F. W. CHRISWELL.

CAR STAKE AND BUNK.

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1,079,109. Patented Nov. 18, 1913.

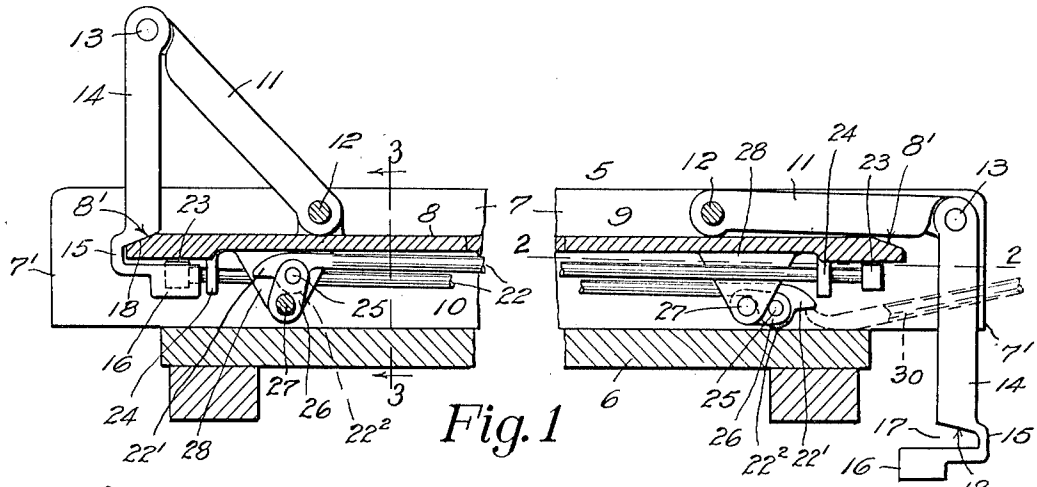


Fig. 1

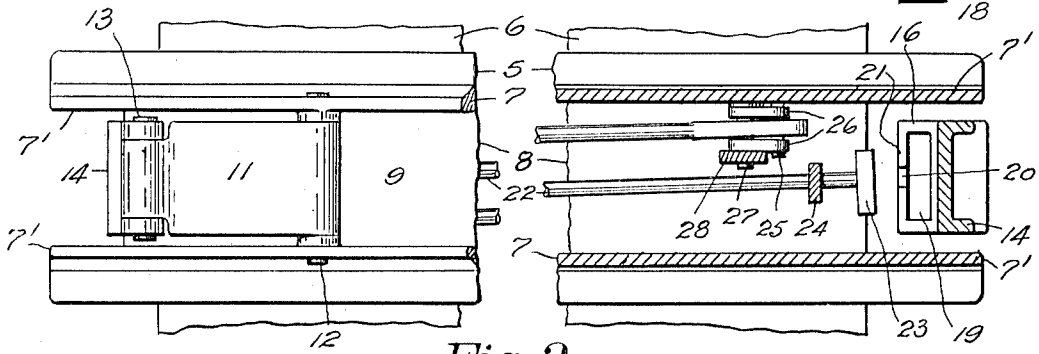


Fig. 2

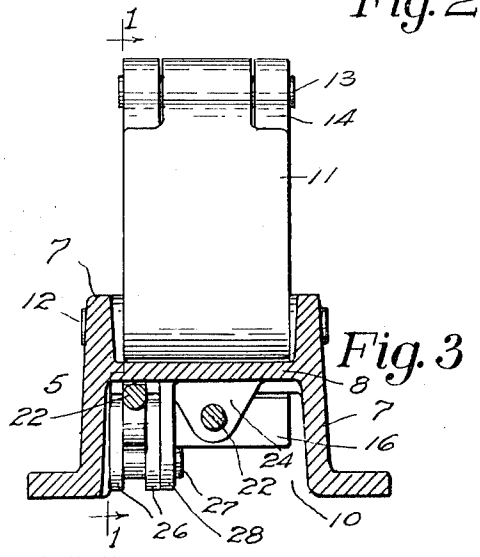


Fig. 3

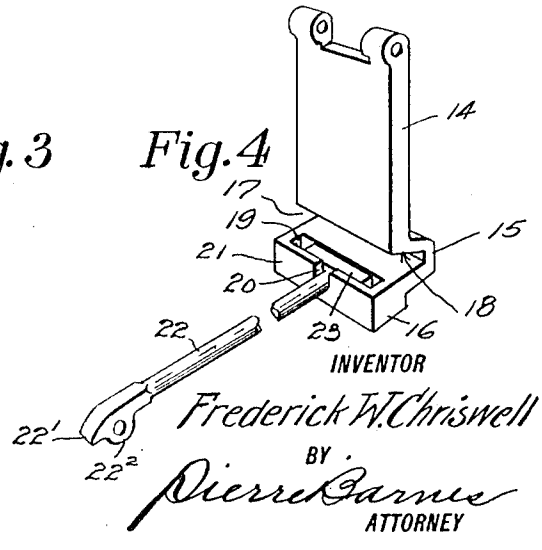


Fig. 4

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CAR STAKE AND BUNK.

1,079,109. Specification of Letters Patent. Patented Nov. 18, 1913.

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To all whom it may concern:

Be it known that I, FREDERICK W. CHRISWELL, 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 Car Stakes and Bunks, of which the following is a specification.

This invention relates to releasable stakes for railway logging cars or trucks and, more particularly, to improvements in the type of stakes illustrated and described in U. S. Patent No. 944,739, issued to T. H. MacLafferty, December 28, 1909.

The objects of my improvements are, first, to provide an automatically engageable lock or securement for retaining the stake in position to maintain logs upon the car bunk; second, to produce a stake lock which will be safeguarded from becoming detached or disconnected with respect to the stake through carelessness of the attendant or from accidental causes; and third, to produce a stake locking device of comparatively few parts which shall be compact in form, durable and reliable, and which may be conveniently released by appliances actuated from the side of a car opposite to a stake.

The invention consists in the general construction of my improved device and in the various details and combination of parts.

In the accompanying drawings, Figure 1 is a longitudinal sectional view, taken through 1—1 of Fig. 3, of a car-bunk and stakes, with the present invention applied thereto. Fig. 2 is a view of the same, shown partly in plan and partly in horizontal section, the sectional portion being substantially taken on plane 2—2 of Fig. 1. Fig. 3 is a vertical transverse section through 3—3 of Fig. 1. Fig. 4 is a perspective view of a stake-prop and its associated coupling rod.

The reference numeral 5 designates a car-bunk which is rigidly secured transversely upon the car-deck 6. The bunk is formed with upright side members 7 which protrude, as at 7^1, beyond the sides of the car deck, and are integral with or rigidly connected to a horizontal floor-member 8 disposed intermediate the height of the bunk to provide an open channel 9 above and a tunnel compartment 10 below the floor member. Said floor member extends a short distance beyond each of the sides of the car deck but to less extent than the adjacent ends of the side members. At its ends, the floor member 8 is desirably formed with downwardly sloping upper surfaces 8^1. Located near each end of the bunk and within the channel is a chock or stake 11 having one of its ends pivotally connected by a pin 12 with the side members 7. The other end of a stake is hingedly connected by a pin 13 to the upper end of a prop 14 which has near its lower end an offset portion 15 and terminates therebelow in an arm 16. By the provision of the offset, a recess 17 is provided at the inner side of the prop to engage the end of the bunk floor. The shoulder 18 at the top of the recess is sloped to correspond with the face 8^1 upon which it is seated when the stake is supported by the prop in its operative position, as represented at the left hand side of Fig. 1. The arm 16 of a prop is provided with an elongated slot or pocket 19 (Fig. 4) extending transversely of the arm and communicating with an opening 20 in the inner wall 21 of the pocket.

22 represents a rod having a transversely arranged head 23 adapted to engage in the pocket 19 of a prop, as shown in Figs. 1 and 4. The rod 22 extends through a guide 24 near one end of the bunk to near the other end thereof, whereat it is pivotally connected by a pin 25 to a pair of swinging links 26 which, in turn, are connected by a pivotal pin 27 with a side member 7 and a hanger or lug 28 which depends from the floor member 8. The pin 25 is positioned at a distance from the adjacent end of the rod with which it is connected to furnish a bill 22^1 which protrudes beyond the pin. The rod 22 is furthermore formed with a downwardly extending projection 22^2 to afford means for carrying the pin 25 so that it may be swung into the locking position in which it is illustrated at the right side of Fig. 1.

The projection 22^2 may serve as a latch-hook with respect to the associated pin 27, or, preferably, dependence may be had upon the links 26 for securing a rod against longitudinal displacement by arranging the axes of pins 25 and 27 so that the latter are swung beyond a medial plane, or "dead

center," with relation to the head 23 of the respective rod and the links 26 which are connected thereto.

The operation of the invention is as follows: Assuming that the stake and prop are in the inoperative positions in which they are shown at the right side of Figs. 1 and 2; to bring the same into operative positions, the attendant first raises the prop together with the free end of the stake so that the rod-head 23 at that end of the bunk is received into the prop pocket 19 which will occur when the prop is at or near its maximum elevation. With the rod-head thus engaged, the prop is pushed inwardly with respect to the car so that the prop will be engaged upon the end of the bunk floor 8, whereupon the prop and stake will occupy positions similar to illustrated positions of the corresponding parts at the opposite end of the bunk. As the prop is shoved inwardly, the attached rod is moved therewith to cause the connected links 26 to be swung to occupy positions similar to those of the corresponding links which are illustrated at the right of Figs. 1 and 2. Under such conditions, the rod is secured against being moved in a contrary direction through the agency of the links or by the latched relation of the rod projection 22^2 with respect to associated pin 27.

To release a stake, a bar such as indicated by broken line 30 in Fig. 1 is employed by the attendant to engage the extension 22^1 of a rod for raising the latter out of latched engagement with a pin 27 and moving the connected links into positions wherein they become ineffective to restrain the rod and hold the prop against an outward pressure due to the load acting against the stake. When the rod is disengaged, however, and the links swing upwardly, they serve to move the rod endwise and cause the prop to become dislodged from the bunk, whereupon the prop drops, together with the stake, to allow the load of logs to leave the bunk from the opposite side of the car from which the attendant effects the rod release.

What I claim, is—

1. The combination of a car-bunk, a stake pivotally connected from one of its ends to said bunk, a prop pivotally connected at one of its ends to the free end of said stake and adapted to seat upon the bunk in proximity to one of the ends of the latter, a rod detachably engaged with said prop and extending into proximity to the other end of the bunk, and releasable means provided at the last named end of the bunk whereby the rod is secured against endwise movement when the rod is engaged with the prop and the latter is seated upon the bunk.

2. The combination of a bunk, a car stake hingedly connected to the bunk near an end thereof, a prop hingedly connected to the free end of the stake for holding the latter in operative position when the prop is seated on the bunk, detachable means extending to within a short distance from the opposite end of the bunk from the stake for securing the prop in operative position with respect to the stake, and locking means provided at the last named end of the bunk for rendering the rod temporarily inoperative to secure the prop.

3. The combination of a bunk consisting of side members and a horizontal member arranged to afford a tunnel compartment below the latter, a stake hinged from one end to the bunk above said horizontal member, a prop hingedly connected to the other end of the stake and adapted to seat upon the last named member, and means located within said compartment and engageable with said prop whereby the latter is retained in operative position, said means being arranged to be affected from the end of the bunk remote from the stake whereby said means are rendered inoperative to hold the prop in operative position.

4. The combination with the bunk formed with side and horizontal members to provide a tunnel compartment below said horizontal member, a stake hingedly connected from one of its ends to the bunk, a prop hingedly connected to the free end of the stake and provided with a shoulder adapted to be seated upon an inclined surface formed on one end of said horizontal member, said prop being provided with an arm arranged to extend into said compartment, a rod located within said compartment and having a head detachably engaged with the prop arm, a pin rigidly secured to the bunk in proximity to the end remote from the stake, a link pivotally connected to said pin and likewise with said rod whereby the link when moved in one position will serve to secure the prop upon the bunk through the agency of said rod and when moved from such position the link will serve to actuate the rod to dislodge the prop from its seat upon the bunk.

5. In apparatus of the class described, the combination with the bunk, a stake hingedly connected thereto, and a prop arranged to seat on the bunk for supporting the free end of the stake, of a rod having at one end a head detachably engaged with said prop, and link connections between the bunk and the other end of the rod whereby the rod is caused to be automatically locked to secure the prop when the prop is brought into operative position, said rod being also arranged to be manipulated to affect said link connections whereby the same are rendered inoperative to lock the rod and thereupon serve to dislodge the prop from the bunk.

6. The combination of a bunk, a stake, a stake-prop having a beveled shoulder arranged to seat upon the bunk, a rod engageable at one end with said prop and provided with an underside projection near its other end, and means provided on the bunk and engageable by said projection whereby the rod may be releasably secured to the bunk for retaining the prop in operative position with respect to the stake.

Signed at Seattle, Wash., this 3rd day of September, 1913.

FREDERICK W. CHRISWELL.

Witnesses:

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HORACE BARNES.