

[54] MOBILE HOME POSITIONER

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[22] Filed: **July 24, 1972**

[21] Appl. No.: **274,474**

[52] U.S. Cl. **214/730, 214/1 H, 214/512**

[51] Int. Cl. **B66f 11/04**

[58] Field of Search **214/1 D, 1 H, 152, 730, 214/750, 38 B**

[56] References Cited

UNITED STATES PATENTS

2,931,519 4/1960 Beach 214/1 D

3,233,768	2/1966	Turturro et al.	214/730
3,411,637	11/1968	Van Der Lely	214/1 H
2,828,027	3/1958	Stevenson et al.	214/38 B X
3,561,628	2/1971	Melin	214/750 X

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[57]

ABSTRACT

A mobile home positioner for use in the accurate leveling, aligning, and positioning of adjacent units of multiunit mobile homes to facilitate the efficient matting of these adjacent units at the mobile home site.

4 Claims, 8 Drawing Figures

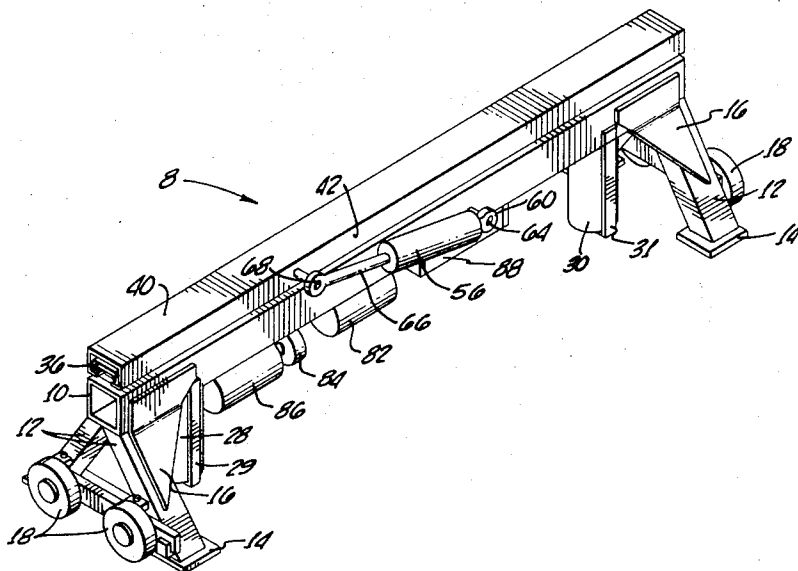


FIG. 1

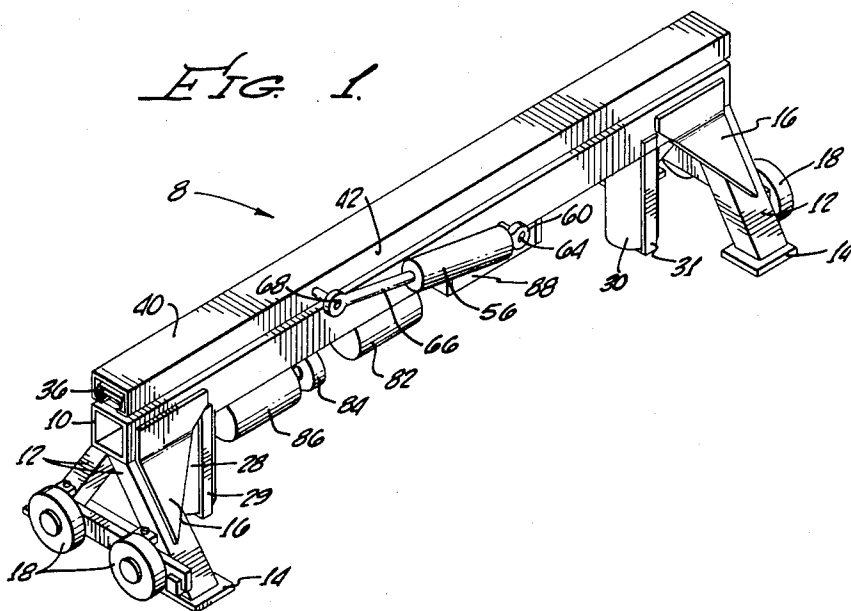
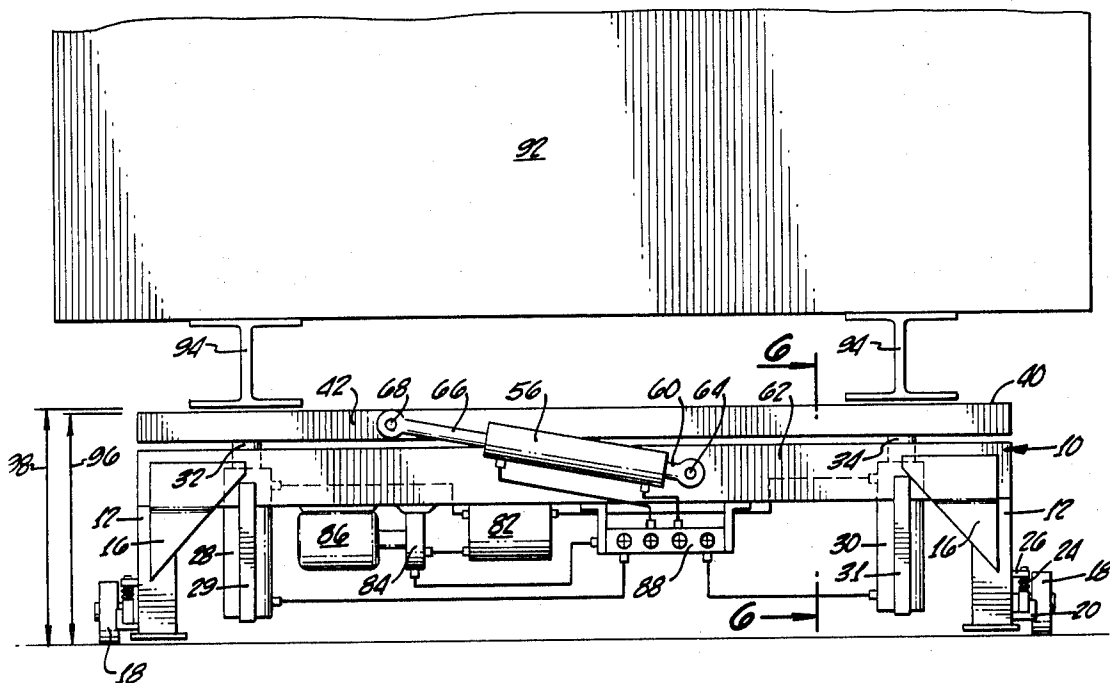


FIG. 2



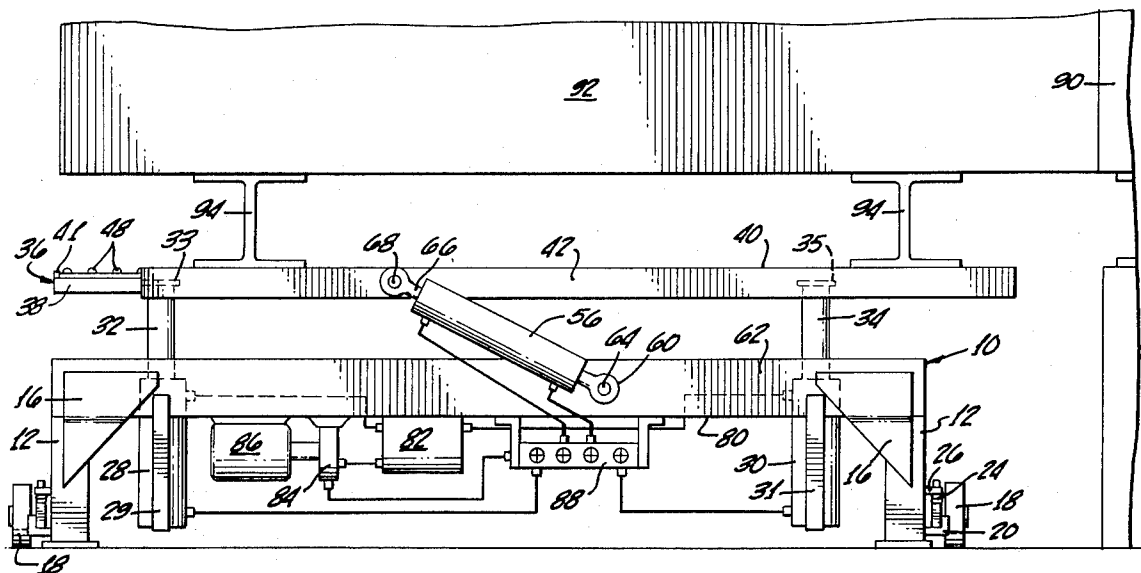


FIG. 3

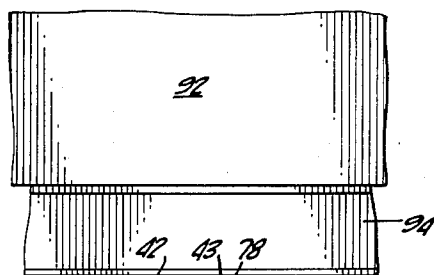


FIG. 4

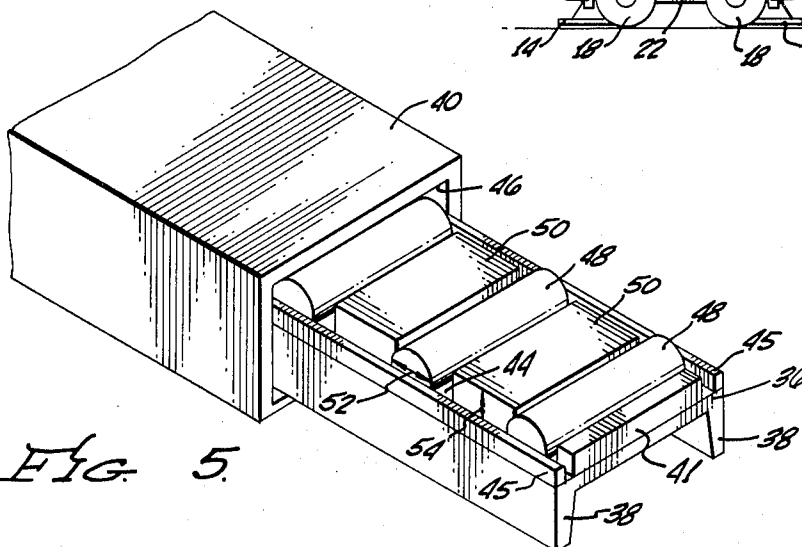


FIG. 6.

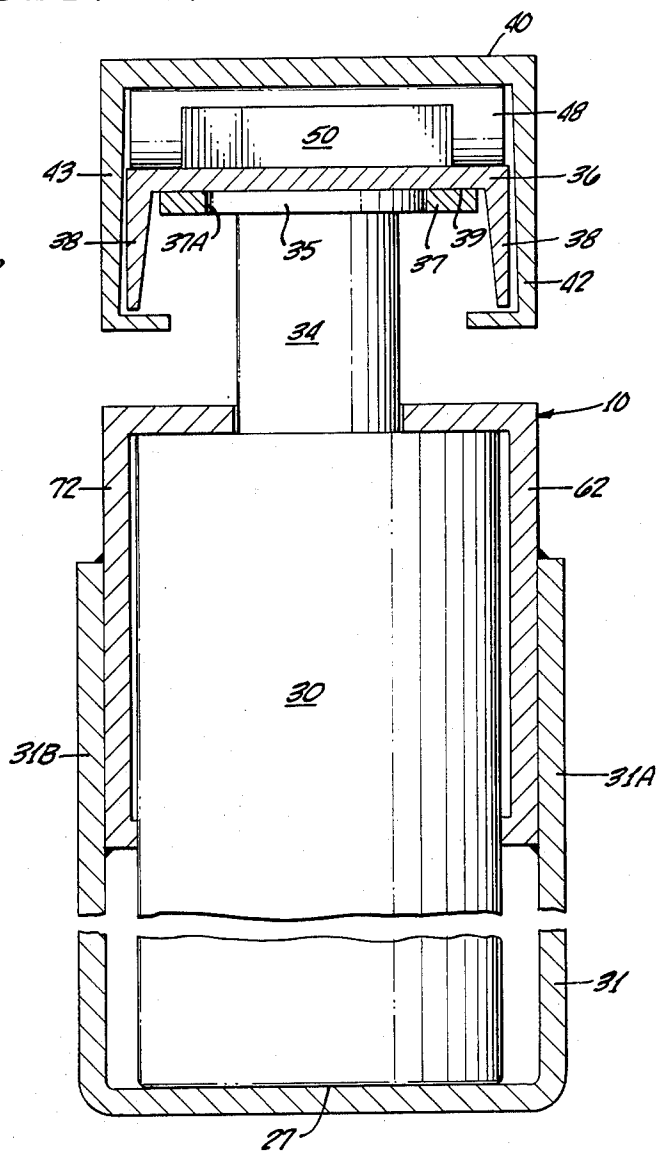


FIG. 8.

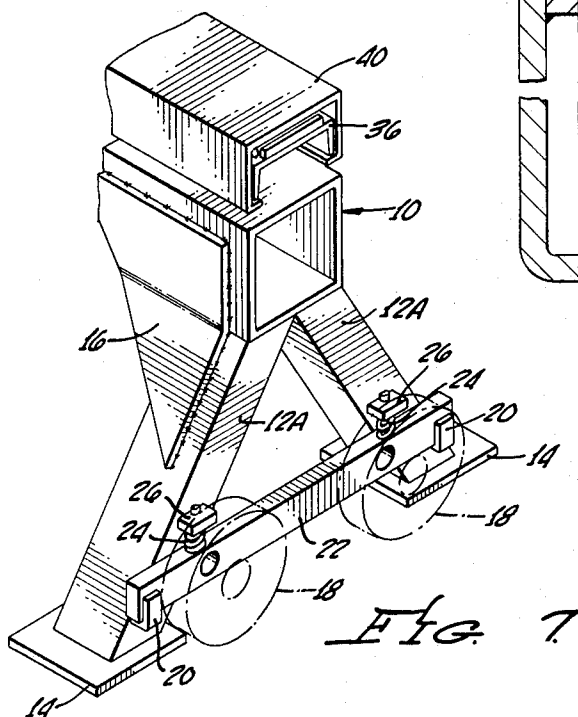
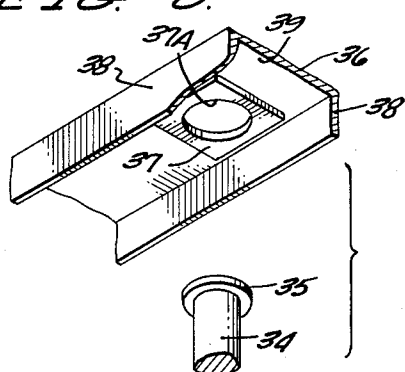


FIG. 7.

MOBILE HOME POSITIONER

BACKGROUND OF THE INVENTION

In recent years the popularity of mobile homes has greatly increased, reflecting a desire on the part of the consumers for more inexpensive permanent housing to fulfill their needs. Originally the typical mobile home was rather small, having a width comparable to a single lane of a roadway and having variable lengths. In response to the public demand for more space in the popular mobile homes, the industry has produced many models which have a width equivalent to two roadway traffic lanes. To facilitate mobility the units are constructed in two separate sections each the width of a single traffic lane. One of the longitudinal sides of each unit is exposed; and, when the two units arrive at the mobile home park site, they are connected by mating the two exposed surfaces together, forming an enclosed home with a width equivalent to two traffic lanes.

The invention disclosed herein is contemplated for use in the attachment procedure once the two units arrive at the mobile home site. The present method used to level and align these component sections involves a very unscientific and impractical system of trial and error through the use of make-shift devices. The placement of the first unit in its proper location causes no serious problem, since the unit may be driven to its exact desired location while still connected to the hauling truck. Each unit is typically permanently constructed upon a simplified trailer base, comprising two I-beams, running the length of each unit. Mounted on these I-beams are sets of wheels for transporting. Consequently, each unit has its own trailer as an inherent part of its structural configuration, allowing the relative ease of positioning the first unit, for it is essentially rolled to the proper location, placed on jacks, and leveled.

However, the difficulty arises in the placement and connection of the second unit which must be a more accurate procedure, since the placement of the first unit has precisely defined the proper positioning for the second unit. Normally, the hauling truck is able to reasonably align the longitudinal side of the second unit with the longitudinal side of the first unit by driving alongside the first unit and performing some forward and backward movement. The noted problem existing after this longitudinal alignment is that the units are still quite a few inches apart in a lateral direction.

The present method utilized to eliminate this lateral gap is very inefficient and impractical, involving much unnecessary time and using make-shift apparatus. One example of a method used is the placing of jacks under the second unit and then following a step by step process of pushing the second unit laterally toward the first unit. This process is initiated by placing some short posts vertically beneath the second unit along the side furthest from the first unit. Then the jacks beneath the second unit which are closest to the first unit are lower slightly while at the same time the second unit is pushed toward the first unit. As a result, the second unit tends to shift toward the first unit with the posts acting as legs which cause the second to pivot or walk toward the first unit. Then the jacks are raised again and process repeated, the distance gained by each step is usually quite small.

The previous longitudinal alignment in many instances is disturbed by this inefficient process. Also, this method is very time consuming and frequently causes some damage to the units, since this is essentially a brute force operation.

BRIEF SUMMARY OF THE INVENTION

The invention disclosed herein provides a device which not only can lift and level mobile home units, but also can laterally align the two units efficiently, eliminating the time consuming step by step process involving much trial and error. In a preferred form, the device includes a base member as an elongated beam on which is moveably mounted a support beam that receives the load. Means such as a pair of jacks are provided to elevate the support beam and the load, and means such as a pair of hydraulic actuators are used to move the support beam and the load laterally.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the mobile home positioner in the retracted position;

FIG. 2 is a front view of the mobile home positioner in the retracted position located beneath a mobile home unit;

FIG. 3 is a front view of the mobile home positioner in both the extended vertical position and the extended lateral position with a mobile home unit thereon;

FIG. 4 is an end view of the mobile home positioner;

FIG. 5 is a perspective detail view of the bearing assembly for the moveable support beam;

FIG. 6 is a vertical section view of the jack connection between the base beam and the support beam taken generally along lines 6-6 in FIG. 2;

FIG. 7 is a perspective detail view of the spring loaded wheels; and

FIG. 8 is a perspective view showing the recessed circular hole which receives the lifting piston bearing pad.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

FIG. 1 illustrates the mobile home positioner 8 as it appears when not in use. One of the main elements of this positioner device is an elongated, horizontally extending base member or base beam 10 having a rectangular hollow cross section. Connected to each end of the base beam 10 are a pair of angled support legs 12. Under the bottom of each support leg 12 is located a rectangular shaped support pad 14. Attached between each support leg 12 and the base beam 10 is a flat support flange 16 which provides added support to the connection between each support leg 12 and the base beam 10. As shown in FIG. 7, attached to the end or outside face 12A of each support leg 12 is an upward extending L-shaped flange 20. Resting in each flange 20 and extending between each pair of support legs 12 is a wheel mounting bar 22. Mounted on each wheel mounting bar 22 are a pair of wheels 18. Attached to the top of each wheel mounting bar 22 are a pair of springs 24. Each spring 24 is connected to a horizontal flange 26 which is attached to the end face 12A of each support leg 12 so that the bar is spring loaded.

As shown more clearly in FIG. 2, two hydraulic jacks 28 and 30 are suspended from and mounted within the base beam 10 by U-shaped brackets 29 & 31, respec-

tively. As reflected in FIG. 6, the bottom 27 of the jack cylinder 30 rests within the U-shaped bracket 31. The upward extending legs 31A and 31B of the U-shaped bracket 31 are respectively attached to the opposite sides 62 and 72 of the base beam 10. The upper ends of each jack cylinder are confined within the beam and each jack includes a respective lifting piston 32 and 34 which extends through the upper surface of the beam 10. Fixed to the top of each lifting piston is a respective bearing pad 33 and 35. Attached to the bottom surface 39 of the inner beam 36 are two circular recessed pads 37 located directly above each lifting piston 32 and 34. As shown in FIG. 8, each bearing pad 33 and 35 is received into a circular hole 37A of each circular recessed pad 37. An alternative method for connecting the lifting pistons 32 and 34 to the inner beam 36 would be to permanently attach the bearing pads 33 and 35 to the bottom surface 39 of the inner beam 36 by such means as welding, and, therefore, eliminate the use of the circular recessed pads.

The inner beam or member 36 is the same length as the base beam 10 and has a channel shaped cross section with two downward extending flanges 38 running the entire length of the beam. Overlapping the inner beam 36 is an upper horizontal support beam or member 40, as shown in FIG. 6, having a channel shaped cross section with a pair of downward L-shaped guiding flanges 42 and 43. The guiding flanges 42 and 43 extend inwardly and beneath the downward extending flanges 38.

Located between the upper surface 44 of the inner beam and the lower surface 46 of the support beam 40, as reflected in FIG. 5, are a series of rollers 48 which are alternately placed loosely between a series of spacers 50 resting on the upper surface 44 of the inner beam 36. The diameter 52 of the rollers 48 is greater than the thickness 54 of the spacers 50. At each end of the inner beam 36 is a stop plate 41. This plate prevents the rollers 48 from exiting the top of the inner beam 36. Also, since the rollers 48 may tend to shift laterally on the inner beam 36 while in use, a short lip 45 extends along each side of the upper surface 44 of the inner beam 36 in order to contain the rollers.

As illustrated in FIGS. 2 and 4, situated approximately midway between the hydraulic jacks 28 and 30 are a pair of lateral movement hydraulic actuators 56 and 58 located on opposite sides of the base beam 10. The lower end 60 of the lateral movement actuator 56 is pivotally attached to the side 62 of the base beam 10 by a connecting pin 64. Extending from the opposite end of the actuator 56 is an adjustment rod 66 which is pivotally connected to the guiding flange 42 of the support beam 40 by a connecting pin 68 at a point laterally spaced from the pin 64. The lower end 70 of the other lateral movement actuator 58 is pivotally attached to the opposite side surface 72 of the base beam 10 by a connecting pin 74. Extending from the opposite end of this lateral movement actuator 58 is an adjustment rod 76 which is pivotally connected to the guiding flange 43 of the support beam 40 by a connecting pin 78 at a point laterally spaced from pin 74.

Attached to the bottom surface 80 of the base beam 10 are an oil tank 82, a pressure pump 84, a motor 86, and a control panel 88 for the operation of the hydraulic jacks 28 and 30 and the lateral movement actuators 56 and 58.

Having reviewed the structural aspects of the device, one can more readily appreciate and comprehend its operation. As previously stated, the main use intended for this apparatus is for the accurate placement of sections of mobile homes at the park site after having been transported to that place in separate sections. However, it is contemplated that the apparatus disclosed herein is not limited to use with mobile homes, but could be utilized in the placement of any comparable large and/or heavy items.

Once the first unit 90, shown in FIG. 3, of a two-unit mobile home is securely placed on its proper position at the site, the second unit 92 is driven beside the first unit and is accurately aligned longitudinally with the first unit by a routine trial and error process of moving the hauling truck forward and backward. However, the two units will still remain a number of inches apart in a lateral direction. At this point the mobile home positioner 8 in its retracted position, as it appears in FIG. 1, having wheels 18, is easily rolled into position beneath the two I-beams 94 at one end of this second unit 92, as shown in FIG. 2. The mobile home positioner height 96, being less than the height 98 that the I-beams 94 are above the ground, allows positioning readily beneath the I-beams. The hydraulic jack cylinders 28 and 30 are actuated by the use of the control panel 88 which engages the pump 84 and the oil reservoir 82, and raises the lifting pistons 32 and 34 causing the support beam 40 to contact the I-beams 94. Once the weight of the second unit 92 is supported by the mobile home positioner 8, the springs 24 adjacent to the wheels 18 of the leveler are compressed and the support pads 14 under the support legs 12 will rest upon the ground giving added support to the positioner 8 as shown in FIG. 3. The pistons 32 and 34 are raised to a sufficient height in order that the second unit 92 is at the height of the first mobile home unit 90. FIG. 3 reflects the pistons extended with the second unit 92 at the height of the first unit 90. The raising of the pistons 32 and 34 causes the lateral movement actuators 56 and 58 to pivot at their connecting points 64 and 74 on the base beam and to pivot at their connecting points 68 and 78 end on the slideable support beam 40. This will also cause some extension of the rods 66 and 76, the hydraulic controls being suitably constructed to accommodate this. Once the proper height has been attained, the two jacks 28 and 30 can be operated independently to horizontally level the second unit.

In order to eliminate the existing lateral gap between the two units, it will be necessary to provide lateral movement for the second unit 92. This is accomplished by actuating the lateral movement cylinders 56 and 58. The respective adjustment rods 66 and 76 will be engaged to move the support beam 40 in a longitudinal, direction parallel with the longitudinal axis of the base beam 10. The movement of the support beam 40 is facilitated by the rollers 48, shown in FIG. 5, that provide a roller bearing surface with low friction upon which the support beam 40 may be easily moved. The longitudinal movement of the support beam 40 with respect to the base beam 10 will cause a lateral movement of the second mobile home unit 92 toward the first unit 90 when the adjustment rods 66 and 76 are actuated in a direction toward the first mobile home unit 90. This will result in the proper mating or positioning and alignment of the two units with respect to each other at one

end and will allow a permanent connection to be made.

Permanent jacks are positioned beneath the I-beams 94 adjacent the mobile home positioner 8. The lifting pistons 32 and 34 are lowered, removing the support beam 40 from beneath the I-beams which will free the positioner from the weight of the second unit 92. The mobile home positioner is then moved to the other end of the second unit 92 and placed beneath the I-beams 94. The process is again repeated of lifting the other end of the second unit 92 and laterally moving it for proper alignment and connection with the first unit 90.

This procedure of connecting one end at a time of the second unit to the first unit is feasible because the lateral movement is usually less than a foot and the long length of these units allows considerable flexibility. However, two mobile home positioners could be used simultaneously in order to facilitate the simultaneous alignment and connection of both ends of the second unit 92 adjacent to the first unit 90. As can be seen from the above description, the process of using the mobile home positioner greatly increases the efficiency of alignment and leveling adjacent sections of multi-unit mobile homes. The problems of lateral movement or lateral alignment of the various sections of mobile homes is eliminated by the ease with which it is accomplished by the use of the mobile home positioner. Although the present disclosure utilizes hydraulic lifting jacks and hydraulic lateral movement actuators, it is contemplated that other means could be used to facilitate the lifting movement and lateral movement utilized in the present invention.

What is claimed is:

1. An apparatus for use in lifting and positioning component units of a mobile home or similar load comprising:

- a base beam;
- a plurality of legs, supporting said base beam;
- a plurality of spring loaded wheels attached to said legs for moving the apparatus;
- a pair of jacks mounted on said base beam;
- an inner beam connected to said jacks for vertical movement of said inner beam with respect to said base beam;

a series of rollers resting on said inner beam, providing a roller bearing surface;

a support beam resting on said rollers to receive the load;

a pair of actuators connected between said base beam and said support beam to move said support beam longitudinally on said rollers to move the load laterally.

2. The apparatus of claim 1 wherein said legs are located adjacent opposite ends of the base beam, said jacks are suspended beneath the base beam adjacent the legs with the moveable piston of each jack extending above the base beam, said support beam has depending flanges which guide its movement on the inner beam and which enclose the rollers, and said actuators are positioned on opposite sides of the beams with each having its upper end attached to a flange of the support beam and its lower end laterally spaced from the upper end and attached to a side of the base beam.

3. Apparatus for vertically and laterally positioning a large bulky load such as adjacent units of a multiunit mobile home comprising:

- an elongated base beam;
- means for supporting and positioning the base beam beneath the load;
- a support beam movably connected to said base beam to receive the load to be moved;
- an inner beam extending between said base and support beams;
- a pair of jacks mounted on said base member with their extendible portions in position to lift said inner beam;
- bearing means positioned between said inner beam and said support beam for supporting the support beam while permitting lateral movement of the support beam relative to the inner beam; and
- means attached between said support beam and said base beam for laterally moving said support beam on said bearing means with respect to said inner beam and said base beam.

4. The apparatus of claim 3 wherein said jacks are suspended from the base beam with their extendible portions extending above the base member to engage the inner member.

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