United States Patent [19]

Young

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[54] **MOBILE HOME HOLDOWN APPARATUS**

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[51] **Int. Cl.** **E04h 9/14**

[58] **Field of Search** ..... 135/1 R, 3 E; 52/23, 52/83, 156, 157, 143, 4; 248/361 R, 361 A

[56] **References Cited**

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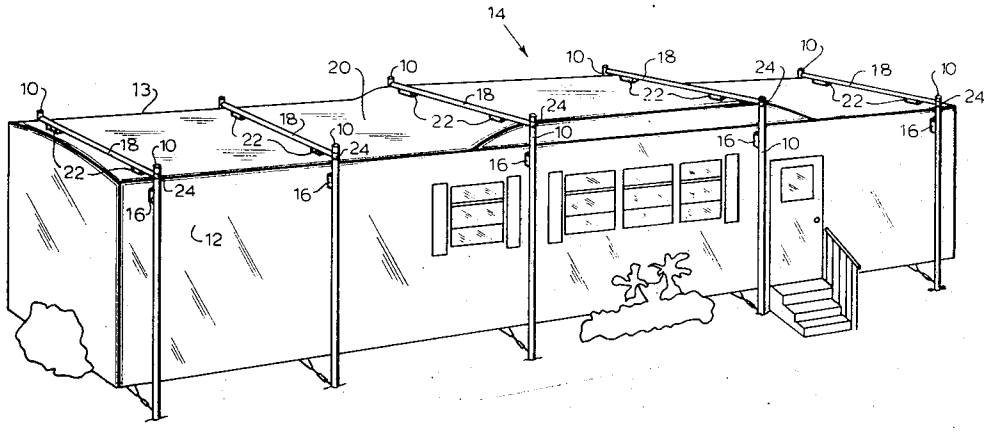
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[57] **ABSTRACT**

A removable mobile home holdown, including pairs of hollow pipes extending into the ground flush with opposing sides of the mobile home. A cross member is secured between each pair of pipes, and each pipe has a crimped end extending into the ground with an auger at the crimped end for anchoring.

6 Claims, 3 Drawing Figures



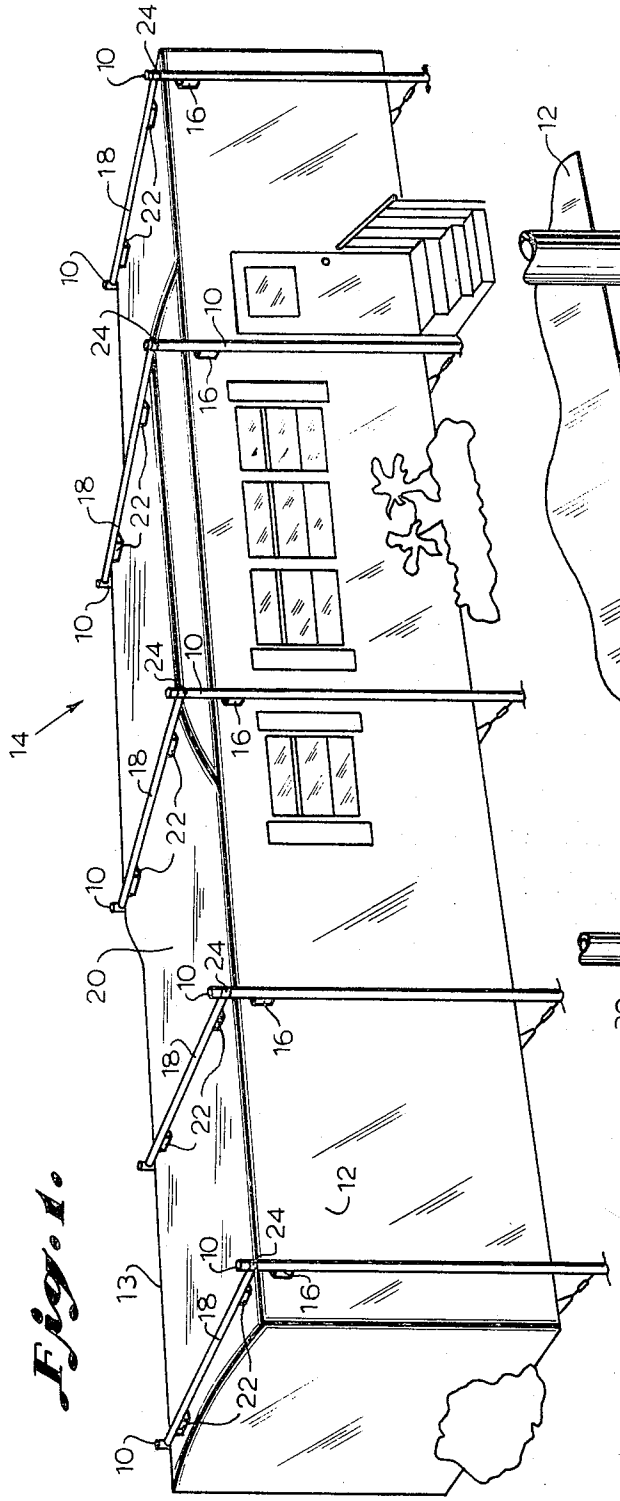


Fig. 1.

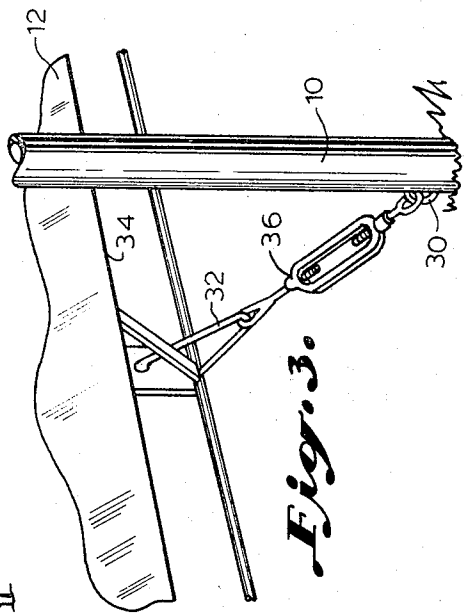


Fig. 3.

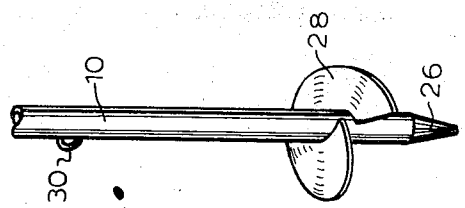


Fig. 2.

MOBILE HOME HOLDOWN APPARATUS

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to holdown apparatus, and in particular, relates to apparatus which are especially adapted to hold down mobile homes.

2. Description of the Prior Art

Mobile homes have greatly increased in popularity in recent years, especially in those portions of the United States where relatively mild winters occur. In some respects, the term "mobile home" has become a misnomer, since many such homes are permanently installed. Yet many mobile home owners still move their facilities occasionally.

One of the disadvantages with mobile homes in the past was their susceptibility to damage from high winds. While mobile homes do not have a high profile, they are relatively light, and are frequently severely damaged or destroyed during hurricanes or tornadoes. Because of this, legislation both in Congress and in some states is being considered which would require all mobile homes to be tied down in some manner to meet certain minimum wind standards.

There are several types of apparatus presently employed to tie down mobile homes. One arrangement employs cable or flexible straps tied to concrete anchors. See, for example, U. S. Pat. No. 3,054,151 to Shankland. However, such arrangements generally require that the straps extend away from the vehicle in order to achieve maximum hold down capabilities (i. e. mechanical advantage). Yet in this configuration, the straps are an impediment to walking about the mobile home.

Grinelli, et al, in U. S. Pat. No. 3,335,531, teach a mobile home tie-down employing permanently installed spaced concrete anchors and a detachable rod frame. However, this arrangement is expensive; and since mobile homes come in various widths, the permanently installed concrete anchors may often be too wide, in which case the rods are a walking impediment, as described above, or too narrow, resulting in a loss in the overall strength or the tie-down assembly.

Another technique, disclosed by Doctor in U. S. Pat. No. 3,403,487, contemplates a permanent concrete pad to which the mobile home is anchored.

While the above described apparatus has worked in the intended manner, it would be desirable to employ a hold down aparatus which could be easily removed and reinstalled at a new location without any limitations on the new location, such as requirements for providing new concrete anchors.

SUMMARY OF THE INVENTION

The present invention is directed to a mobile home tie-down apparatus which is easily installed and which does not provide a walking impediment. Further, the mobile home tie-down apparatus of the present invention is easily removed and reinstalled at a new location, without any limitations on that location.

The holdown apparatus of the present invention comprises a plurality of pairs of hollow tie-down pipes, each pair of pipes adapted to extend next adjacent opposing sides of a mobile home. Each pipe has a crimped end adapted to extend into the ground, and further includes a threaded auger along the pipe proximal to the crimped end. A cross member is included between opposing pipes of each pair, and is adapted to engage the roof of the mobile home.

THE DRAWINGS

FIG. 1 is a perspective view of a mobile home employing the holdown apparatus of the present invention.

FIG. 2 is a perspective view of an end portion of a pipe employed in the present invention.

FIG. 3 is another perspective view of a portion of the present invention.

DETAILED DESCRIPTION

A holdown apparatus for a mobile home in accordance with the present invention is shown in FIGS. 1–3 and described with reference thereto.

Noting FIG. 1, a plurality of pairs of hollow pipes 10 are provided, each pair of pipes being adapted to extend next adjacent to opposing sides 12, 13 of a mobile home 14. Preferably the pipes 10 are flush with the sides 12, 13 with a small standoff 16, such as a hard rubber pad, interposed therebetween.

The size and material of the pipes 10 are not critical. By way of example, the pipes 10 may comprise 3 inch galvanized iron.

A plurality of cross members 18 are provided, each being joined between the opposite pipes 10 of each pair. The cross members 18 are flush with the roof 20 of the mobile home 14, with appropriate standoffs 22 therebetween. The cross members 18 may be joined to the corresponding pipes 10 by a variety of means. Preferably, however, slidable bands 24 are employed in order to allow the cross member 18 to be adjusted in a vertical direction, and thus accommodate a variety of mobile home heights.

Referring now to FIG. 2, the lower end 26 of each pipe 10 is crimped to provide a relatively sharp point which is more easily inserted into the ground than without such crimping. Additionally, a threaded flange, or auger 28, is welded or otherwise joined to the pipe 10 proximal to the crimped end 26.

As shown in FIG. 3, the holdown apparatus of the present invention further includes an eyelet 30 joined to each pipe 10 a short distance above the auger 28. A cable 23 is tied to the lower edge 34 of the side 12, 13 of the mobile home 14 which is next adjacent to the pipes 10, and is tied to the eyelet 30 via a turnbuckle 36. The turnbuckle 36 provides means for adjusting the length of the tie between the lower edge 34 and each pipe 10.

The mobile home tie-down apparatus of the present invention provides several advangages with respect to the prior art. First, all of the apparatus of the present invention is flush to the mobile home, and thus does not serve as an impediment to walking about the mobile home. Second, the apparatus of the present invention can be completely and easily taken down and reused at another site. Third, the present invention does not require permanent concrete anchors or pads, and is relatively inexpensive.

I claim:

1. A mobile home tie-down, comprising:

a plurality of pairs of hollow tie-down pipes, each pair of pipes adapted to extend next adjacent opposing sides of a mobile home;

each said pipe having a crimped end adapted to extend into the ground, and each said pipe further including a threaded auger therealong proximal to said crimped end; and

a cross member between opposing pipes of each pair, each said cross member adapted to engage the roof of said mobile home.

2. A mobile home tie-down as recited in claim **1** further comprising means for tieing the lower edge of each said side of said mobile home to said pipes along the corresponding side.

3. A mobile home tie-down as recited in claim **2** further comprising means for adjusting the length of said tieing means.

4. A mobile home tie-down as recited in claim **3** wherein each of said pipes comprises a unitary member.

5. A mobile home tie-down as recited in claim **4**, wherein said pipes are mounted flush with said sides of said mobile home.

6. A mobile home tie-down as recited in claim **5**, wherein said cross member further comprises vertical adjusting means.

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