

May 8, 1923.

1,454,037

R. E. BYRNE

VEHICLE BED

Filed June 13, 1921

Fig. 1.

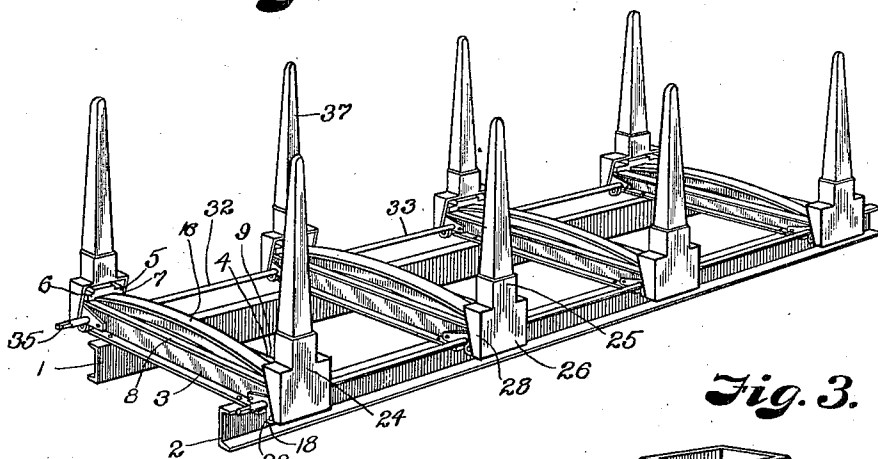


Fig. 3.

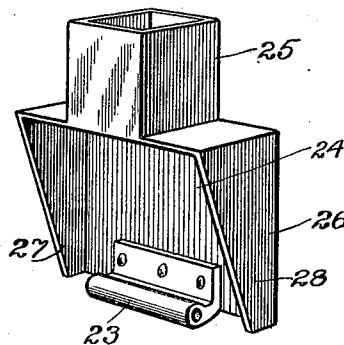


Fig. 2.

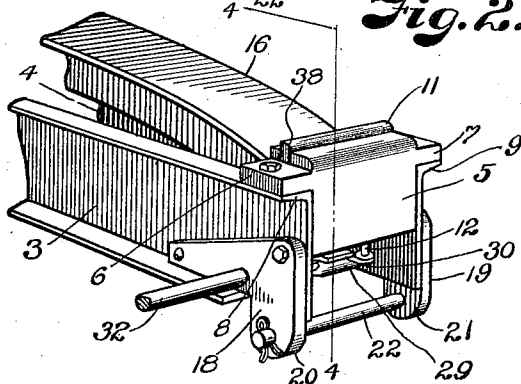


Fig. 4.

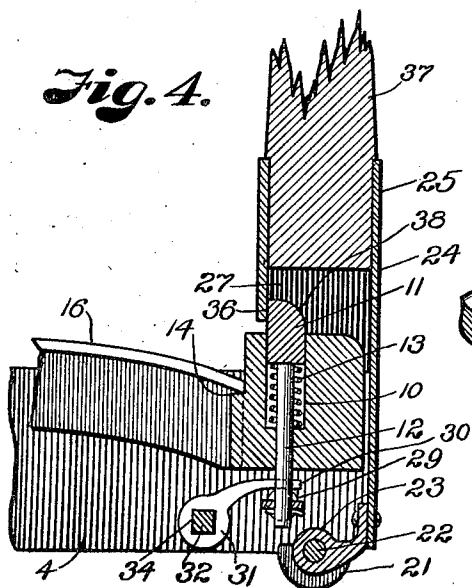


Fig. 5.

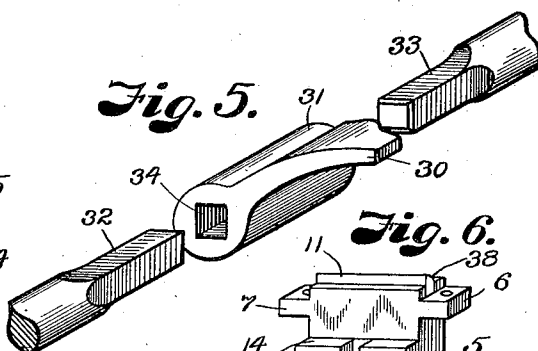
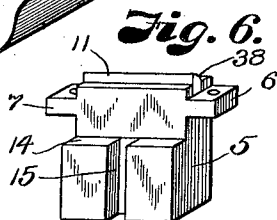


Fig. 6.



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UNITED STATES PATENT OFFICE.

RALPH E. BYRNE, OF KANSAS CITY, MISSOURI.

VEHICLE BED.

Application filed June 13, 1921. Serial No. 477,075.

To all whom it may concern:

Be it known that I, RALPH E. BYRNE, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Vehicle Beds; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to combined vehicle beds and stake pockets, the stake pockets being so co-related with the bed proper that they can function as bases for the stakes to maintain the load upon the bed or they may function as skids for effecting side delivery of the load from the bed.

For example, in the normal position of the pockets they will support the stakes vertically in the usual way but they are hinged to the sides of the vehicle bed so that they may swing laterally and downwardly to permit the free ends of the stakes to rest upon the ground so that the stakes, in conjunction with the pockets, form side delivery skids to permit the load to be discharged laterally from the bed.

In one form of the invention I may employ arcuate sills transversely of the vehicle body, the top edges of the sills curving downwardly on each side of the longitudinal center so that there will be a normal tendency for the load to shift to the side edges of the body or bed and discharge when the stakes are swung out of load-retaining position, there being also means provided whereby all of the stake pockets on one side of the bed or body may be simultaneously released to permit the load to be discharged.

The novel arrangement as well as the details of construction of the preferred form of my invention will be understood by reference to the following description in connection with the accompanying drawings, in which—

Fig. 1 is a perspective view of a vehicle bed constructed in accordance with my invention.

Fig. 2 is a detail perspective view of one end of a bolster, a stake pocket securing means, and part of one of the transverse sills.

Fig. 3 is a detail perspective view of one of the stake pockets.

Fig. 4 is a sectional view on the line 4—4 of Fig. 2.

Fig. 5 is a fragmentary perspective view of one of the stake pocket latch actuators and ends of co-operating rod sections, and

Fig. 6 is a detail perspective view of one of the transverse sill supporting blocks which also carries the retaining latch for the stake pocket.

The vehicle bed is shown as consisting of channel side sills 1 and 2, connected by the bolsters consisting of parallel channels 3 and 4 with a space between them. The bottom flanges of the channels 3 and 4 are shown as resting upon the top flanges of the channels 1 and 2, to which they may be secured by bolts, rivets or other suitable fastening means.

The ends of the bolsters project slightly beyond the edges of the side sills 1 and 2 and in the space between them at each end are blocks 5. Each block is shown as having lugs or projections 6 and 7 at opposite ends, which rest upon the top flanges 8 and 9 of the channels 3 and 4, to which they may be secured in any appropriate manner, the major portion of the block filling the space between the webs of the channels, as clearly seen in Fig. 2.

Each block is provided with a recess 10, in which is a vertically slidable latch bolt 11, having depending pins 12 near its respective ends, around which are coiled bolt-projecting springs 13, one end of each spring resting against the floor of the recess 10 and the other against the under side of the bolt bar or latch 11, which may normally extend above the upper edge of the block 5.

The inner face of each block 5 is provided with a shoulder 14, bisected by a vertical groove or recess 15, see Fig. 6. The blocks 5, in addition to serving as spreaders and tie members for the bolster channels 3 and 4 and as bolt-supporting means, also constitute seats for the transverse sills 16. The sills 16 are shown as arcuate T-bars, the top flanges of which constitute the floor of the bed upon which the load rests and each sill 16 is curved toward the side of the bed so that there will be a normal tendency for the load to divide and shift to opposite sides of the bed when the stake pockets to be herein-after described are released.

The ends of the top flanges of the T-

shaped transverse sills 16 rest upon the shoulders 14 of the blocks 5 and their webs 17 engage in the vertical recesses or slots 15 so that seats are provided for the ends of the removable transverse sills 16, the construction of the blocks also providing means whereby the sills 16 may be easily dropped into place when it is desired to employ them, it being understood that the sills 16 may or may not be used, according to the material to be carried by the vehicle.

Carried by the webs of the channel members 3 and 4 are pairs of brackets 18 and 19 having depending arms 20 and 21, which extend below the channel members 3 and 4 and which carry hinged pintles in the form of rods 22, on which is mounted the barrel or sleeve member 23 of the stake pocket 24. Each stake pocket comprises a tubular stake-receiving socket portion 25, open at both ends, and a base member 26, to the lower edge of which the hinged barrel 23 is secured. The base 26 may be constructed with side flanges 27 and 28, which, together with the main body portion or plate of the base, constitute boxes for boxing in the ends of the bolsters, as will be clearly apparent by reference to Figs. 1 and 4. This enhances the appearance of the vehicle.

The bolts or spring-pressed latch bars 11 are provided at the lower ends of their pins 12 which extend below the blocks 5 with transverse connecting bars 29, which connect the respective pins 12 and which are adapted to be engaged by the lips 30 of the actuators 31, which are shown as sleeves engaging the ends of the rod sections 32 and 33. The ends of the rod sections 32 and 33 are polygonal to engage the polygonal recess 34 of said rod sections. The rod sections are journaled in the bolster channels, as clearly seen in Figs. 1, 2 and 4.

The rods can be of any construction but they may be made sectionally for convenience in assembly. Whether the rod is a single rod or a sectional rod will depend upon the judgment of the manufacturer but I prefer to have one end 35 of the operating rod polygonal so that a crank, hand wheel or other actuating device may be placed thereon to turn the rod so that all of the actuators 31 will be operated at the same time so that their lips will contact with the tie bars 29 to withdraw the bolts or latch bars 11 from engagement with the inner walls 36 of the socket members 25 to release the latches from engagement therewith and permit the stake pockets to swing outwardly and downwardly so that the ends of the stakes 37 will rest upon the ground and constitute skids to support the load as it is being transferred from the vehicle bed to the ground or platform.

When the parts are assembled as shown in Figs. 1 and 4 with the stake pockets swing-

ingly supported on the pintles 22 and the top edges of the latch bars 11 engaging the forward walls 36 of the sockets 25, the load may be conveniently supported against lateral displacement. If it is desired to dump the load, a suitable crank wheel or similar device may be applied to the end 35 of the actuating rod so that all of the actuators or releasing devices 31 on one side of the vehicle may be caused to operate at the same time to simultaneously withdraw all of the latches from engagement with the pockets. The pressure of the load against the stake pockets will cause the stakes and pockets to swing outwardly and downwardly so that the load will automatically release itself. If the actuators on the opposite side of the vehicle, are operated to release the stake pockets at that side, the remainder of the load will be deposited to the side of the vehicle, it being understood that when the transverse bars 16 are employed, the load will have a tendency to divide itself to discharge on opposite sides of the vehicle although, as heretofore stated, the arcuate transverse sills 16 may be eliminated if desired.

When it is desired to restore the stakes and the pockets to their functional position for maintaining the load on the body, as shown in Fig. 1, they may be swung up into such position, the edges of the plates 36 riding over the curved portions 38 of the latch bars 11. The latch bars are depressed slightly during this operation against the action of the spring 13, this movement being permitted without affecting the actuators 31 since the latch bars 11 may have independent movement with respect to the actuators because the lips 30 merely lie between the pins 12 and above the tie bars 29.

It will also be apparent that the transverse sills 16 may be conveniently removed so that the load will rest directly upon the bolsters, or rollers may be substituted between the bolster members 3 and 4, if desired. The substitution of rollers, however, constitutes no part of the present invention since rollers in connection with bolsters are shown in my former Patent No. 1,334,618 of March 23, 1920.

What I claim and desire to secure by Letters-Patent is:

1. A vehicle bed comprising side sills, transverse sills connecting them, the transverse sills being arranged in pairs, blocks between the sills of each pair and at each end thereof, stake pockets hinged to the sides of the vehicle bed, and sliding latches carried by the blocks and engageable with the stake pockets to normally hold them in vertical position.

2. A vehicle bed comprising side sills, transverse sills connecting them, the transverse sills being arranged in pairs, blocks

between the sills of each pair and at each end thereof, stake pockets hinged to the sides of the vehicle bed, sliding latches carried by the blocks and engageable with the stake pockets to normally hold them in vertical position, and means for actuating said latches.

3. A vehicle bed comprising side sills, transverse sills connecting them, the transverse sills being arranged in pairs, blocks between the sills of each pair and at each end thereof, stake pockets hinged to the sides of the vehicle bed, sliding latches carried by the blocks and engageable with the stake pockets to normally hold them in vertical position, and means for simultaneously actuating all of the latches on one side of the vehicle bed to stake-pocket-releasing position.

4. A vehicle bed comprising side sills,

transverse sills connecting them, stake pockets hinged to the sides of the vehicle bed and having vertical walls, and vertically slidable latches carried by the vehicle bed and projectable into the bottom of the stake pockets to engage the inner walls of the stake pockets to normally hold them in vertical positions.

5. A vehicle bed, vertical stake pockets hinged to the side of the vehicle bed and having outwardly swinging movement to release the load, vertical latches carried by the vehicle bed, the ends of which are receivable within the lower portions of the stake pockets to normally prevent outward swinging movement thereof, and a single rock shaft for releasing all of the sliding latches on one side of the vehicle bed.

In testimony whereof I affix my signature.

RALPH E. BYRNE.