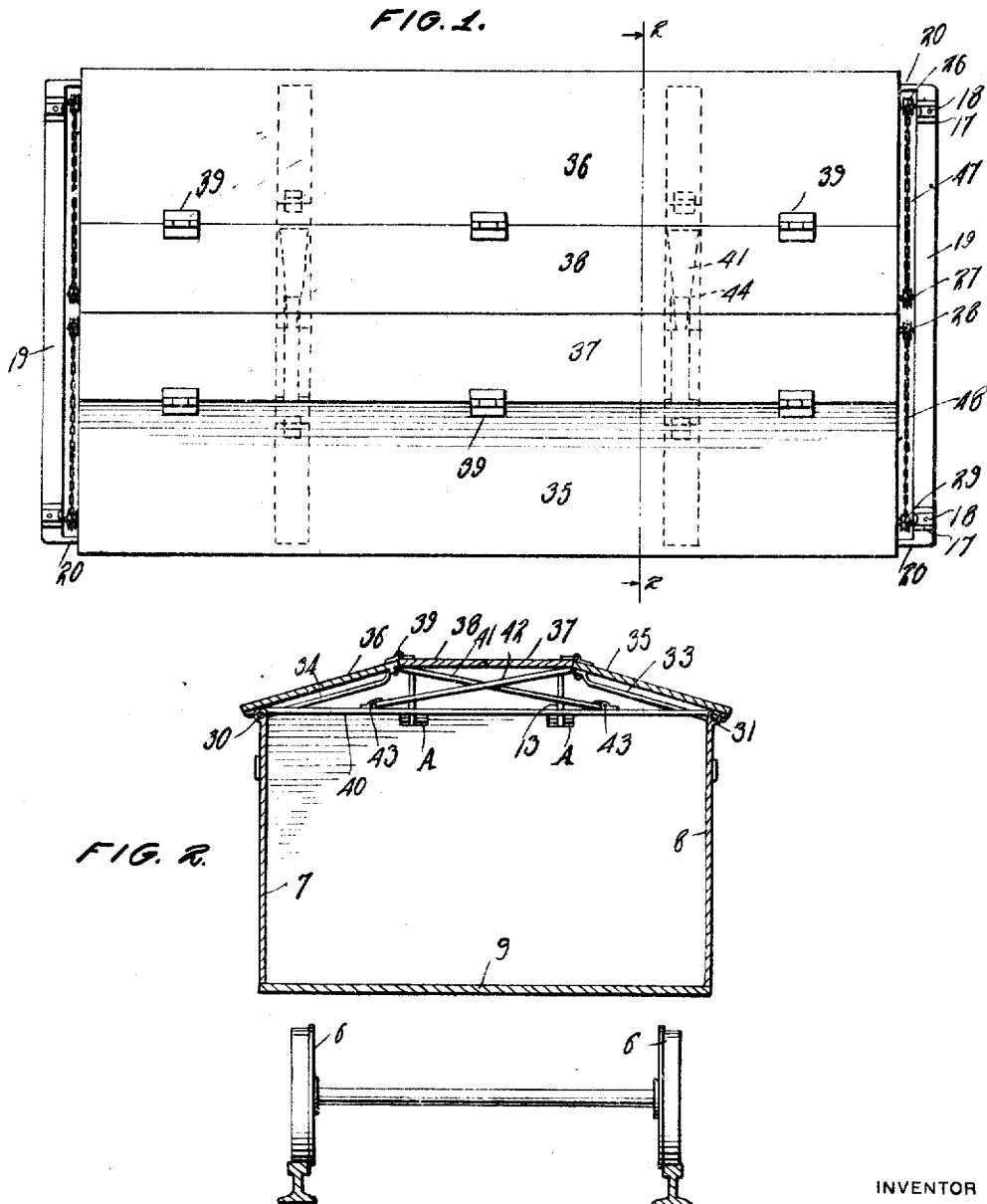


Patented June 11, 1918.
2 SHEETS—SHEET 1.



WITNESSES

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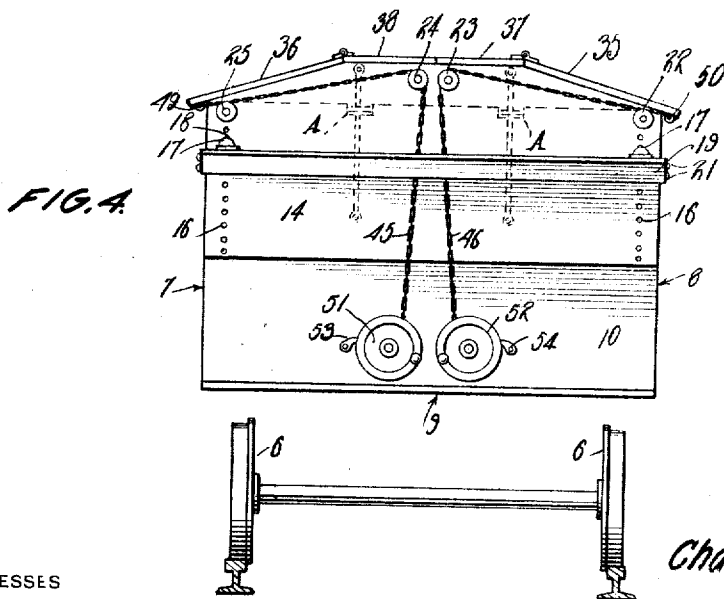
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2 SHEETS--SHEET 2.



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CAR-TOP.

1,269,431.

Specification of Letters Patent.

Patented June 11, 1918.

Application filed December 13, 1917. Serial No. 206,965.

To all whom it may concern:

Be it known that I, CHARLES B. GUTHRIE, a citizen of the United States, residing at Charleston, in the county of Kanawha and State of West Virginia, have invented certain new and useful Improvements in Car-Tops, of which the following is a specification.

This invention is a railway car of the removable top or convertible type which is more particularly adapted for use in connection with cars that are loaded with commodities in bulk, such as coal, wherein the car may have a cover that is movable so that access may be had to the interior for bulk loading at the same time afford protection from the weather and also tend to prevent theft when the cover is extended over the car.

One object of the invention is to provide a cover composed of connected sections that may, when assembled, form a cover or closure for the top of the car, and when disassembled and moved to another position will not obstruct the access to the interior of the car or of its contents.

Another object is to provide a cover that may be readily moved from the uncovering position to the covering position with a minimum expenditure of time and energy.

Still another object is to provide a car having adjustable ends that are movable vertically to increase the cubical carrying space and at the same time serve to support the ends of the roof sections.

A further object is to provide a cover comprising hingedly connected sections that are adapted to be carried on each side of the car when in the uncovering or inoperative position, which sections are also adapted to be moved to their covering or operative positions, by means of chains and winding devices, and when in the covering position supporting the sections by braces having interlocking members.

Broadly stated the invention comprises a railway car having ends that are adjustably secured at predetermined heights, a cover composed of connected and separable sections that may be carried in an inoperative position on each side of the car, means for moving said sections from the sides of the car to a position where they will cover the car and serve as a top, braces having interlocking members for supporting the cover, and means for retaining the cover in posi-

tion to prevent the theft of the contents of the car and as a protection against weather conditions, certain of said sections being slidably secured to the sides of the car by means of rods longitudinally placed and notching the upper edge of the sides and said ends being interposed between the stationary ends and bar members spaced therefrom, said bar members being provided with locking means to engage with the movable ends to retain said ends after adjustment.

One practical form of construction and assembly will be described and illustrated in the accompanying drawings, in which:—

Figure 1 is a top plan view of the car,

Fig. 2 is a sectional view on the line 2—2, of Fig. 1,

Fig. 3 is a side elevation of the car with a portion broken away to show the connection of the adjustable end with the stationary end, and

Fig. 4 is an end elevation of the car showing the means for moving the cover and the manner of adjusting the movable ends.

In the practical embodiment which will be described the car may be provided with the usual trucks having the wheels 6. The car is provided with the stationary sides and 8 and bottom 9 and ends 10 and 11. The usual construction as employed in building railway cars may be employed in the construction of this car. It may be constructed of suitable material and of such size and shape as will adapt it to better perform the functions required of it.

The stationary ends 10 and 11 are preferably formed similarly. The end 10 may be provided adjacent its upper edge with a transverse rod 12 and this rod 12 is adapted to pass through suitable notches formed in the upper edge of this end. The rod 12 is preferably secured so that it is not in-alignment with the end of the car but is spaced away a sufficient distance and to cooperate with the notches A and the rod 12 a guide member 13 is employed that is secured to the supplementary adjustable end, 14. The end 11 of the car is also provided with a supplementary end indicated at 15.

The guide member 13 may be secured in any suitable manner and between its points of attachment is slightly curved so as to permit the end 14 to move vertically out of contact with the end 10. As it moves vertically the guide member 13 is adapted to

bear against the external surface of the end 10.

Where the ends of the supplementary end lie adjacent the sides of the car these ends are provided with a series of holes 16. These holes are preferably spaced from each other vertically so that the supplementary ends may be positioned at different heights. To cooperate with these holes 16 there may be any usual or customary form of locking devices indicated at 17 and 18.

As shown this locking device consists of a pin that is adapted to move into and out of engagement with the hole. Each end of the car is preferably provided with two of these locking devices so as to engage with the two series of holes 16. Each pair of the locking devices is carried upon a bar member 19 L-shaped in cross section that may be secured to the sides of the car by means of the brackets 20 and the usual fastening means 21.

The bar member 19 is preferably so spaced that the supplementary ends will move freely. The lower side of each of the ends 14 and 15 is preferably straight while the top edge comprises two slanting portions joining a side that is substantially parallel with the bottom side. Each of the ends 14 and 15 are provided with spaced pulleys which upon the end 14 are indicated at 22, 23, 24, and 25. Those mounted upon the end 15 are indicated at 26, 27, 28, and 29. Two of these pulleys are preferably placed adjacent the edge of the supplementary ends and the other two are arranged adjacent the median line of the flat portion of the top side.

The sides 7 and 8 are preferably provided adjacent their top edge with the bars 30 and 31. These bars may be secured in any suitable manner. The top edge of each of the sides is provided with a series of notches indicated at 32. As shown the rods 30 and 31 pass through each of these notches. To cooperate with the rods 30 and 31 the guide members 33 and 34 are provided that are substantially the same shape as the guide members 13. The guide members 33 and 34 are secured to the sections 35 and 36. These sections may be formed of metal and any usual or customary means may be employed for securing the guide members thereto. These guide members are so shaped that they will permit the sections to be moved out of contact with the side of the car during such movement. They will also serve to prevent the loss of the sections in a similar manner to the function therefor by the guides 13.

Connected with the section 35 is another section 37. The section 36 may have connected to it a section 38. In order to hold these two sections 37 and 38 in proper alignment so that they may be folded upon the

sections 35 and 36, the hinges 39 are employed. These hinges may be of any usual or customary type but are shown as being spaced from each other. They may be formed in other ways and any such manner as will provide a hinged connection between the several sections.

As shown in Fig. 1 the sections 37 and 38 lie in abutting relation and more particularly in Figs. 2 and 4 these two sections are illustrated as being adapted to rest upon the flat portion of the top edge of the ends 14 and 15. This will provide a walk way over the top of the car.

To support the several sections in their covering position the removable braces are employed. These braces comprise a base section 40 that is adapted to engage with the upper edge of the sides 7 and 8. The base has secured to it two interlocking members indicated at 41 and 42 and these several members are hingedly connected to the base as shown by the hinges 43. The member 42 may be provided with an elongated open ended slot that is adapted to cooperate with the member 41. The member 41 may be provided with the angular sides indicated at 44. This will provide an interlocking feature that will prevent the two members from accidentally separating. The free ends of these members 41 and 42 are adapted to engage and support the sections as shown in Fig. 2.

In order to raise and lower the hinged sections suitable means may be employed and as shown this consists of the four chains indicated at 45, 46, 47, and 48. As shown one end of the chain 45 is connected with the section 35 and preferably adjacent one edge thereof as indicated at 49. The free end of the chain 46 is similarly connected to the section 35 at the point 50. The chain 45 may contact with the pulley 25 and passes over the pulley 24 downward to the windlass indicated at 51. The chain 46 may pass over the pulley 22 and over the pulley 23 downward to the windlass 52.

A similar construction is employed upon the opposite end of the car for the chains 47 and 48. The type of windlass may be any that is usual or customary and it is preferred to have it provided with means for releasing and holding as indicated by the pawls 53 and 54. Suitable means may be employed for locking the windlasses in the position shown in Fig. 4. Suitable means may also be employed to maintain the sections 37 and 38 so as to prevent them being separated by an unauthorized person. This will prevent theft of the contents of the car at all times and especially when in transit.

To operate the cover or top with respect to its ends, the supplementary ends are adjusted to their proper heights. Assuming that the ends of the car have been raised to

the position shown in Fig. 4 and the top in its covering position and it is desired to move the top, the windlasses 51 and 52 are loosened by means of their pawls 53 and 54.

5 The sections 37 and 38 are separated and folded back upon their respective sections 35 and 36.

With a slight effort the folded sections may then be lowered to their respective
10 sides of the car. If desired the sections 37 and 38 may be folded after the sections 35 and 36 have reached the lower limit of their travel. The guide members 33 and 34 will also serve to limit the vertical travel of the
15 several sections and act as stop members when coöperating with the longitudinal rods 30 and 31.

The chains in their travel will then firmly engage with the pulleys as the sections are
20 lowered to their inoperative or uncovering position. The pulleys 22, 25, 26, and 29 will serve also as guides to direct the chains during such movement. When the sections are lowered to their inoperative position the
25 braces may be removed which will make the contents of the car as accessible as the usual open car. One of the sections are raised by means of their respective chains and windlasses to their positions for covering the car,
30 the car is protected in a very efficient manner against the weather and against theft.

What I claim is:—

1. A car having stationary sides and stationary ends, adjustable ends to coöperate
35 with the stationary ends, a plurality of hingedly connected sections movable from the sides of the car to a connected position upon the upper edges of the sides and ends to form a cover, means for moving the sec-
40 tions, and braces for supporting the sections.

2. A car having stationary sides and ends, movable ends to coöperate with the station-
45 ary ends, means to retain the movable ends at predetermined heights, a plurality of

movable sections hingedly connected together upon each side of the car, means for guiding said sections during movement and when at rest retaining the sections in position, means for moving said sections, and
50 braces for supporting said sections.

3. A car having stationary sides and ends, the upper edge of each being notched and provided adjacent said edge with a rod, adjustable supplementary ends, a plurality of
55 sections arranged in hingedly connected pairs on each side of the car, and slidably connected with the rods, removable braces having interlocking members for supporting the sections, rotatable guide members
60 secured to the movable ends, chains attached to one of the sections upon each side of the car, and a windlass for winding and unwinding said chain for moving said sec-
65 tions, said sections when in the covering position forming a walk way longitudinally of the car.

4. A car having sides and ends, comprising a movable and separable cover formed of hingedly connected sections, a removable
70 and foldable brace for supporting the cover, which comprises a base, having a plurality of interlocking members, and means for moving said sections.

5. A car having stationary sides and ends, movable and adjustable supplementary ends,
75 each having a plurality of holes, adjacent each vertical edge, a transverse member spaced from the stationary end and secured thereto to permit the movable end to move
80 therebetween, and means on the member for releasably holding the movable ends at a predetermined height.

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

CHARLES B. GUTHRIE.

Witnesses:

JNO. A. WILKENS,
F. A. MCGREW.