Nov. 13, 1928. 1,691,473

L. D. GREGG

STAKE POCKET

Filed April 20, 1928

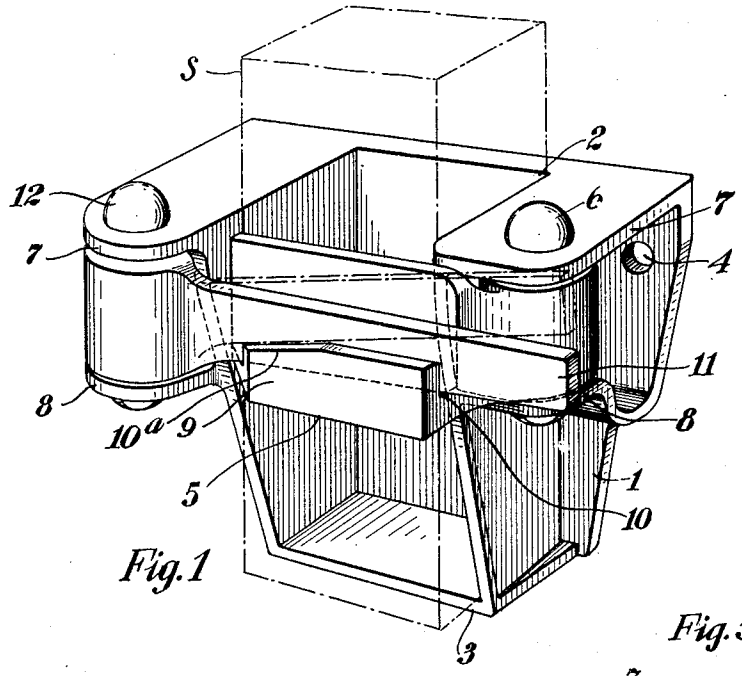


Fig. 1

Fig. 5

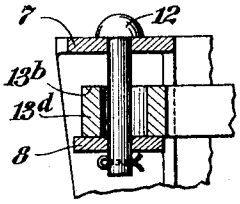


Fig. 2

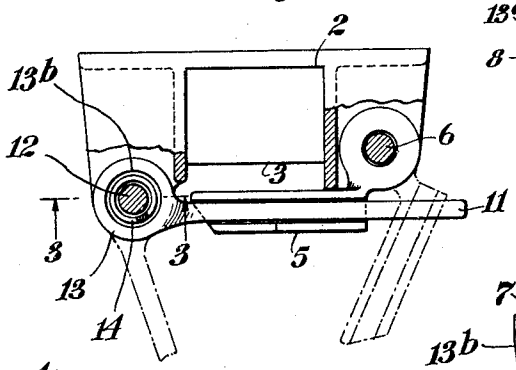


Fig. 3

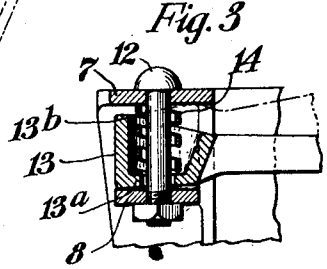
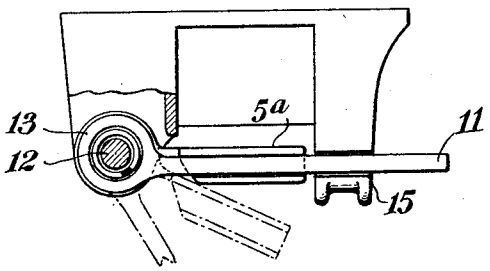


Fig. 4



INVENTOR
Louis D. Gregg,
BY
Hammond & Littell
ATTORNEYS

Patented Nov. 13, 1928. 1,691,473

UNITED STATES PATENT OFFICE.

LOUIS D. GREGG, OF HACKENSACK, NEW JERSEY, ASSIGNOR TO THE GREGG COMPANY LTD., OF HACKENSACK, NEW JERSEY.

STAKE POCKET.

Application filed April 20, 1928. Serial No. 271,424.

This invention relates to an improvement in stake pockets for railway cars and the like.

It is an object of the invention to provide an easily releasable stake pocket for railway cars in which the stakes are supported only from the lower end by resting in the pockets, and in which the repeated opening of the stake pockets to release the stakes for dumping will not wear and cut into the portion of the stake resting against the latch of the stake pocket.

Another object of the invention is to provide a stake pocket for supporting the stakes of sugar cane cars and cars for other commodities which are to be dumped, so as to permit ready opening of the pocket to release the stake, and in which the load on the stakes will not cause binding of the latch.

A further object of the invention is to provide a releasable stake pocket of the type described, having a door in direct contact with the stake, which has little or no movement in a vertical plane, but which is readily released horizontally when the latch is disengaged, and a movable latch by which the door may be locked in closed position.

Various other objects and advantages of the invention will appear as the description thereof proceeds.

Referring now to the drawings which indicate a preferred embodiment of the invention.

Figure 1 is a perspective view of one form of the stake pocket, showing a stake resting therein.

Figure 2 is a plan view of the stake pocket shown in Figure 1, with the open position of the parts shown in dotted line.

Figure 3 is a sectional view on a line 3—3 of Figure 2.

Figure 4 is a plan view of a modified form of embodiment of the invention.

Figure 5 is a sectional view similar to Fig. 3 showing a further modified form of the invention.

In the form of embodiment illustrated in Figure 1, the stake pocket comprises a casing 1, which is preferably a malleable iron or steel casting having a rectangular pocket 2 therein closed on three sides and provided with the bottom ledge 3, on which the bottom of the stake, indicated at S rests. The casing 1 is adapted to be secured to the frame of the railway car by means of bolts or the like passing through the openings 4. To permit the stakes to be released for discharge of the load, which may be sugar cane, lumber, or any other bulky commodity, the stake pocket is provided with a door 5 which closes the front of the opening 2, and is preferably pivoted on a bolt 6, passing between the top flange 7 and intermediate flange 8 of the casing 1. The door 5 preferably presents a smooth rear surface against the side of the stake in contact therewith and is secured to the pivot 6 in such a way as to prevent any substantial amount of up and down or vertical movement of the door when the latch is applied or released. At the lower portion of the door 5 toward the front an integral catch member 9, providing a trough 10, is formed so as to receive the latch bar 11 of the latch. The latch bar 11 is pivoted on a bolt 12 which extends between the top and intermediate flange members 7 and 8 on the opposite side of the casing 1 from the bolt 6. The latch bar 11 is provided with an enlarged hollow boss or socket 13, preferably having a closed bottom 13^a, surrounding the pin 12, and a compressed coiled spring 14 is located in the opening of the boss around the pin 12, with the upper end of the spring 14 pressing against the upper flange member 7 and the lower end of the spring pressing against the bottom of 13^a of the socket 13, so as to tend normally to keep the latch 11 pressing downwardly in trough 10 to hold the latch bar 11 in its locked position so that vibration or jarring of the moving car will not open the stake pocket. The upper portion of the socket 13 is bevelled so that the latch when raised will not foul the top flange member 7 and the socket 13 tapers outwardly from bottom to top, as indicated, so it will not foul the pin 12 when the latch 11 is raised thus permitting the outer end of the latch bar to be lifted upwardly against the compression of the spring 14 to free the latch bar from the trough 10 in the door 5, one edge of the trough being cut away as indicated at 10^a to permit this releasing upon elevation of the latch bar 11. It will be understood, of course, that the trough 10 need not be as long as illustrated but may be only a short latch or keeper formed as a part of the door 5, or a keeper formed as a part of the stake pocket 1, such as the keeper 2 illustrated in my prior Patent No. 1,145,479, granted July 6, 1915, or the keeper 15 of Figure 4.

From the dotted line position of the latch bar as indicated in Figure 1, it will be obvious that the latch bar 11 may be swung outwardly around the pivot pin 12 to release the door 5, which may then swing around the pivot pin 6, opening the front of the compartment 2 and permitting the stake S to move out of the compartment, freeing the load resting thereagainst. To secure the stake in the pocket, the stake is again replaced in the compartment 2, with the bottom resting on the ledge 3, the door 5 closed and the upper end of the latch bar moved upwardly and swung into position above the trough 10 and permitted to descend therein. The compression of the spring 14 and the contour of the bottom 13^a, which tends to keep the latch bar in a down position, is sufficient to prevent accidental unlatching under normal cond tions, and yet permits the elevation of the latch bar for releasing the stakes when desired. The use of a separate latch member pivoted on the opposite side from the door greatly reduces the pressure at the point where the latch bar rests against its keeper, facilitating the release of the latch and greatly reducing the damage done to the latch when opening the same with a hammer or otherwise.

The door 5, which is in contact with the front surface of the stake, swings in a horizontal plane around the pivot 6 and is held substantially free from vertical movement when the latch bar 11 is raised or lowered, giving a smooth and immovable support against the stake S so that the stakes are not worn away or cut into by the frequent raising and lowering of the latch bar 11. An objection which arises when an attempt is made to release the stakes in the prior stake pockets, in which the latch bars are in direct contact with the outer surface of the stake is that the up and down movement of the latch bars along the surface of the stakes, which are always inclined outwardly by the loads thereon, cuts into and wears away the stake and also makes more difficult the release of the latch bar.

The spring 14, while desirable as an assistance to gravity in holding the latch in its closed position in the trough, is not, however, essential and the action of gravity alone can be relied upon as the sole means of holding the latch in the trough especially if the depth of the trough is increased, thereby making necessary greater vertical movement to attain the release. Figure 5 shows a modified construction in which the spring 14 has been omitted and the socket 13^d formed with no bottom becoming merely a cored extension of latch 11 with a hole for pin 12. As illustrated in Figure 5, neither the hole for pin 12 nor the top of the latch bar need be tapered to permit the lifting of same to disengage it from the trough as the clearance between the latch 11 and pin 12 permits tilting of the latch to lift it from the trough and also the clearance between latch 11 and upper flange member 7 permits the latch to be lifted vertically for disengaging it from the trough.

It will be noted that a stationary plate in contact with the outer surface of the stake S may be provided in various ways, such as by the use of a thin plate of sheet metal between the latch bar and the stake S, secured by a chain of suitable length to the stake pocket, so as to permit the plate to drop out of place without becoming lost, when the latch bar is opened, or by the use of a door 5^a, as indicated in Figure 4, which shows both the door 5^a and the latch 11 pivoted, one above the other at the same side of the stake pocket around the pin 12, the latch bar being secured in a suitable notch or recess 15 in the opposite side of the casing 1, or in other ways.

Various modifications and changes may be made in the embodiments illustrated and other embodiments may be used without departing from the spirit of the invention or the scope of the appended claims.

I claim:

1. In a stake pocket for railway cars and the like, a stake receiving compartment having an open front, a pivoted door for closing the open front, a pivoted latch bar for releasably latching the door in closed position, a trough on said door for receiving the latch bar and means to permit movement of the latch bar in a vertical and horizontal plane.

2. In a stake pocket for railway cars and the like, a stake receiving compartment having an open front a pivoted door for closing the open front, a pivoted latch bar for releasably latching the door in closed position, a keeper for receiving the latch bar and means to permit movement of the latch bar in a vertical and horizontal plane, to release same from the keeper.

3. In a stake pocket for railway cars, a stake receiving and supporting compartment having an open front through which the stake may fall when released, a pivoted door for closing the open front, a latch bar pivoted for horizontal movement for releasably latching the door in closed position, a catch for receiving said latch bar, and spring means normally holding said latch bar in horizontal position but permitting vertical movement thereof for insertion into or removal from said catch.

4. In a stake pocket for railway cars and the like, a stake receiving and supporting compartment having an open front, a smooth plate member closing said open front and contacting with one surface of the stake, a latch member for releasably latching said stake and plate in position, a catch for

receiving said latch member, a pivot pin, a large socket on said latch member surrounding said pivot pin, and a coil spring around said pin pressing upon the bottom of said socket.

5. In a stake pocket for railway cars and the like, a stake receiving compartment having an open front, a pivoted door for closing the open front, a pivoted latch bar for releasably latching the door in closed position, a trough on said door for receiving the latch bar, means to permit swinging of the latch bar, and means to permit movement of the latch bar in a plane other than the plane it swings in.

6. In a stake pocket for railway cars and the like, a stake receiving compartment having an open front through which the stake is inserted, a pivoted door for closing the open front, a pivoted latch bar for releasably latching the door in closed position, a keeper for receiving the latch bar and means to permit the movement of the latch bar in two planes.

7. In a stake pocket for railway cars and the like, a stake receiving compartment having an open front thru which the stake is inserted, a pivoted door for closing the open front, a pivoted latch bar for releasably latching the door in closed position, a catch on said stake pocket for receiving the latch bar and means to permit the movement of the latch bar in two planes.

8. In a stake pocket for railway cars and the like, a stake receiving compartment having an open front through which the stake is inserted, a pivoted door for closing the open front, a pivoted latch bar for releasably latching the door in closed position, a catch for receiving said latch bar, spring means bearing against the latch bar to hold the same engaged in its catch, and means to permit movement of the latch bar in two planes.

9. In a stake pocket for railway cars and the like, a stake receiving compartment having an open front through which the stake is inserted, a door closing said open front and contacting with one surface of the stake, a latch member for releasably latching said stake and plate in position, a catch for receiving said latch member, a pivot pin, a large socket on said latch member surrounding said pivot pin, a beveled edge on both the upper and lower surface of said socket, and a coil spring around said pin pressing upon the bottom of said socket.

10. In a stake pocket for railway cars or the like, a stake compartment having an open side, a door closing said open side and pivoted at one side of said pocket, a latch pivoted at the other side of said pocket, a keeper for said latch on the door pivot side of the latch, said door bearing against the latch on the side adjacent the latch pivot, whereby the releasing of the latch from its keeper is facilitated.

11. In a stake pocket for railway cars and the like, a stake receiving compartment having an open front, a member contacting with one surface of the stake and extending when closed substantially across said front opening and a latch member extending when closed substantially across said front opening and releasably securing said stake contact member.

12. In a stake pocket for railway cars and the like, a stake receiving compartment having an open front, a door extending when closed substantially across said front opening and a latch bar extending when closed substantially across said front opening and releasably securing said door.

In testimony whereof I have affixed my signature to this specification.

LOUIS D. GREGG.