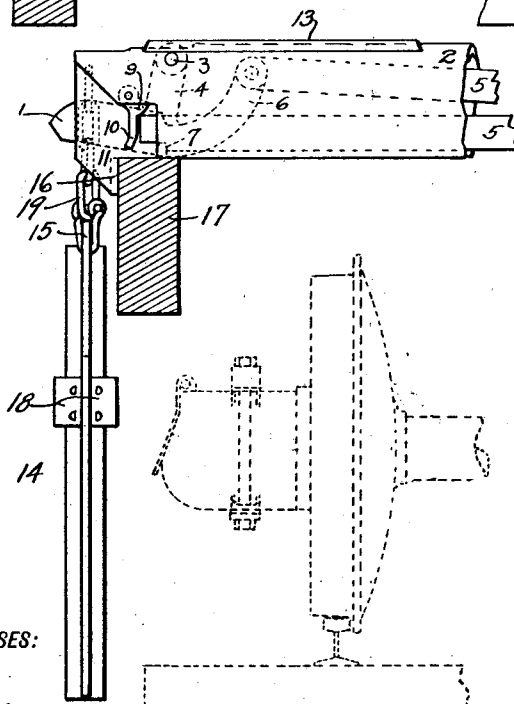
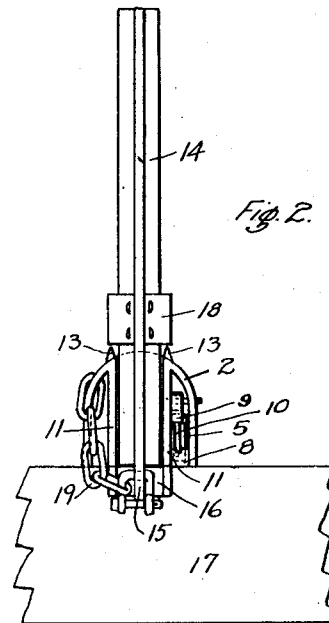
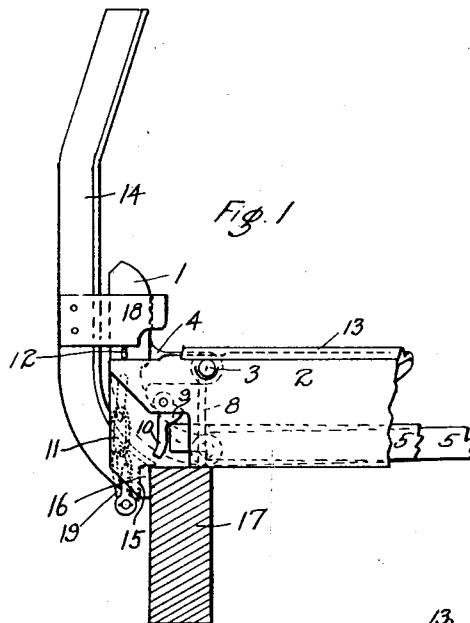


E. B. SHIELDS.
 LOGGING CAR STAKE.
 APPLICATION FILED MAR. 20, 1913.

1,065,889.

Patented June 24, 1913.
 2 SHEETS—SHEET 1.



WITNESSES:

L. L. Pyler
a. a. allen

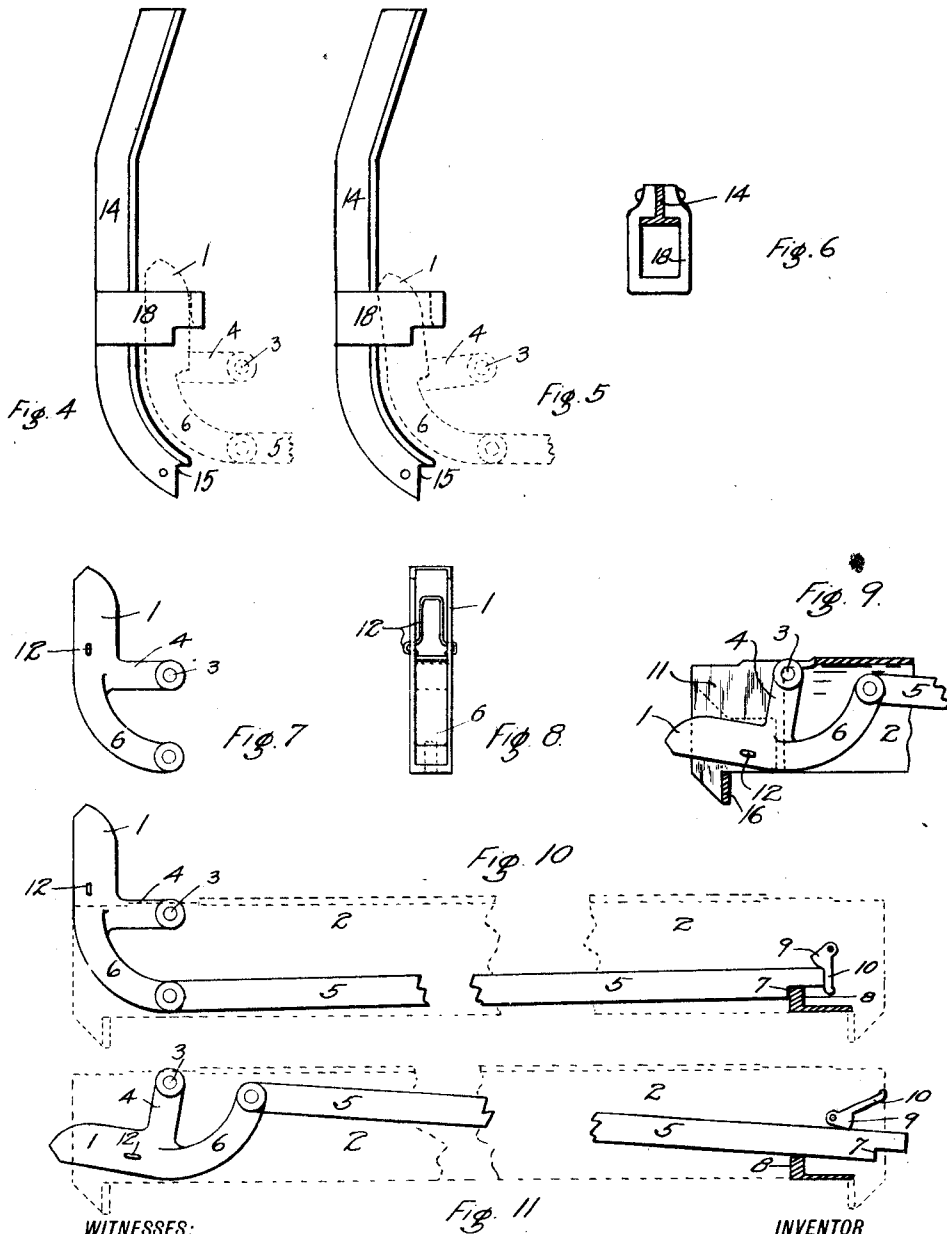
INVENTOR
Edward B. Shields
 BY *M. P. Elliott*
 ATTORNEY

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WITNESSES:
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UNITED STATES PATENT OFFICE.

EDWARD B. SHIELDS, OF TACOMA, WASHINGTON, ASSIGNOR TO TURTLE-BACK LOG BUNK AND CAR STAKE COMPANY, OF TACOMA, WASHINGTON, A CORPORATION OF WASHINGTON.

LOGGING-CAR STAKE.

1,065,889.

Specification of Letters Patent.

Patented June 24, 1913.

Application filed March 20, 1913. Serial No. 755,673.

To all whom it may concern:

Be it known that I, EDWARD B. SHIELDS, a citizen of the United States, residing at Tacoma, in the county of Pierce and State of Washington, have invented a new and useful Logging-Car Stake, of which the following is a specification.

This invention relates to stakes to be used on logging and similar cars, and has for its objects to provide a removable extension to the car stake for which I have made application for Letters Patent of the United States under date March 25th, 1912, Serial No. 686,006, whereby the said stake can be used for a larger variety of loads; to provide means whereby the said stake will be held automatically in withdrawn position when not in use; and means to prevent the accidental release of said stake from its operative position. I attain these and other objects by the devices, mechanisms, and arrangements illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of a part of a bunk with a stake mounted thereon in operative position, the car sill being shown in section; Fig. 2 is a side elevation thereof; Fig. 3 is a view similar to Fig. 1 showing the car stake released and also indicating the wheel and track in dotted lines; Fig. 4 is a detail of the stake extension in operative position, showing the stake proper in dotted lines; and Fig. 5 is a similar view showing the stake proper in the act of dropping and releasing the stake extension; Fig. 6 is a horizontal section of the stake extension; Figs. 7 and 8 are side and front views of the stake proper showing the device whereby the said stake is held in withdrawn position when not in use; and Fig. 9 is a section of the bunk showing said stake mounted therein in elevation and illustrating said device in operation; Figs. 10 and 11 are two views showing the latch whereby the compression bar of the stake is kept from being accidentally released.

Similar numerals of reference refer to similar parts throughout the several views.

Referring first to the device for locking the car stake in operative position and illustrated principally in Figs. 10 and 11. The stake 1 is mounted on the bunk 2 by a pivot 3 passing through the end of the radial arm

4 and is upheld in vertical position by the compression bar 5 which is pivoted to the end of the curved arm 6 and which extends across the car, within the bunk 2, all as described in the said application for patent. The bar 5 has a shoulder 7 at the lower edge of its free end, which shoulder engages the cross wall 8 of the bunk thus preventing the downward swing of the stake 1 on its pivot 3. Now it is evident that if the bar 5 were to be accidentally forced upward a sufficient distance to allow the shoulder 7 to become disengaged from the wall 8, the stake would be released and would fall thus dumping the logs from the car, hence I have devised the following described latch. The latch consists of a sector 9, pivoted at its center to the bunk 2 above the wall 8, and engaging the bar 5 and having a handle 10 extending down adjacent to the end of the said bar (Fig. 10). When the circular part of the sector 9 engages the top of the bar 5 it effectually locks the bar against any upward movement. But when it is desired to unlatch the bar, the handle 10 is raised thus turning the sector on its pivot until it allows the bar to be raised by any suitable means (Fig. 11) out of engagement with the wall 8 thus releasing the stake 1.

Referring now to the friction device illustrated in Figs. 7, 8 and 9. When the stake is released it falls between the guide walls 11 of the bunk as described in the said application for a patent, but in this position the bar 5 is raised and acts on the said curved arm 6 to turn the stake on its pivot 3 to bring the said stake again into nearly vertical position, in which case a log may hit it and swing it far enough for the shoulder 7 to again engage the wall 8 and thus hold it in operative position. To overcome this action I have devised the friction means which is mounted on the stake and which engages the said walls 11 when the stake is in released position, thus holding the stake down against the said action of the bar 5. This device consists of a wire spring 12 mounted in the hollow upper end of the stake 1 and passing out therefrom through the holes in the sides of the stake to engage the said walls 11. The ends of the wire are preferably turned back through other holes in the stake to the interior thereof. Thus

when the stake swings down the portions of the wire extending out from the sides thereof engage the walls 11 and hold the stake down, yet when it is desired to use the stake again it can be easily lifted to place.

Referring now to Figs. 1, 2 and 3. The bunk 2 is provided with a pair of ridges 13 extending along it on each side of the center of the curved top, said ridges being adapted to prevent the accidental shifting of the logs longitudinally during transit.

The extension stake, illustrated in Figs. 1-6 inclusive, consists of a metal standard 14, bent substantially as shown in the drawings, to bring its notched foot 15 inward to rest against and be supported by the upper edge of the bracket plate 16, forming part of the bunk 2 and positioned beside the top edge of the outer sill 17 of the car; and to allow the main portion of the standard to be positioned outside of the stake 1. A loop or strap 18 is secured to the standard 14 and extends inward therefrom, being positioned and proportioned so as to engage the inner vertical surface of the stake 1 near the top thereof and allowing sufficient space between the stake and the standard to permit the stake to drop therefrom when released and as the standard drops (Fig. 5). A short chain 19 is secured to the lower end of the standard 14 and to the bunk 2 (Fig. 2). When the extension stake is not in use it is laid on the deck of the car beside the bunk to which its chain is fastened. When it is in use, however, it is placed with its notched foot 15 in the above described position and the stake 1 is raised to enter the loop or strap 18 to hold the stake up. In this position the stake holds the standard from falling outward under the side pressure of the logs and also from being twisted by any longitudinal strain of the logs because the strap 18 engages the sides of the stake 1. Now when the logs are to be dumped the stake 1 is released by raising the end of its bar 5 at the other side of the car from the wall 8 as described in the aforesaid application for patent, thus withdrawing the inward-acting force from the standard and allowing it to swing outward

and fall, as shown in Fig. 3, and allowing the logs held thereby to be dumped.

Having described my invention, what I claim is:—

1. In a car stake, the combination with a bunk extending across the car and having a stake guide at one end and a cross wall at the other end; a stake pivoted to said bunk and positioned within the stake guide; a compression bar secured to said stake and extending across the car and engaging the cross wall of the bunk whereby said stake is held in upright position; and a removable latch engaging the compression bar adjacent to said cross wall and adapted to prevent said bar from moving out of engagement with said cross wall.

2. In a car stake, the combination with a stake mounted on the car and having means whereby said stake is releasably held in upright position; of a standard engaging and supported by the car at its lower end; and a strap secured to said standard intermediate its ends and engaging the inner side of said stake, whereby said standard is held from outward movement.

3. In a car stake, the combination of a standard; the foot of said standard being shaped to engage the upper corner of the car sill to support the standard and to prevent the inward movement of the foot; and releasable means engaging said standard above its foot and holding it against outward movement.

4. In a car stake, the combination with a bunk having vertical walls formed in the end thereof, said walls forming a stake guide; a stake pivoted to the bunk and mounted within said guide whereby when it is in withdrawn position said stake will lie between said walls; and a spring friction surface secured to said stake and extending therefrom and adapted to engage said guide walls when said stake is in withdrawn position.

EDWARD B. SHIELDS.

Witnesses:

L. L. TYLER,
F. D. METZGER