May 3, 1949. W. G. WHITE 2,469,093

STAKE BUNK

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Fig 1

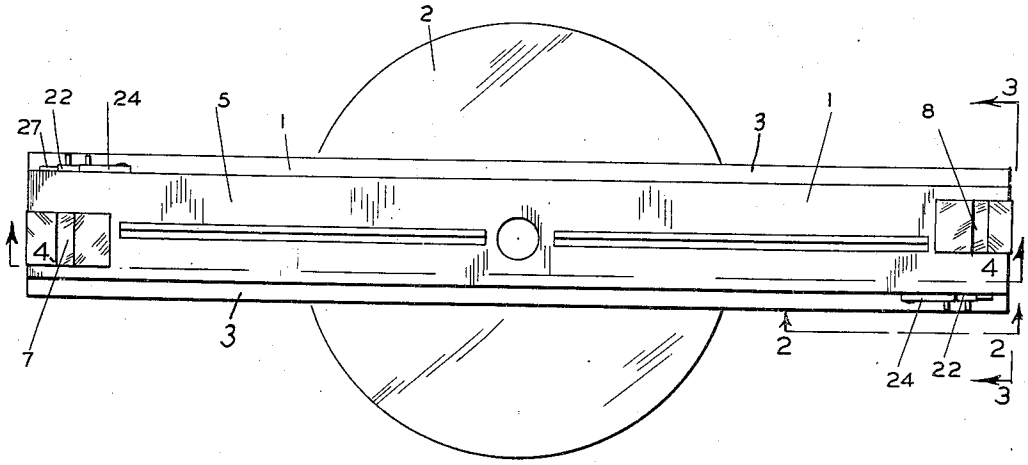



Fig 3

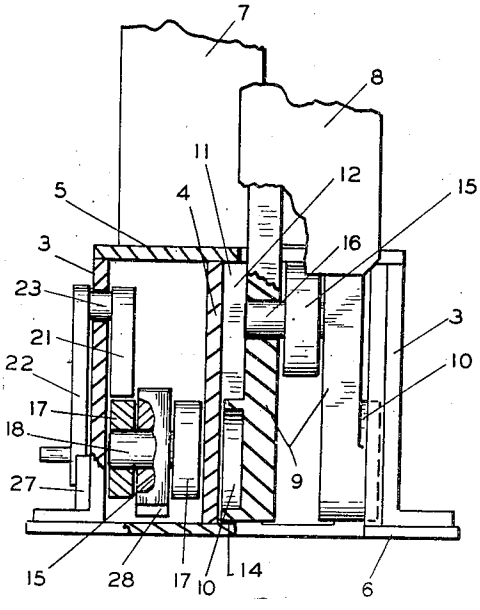
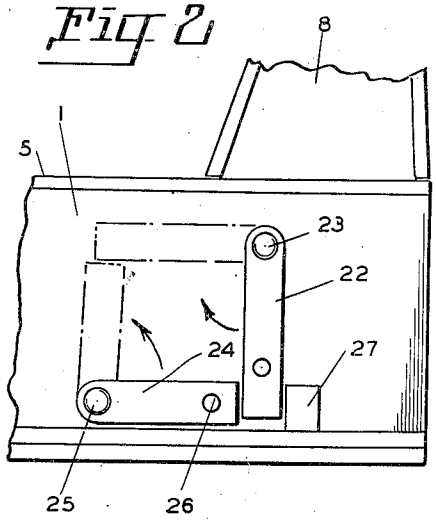



Fig 2



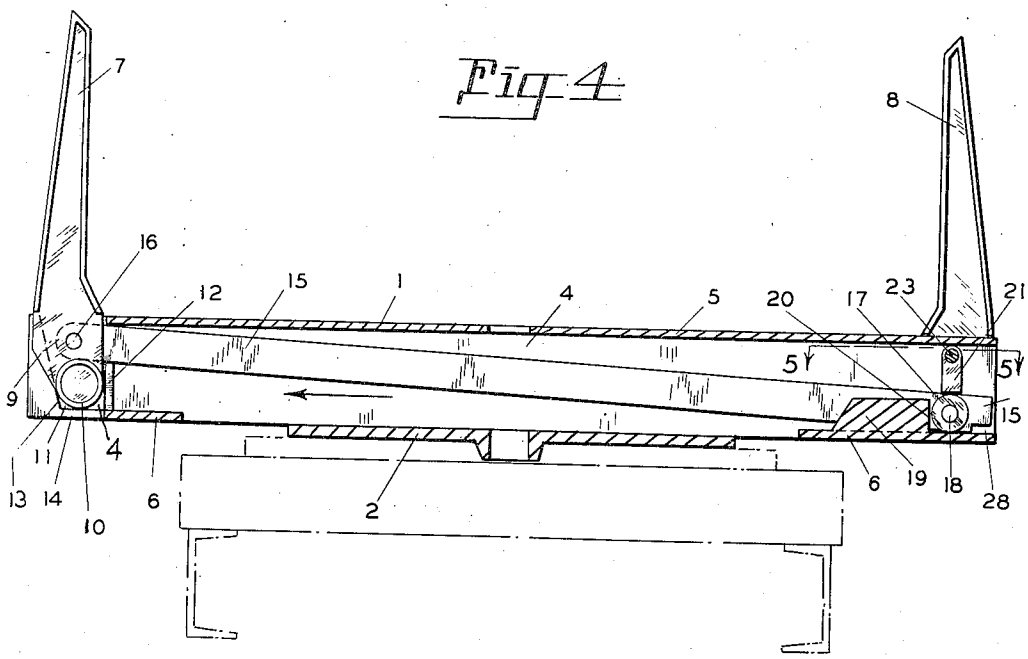

INVENTOR.
WILLIAM G. WHITE
BY
ATTORNEY

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STAKE BUNK

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Fig 4



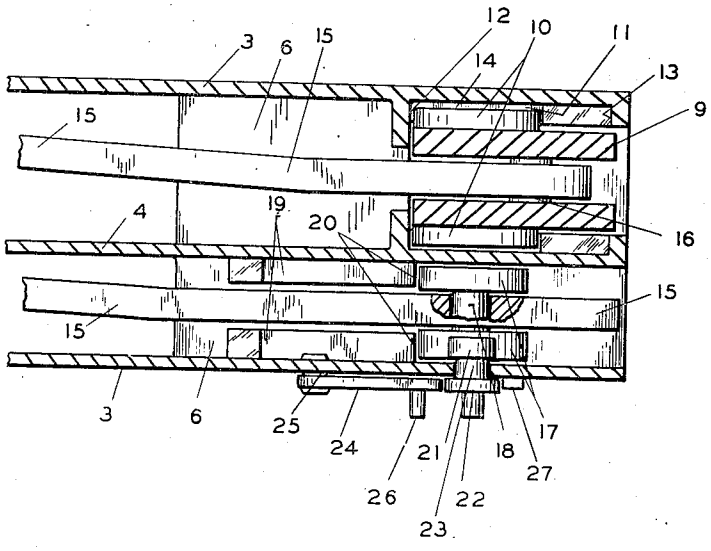




Fig 5

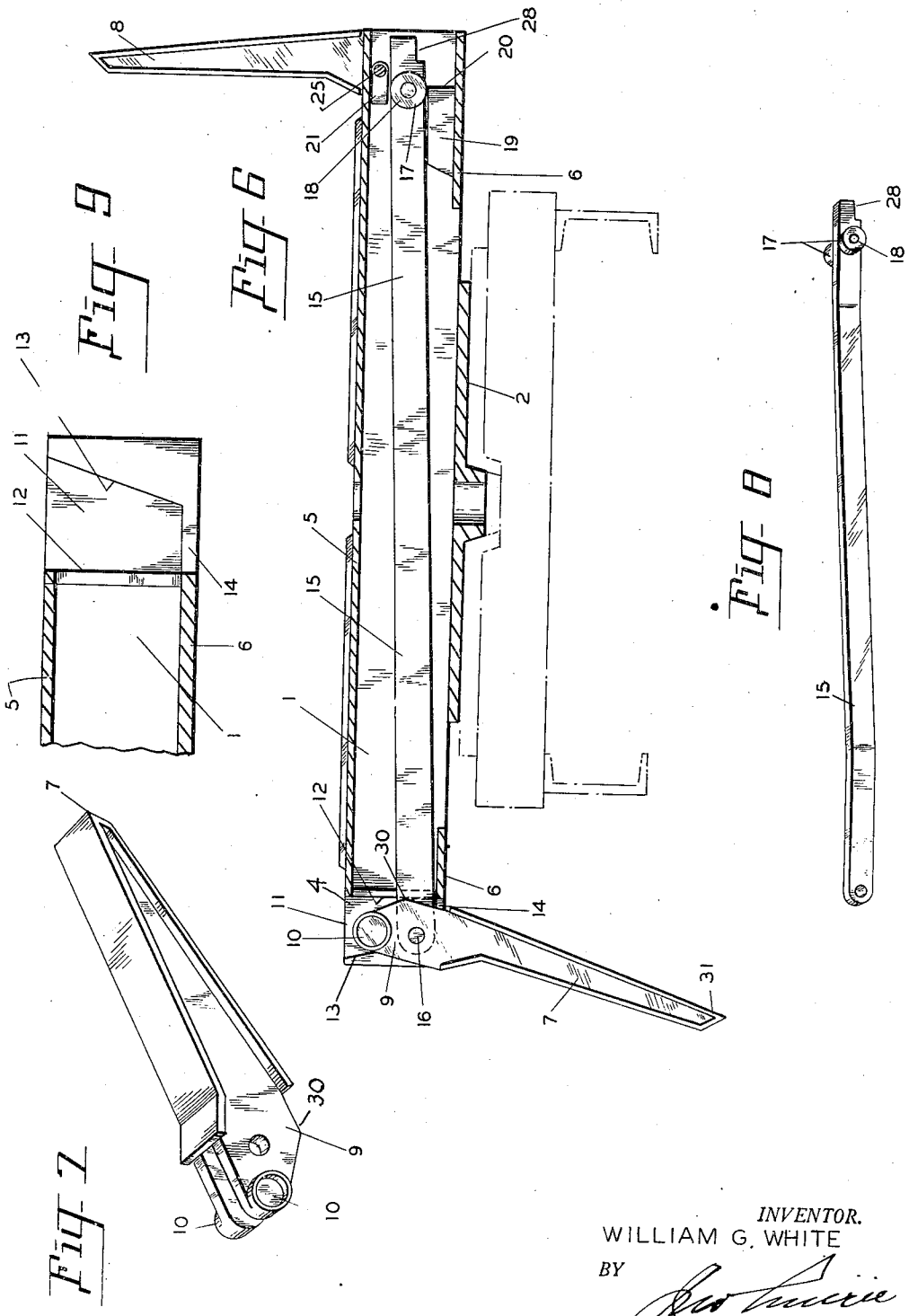
INVENTOR.
WILLIAM G. WHITE
BY
ATTORNEY

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STAKE BUNK

Filed Nov. 17, 1947

3 Sheets-Sheet 3




INVENTOR.
WILLIAM G. WHITE
BY
ATTORNEY

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# UNITED STATES PATENT OFFICE

2,469,093

## STAKE BUNK

William G. White, Aberdeen, Wash.

Application November 17, 1947, Serial No. 786,406

7 Claims. (Cl. 280—145)

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This invention relates to stake type bunks and is particularly adapted to logging trucks and trailers.

The primary object of the invention is to provide pivotally mounted stakes that can be securely locked in a vertical position relative to the bunk.

A further object of the invention is the provision of a stake locking mechanism that can be safely and easily unlocked permitting the stakes to pivot at their lower ends, their upper ends falling from an upright vertical position to a hanging vertical position relative to the bunk.

These and other incidental objects will be apparent in the drawings, specification and claims.

In the drawings:

Figure 1 is a plan view of my new and improved stake bunk.

Figure 2 is a fragmentary enlarged side view of one end of the bunk, viewed from line 2—2 of Fig. 1.

Figure 3 is a fragmentary end view of the bunk taken on line 3—3 of Figure 1, partially broken away for convenience of illustration.

Figure 4 is a sectional view taken of the bunk on line 4—4 of Figure 1. This view illustrates the stake in vertical and locked position.

Figure 5 is a fragmentary enlarged view taken on line 5—5 of Figure 4.

Figure 6 is a sectional view similar to Figure 4 illustrating one of the stakes in lowered or unlocked position.

Figure 7 is a perspective view of one of the stakes removed from the bunk.

Figure 8 is a perspective view of one of the stakes removed from the bunk assembly.

Figure 9 is a fragmentary sectional view of the bunk having the stake removed therefrom and illustrating the guideway in which the stake operates.

Referring specifically to the drawings:

In my drawings, I indicate my new and improved stake bunk by numeral 1, the same consisting of a rectangular box-like assembly having side walls 3 and a central partition 4 with a top plate 5 and bottom plates 6. The plates 6 provide brace members between the side walls 3 as well as supports for the internal working parts to be described later. The bunk has a base plate 2 forming part thereof and is what is known in the terms of logging trucks as a fifth wheel. In the drawings I only show the part of this wheel that is associated with the bunk, the other half not here shown forms part of the truck or trailer to which the bunk is mounted.

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The main and outstanding feature of the invention is the method of mounting the stakes 7 and 8. Located on the lower ends 9 of the stakes are protruding bosses 10, these bosses are adapted to work within the guideways 11 formed within the ends of the bunks.

Referring particularly to Figure 9, the guideways 11 consist of a vertical inner guide 12 and an inclined outer guide 13 with a horizontal bottom guide 14, all of the said guides being formed on the inner sides of the side wall 3 and partition 4. A locking bar 15 is pivotally connected at one end between the bifurcated lower end 9 of the stake 7 at 16 at its one end and having rollers 17 journalled to the pin 18 at its opposite end. Stops 19 are fixedly mounted on the bottom plates 6 and are adapted to stop the end movement of the locking bar 15 when the rollers 17 are in the location indicated in Figure 4, namely, against the outer end 20 of the stop 19.

A locking mechanism, consisting of the pivotally mounted stop 21 holds the cam rollers 17 in the down position when the lever 22, located on the outside of the bunk, is in the position illustrated in Figure 2. The lever 22 is connected to the stop 21 by the stub shaft 23 and forms part thereof. A stop 24 is pivotally mounted to the bunk at 25 and has an outwardly extending pin 26 forming part thereof and normally rests in the position shown in Figure 2 preventing the lever 22 from moving in the direction of the arrow. A permanent stop 27 prevents the lever 22 from moving to the opposite direction.

Referring back to Figure 4, the bosses 10 of the stake rest upon the horizontal bottom guide 14 of the guideways 11 and between the sides of the guides 12 and 13, the locking bar 15 securely holding the stake in the position shown.

I will now describe the operation of lowering the stake to the position shown in Figure 6. The stop 24 is revolved in the direction of the arrow. The lever 22 is then raised in the direction of the arrow to the broken line position, after which the stop 24 is moved back to its broken line position, thereby holding the lever 22 in a raised position together with the stop 21. When the stop 21 is removed from above the roller 17 a pinch bar is then inserted at the point 28 (Fig. 4) raising the locking bar 15 and cam rollers 17 above the stop 19 permitting the bar 15 to travel in the direction of the arrow and thereby lowering the stake.

It will be noted in Figure 6 that the bosses 10 have raised within the guide members 11, while the locking bar 15 has lowered resting on the

base plate 6. Also it will be noted that the elbow 30 of the lower ends 9 of the stake is bearing against the vertical guides 12 forcing the bosses 10 away from the said guides 12 against the oppositely disposed guide 13, which slopes outwardly at its upper end from the bunk, permitting the movement of the bosses 10 away from the guide 12. The object of this movement is to prevent the locking rollers 17 disposed at the opposite end of the locking bar 12 from dropping down behind the stops 19 when the stake is in lowered position.

When it is desired to raise the stake the operator grasps the end 31 of the stake, raises the same to the vertical position at which time the cam rollers 17 will drop over the end 20 of the stop 19 after which the stop 24 will be operated by the operator, allowing the lever 22 to assume is original position as shown in Figure 2, bringing the stop 21 in line with the rollers preventing the said rollers from becoming disengaged from the stop 19 until it is desired to lower the stake again. By permitting the pivot bosses 10 to float within the guideways 11 a minimum of height is required within the bunk for the operation of the locking bar 15, still giving a maximum of leverage when the stake is in raised position. An identical structure is provided for the stake 8, but in reverse position, on the opposite side of the partition 4, as shown in Figures 3 and 5.

This structure assembly with its locking mechanism is the primary object of my invention, although I do not wish to be limited to the exact mechanical structure as other mechanical equivalents may be substituted still coming within the scope of my claims.

What is claimed as new, is:

1. A stake bunk comprising an elongated housing having a longitudinally extending central partition separating said housing into two compartments, an opening formed in the top of said housing at each end and into one of said compartments, slots formed in the ends of said compartments from said openings and extending partially along the bottom walls thereof, an upright partition extending inwardly of said compartments to and adjacent the inner ends of said slots and cooperating with the end and bottom walls containing said slots to define open topped opposed recesses, stakes mounted in the open ends of said housing and having lateral bosses extending into said recesses to provide floating fulcrums for the stakes, and individual means including a bar for releasably retaining said stakes in upright operative position.

2. A stake bunk comprising an elongated housing having a longitudinally extending central partition separating said housing into two compartments, an opening formed in the top of said housing at each end and into one of said compartments, slots formed in the ends of said compartments from said openings and extending



partially along the bottom walls thereof, upright partitions extending inwardly of said compartments to and adjacent the inner ends of said slots and cooperating with the end and bottom walls containing said slots to define open topped opposed recesses, stakes mounted in the open ends of said housing and having lateral bosses extending into said recesses to be supported thereby while permitting pivotal movement between positions extending downwardly through said bottom slots and upwardly through said openings, and individual means for releasably retaining said stakes in upright operative position, and comprising a bar freely positioned longitudinally in each of said compartments, each of said bars being pivotally connected to the stake mounted in the ends of the respective compartments, stop means in the opposite ends of said compartments, and catch means in the free ends of said bars for cooperating with said stop means to retain said stakes in upright position.

3. A stake bunk as defined in claim 2 wherein a latch is mounted adjacent said stop means for selectively blocking said catch means.

4. A stake bunk as defined in claim 2 wherein a latch is mounted adjacent said stop means for selectively blocking said catch means, and a second latch is mounted adjacent said latch for selectively blocking said latch.

5. A stake bunk as defined in claim 2 wherein the free end of said bar is recessed to receive a prying tool for lifting said bar to release said catch means from said stop means.

6. A stake bunk as defined in claim 1 wherein each of the stakes is provided with a shoulder for abutting the inner edges of said recesses when the stake is lowered to prevent its bar from moving to locked position.

7. A stake bunk comprising an elongated housing, open at one end and formed with opposed inwardly extending substantially U-shaped flanges, the inner surfaces of the front legs of the flanges being inclined upwardly, a stake having outwardly extending bosses in the inner open end of the housing, the bosses being confined and guided between the flanges to provide a floating fulcrum, a bar pivoted to the stake, means for operating the bar to raise and lower the stake on its floating fulcrum, and means for locking the bar in its raised or lowered position.

WILLIAM G. WHITE.


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