United States Patent

[11] 3,625,542

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[54] STABILIZER AND JACK ASSEMBLY FOR CAMPING TRAILERS AND THE LIKE

19 Claims, 10 Drawing Figs.

[52] **U.S. Cl.** **280/150.5**
[51] **Int. Cl.** **B60s 9/02**
[50] **Field of Search** ..... 280/150.5; 254/86 R, 108, 106; 248/161, 157

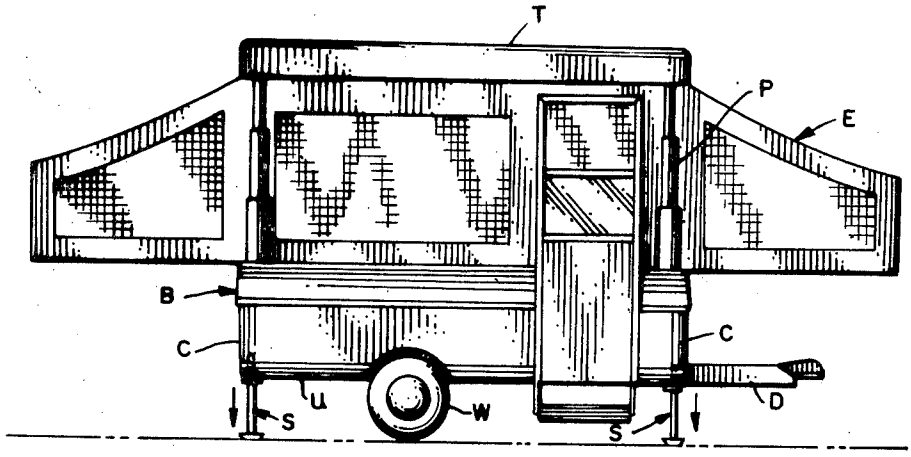
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Assistant Examiner—Robert R. Song
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ABSTRACT: The combination stabilizer and jack is designed for integration with the frame members of a vehicle adjacent its underside. The brackets for attachment to the vehicle frame includes upper and lower flanges which provide vertically aligned openings for slidably receiving an upright shaft movable from a raised storage position to lowered use positions. Upper and lower gripping plate units are mounted between the flange means for coaction with the shaft, the upper plate means being normally biased to a nongripping alignment by spring means yielding to permit it to be downwardly canted for bitingly engaging the shaft. The lower plate unit is spring biased to a downwardly canted alignment while permitting adjustment to a nongripping alignment so that the shaft can be lowered but not raised with the plate unit in its normal position. The gripping units provide tab means, the tab means of the lower unit being adapted for manual operation, and the tab means of the upper unit for actuating by a tool through a mechanical linkage. Latching means is provided for releasably securing the shaft in its raised storage position, and cover and gasket means are provided for protecting the operative mechanism within the bracket from weather and dirt.



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SHEET 1 OF 2

FIG. 1

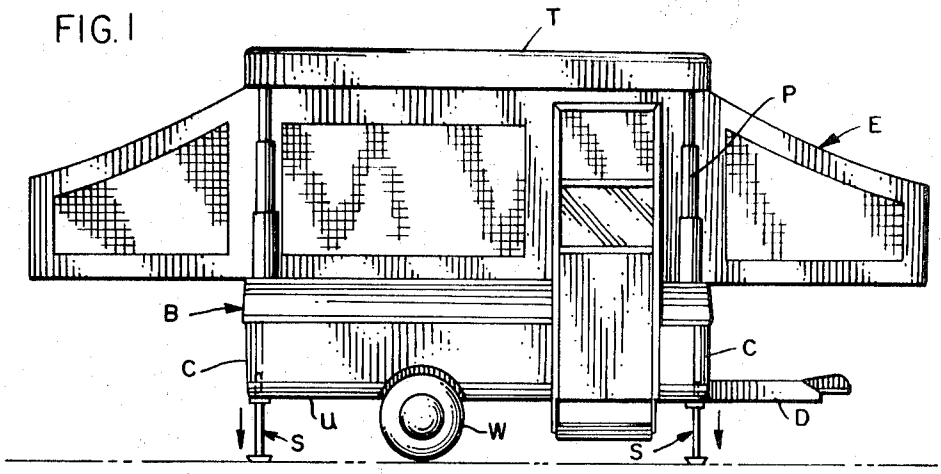


FIG. 2

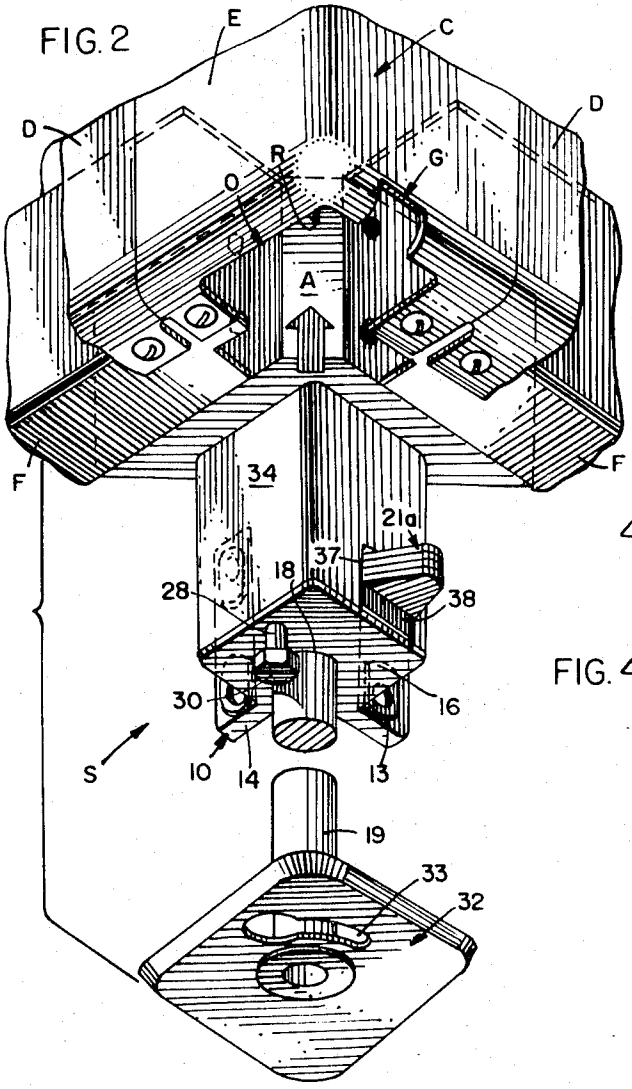


FIG. 3

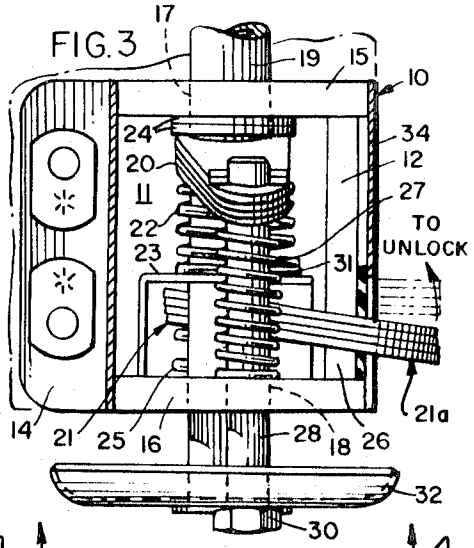
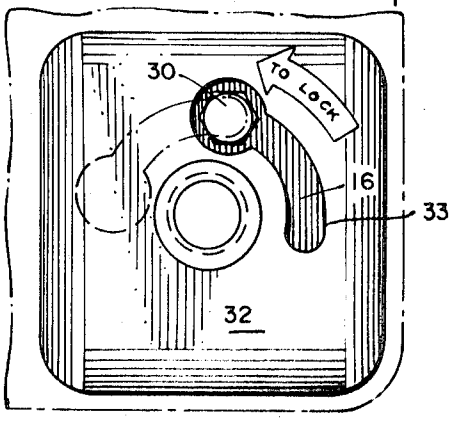


FIG. 4



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FIG. 5

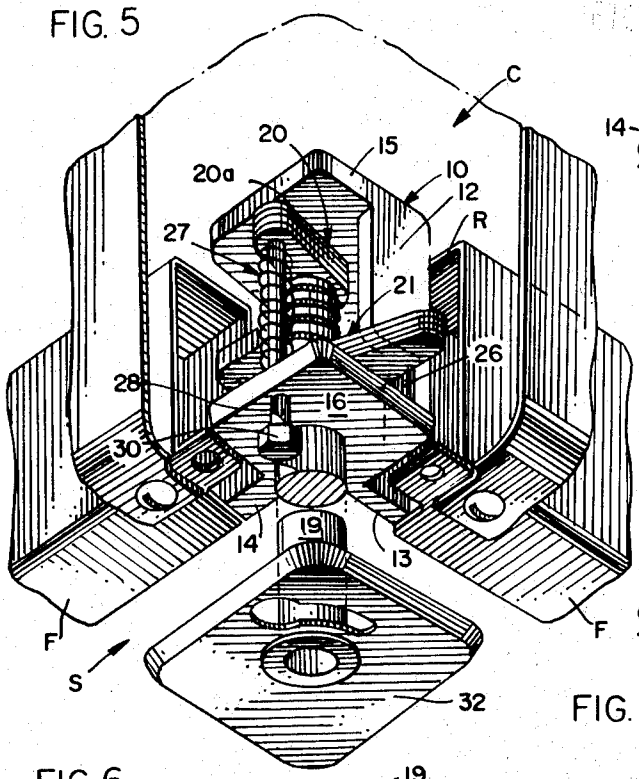


FIG. 7

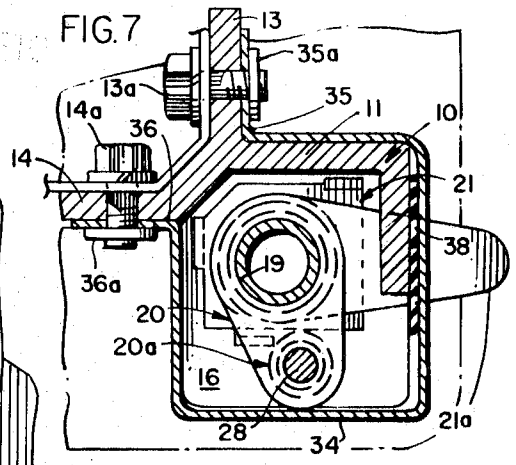


FIG. 8

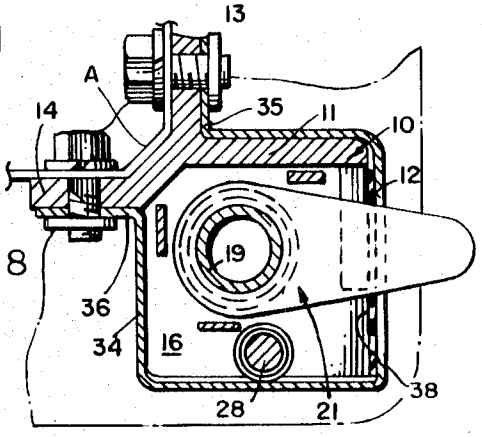


FIG. 6

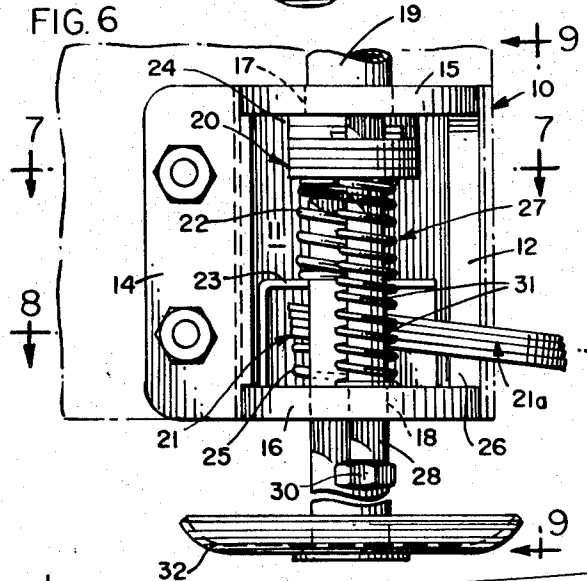


FIG. 9

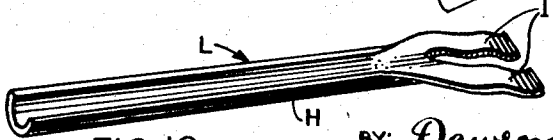


FIG. 10

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STABILIZER AND JACK ASSEMBLY FOR CAMPING TRAILERS AND THE LIKE

BACKGROUND AND SUMMARY

Camping trailers are commonly equipped with a single pair of wheels located intermediate the fore and aft ends of the trailers. For transit, the trailer hitch at the front is connected to the automobile, and this maintains the body in generally horizontal alignment for road travel. At the campsite, the trailer is disconnected from the car, and it is necessary to provide auxiliary supports or stabilizers. Heretofore, no fully satisfactory stabilizer for use with camping trailer has been known.

Considerations of mechanical strength as well as appearance make it desirable to integrate the stabilizers with the camping trailer. Ideally, the stabilizers should be located within the body of the camping trailer so that they are substantially completely concealed when in raised or travel condition, while at the same time being readily accessible for lowering to use positions at the campsite. In their storage positions, the stabilizers should be securely locked so that they will not drop downwardly at unexpected times during road travel. At the same time, convenience of use requires that the stabilizer latching means be readily releaseable, so that the stabilizers can be moved downwardly freely and quickly to the length required for ground support. The required length must be variable because of the frequent unevenness of the ground at the campsite.

Stabilization of the trailer body must sometimes be supplemented by leveling. The body can be supported and prevented from further tipping on its wheels by a stabilizing device, but without some jacking or elevating means, it may be very difficult to position the stabilizer so that the floor of the trailer is completely horizontal front to back and side to side. It is therefore an object of the present invention to provide a combination stabilizer and jack assembly, which will permit not only rapid support and stabilization of the trailer body, but which will also provide the possibility of jacking up the body at one or more points, as required, to level the floor of the trailer. To accomplish this objective, however, it is desired to avoid having any permanently attached jack handle or tool, which would have to be folded into a travel position, or which would otherwise project downwardly or outwardly from the body, providing an obstruction and making the trailer less attractive in appearance.

Since the operative mechanism of a stabilizer jack assembly will be exposed to road dirt and mud, as well as to weather conditions like rain, snow, and ice, it is also an object to provide a design wherein the operative mechanism is also substantially enclosed and protected. This and other objects and advantages will be more fully described and illustrated in the following detailed specification.

THE DRAWINGS

The combination stabilizer and jack of this invention is shown in an illustrative embodiment in the accompanying drawings, wherein:

FIG. 1 is a front elevational view of a camping trailer incorporating one of the stabilizer and jack assemblies at each corner;

FIG. 2 is a separated perspective view showing one of the stabilizers and jacks removed from a corner of the trailer body;

FIG. 3 is a side elevational view of the stabilizer and jack assembly;

FIG. 4 is a bottom view taken on line 4—4 of FIG. 3;

FIG. 5 is a perspective view of the stabilizer and jack attached to the body frame members with the stabilizer cover and body panels removed to more clearly illustrate the structure;

FIG. 6 is a side elevational view of the stabilizer and jack from the left side of FIG. 5;

FIG. 7 is a transverse sectional view taken on line 7—7 of FIG. 6;

FIG. 8 is another transverse sectional view taken on line 8—8 of FIG. 6;

FIG. 9 is an operational side elevational view taken from the right side of FIG. 5; and

FIG. 10 is a perspective view of a tool for use with the stabilizer and jack of the preceding figures.

DETAILED DESCRIPTION

In the accompanying drawings, the stabilizer and jack assembly of this invention is illustrated in a preferred application, where it is integrated into the body of a camping trailer. However, the stabilizer and jack can be used in a similar manner for other wheel-equipped vehicles, especially those having boxlike bodies including frame members adjacent the underside. Such vehicles may include travel trailers, house trailers, load-carrying trailers, etc. Other uses of the stabilizing and jacking assembly will occur to those skilled in the art. The use of stacked series of gripping plates has actuating and/or holding plates in jacking devices is of course not novel per se. Jack devices including such components are shown for example in the U.S. Pats. of Lucker, U.S. Pat. No. 2,242,431, and Zinke, U.S. Pat. No. 2,718,253.

However no prior art jacking device is known which provides the features and advantages of the present invention, as will be understood more fully from the following description.

Looking first at FIG. 1 there is shown a camping trailer as it would appear parked at a campsite and opened ready for use. As shown, the trailer includes a boxlike body B having an underside U and four corners C. The front end of the body is equipped with a drawbar D for attachment to an automobile, and mounted between the front and rear end is a pair of travel wheels W. It will be understood that the top T which is supported by collapsible corner posts P is moved downwardly onto the top of body B and that the foldable fabric enclosure E is collapsed into the interior of body B when the camping trailer is in travel condition. These features however are not related to the present invention, and will not be further described.

This invention is concerned with the stabilizer and jack units designated generally by S, which is shown as integrated with the trailer body B at each of the four corners thereof. These will now be described in detail with reference to FIGS. 2 to 9 of the drawings.

Looking first at FIG. 2, there is shown one of the trailer body corners C with the stabilizer assembly S removed and shown in separated relation. For greater clarity and correlation, FIG. 2 can be considered in conjunction with FIG. 5, which shows the stabilizer assembly S installed in the corner C.

Extending around the lower perimeter of the body B are the structural frame members F, two of which are shown as meeting at the corners C. As shown, the frame members F are at and form part of the underside U of the trailer body. At the corner C, the ends of the members terminate short of the corner, and are connected by an angle brace A, as shown more clearly in FIG. 2. The body panels D have their lower ends turned inwardly over the undersides of the frame members F and are connected thereto by suitable screw or bolt means, as indicated in FIG. 2. A separate corner cover E continues the line of the panel D around the corners, as shown in FIG. 2, and has lower portions turned inwardly over the frame members F and connected thereto by suitable screw or bolt means. The corner members E together with the sides of the corner brace A forms a recess R for receiving the stabilizer assembly. To permit the insertion and removal of the stabilizer assembly with enclosure E in place, the bottom of the enclosure provides a rectilinear opening O. To receive the manual tab operator, and to permit it to extend laterally, as will subsequently be explained, the right sidewall of the enclosure E provides a cutout G, as also shown in FIG. 2. This construction permits the stabilizer S to be substantially completely enclosed within the body.

Still looking primarily at FIGS. 2 and 5, it can be seen that the stabilizer and jack assembly include a body or bracket means 10. In the illustration given, the bracket body includes a rear side 11 (FIG. 6–8) and a partial right side 12. At the left corner of rear side 11, the body 10 provides a pair of laterally projecting attachment flanges 13 and 14, which are bolted securely to the inclined surfaces of the corner brace A, as indicated more clearly in FIG. 7 and 8. The attachment bolts 13*a* and 14*a* are accessible from inside the trailer, and installation and removal of body bracket 10 can be effected without removing the corner enclosure E.

As shown more clearly in FIGS. 5 and 6, bracket 10 provides spaced-apart upper and lower flanges 15 and 16. These flanges define vertically aligned openings 17 and 18 which extend through the central portion thereof, and are adapted for slidably receiving the upright shaft 19. In the illustration given, shaft 19 is in the form of a hollow tube of circular cross section (FIGS. 7 and 8), but a solid shaft or one of different cross-sectional shape can be employed.

Shaft 19 can be moved upwardly to a storage position where it is substantially entirely within body B, the lower end of the shaft projecting only slightly beyond flange 16 in this position. Shaft 19 can also be lowered to use positions, such as the ones illustrated in FIG. 1, where the bottom end of the shaft is at the required distance from the underside of the trailer body to make firm contact with the ground.

As shown in FIGS. 5 and 6, upper and lower gripping plate means 20 and 21 are mounted on shaft 19 between flanges 15 and 16. As is well known in the art, each of the gripping means 20, 21 consists of a series of stacked gripping plates, four plates being shown for each of the gripping means in the illustration given. The gripping plates have openings therethrough slidably receiving shaft 19 when the plates are disposed generally horizontally. Around the plate openings are provided gripping edges, which may be right-angled corners at the tops and bottoms of each plate, which will bitingly engage the shaft when the plates are canted and forced into engagement with the shaft. As is well known in the art, the shaft will slide freely in the opposite direction from that in which the plates are canted, but will bind against the plates when it is forced in the same direction as the canting.

In the assembly of the present invention, a coil spring means consisting of a coil spring 22 normally biases the upper plate means 20 to a nongripping generally horizontal alignment, as shown in FIGS. 5 and 6. In the illustration given, spring 22 encircles shaft 19 and bottoms against the top of a pedestal washer 23. Above and bearing against the top of the uppermost of the gripping plates 20 is a pair of filler washers 24 against which plates 20 are urged by spring 22, thereby establishing the desired nongripping horizontal alignment. With this arrangement, the upper plate means 20 does not normally grip the shaft 19.

Spring means consisting of a coil spring 25 is also provided for normally biasing the lower gripping plates 21 to a downwardly canted alignment as shown in FIG. 6. In the illustration given, spring 25 is a coil spring encircling shaft 18 and bottoming against the top of lower flange 16. Spring 25 is yieldable to permit plates 21 to be moved to a nongripping generally horizontal alignment to permit upward sliding movement of the shaft 19. Normally, however, plate means 21 is held in the canted gripping alignment, which prevents shaft 19 from moving upwardly. With this arrangement, shaft 19 can be freely lowered but not raised with plates 21 in their normal position. This facilitates stabilizing adjustments of shaft 19.

To provide for the mechanical operation thereof, each of the plates forming the gripping means 20 is provided with lateral tab extensions indicated generally at 20*a* (FIGS. 5 and 7). In the illustration given, tab extensions 20*a* terminate within the confines of the body 10 as defined by the side edges of the flanges 15 and 16. The plates of the lower gripping means 21 also provide laterally extending tab portions which are indicated generally at 21*a*. Tabs 21*a* are designed to permit manual actuation of gripping means 21, and for this purpose the tabs extend outwardly beyond the confines of bracket body 10. An oversize opening 26 (FIGS. 5, 6 and 8) is provided at the base of sidewall 12 through which tabs 21*a* extend to a point where they are accessible for actuation by the hand of the operator. By moving tab means 21*a* upwardly, the plates 21 can be moved to a horizontal position, where shaft 19 will slide freely upwardly to a raised position within body B.

For the mechanical operation of gripping means 20, an actuating means indicated generally at 27 is provided. In the illustration given, this consists of a pin 28 which has its upper end extending through aligned openings in tab portions 20*a*. Withdrawal of the end of pin 28 projecting above the upper tab 20*a* is prevented by means of a transverse pin 29 (FIG. 9). The lower end of pin 28 extends slidably through an opening in flange 16, and terminates in a head 30. The actuating means also includes a coil spring 31 which encircles pin 28 bottoming against the top of flange 16 and exerting an upward biasing force against tabs 20*a* to hold the tabs in firm contact and the uppermost tab against the pin 29. In its upwardmost position, the top of pin 28 bears against the underside of flange 15, as shown more clearly in FIG. 9. However, pin 28 can be pulled downwardly by exerting a pulling force on the projecting lower end, thereby compressing spring 31 and canting the gripping means 20 until it bitingly engages the shaft 19.

The projecting lower end of pin 28 is preferably adapted for engagement with a separate handle or lever tool, such as the tool L illustrated in FIGS. 9 and 10. As shown, tool L has a forked end providing feet I extending outwardly from the forward end of the handle H. As indicated in FIG. 9, the feet I of the forked end are spaced apart so that the slot therebetween can be slipped around and will receive the lower extension of pin 28. In the fully inserted position as shown, the ends of feet I can be made to bear against the underside of flange 16. The hand of the operator can then be placed on handle H to force the handle downwardly, and by a lever action the pin 19 will be moved downwardly until the plates 20*a* are canted sufficiently to lock against shaft 19. When this condition is reached, the upward force exerted on flange 16 of body 10 by the outer ends of feet I, body 10 will be forced upwardly relative to shaft 19, thereby lengthening the extent of the shaft below plate 16. With the stabilizer and jack assemblies in position as shown in FIG. 1, this action will cause the trailer body to be raised at the location of the stabilizer. This jacking action can thereby be used to level the floor of the trailer, the jacking operation being applied as needed at any or all of the four corners.

Preferably a ground-engaging pad or pedestal plate 32 are securely mounted on the lower end of shaft 19 for bearing against the ground. When the shaft 19 is in its fully raised or storage position, the parts are preferably dimensioned so that pedestal 32 lies against or is at least closely adjacent to the underside of flange 16. As previously indicated, the bracket 10 (with the exception of lower flange 16) is enclosed within the trailer body B. Preferably, as shown, the lower flange 16 is positioned at substantially the level of the body underside, as determined for example by the underside of the frame members F. This permits the shaft 19 in storage position to be substantially entirely within the body, only the extreme lower end which is attached to the pedestal 39 projecting below the flange 16.

In a preferred combination with the trailer body, as shown in FIG. 1, the body provides four corners and one of the stabilizer and jack assemblies S is located adjacent each of the corners. Further, the body is provided with a pair of travel wheels located intermediate the front and rear corners of the body. Usually, as shown, only one pair of travel wheels will be provided.

For securing the shafts 19 in their raised or travel position, the stabilizer assembly also preferably provides releasable latching means. It has been found advantageous to utilize a latching means which is effective for releasably latching pedestal plate 32 in its raised position closely adjacent flange 16. The latching means can therefore be located at or im-

mediately below the flange 16. In the illustration given and preferably, the latching means consists of an arcuate key hole slot 33 in pedestal 32 (FIGS. 2 and 4). The enlarged end of the slot is dimensioned to permit head 30 to pass therethrough, as indicated in FIG. 4. Then by rotation of plate 32 and shaft 19, plate 32 can be turned to bring the extension of pin 28 into the narrower portion of the slot 33, thereby latching the shaft and pedestal in raised position.

In order to prevent the possibility that the pedestal plate 32 might be vibrated out of latching engagement with the pin 28, a downward pull can be exerted on the plate after the pin is positioned in the narrow portion of the keyhole slot. The plate will engage the head 30 as the plate and shaft 19 are pulled downwardly, and the pin 28 will also be pulled downwardly against the bias of spring 31. Limited downward movement of the pin 28 is permitted by the upper plates 20, which will be pulled by the pin from their normal horizontal position to the canted position shown in FIG. 3. The shaft 19 will be prevented from returning upwardly by the lower plates 21, and the upward tension exerted by the spring 31 on the plate 32 through the pin 28 serves to lock the plate 32 in the latched position.

When it is desired to lower the pedestal and shaft, the tab means 21*a* are moved upwardly to permit the plate and shaft to be pulled upwardly by the spring 31 until the spring tension is relieved. The shaft can then be rotated to bring the enlarged end of the keyhole slot into alignment with the head 30, and the shaft can be drawn downwardly until the pedestal touches the ground. As will be recalled, neither gripping means 20 or gripping means 21 in their normal position resists the downward movement of shaft 19. However, once seated against the ground, a weight exerted on the shaft by the trailer body at this point will increase the locking engagement between the shaft and the downwardly canted plates 21, the movement being in the same direction as the direction of canting.

To provide additional protection from dirt and weather for the internal components of the stabilizer, a cover 34 can be provided for substantially enclosing the open sides of the bracket 10. The cover 34 is shown in place in FIGS. 2, 3, 7 and 8, and removed in FIGS. 5, 6 and 9. In the illustration given, cover 34 not only encloses the open sides of bracket 10, but extends around the closed sides thereof to the corner providing the attachment flanges 13 and 14. At that point, the cover includes flanges 35 and 36 (FIGS. 7 and 8), which can be bolted to the attachment flanges 13 and 14 by the same bolts that secure body 10 to the corner brace of the frame. Nuts 35*a* and 36*a* are welded to the flanges 35 and 36 respectively, so that the bolts can be inserted into and withdrawn from the nuts without removing the enclosure E.

To permit tab extensions 21*a* to extend outwardly beyond wall 12 or body 10, the cover 34 at that point is provided with a cut out opening 37 (FIGS. 2 and 8) corresponding in size to the opening 26 in wall 12. To provide additional protection at that point, the openings 26, 37 can be closed by a flexible gasket 38 (FIGS. 2, 7 and 8). Gasket 38 can be formed of natural or synthetic rubber, and can be provided with an opening for snugly receiving the tab extensions 21*a*. This is indicated in FIG. 8.

The operation of the stabilizer and jack assembly will be largely apparent from the foregoing description. It can be summarized as follows. When the trailer is parked, the pedestals 32 are rotated to unlatch the shafts 19. The shafts are then pulled downwardly, which occurs without resistance, until the pedestals 32 are firmly seated on the ground. At that point, if the body is level, nothing further need by done. However, where leveling is required, the tool L can be utilized to elevate the body at one or more corners. As previously explained, by inserting the tool as shown in FIG. 9, the pin actuator 28 can be pulled downwardly until gripping plates 20 bite into and frictionally engage shaft 19. Further downward movement of the tool handle H then forces body 10 upwardly on shaft 19, thereby increasing the elevation of the corner at that point and lengthening the extent of shaft 19 below flange 16. As soon as the tool is removed, spring 22 returns plates 20 to their normal horizontal nongripping position. Then when it is desired to raise the shafts 19 to storage position, all that is required is for the operator to grasp the tab extensions 21*a*, move them upwardly to release the engagement with shaft 19, and at the same time to move shaft 19 upwardly until pedestal 32 is adjacent the underside of flange 16. When that position is reached, it is a simple matter to rotate pedestal 32 until head 30 passes through the enlarged end of the keyhole slot 33. Further rotation of pedestal 32 will position the head 30 below the narrow portion of the keyhole slot, and the pedestal can then be pulled downwardly slightly to tension the spring 31 and complete the latching engagement so that the pedestals 32 and the shafts 19 are held in raised travel condition.

The advantages of the stabilizer-jacks of this invention when installed in a camping trailer as shown in FIG. 1 have been discussed above, and need not be repeated here. However, there is one further advantage that has not been mentioned. Whenever it is necessary to remove one or both of the wheels of the trailer, as may be required for repairing a flat tire, the stabilizers can be used as wheel jacks. For example, the two jacks on the same side as the wheel can be elevated until the wheel is free from the ground. If it is desired to remove both wheels at the same time, all four jacks can be elevated until both wheels are free from the ground. It will be appreciated that this is an important advantage, and one which can be of value with other wheel-equipped vehicles than camping trailers.

I claim:

1. In a vehicle having a wheel-equipped body including an underside and frame members adjacent thereto, a stabilizer and jack assembly comprising:

a. bracket means secured to said frame means and providing spaced-apart upper and lower flange means defining vertically aligned openings;

b. an upright shaft extending through and slidably received in said openings for vertical movement from a raised storage position to lowered use positions where a portion of said shaft extends below said body underside to the ground;

c. upper and lower gripping plate means mounted between said flange means for coaction with said shaft, said plate means having openings therethrough slidably receiving said shaft when said plate means are horizontal and providing gripping edges around said plate openings for bitingly engaging said shaft when said plate means are canted;

d. spring means normally biasing said upper plate means to a nongripping generally horizontal alignment while yielding to permit said upper plate means to be downwardly canted, whereby said upper plate means does not normally grip said shaft;

e. spring means normally biasing said lower plate means to a downwardly canted alignment while yielding to permit said lower plate means to be moved to a generally horizontal nongripping alignment, whereby said shaft can be lowered but not raised while said lower plate means is in its normal position to facilitate stabilizing adjustments of said shaft;

f. upper and lower operating tab means provided respectively by said upper and lower plate means and extending laterally from the portions thereof surrounding said shaft, said lower tab means extending to a point accessible from outside said body for manual actuation thereof to release said shaft for upward movement to said storage position; and

g. actuating means having an upper portion connected to said upper tab means for pulling said upper tab means downwardly to cant said upper plate means for gripping said shaft, a lower portion of said actuating means extending below said lower flange means for a distance sufficient to permit engagement by an actuating tool.

2. The combination of claim 1 in which said bracket means except for said lower flange means is enclosed within said body, said lower flange means being positioned at substantially the level of said body underside, and said shaft in said raised storage position being substantially entirely within said body.

3. The combination of claim 2 in which said body provides four corners and one of said stabilizer and jack assemblies is located adjacent each of said corners, said body having its travel wheels located intermediate the front and rear corners thereof and only one pair of travel wheels being provided.

4. The combination of claim 1 in which said actuating means lower end portion is provided with an enlarged head below said lower flange means whereby said lower end portion is adapted for engagement by a forked end of said actuating tool.

5. The combination of claim 1 in which a ground-engaging pedestal plate is mounted on the lower end of said shaft, said pedestal plate lying adjacent the underside of said lower flange means when said shaft is in said storage position and means for releasably latching said pedestal plate in said adjacent position.

6. The combination of claim 1 in which a ground-engaging pedestal plate is mounted on the lower end of said shaft, said pedestal plate lying adjacent the underside of said lower flange means when said shaft is in said storage position, said pedestal plate providing an arcuate keyhole slot, and said actuating means end portion being provided with an enlarged head for cooperation with said slot to releasably latch said pedestal plate in said storage position.

7. The combination of claim 1 in which cover means is provided for substantially enclosing the open sides of said bracket means between said flange means, said lower tab means extending through an oversize opening in said cover, and said oversize opening being closed by flexible gasket means.

8. The combination of claim 1 in which said actuating means includes a pin having its lower portion slidably extending through an opening in said lower flange means and terminating therebelow in a tool-engageable head.

9. The combination of claim 1 in which said actuating means includes spring means biasing the lower portion of the actuating means against downward movement, latch means on said shaft selectively engageable with the lower portion of the actuating means whereby said shaft may be releasably latched in said storage position by engaging the latch means with said actuating means lower portion and pulling the shaft downwardly against the bias of the said spring means of the actuating means.

10. The combination of claim 9 in which the latch means includes a ground-engaging pedestal plate mounted on the lower end of said shaft and means on said plate for engaging said actuating means lower portion.

11. The combination of claim 9 in which said said actuating means includes a pin having its upper portion connected to said upper tab means and its lower portion slidably extending through an opening in said lower flange means and terminating therebelow in an enlarged head, the spring means of the actuating means biasing the pin against downward movement.

12. The stabilizer and jack assembly of claim 9 in which a ground-engaging pedestal plate is mounted on the lower end of said shaft, said pedestal plate lying adjacent the underside of lower flange means when said shaft is in said storage position, and means for releasably latching said pedestal plate in said adjacent position.

13. The combination of claim 10 in which said latching means comprises providing said pedestal plate with an arcuate keyhole slot, and providing the lower end of said actuating means with enlarged head for cooperation with said slot to releasably latch said pedestal plate in said storage position.

14. The stabilizer and jack assembly of claim 9 in which cover means is provided for substantially enclosing the open sides of said bracket means between said flange means, said lower tab means extending through an oversize opening in said cover, and said oversize opening being closed by flexible gasket means.

15. The stabilizer and jack assembly of claim 9 in which said actuating means is a pin having its lower portion slidably extending to an opening in said lower flange means and terminating therebelow in a tool-engageable head.

16. The combination of claim 1 in which a ground-engaging pedestal plate is mounted on the lower end of said shaft, said pedestal plate lying adjacent to the underside of said lower flange means when said shaft is in said storage position, said pedestal plate providing an arcuate keyhole slot having an enlarged portion and a narrow portion, said actuating means including a pin having its upper portion connected to said upper tab means and its lower portion slidably extending to an opening in said lower flange means and terminating therebelow in an enlarged head sized to pass through the enlarged portion of the keyhole slot but not the narrow portion of the keyhole slot, and spring means biasing the pin against downward movement whereby said shaft may be releasably latched in said storage position by raising said shaft and pedestal plate to pass the enlarged head of the pin through the enlarged portion of the keyhole slot, rotating the shaft and pedestal plate to position the enlarged head below the narrow portion of the keyhole slot, and pulling the shaft, pedestal plate and pin downwardly to tension the spring means of the actuating means.

17. A stabilizer and jack assembly comprising:

a. bracket means having a body for attachment to a vehicle frame and providing spaced-apart upper and lower flange means defining vertically aligned openings:

b. an upright shaft extending through and slidably received in said openings for vertical movement from a raised storage position to lowered use positions where a portion of said shaft means extends below said lower flange means;

c. upper and lower gripping plate means mounted between said flange means for coaction with said shaft, said plate means having openings therethrough slidably receiving said shaft when said plate means are horizontal and providing gripping edges around said plate openings for bitingly engaging said shaft when said plate means are canted;

d. spring means normally biasing said upper plate means to a nongrippping generally horizontal alignment while yielding to permit said upper plate means to be downwardly canted, whereby said upper plate means does not normally grip said shaft;

e. spring means normally biasing said lower plate means to a downwardly canted alignment while yielding to permit said lower plate means to be moved to a generally horizontal nongripping alignment, whereby said shaft can be lowered but not raised while said upper plate means is in its normal position to facilitate stabilizing adjustments of said shaft;

f. upper and lower operating tab means provided respectively by said upper and lower plate means and extending laterally from the portions thereof surrounding said shaft, said lower tab means being accessible from outside said bracket body for manual actuation thereof to release said shaft for upward movement to said storage position; and

g. actuating means having an upper portion connected to said upper tab means for pulling said upper tab means downwardly to cant said upper plate means for gripping said shaft, a lower portion of said actuating means extending below said lower flange means for a distance sufficient to permit engagement by an actuating tool.

18. The combination of claim 17 in which said actuating means includes spring means biasing the lower portion of the actuating means against downward movement, latch means on said shaft selectively engageable with the lower portion of the actuating means whereby said shaft may be releasably latched in said storage position by engaging the latch means with said actuating means lower portion and pulling the shaft downwardly against the bias of the said spring means of the actuating means.

19. The combination of claim 17 in which a ground-engaging pedestal plate is mounted on the lower end of said shaft, said pedestal plate lying adjacent to the underside of said lower flange means when said shaft is in said storage position, said pedestal plate providing an arcuate keyhole slot having an enlarged portion and a narrow portion, said actuating means including a pin having its upper portion connected to said upper tab means and its lower portion slidably extending to an opening in said lower flange means and terminating therebelow in an enlarged head sized to pass through the enlarged portion of the keyhole slot but not the narrow portion of the keyhole slot, and spring means biasing the pin against downward movement whereby said shaft may be releasably latched in said storage position by raising said shaft and pedestal plate to pass the enlarged head of the pin through the enlarged portion of the keyhole slot, rotating the shaft and pedestal plate to position the enlarged head below the narrow portion of the keyhole slot, and pulling the shaft, pedestal plate and pin downwardly to tension the spring means of the actuating means.

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