

W. HOUGHTON.
 RELEASABLE CAR STAKE.
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1,056,753.

Patented Mar. 18, 1913.

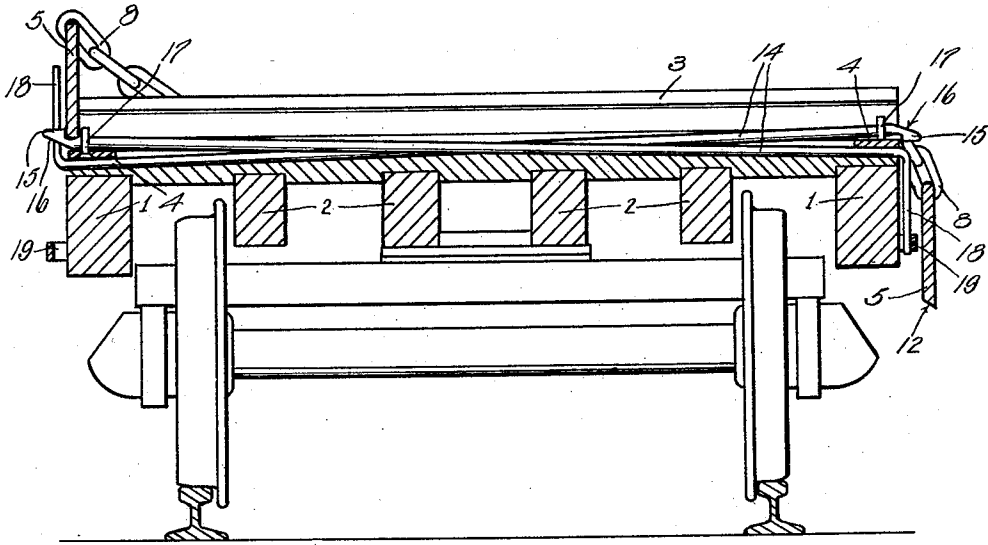


Fig. 1

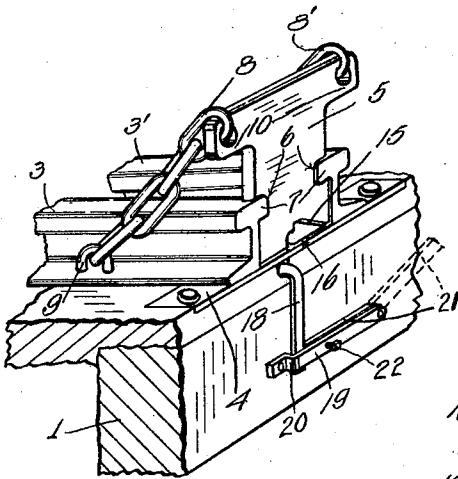


Fig. 2

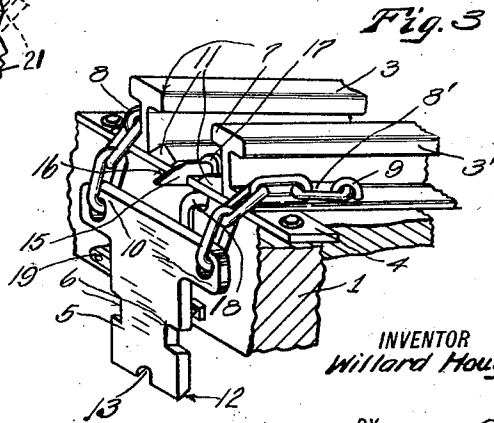


Fig. 3

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RELEASABLE CAR-STAKE.

1,056,753.

Specification of Letters Patent.

Patented Mar. 18, 1913.

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To all whom it may concern:

Be it known that I, WILLARD HOUGHTON, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Releasable Car-Stakes, of which the following is a specification.

This invention relates to releasable car-stakes, and particularly to improvements in the devices described and claimed in my prior Patent No. 1,022,084 dated April 2, 1912.

The principal object of this invention is to provide a car-stake that may be retained in positive locked condition while bearing a load and that may be readily and surely released to dump the load from the opposite side of the car with perfect safety to the operator.

A further object of the present invention is to simplify the structure of said devices to make the same more efficient in operation and economical of construction and maintenance.

The invention consists in the novel construction of the stake-latching and releasing means, and the adaptation and combination therewith of the car-bunk and other devices, as will be fully described in the following specification, illustrated in the accompanying drawings, and finally set forth in the appended claims.

In said drawings, Figure 1 is an end view of a flat-car showing a bunk in vertical section with an embodiment of my invention illustrated upon each end thereof in different operative positions. Figs. 2 and 3 are fragmentary perspective views of my car-stake in its engaged and released condition, respectively.

Referring to said drawings, the reference numeral 1 indicates the longitudinal side beams and 2 the intermediate beams of a railway logging or flat car. Transverse bunks are provided adjacent the opposite ends of the car desirably constructed of two parallel track rail sections 3 and 3¹ supported at their ends upon plates 4 rigidly secured to said beams 1 or to the bolster of usual construction of logging car-trucks.

The car-stake 5 is adapted to be received between said rail-ends and is formed with oppositely disposed recesses 6 to receive the inwardly extending portion 7 of the rail-heads. Chains 8 and 8¹, or an equivalent, are connected at 9 through the outer flanges of the respective rails and have their opposite ends connected to said stake through laterally directed apertured lugs 10. The ends 11 of the inwardly directed rail flanges are beveled similarly to the lower edge 12 of the stake. The latter is also provided with a centrally disposed notch 13. A locking rod 14 is provided for each said car-stake having one end resting upon the respective plate 4 and provided with a projecting and upturned head 15. The opposite side of said upturned portion is sloped as at 16 to cause said stake to slide thereover when released. Adjacent said end the rod is rotatably secured in a staple or eye-bolt 17 which also serves as an inner stop for the stake, as will presently be explained. The other end of the said rod extends to the opposite side of the car whereat it is rotatably secured in a bearing provided below the respective plate 4 and somewhat to one side of the adjacent head 15 of the other corresponding rod. Said rod is thereat provided with a handle lever 18 formed by a rectangular bend in the rod end diametrically opposite to the direction of the upturned head 15 upon the opposite end. A lock to secure the head in operative upturned condition is provided for said handle consisting of a strap 19 rigidly secured to the respective beam 1 having an abutment at 20 for said handle-lever when the same is in a vertical position. A latch-bar 21 is pivotally mounted at the other end of said strap and adapted to be swung against the end of said handle-lever when in said vertical position and secure the same in locked condition against said abutment. A set-screw 22 may be provided to prevent the accidental dislodgment of said latch-bar. There is, of course, a car-stake of similar construction upon each end of the bunk. The operating rods 14 which extend from side to side cross each other in the middle of the car, as shown in Fig. 1. No disadvantage is experienced thereby as

the rods of proper size and length are of sufficient flexibility to overcome the relatively slight distortion.

The operation of the invention may be described as follows: The car-stakes are set upright, as clearly illustrated in Fig. 2, with their lower portions between the ends of the rails 3 and 3¹ and the respective ends of the rods 14 received within the notch 13. The handle-lever 18 of each rod is then turned downwardly to throw the head 15 correspondingly upward where it engages the outer plane face of the car-stake and prevents outward movement thereof. The lower end of the stake is then positioned between said head and the eye-bolt 17 which prevents any displacement in lateral directions, the recesses 6 prevent any upward displacement while the chains 8 and 8¹ support the upper end of the stake from outward pressure of the load. In this condition, the handle-lever 18 is locked in its set position by any suitable method, preferably in the manner described. In unloading, usually the stakes upon one side only are displaced which is accomplished from the opposite side of the car so that the operator is not exposed to danger by the shifting of the load when the stakes drop. This is done by unlatching the locking devices and turning the handle-lever 18 upwardly, as shown at the left hand side of Fig. 1, to turn the head 15 upside down. The head is thus removed from its restraining influence upon the stake which then rests upon the sloping face 16 of the rod. The pressure of the load thereupon forces the car-stake outwardly and it drops straight downwardly to the limit of the chains and out of danger of interference with removing the load from the car, as illustrated in Fig. 3.

Having described my invention, what I claim is—

1. The combination with a car-bunk provided with a channel, a stake receivable in said channel, flexible connections between the bunk and the upper portion of the stake, a rotatable rod adapted to support and secure from lateral displacement the lower end of said stake in one of its rotative positions, and means to lock said rod in said operative position.

2. The combination with a car-bunk provided with a channel, a stake receivable in said channel, flexible connections between the bunk and the upper portion of the stake, a rotatable rod extending from side to side of the car and adapted to support the lower end of said stake in one of its rotative positions, and means to secure the rod in said operative position.

3. The combination with a car-bunk provided with a channel, a stake receivable in said channel, a chain connecting the upper

portion of said stake with the bunk, and a rotatable rod extending transversely of the car provided with a head engageable with the lower end of said stake.

4. The combination with a car-bunk provided with a channel, a stake receivable in said channel, a chain connecting the upper portion of said stake with the bunk, a rotatable rod extending transversely of the car provided with a head engageable with the lower end of said stake, and means upon the opposite side of the car for rotatively actuating said rod.

5. The combination of a car-bunk comprising a pair of spaced rail-members, a car-stake received between said rail-members and provided with means to prevent upward displacement, flexible connections between the bunk and the upper portion of said stake, a stop to prevent the inward displacement of the lower portion of said stake, and a rod having a handle-lever at one end and devices at its other end engageable with the lower portion of said stake to prevent is outward displacement.

6. The combination of a car-bunk comprising a pair of spaced rail-members, a car-stake provided with a notch in its lower edge, flexible connections between the bunk and upper portion of said stake, and a rod rotatably mounted transversely of the car and received in said notch having a head adapted to engage the outer surface of said stake and a handle-lever at its opposite end to actuate said rod to engage or disengage said stake.

7. The combination of a car-bunk comprising a pair of spaced rail members, each having an inwardly directed flange, a car-stake provided with a pair of recesses adapted to receive said flanges and a notch in its lower edge, flexible connections between the bunk and upper portion of said stake, and a rod rotatably mounted transversely of the car and received in said notch having a head adapted to engage the outer surface of said stake and a handle-lever at its opposite end to actuate said rod to engage or disengage said stake.

8. The combination of a car-bunk comprising a pair of spaced rail members, a car-stake provided with a notch in its lower edge, flexible connections between the bunk and upper portion of said stake, a rod rotatably mounted transversely of the car and received in said notch having a head adapted to engage the outer surface of said stake and a handle-lever at its opposite end to actuate said rod to engage or disengage said stake, and means to retain said rod in locked condition.

9. The combination of a car-bunk comprising a pair of spaced rail members each having an inwardly directed flange, a car-

stake provided with a pair of recesses adapted to receive said flanges and a notch in its lower edge, flexible connections between the bunk and upper portion of said stake, a rod
5 rotatably mounted transversely of the car and received in said notch having a head adapted to engage the outer surface of said stake and a handle-lever at its opposite end to actuate said rod to engage or disengage

said stake, and means to retain said rod in 10 locked condition.

Signed at Seattle Wash., this 12th day of December, 1912.

WILLARD HOUGHTON.

Witnesses:

HORACE BARNES,
E. PETERSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
