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Link to Claims Section

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SHED LEVELING SYSTEM

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ENGLISH-ABST:

A leveling system for a shed or other pre-fabricated building. The system includes a series of concrete supports and bases for receiving the vertical support arms for the shed. The bases each have pivot points to receive slant support beams. The pivot points allow the user to place the slant support beams to the correct angle depending on the incline of the terrain. The bases also have the capability of receiving mechanical fasteners, such as screws, to stabilize the support system to the concrete bases. The system can be used in several places beneath the shed, to compensate for uneven terrain in different places beneath the shed or prefabricated buildings.

EXMPL-FIGURE: 1

NO-DRWNG-PP: 2

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PARENT-PAT-INFO:

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] Priority is hereby claimed to patent application Ser. No. 60/320,285 filed on Jun. 18, 2003.

SUMMARY:

BACKGROUND OF INVENTION

[0002] The present invention is a shed leveling system for leveling a shed or portable building on uneven ground or terrain.

[0003] The problem that faces many builders and manufactured building suppliers is the slope or lay of the land in which they are to install the building. The options open to the builders or installers vary greatly depending on the budget of the project. The builders or installers can choose to bring in bulldozers and other such earth moving equipment to remove earth from the intended area and create an even terrain to build the building, or to install a prefabricated building. This option is very expensive and in most cases requires a builder or installer to sub contract to a company that owns the proper earth moving equipment.

[0004] Another option is to build a permanent foundation to a building, wherein the foundation compensates for the uneven terrain. An inherent problem with permanent foundation, such as a brick or stone foundation, is that the home or storage building owner may wish to move a building such as a shed or mobile or modular home to another location, and a permanent foundation will increase the difficulty of moving the building in the future.

[0005] U.S. Pat. No. 4,698,949 issued to Dietrich on Oct. 13, 1987, shows a self leveling block. Dietrich's invention is unlike the present invention because it is a system for placing building blocks longitudinally on a surface with a malleable attachment in the mid section of each block. It does not provide a means to level a shed or other outbuilding. Instead it is a building block mechanism for a permanent foundation as in a home or business.

[0006] U.S. Pat. No. 4,870,789 issued to Clark, et al., on Oct. 3, 1989 shows a manufactured building adjustable leveling and support device. Clark's invention is unlike the present invention because it does not have an adjustable hinge to alleviate different angles of the terrain.

[0007] Japanese patent application no. 10214610 entitled Operation device for leveling machine and leveling machine equipped with it, filed by Hidenori, et al., on Jul. 29, 1998. Hidenori's invention is unlike the present invention because it is a machine leveling system for setting a machine to the appropriate height for the operator. It does not provide a means to level a shed or other building to correct for terrain.

[0008] U.S. Pat. No. 5,839,239 issued to jang on Nov. 24, 1998 shows an apparatus and method for building construction. Jang's invention is unlike the present invention because it is a system for constructing an entire building and does not provide a means to stabilize a preconstructed building on uneven terrain.

[0009] Japanese patent application no. 2000110085 filed by Sadaki, et al., on Apr. 12, 2000 shows a Scaffold level adjusting joint. Sadaki's invention is unlike the present invention because it does not provide a means to stabilize a shed or other temporary structure. Instead it provides a joint to stabilize scaffolding, which cannot be uses to stabilize a structure as heavy or complex as a building.

[0010] U.S. Pat. No. 6,010,299 issued to jesswein on Jan. 4, 2000 shows a lifting and positioning device. Jesswein's invention is unlike the present invention because it is a system of lifting sheet rock or other building material to the correct position for construction, but does not provide a means for leveling a building on uneven terrain.

[0011] Japanese patent application no. 2001158494 filed by Komute on May 28, 2001 shows a direct foundation structure of a building built on steep slope and having great difference in foundation level. Komute's invention is unlike the present invention because it is a modular system that is built to accommodate a slope, and is permanent.

[0012] Therefore a need has been established for a leveling means for a shed or other prefabricated building which is easy and inexpensive to install.

SUMMARY OF INVENTION

[0013] The present invention is a leveling system for a shed or other pre-fabricated building. The system includes a series of concrete supports and bases for receiving the vertical support arms for the shed. The bases each have pivot points to receive slant support beams. The pivot points allow the user to place the slant support beams to the correct angle depending on the incline of the terrain. The bases also have the capability of receiving mechanical fasteners, such as screws, to stabilize the support system to the concrete bases. The system can be used in several places beneath the shed, to compensate for uneven terrain in different places beneath the shed or prefabricated buildings.

DRWDESC:

BRIEF DESCRIPTION OF DRAWINGS

[0014]FIG. 1 shows a cut away view of the support and a shed.

DETDESC:

DETAILED DESCRIPTION

[0015] The present invention is a support system for sheds or other prefabricated buildings.

[0016]FIG. 1 shows a cut away side view of the support system and the shed. The left of the figure shows a close up view of the system including a support beam (160) for steep inclines. The system includes two cement or concrete supports (10, 110). In alternate embodiments, the present invention can be applied to soil or a slab instead of the two cement or concrete supports (10, 110). On the top of each of the supports (10, 110) are the plates (20, 120) to receive mechanical fasteners (90). Each of the plates (20, 120) has at least four diametrically opposed holes for the mechanical fasteners (90). In this embodiment the mechanical fasteners (90) are conventional screws but in alternate embodiments the mechanical fasteners (90) can be nails, brackets, or any other mechanical fasteners (90), which can secure the support in an immobile fashion.

[0017] The system also includes a vertical pivot station (30, 130) to allow the user to adjust the slant support member (100) to the proper grade for the incline. The slant support member (100) is attached by a threaded stud and lock nut to the floor, so that the slant support member (100) can be adjusted to the correct elevation. The vertical pivot station (30,130) is secure and does not have the capability of movement for the shed (170), when the shed (170) is set in place. The plates (20, 120) each have a raised portion (40, 140) to receive the vertical pivot station (30, 130). The connection of the raised portion (40) and the vertical support (30) is shown at connection point (50). Each of the

supports has a vertical arm (60, 150) that can be raised or lowered to compensate for the incline. The vertical arms (60, 150) can be raised or lowered by means of an upper receiving means (80, 180) and the raised portion (40, 140) of the plates (20, 120). The vertical arms (60,150) in the present embodiment are threaded aluminum rod, but are not limited thereto. Additionally in this embodiment the vertical arms (60, 150) are not threaded at the connection point (50) to allow the vertical arms (60,150) to spin each of the supports (10, 110). The vertical support (30), the connection point (50) and the plates (20, 120) allow the vertical arms (60, 150) to pivot as needed for placement.

[0018] In the present embodiment of the invention the receiving means (80,180) is a threaded cylinder welded to an aluminum girder, but is not limited thereto. Also, in this embodiment of the present invention the system includes a support beam (160), which is attached through the walls or floor of the shed (170). The support beam (160) is preferably used with the system when the incline is steep or the grade of the incline is sudden.

[0019] The range of adjustment of support beam (160) is greatly improved by means of support beam (160) extending through the floor area into the wall cavity of shed (170). The support beam (160) can be extended through the floor area of the shed into the interior of a sheet metal wall and given a sheet metal skirt to cover the support beam (160). Adjustments can be made in a timely manner, in fact in minutes, versus hours. Support beam (160) extends into the shed (170) cavity, adjusts height by rotating right or left, adjustments can be made from the top of the platform, or from inside the unit. Support beam (160) always extends through or is accessed from the top or through the access hole in a wall or floor of shed (170). Turning support beam (160) right equals moving it up and turning support beam (160) left equals turning it down. Support beam (160) is designed to receive a socket wrench or a cordless drill with an extension design for application.

[0020] The present invention is not limited to the embodiments described above. It should be understood that some of the other embodiments might include the use of a laser to insure accurate or automatic leveling. It is further envisioned that all hand turned devices herein may be connected to motors. This of course would allow much larger buildings to use this device and for the entire process to be automated by connecting a standard computer with custom software to the motors controls.

ENGLISH-CLAIMS:
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1. A shed leveling device comprising: a floor of a shed; an opening in said floor; an adjustment member extending through said opening in said floor; and a foot in communication with said adjustment member;

2. The device of claim 1, wherein said foot member communicates with a mounting surface.

3. The device in claim 1, wherein said device is connected to a motor.

4. The device in claim 1, wherein said device is automated allowing an operator to level a building with a single button touch.

5. The device in claim 1, wherein said foot is a hardened substance.

6. The device of claim 1, wherein said adjustable member is a metal.

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