No. 842,638. PATENTED JAN. 29, 1907.

R. L. EDWARDS.

CAR STAKE.

APPLICATION FILED NOV. 9, 1906.

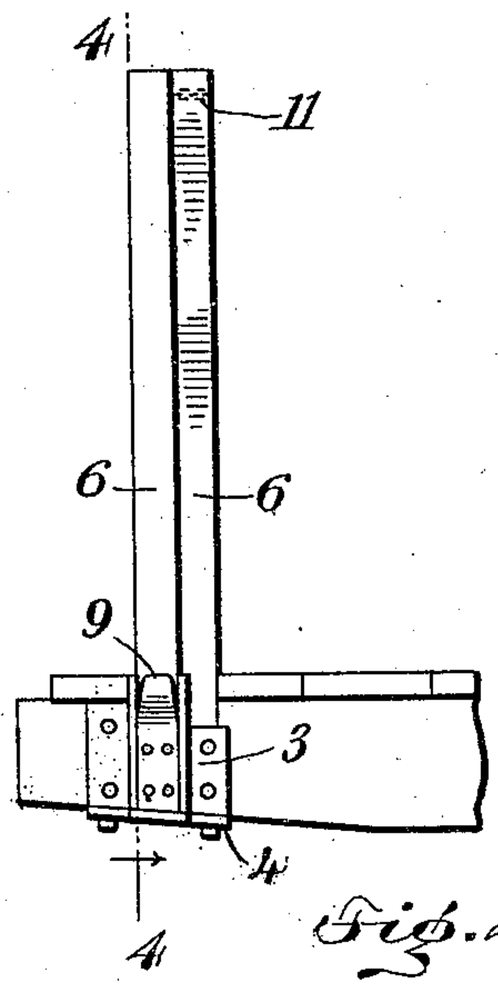


Fig. 2.

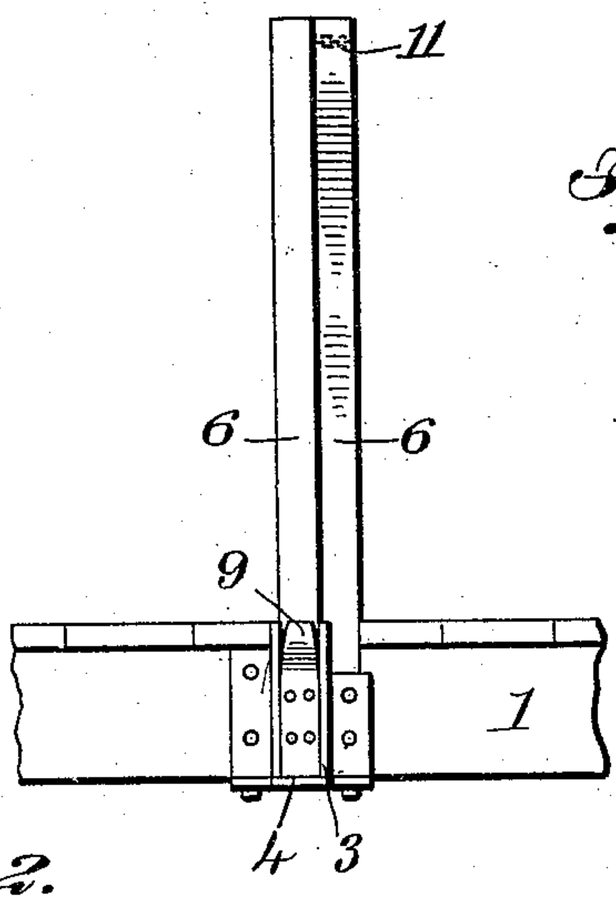


Fig. 1.

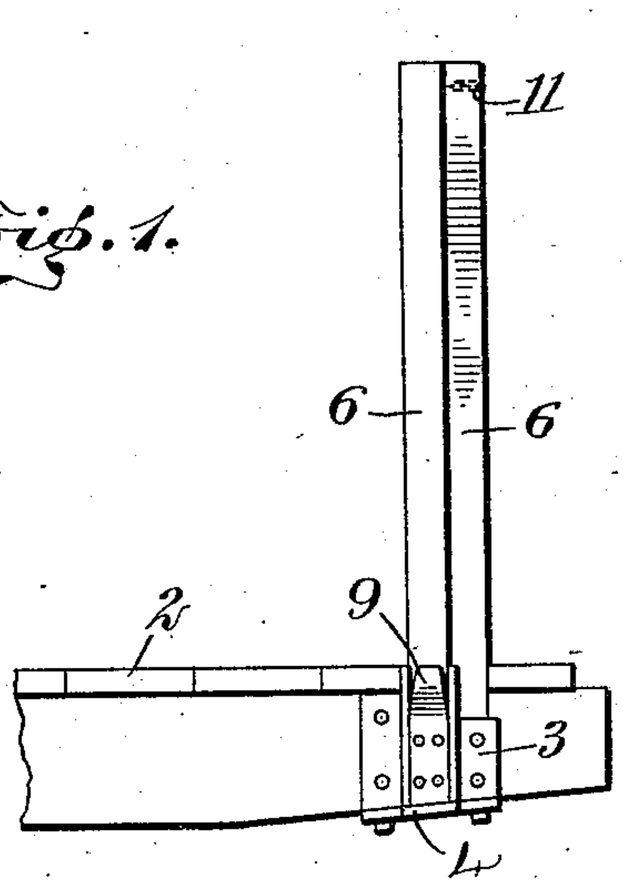


Fig. 3.

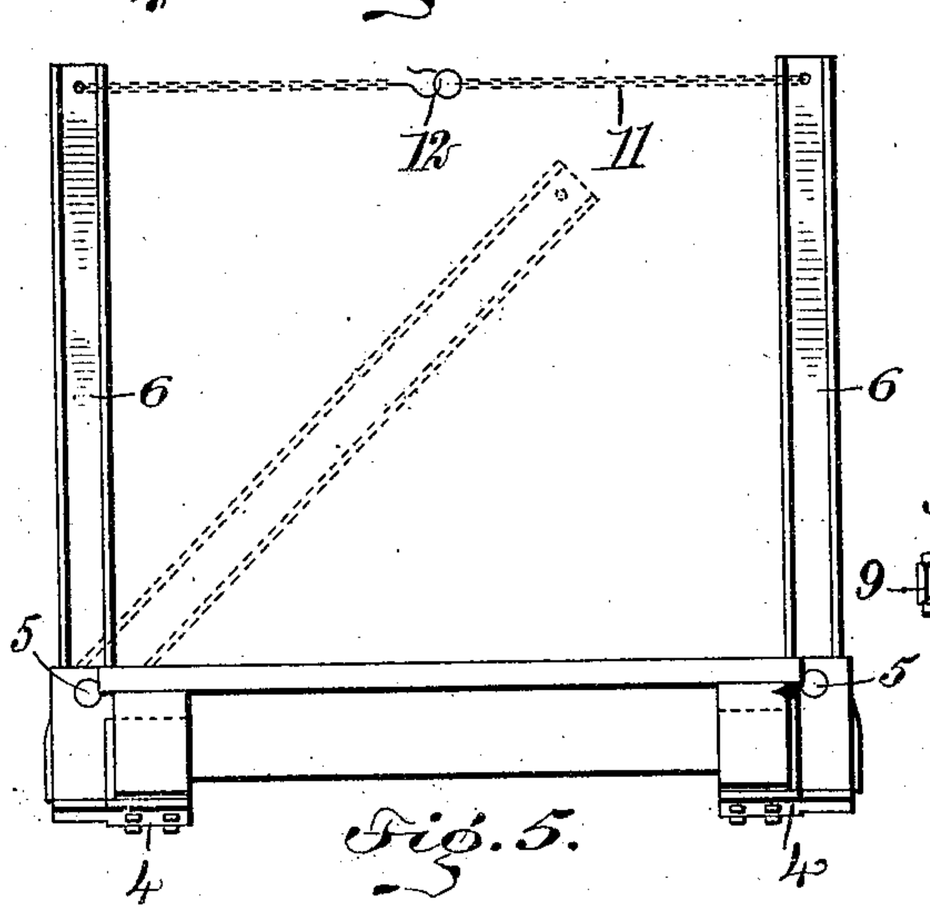


Fig. 5.

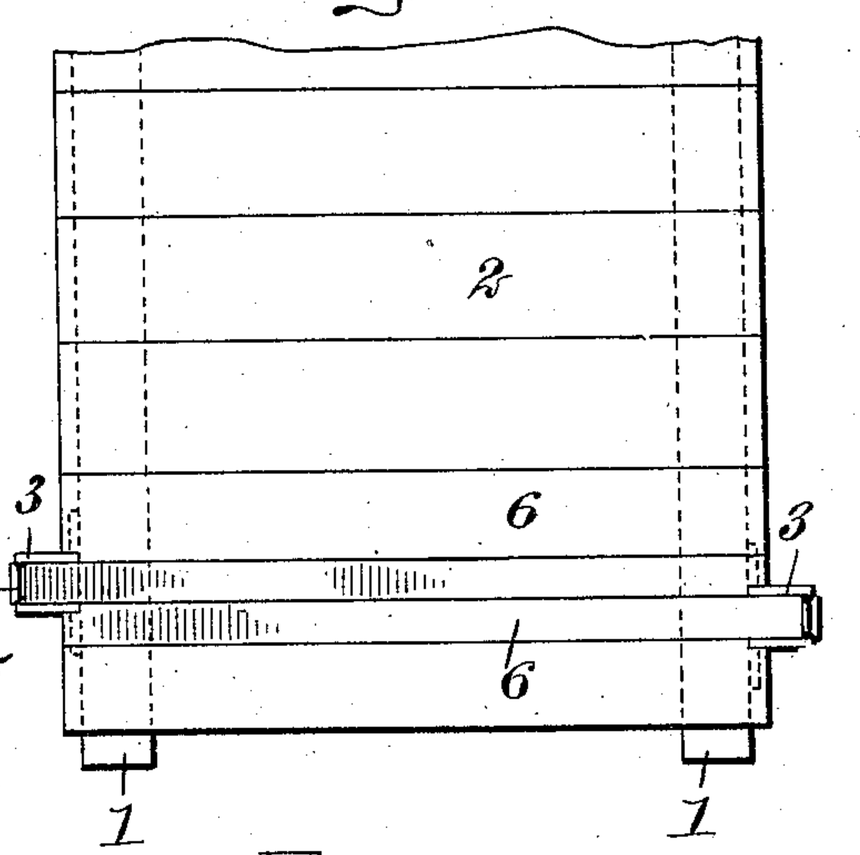


Fig. 6.

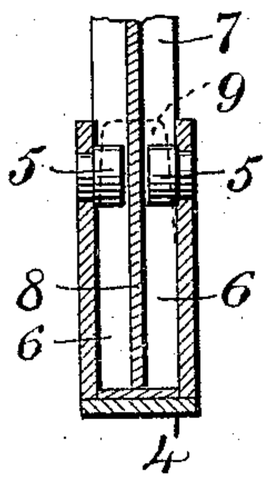
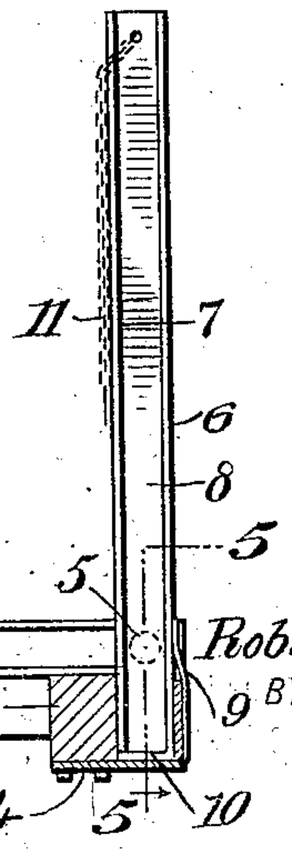


Fig. 4.



WITNESSES

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CAR-STAKE.

No. 842,638. Specification of Letters Patent. Patented Jan. 29, 1907.

Application filed November 9, 1906. Serial No. 342,641.

To all whom it may concern:

Be it known that I, ROBERT LEE EDWARDS, a citizen of the United States, and a resident of Perry, in the county of Noble and Territory of Oklahoma, have invented a new and Improved Car-Stake, of which the following is a full, clear, and exact description.

This invention relates to car-stakes such as used at the sides of freight-cars employed for carrying lumber or logs.

The object of the invention is to produce a car-stake having a mounting which will permit it to be readily adjusted into an erect position, but which will enable it to be quickly folded down in an inoperative position.

The invention consists in the construction and combination of parts to be more fully described hereinafter, and particularly set forth in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation showing a portion of the body of a freight-car provided with car-stakes constructed according to my invention. Portions of the view are broken away to save space. Fig. 2 is an end elevation. Fig. 3 is a plan of one end of the car and representing a pair of opposite car-stakes in their folded or inoperative position. Fig. 4 is a cross-section taken through the car-floor at the position of the stakes and further illustrating the construction of and means for mounting the stakes. This section is taken on the line 4 4 of Fig. 1. Fig. 5 is a cross-section on the line 5 5 of Fig. 4 and upon an enlarged scale, and Fig. 6 is a cross-section through the socket and showing a modified construction in which the socket prevents the longitudinal movement of the stake when in its folded position.

Referring more particularly to the parts, 1 1 represent the side beams or stringers of the car-body, and upon these stringers the floor 2 of the car is laid. At suitable points the outer faces of the side beams 1 are provided with sockets 3. The under sides of these sockets are closed respectively by butt-plates 4, which are attached to the under side of the side beams, as indicated most clearly in Fig. 4. The side walls of these sockets are provided with inwardly-projecting pins 5, and these pins afford means for retaining the car-stakes 6 in the manner indicated in Fig. 5. The car-stakes are preferably formed of structural iron known as "**I**-beams," and the stakes are arranged in the sockets with their flanges 7 disposed against the side beam, as indicated most clearly in Fig. 4. The web 8 of each **I**-beam is disposed in a plane transverse with respect to the beams, and the pins 5 project inwardly and nearly touch the web, as indicated in Fig. 5. As indicated most clearly in Fig. 4, the pins 5 are disposed above the beams 1, and the outer wall of the socket is cut away opposite the pins, so as to leave an opening for the operation of a leaf-spring 9. There is one of these leaf-springs in connection with each socket, and its body is attached to the outer face of the socket, as shown, the upper extremity being offset inwardly and pressing against the outer face of the stake, as indicated. The sockets are preferably arranged nearly opposite each other, but disposed slightly out of alinement, so that the stakes may lie adjacent to each other when folded downwardly into the car-floor, in the manner which will be described hereinafter.

Referring again to the construction of the stakes, it may be stated that the lower extremities of the stakes present a transverse head or wall 10, which constitutes substantially a continuation of the flange of the stake. The floor between the opposite pairs of sockets is left with an opening, so as to receive the stakes when they are folded down in the manner indicated in Fig. 3. The upper ends of the opposite stakes are connected by a chain 11, provided at its middle point with a detachable coupling 12, which may consist simply of a hook and ring, as shown.

In Figs. 2 and 4 the stakes are shown in their operative position, at which time the lower end of each stake is stepped in its socket. The dimensions of the socket conform to those of the stakes, so that the stake is held rigidly. When it is desired to fold the stakes down out of the way and in an inoperative position, the chain 11 is disconnected from the coupling 12, so that its sections hang respectively at the upper ends of the stake. The stakes are then pulled upwardly in their sockets and rotated inwardly, as indicated in the dotted lines at the left in Fig. 2. The upward movement of the stake takes place until the pins 5 strike against the head 10 at the lower end of the stake, where-

upon the downward rotation is begun. In this way the stakes are folded beside each other in the car-floor, and they are held against being dislocated from this position by the springs 9, which abut against the heads 10, as will be readily understood. When in the folded relation shown in Fig. 3, the chain-sections may be attached to the side of the car in any suitable manner.

A car fitted with car-stakes constructed as described may be used for hauling lumber, which will be held from rolling from the car by the stakes in the usual manner. Evidently when the stakes are not useful they may be quickly folded into the floor of the car, so as to be out of the way and so as to leave the sides of the car unobstructed.

In the form shown in Fig. 6 the spring is dispensed with; but the outer wall of the socket 13 is extended above the lower edge of the stake 15 to form a stop 14, so that when the stake is in its folded position its outer end would strike the stop if the stake moved longitudinally beyond the edge of the car.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In combination, a socket adapted to receive a car-stake, a stake normally stepped in said socket and adapted to be partly withdrawn therefrom by a vertical movement, means for limiting the upward movement of said stake from said socket, said means constituting a pivot about which the said stake may be rotated into a folded and horizontal position at the car-floor, and a spring engaging said stake and adapted to hold the same in its folded position.

2. In combination, a socket adapted to be attached to a car and to receive a car-stake which is normally stepped in said socket and adapted to be partly removed therefrom by a vertical movement, means for limiting the upward movement of said stake from said socket, said means constituting a pivot about which said stake may be rotated into a folded and horizontal position at the car-floor, and a bed or receptacle sunk into said floor adapted to receive said stake when so folded, in such a manner that the upper face of the stake is on a level with, and becomes a part of, the surface of said car-floor.

3. In combination, a socket adapted to be attached to a car, a stake normally stepped in said socket and presenting a transverse head at the lower extremity thereof, and pins projecting inwardly from the side walls of said socket and adapted to engage said head when said stake is raised partially from said socket, said pins constituting pivots for the rotation of said stake.

4. In combination, a socket adapted to be attached to a car, a stake normally stepped in said socket and presenting a transverse head at the lower extremity thereof, pins projecting inwardly from the side walls of said socket and adapted to engage said head when said stake is raised partially from said socket, said pins constituting pivots for the rotation of said stake, and a spring attached to said socket and adapted to engage said head when said stake is in its folded position.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT LEE EDWARDS.

Witnesses:

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L. B. ROBINSON.