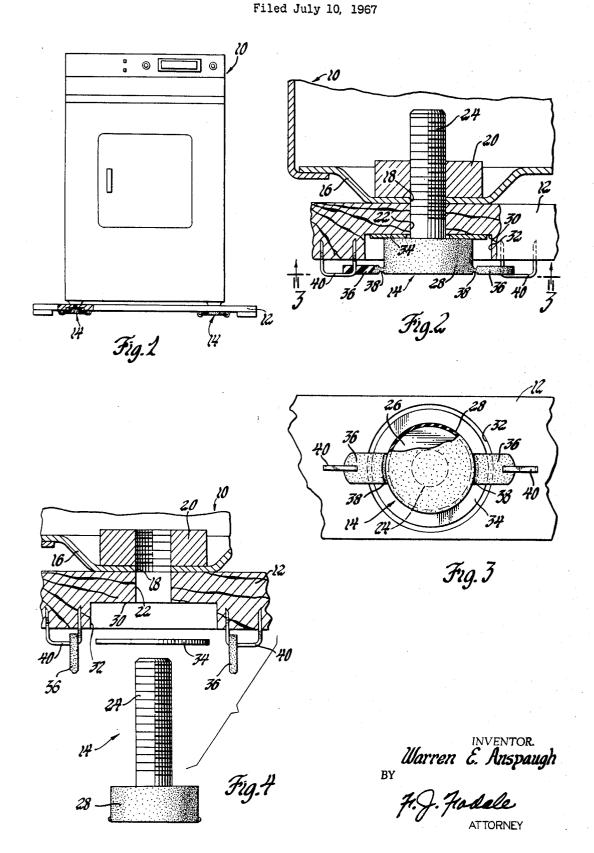
APPLIANCE LEVELING FOOT AND SHIPPING PALLET BOLT



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3,436,045 APPLIANCE LÉVELING FOOT AND SHIPPING PALLET BOLT

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ABSTRACT OF THE DISCLOSURE

An appliance leveling foot which is especially adapted to be used as a shipping bolt when the appliance is secured to a wooden shipping pallet. The shipping foot includes a molded rubber covering on a bolt head. The molded covering has two integral tabs connected to it through thinned frangible portions. In shipment, the appliance is placed on the pallet with the leveling feet threaded into the suitable sockets in the appliance bottom panel. This secures the pallet to the appliance. With the leveling foot in place, the tabs are stapled to the pallet allowing the bolts and appliance to move relative to the pallet while preventing rotation of the leveling feet thereby avoiding the possibility of their working loose during shipment.

This invention relates generally to appliance leveling feet and more particularly to appliance leveling feet which can be used as shipping bolts to secure the appliance to a shipping pallet and the palletized appliance so assembled.

The usual method for shipping appliances or other bulky items which are provided with leveling feet is to use the leveling feet securing means in conjunction with suitable devices to secure the appliance to a wooden pallet. It has been found that if ordinary leveling feet are utilized, these feet tend to work loose during shipment thus allowing the pallet to be separated from the appliance. A solution to this problem is to provide separate shipping bolts for securing the pallet to the appliance and then using a lock wire in the shipping bolt to prevent the shipping bolt from working loose. This solution, however, is undesirable since it requires extra pieces and the assembly of the lock wire is tedious and time consuming.

Accordingly, this invention is directed to providing an appliance leveling foot which can be used as a shipping bolt for palletizing the appliance and which will not work loose during shipment.

Other objects and features of the invention will become apparent to those skilled in the art as the disclosure is made in the following detailed description of a preferred embodiment of the invention as illustrated in the accompanying sheet of drawing in which:

FIGURE 1 is an elevation view of a palletized appliance in accordance with this inevntion.

FIGURE 2 is an enlarged view partially in cross section of a portion of FIGURE 1.

FIGURE 3 is a section taken along the line 3—3 of FIGURE 2.

FIGURE 4 is a view similar to FIGURE 2 showing the leveling foot being disassembled from the shipping pallet.

Referring now to the drawing and more particularly to FIGURE 1, there is shown an appliance indicated generally at 10 secured to a wooden pallet 12 by leveling feet 14. The detail of the leveling feet 14 is shown more clearly in FIGURE 2 where the bottom panel of the appliance 10 includes a dished portion 16 apertured at 18. A threaded nut 20 is tackwelded or otherwise suitably secured to the bottom panel 16.

The appliance 10 rests on a wooden pallet 12 which 70

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has a countersunk hole 22 in alignment with the nut 20 and aperture 18. The leveling foot 14 includes a threaded shank 24 which extends through the holes 22, 18 and is secured in nut 20. The leveling foot also includes a head 26 which has a rubber or similar resilient material molded to it to provide a covering 28. The head of the leveling foot 14 abuts through a washer 34 the shoulders 30 of the pallet 12 produced by countersinking the hole 22 at 32. The covering 28 includes a pair of integral tabs 36 which are connected to the covering 28 through thinned frangible portions 38. With the pallet secured to the appliance 10 by the leveling foot 14 as shown in FIGURE 2, the tabs 36 are stapled to the pallet 12 at 40. This allows relative vertical movement between the pallet and the appliance while preventing rotation of the leveling foot 14 during shipment. To remove the appliance 10 from the pallet 12, the portions 38 are broken as shown in FIG-URE 4. The leveling foot is then unscrewed from the appliance and the pallet disposed of. The leveling foot is then rethreaded into the appliance and used to adjust it to a leveled condition in its operating environment.

It should be understood, of course, that the foregoing disclosure relates to only a preferred embodiment of the invention and that it is intended to cover all changes and modifications of the example of the invention herein chosen for the purposes of the disclosure, which do not constitute departures from the spirit and scope of the invention.

I claim:

1. In an appliance having a number of threaded holes in its bottom panels for threadably receiving adjustable leveling feet and which is secured to a pallet for shipping, the improvement comprising a plurality of bolts having heads on the side of the pallet opposite to said appliance, said bolts being secured within said holes, and a pair of tabs integral with said head and connected thereto by frangible portions whereby said bolt is adapted to be secured in a fixed angular position with respect to said pallet during shipment of said appliance.

2. The improvement as defined in claim 1 wherein said bolts are appliance leveling feet with resilient coverings molded to said heads whereby said bolts can be used to level said appliance after removal from said

3. A container for shipping including an appliance having a plurality of threaded holes in its bottom panel, a pallet adjacent said bottom panel and having countersunk holes in alignment with said first holes, a plurality of bolts extending through said countersunk holes and secured within said threaded holes, said bolts having heads with resilient covering molded thereto and being disposed in said countersinks to secure said pallet to said appliance and tab means integrally connected to said head covering through frangible portions, and means to secure said tab means to said pallet whereby said bolts are angularly fixed during shipment.

References Cited

UNITED STATES PATENTS

			
60	2,355,804	8/1944	Hutchinson.
	2,744,654	5/1956	Swerdlow 85—9
	2,767,944	10/1956	Moore 16—19
	2,890,545	6/1959	Fiddler 248—188.4
a=	2,972,440	2/1961	Munroe.
65	3,080,690	3/1963	Budd 108—51

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⁷⁰ 248—188.4; 85—9; 206—46