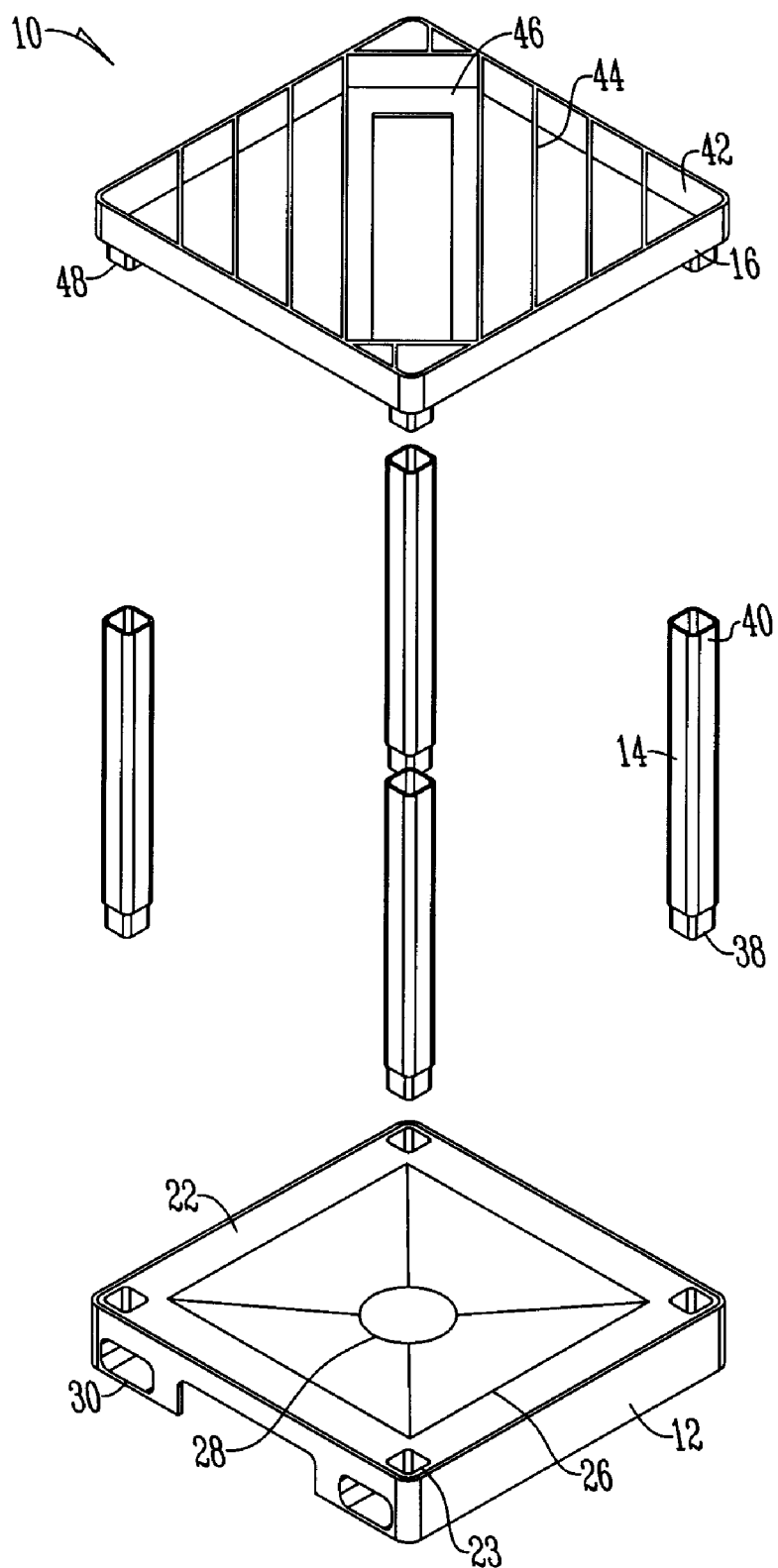
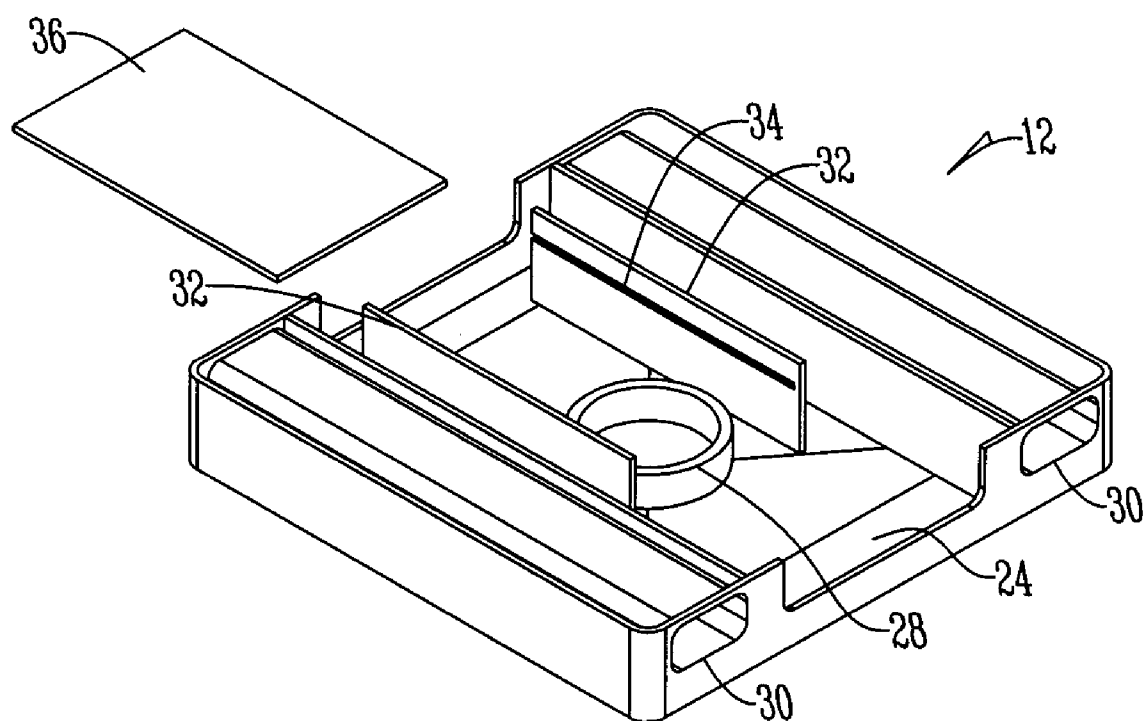




*Fig. 2*



*Fig. 3*

## COLLAPSIBLE BULK STORAGE PALLET ASSEMBLY

### BACKGROUND OF THE INVENTION

[0001] This invention relates to bulk storage pallets. More specifically this invention relates to a collapsible bulk storage pallet.

[0002] Bulk storage pallets are typically used in the seed industry for commodity transport. Specifically large canvas bulk bags hold seed or other commodities and are placed upon the pallet for transportation by a forklift or other heavy machinery. These bulk bags can hold over 2,000 pounds of commodities.

[0003] There are several deficiencies with current pallets. For example, pallets typically are susceptible to having a hole ripped in the bag causing the seed or commodity to spill. Additionally the bags can be tipped over causing them to roll off the pallet and open and spill seed. Another problem with pallets is that they are bulky in size and are not easy to store once the pallets are not being used. Consequentially a need in the art exists for an improved bulk storage pallet.

[0004] A primary object of the present invention is to provide a bulk storage pallet that minimizes the commodity spilled from a bag resting on the pallet.

[0005] Yet another object of the present invention is to provide a bulk storage pallet that is collapsible and easy to store.

[0006] These and other objects, features, or advantages of the present invention will become apparent from the specification and claims.

### BRIEF SUMMARY OF THE INVENTION

[0007] A collapsible bulk storage pallet assembly having a base and at least one side post that is removably secured to and extends away from the base. A top portion removably receives and is secured to the side post. The base tapers downwardly from the edge of the base toward a central opening to accommodate a bulk storage bag.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0008] FIG. 1 is a perspective view of a collapsible bulk storage pallet assembly holding a bulk storage bag;

[0009] FIG. 2 is an exploded perspective view of the pieces of a collapsible bulk storage pallet assembly; and

[0010] FIG. 3 is a bottom perspective exploded view of the base of a collapsible bulk storage pallet assembly.

### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT OF THE INVENTION

[0011] FIGS. 1 and 2 show a collapsible bulk storage pallet assembly 10. The pallet assembly 10 has a base 12 that is removably secured to a plurality of side posts 14 that in turn are removably secured to a top portion 16. When the base 12, side post 14 and top portion 16 are secured together they form an interior chamber 18 that contains a bulk storage bag 20 therein. When the pallet assembly 10 is not holding a storage bag 20 the plurality of side posts 14 are removable from the base 12 and top portion 16 so that the top portion 16 can rest on the base 12. In this manner the pallet assembly 10 is collapsible.

[0012] The base 12 has a top surface 22 and bottom surface 24. The top surface 22 contains openings 25 for receiving the side post 14. The base 12 tapers downwardly from an edge 26 of the base 12 toward a central opening 28 that is disposed through the base 12. By tapering toward the central opening 28 the base accommodates the bulk storage bag 20 so that the bulk storage bag 20 rests comfortably in the base 12 minimizing the likelihood that the bag 20 tips over causing grain to spill.

[0013] As best shown in FIG. 3 the base 12 has two forklift openings 30 disposed therethrough for receiving the tongs of a forklift for movement. Additionally the bottom surface 24 has a pair of spaced apart flanges 32 that have grooves 34 disposed therein. The grooves 34 removably and slidably receive a slide gate 36 that slides in place to cover the central opening 28. The slide gate 36 thus prevents seed or other commodity from flowing through the opening 28.

[0014] The side posts 14 extend from a first tapered end 38 that is received by the base 12 to a second open end 40 that receives the top portion 16. By having a tapered first end 38 a tight secure fit is presented between the base 12 and the side posts 14. Additionally this allows the side posts to be removable from the base 12 so that the assembly 10 may be collapsed. While in the embodiment four side posts are shown and the side post is shown as tubular, the side post may be of any shape or number without falling outside the scope of the present disclosure.

[0015] The top portion 16 comprises a frame 42 that in a preferred embodiment is square. The top portion 16 additionally has a plurality of braces or supports 44 that extend across and within the frame 42. To provide additional support the bag 20 may be tied to the supports 44. Additionally within the frame 42 is a compartment 46 that is of size and shape to receive and retain the side posts 14. Therefore when the side posts 14 are removed from the top portion 16 and base 12 the plurality of side posts 14 may be placed within the compartment 46 for storage.

[0016] The top portion 16 additionally has a plurality of tapered posts 48 that are received by the second end 40 of the side posts 14. The posts 48 are also received by the openings 25 within the base 12. Consequently once the side posts 14 are removed and placed within compartment 46, the top portion 16 is placed and secured to the base 12 by placing the posts 48 within the openings 25. The end result is a compact collapsible storage assembly 10 that can be easily stored.

[0017] The bulk storage bag 20 can be made of any material including canvas. The bulk storage bag 20 may also have a plurality of straps 50 that can be tied to the pallet assembly 10 and specifically around the braces 44. Additionally the bag 20 can have a spout 52 that in one embodiment may be wrapped around the central opening 28 to allow seed or commodity to be dispelled through the spout 52 to a desired location. In this embodiment the slide gate 36 is used in order to cover central opening 28 to stop seed or commodity from flowing out of the bag 20.

[0018] In operation the collapsible bulk storage pallet assembly 10 has a bulk storage bag 20 placed thereon. Because the top surface 22 of the base 12 is tapered the bulk storage bag 20 is accommodated by the base 12 minimizing spilling. Once the bulk storage bag is removed and the assembly 10 is no longer needed to transport the bulk storage bag

**20**, the top portion **16** is removed from the side posts **14** and the side posts **14** are removed from the base **12**. At this point in time the side posts **14** are placed in the compartment **46** of the top portion **16** and the top portion is placed on top of the base **12**. Once the top portion **16** and base **12** are secured to one another the assembly **10** can be easily stored.

**[0019]** Thus disclosed is an improved collapsible bulk storage pallet assembly. The assembly **10** by having a tapered base minimizes the chance of a bulk storage bag tipping over or being torn. Similarly the braces or supports **44** provide attachments for straps **50** of the bulk storage bag **20** in order to provide additional support to prevent movement or ripping of the bag **20**. The use of the slide gate **36** minimizes the amount of commodity or seed that is lost out of the central opening **28** during transportation. Finally because the side post **14** is removable from the base **12** and top portion **16** and easily contained within compartment **46**, the assembly **10** is easily stored. Consequently at the very least all of the stated objectives have been met.

**[0020]** It will be appreciated by those skilled in the art that other various modifications could be made to the device without the parting from the spirit and scope of this invention. All such modifications and changes fall within the scope of the claims and are intended to be covered thereby.

What is claimed is:

- 1.** A collapsible bulk storage pallet assembly comprising:  
a base,  
at least one side post removably secured to and extending away from the base;  
a top portion removably secured to the side post; and  
said base tapering downwardly from the edge of the base toward a central opening.
- 2.** The assembly of claim **1** further comprising a slide gate removably connected to the base.
- 3.** The assembly of claim **2** wherein the slide gate slidably covers the central opening.
- 4.** The assembly of claim **1** wherein the top portion has a plurality of braces that hold straps from the bulk storage bag.
- 5.** The assembly of claim **1** wherein the top portion has a compartment that receives the side post when the side post is removed from the top portion and base.
- 6.** The assembly of claim **1** wherein the side post has a tapered first end that is received by the base to secure the side post to the base.
- 7.** The assembly of claim **1** wherein the central opening receives a spout of the bulk storage bag and the tapered base facilitates commodity flow.

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