No. 708,526. Patented Sept. 9, 1902.

W. M. CAIN.

LOAD RETAINING APPARATUS FOR VEHICLES.

(Application filed Dec. 3, 1901.)

(No Model.)

Fig. 1.

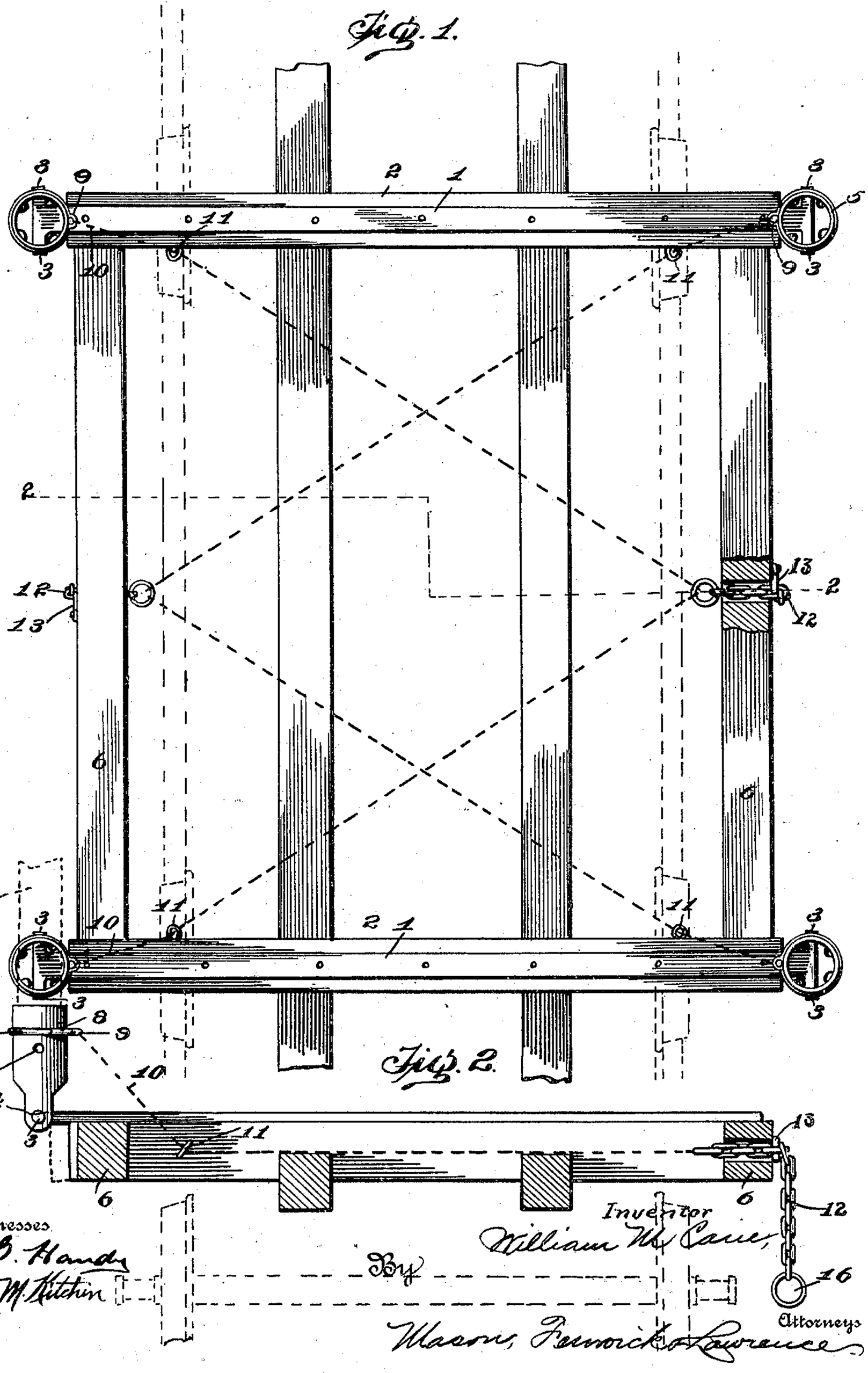

Fig. 2.

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LOAD-RETAINING APPARATUS FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 708,526, dated September 9, 1902.

Application filed December 3, 1901. Serial No. 84,507. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MARTIN CAIN, a citizen of the United States, residing at Carlton, in the county of Carlton and State of Minnesota, have invented certain new and useful Improvements in Load-Retaining Apparatus for Vehicles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in load-retaining apparatus for vehicles, and more particularly to stake-governing means for logging-cars.

It consists, in combination with a suitable car or vehicle, of sockets pivotally supported near the sides thereof, flexible means secured thereto and designed to retain the same in a vertical position, the flexible means carried by all of the sockets upon one side of the said vehicle being passed to the opposite side thereof, and means for retaining said flexible means against movement.

It also consists of certain other novel constructions, combinations, and arrangements of parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 represents a top plan view of a portion of a logging-car or other suitable vehicle having my improved stake-supporting sockets applied thereto, and Fig. 2 represents a transverse vertical section on line 2 2 of Fig. 1.

In the art to which this invention relates it has been found desirable to provide log-supporting stakes on either side of a logging-vehicle, and also to provide means for lowering all of the stakes on one side of the vehicle simultaneously for permitting the logs, which are arranged, preferably, longitudinally of the vehicle so that their sides engage the stakes, to roll off without hindrance or to be readily lifted from the vehicle without the necessity of raising them above their retaining-stakes. In order to obtain this and other valuable results in the most efficacious manner, I provide, as seen in the drawings, a strap, as 1, arranged transversely of each end of a vehicle, and preferably secure the same upon the upper edge of a suitable bolster, as 2, the arrangement at one end being the same as at the other. The ends of each of the straps 1 are provided with transversely-extending lugs, as 3 3, designed to be engaged by eyes 4, carried upon a socket, as 5, which socket is formed, preferably, of a tube with a part of its sides cut or beveled away for forming the eyes 4, whereby the said socket is capable of swinging from a vertical position above the strap 1 to an inverted vertical position below the same. The ends of the straps 1 preferably project sufficiently far beyond the ends of the longitudinal beams 6 to permit the said sockets to swing to such inverted vertical position; but, if preferred, I may terminate the ends of said straps in a vertical plane approximately the same as that of the outer edge of beam 6, whereby the beveled or cut-away portion of the socket 5 will engage such beam and cause the socket to stand off at an acute angle below the horizontal plane of the strap 1.

Preferably encircling each of sockets 5 and lying within an annular groove, as 7, formed in the outer surface of the socket, is a suitable ring, as 8, formed with an eye 9, engaged by a suitable chain, cable, or other flexible supporting means, as 10, which supporting means is passed downwardly through a suitable eye or ring, as 11, carried on the inner vertical face of bolster 2, and then passed diagonally across to the opposite side of the vehicle and secured to a chain or other flexible cable, as 12, which latter cable passes through the longitudinal beam 6 and is engaged by a hook, as 13, pivotally secured to the beam 6, whereby the socket 5 will be supported in a vertical position when the cable 10 is drawn sufficiently taut and the hook 13 is caused to engage chain 12, or the said socket may be permitted to assume its lowered position by the disengagement of the said hook from the said chain. Of course if a cable or rope is employed any suitable securing means may be substituted for hook 13.

It will be seen by reference to Fig. 2 that I prefer to pass the cable 10 above the intermediate framework of the vehicle; but it is not beyond the present invention to place the said cable beneath such framework or even to pass it through the same.

It will be seen that all of the cables 10 are arranged alike, and the description of one

would seem sufficient for the others, it being apparent that all of the sockets on one side of the vehicle have their supporting-cables passed to and engaging the common chain or cable 12, whereby operation of the said chain or cable 12 is designed to affect all of the sockets upon one side of the vehicle, and, as seen in the drawings and before described, the chain 12 is upon the opposite side from that of the sockets operated, whereby the operator stands upon the opposite side of the vehicle from that from which the load is discharged while releasing the socket-supporting means.

Any preferred form of log-supporting stakes, as 14, may be carried by the sockets 5, each of the sockets being formed with one or more side apertures, as 15, for receiving stake-retaining pins or bolts.

Although I have specifically pointed out the details of one particular embodiment of the present invention, yet I do not wish to be understood as limiting myself to the exact form set forth, but shall feel at liberty to deviate therefrom with respect to all minor details within the spirit and scope of my invention.

It will be noted by reference to Fig. 2 that the chain 12 is provided at its free end with a comparatively large ring, as 16, the said chain being of sufficient length to easily permit of the full outward and downward swing of the sockets 5, the said ring 16 engaging the face of beam 6 to prevent the chain from becoming dislodged when not engaged by hook 13 and when the sockets are lowered.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a load-retaining apparatus, the combination with a suitable car, of sockets pivotally supported thereon, flexible means secured to said sockets and passed transversely of the car to the opposite side thereof to that of the respective socket, and flexible means at each side of said car for simultaneously controlling the socket-operating means for affecting all of the sockets of the opposite side of the car, substantially as described.

2. In a load-retaining apparatus, the combination with a suitable car, of stake-carrying sockets pivoted at either side thereof, cables secured to each of said sockets and passed to the side of the car opposite that of the respective socket, and flexible means carrying the free ends of said cables, whereby operation of said flexible means is designed to simultaneously affect all of the sockets of one side of the car, substantially as described.

3. In a load-retaining apparatus, the combination with a suitable car, of stake-carrying sockets pivotally supported near either side thereof, flexible means engaging each of said sockets and designed to control the pivotal position of the same, the said means being passed to the opposite side of the car to that of the sockets, and means for controlling the movement of said flexible means of all of the sockets on one side of the car simultaneously, from the opposite side thereof, substantially as described.

4. In a load-retaining apparatus, the combination with a suitable car, of straps passed transversely thereof, sockets pivoted to the ends of said straps, means carried by said sockets and passed transversely across the car to the opposite side thereof to that of the respective sockets for controlling the pivotal movement thereof, flexible means upon said opposite side connecting the controlling means of one set of sockets whereby the same may be operated simultaneously, means for locking said connecting means against movement, substantially as described.

5. In a load-retaining apparatus, the combination with a suitable car, of straps arranged transversely thereof and secured on top of the same, stake-carrying sockets pivoted to said straps to swing laterally outward and downward, a cable secured to each of said sockets and passed to the opposite side of said car to that of its respective socket, a chain carrying the free ends of all the cables of one side of the car, and means for locking said chain against movement, substantially as described.

6. In a load-retaining apparatus, the combination with a suitable car, of stake-carrying sockets pivoted upon the same, each of said sockets being provided with an annular groove, a ring fitting within said groove and surrounding said socket, an eye formed on said ring, a cable secured to said eye and passed to the opposite side of said car, and means for locking the free end of said cable in a given position, substantially as described.

7. In a load-retaining apparatus, the combination with a suitable car, of stake-supporting sockets pivotally mounted thereon near each side thereof, a cable secured to each of said sockets, a ring carried by the framework of said car near each of said sockets, the cable of each of the respective sockets being passed through its contiguous ring, and thence to the opposite side of the car to that of its socket, and a chain at each side of the said car engaging the free ends of all of the cables of its respective side of the car, and designed to be operated for simultaneously affecting all of said cables, substantially as described.

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

WILLIAM MARTIN CAIN.

Witnesses:
JAMES T. WATSON,
JOHN J. KUSE.