



(19) **United States**  
(12) **Patent Application Publication**  
**Chu**

(10) **Pub. No.: US 2009/0032530 A1**  
(43) **Pub. Date: Feb. 5, 2009**

(54) **JOINT STRUCTURE FOR PORTABLE WORK AND STORAGE CONTAINER**

(52) **U.S. Cl. .... 220/4.28**

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(57) **ABSTRACT**

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A joint structure for portable work and storage container includes a plurality of joint members and a plurality of reinforcing shafts. Each joint member includes an upper joint extended from a top retention frame, a lower joint extended from a bottom retention frame, and a shaft holder alignedly mounting between the upper and lower joints to form a reinforcement channel. The reinforcing shafts are disposed within the reinforcement channels and coupling between the upper and lower joints through the shaft holders respectively, wherein each of the reinforcing shafts has an upper portion received in a respective upper socket of the upper joint, a lower portion received in a respective lower socket of the lower joint, and a mid-portion received within the respective shaft holder such that the joint structure reinforces the strength between the top and bottom retention frames to rigidly support the wall frame.

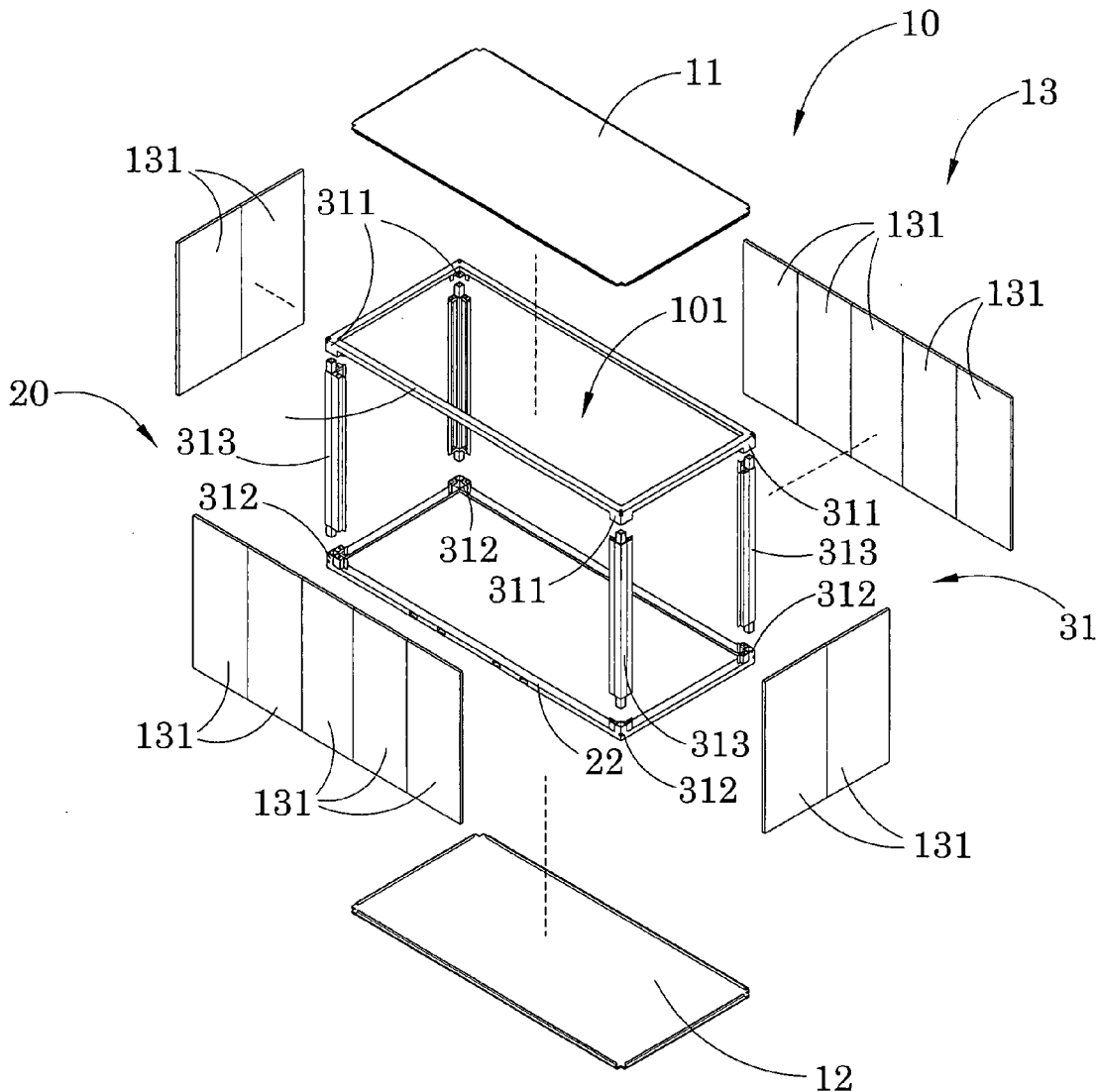
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(21) **Appl. No.: 11/888,271**

(22) **Filed: Jul. 30, 2007**

**Publication Classification**

(51) **Int. Cl.**  
**E04B 1/343** (2006.01)  
**B65D 88/52** (2006.01)



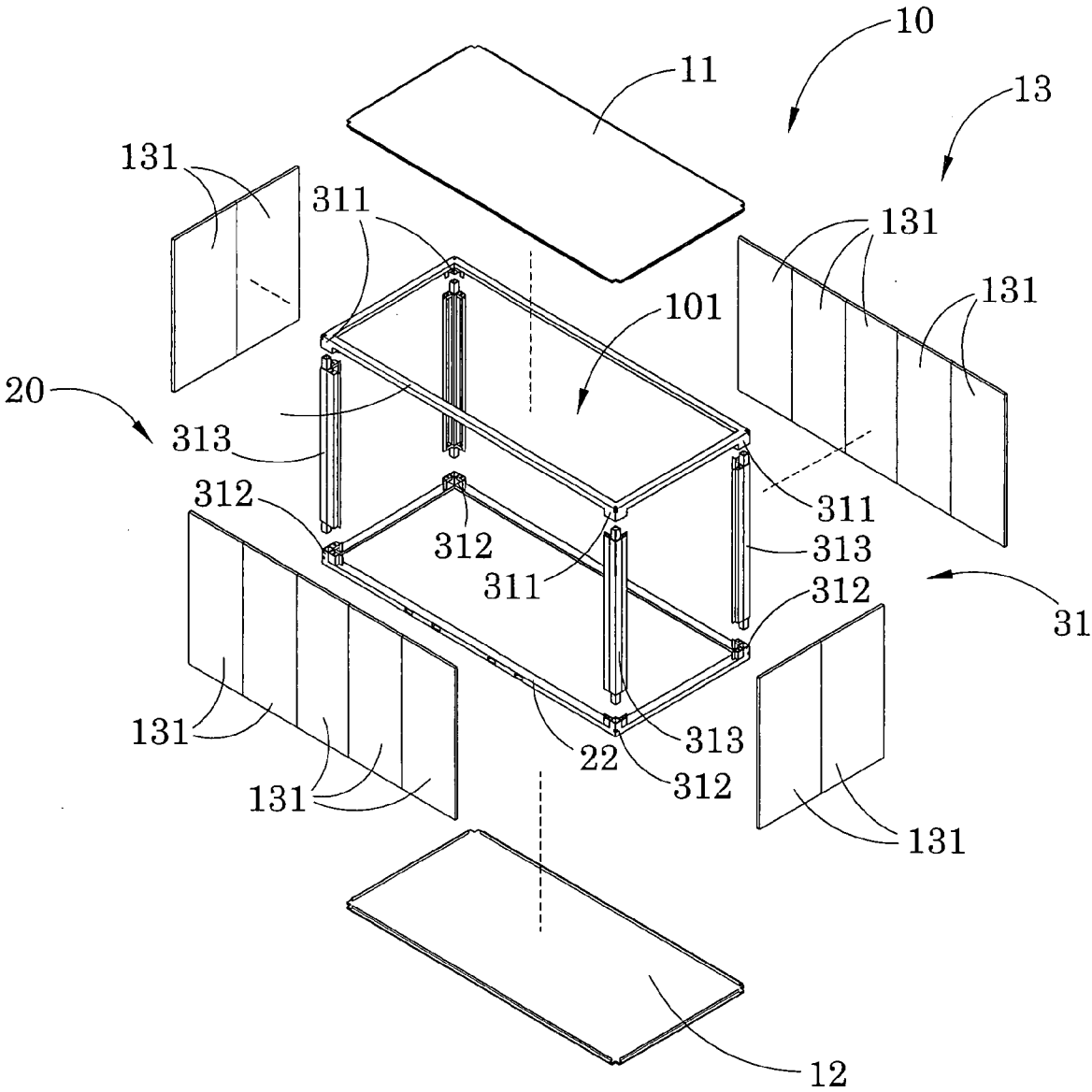


FIG.1

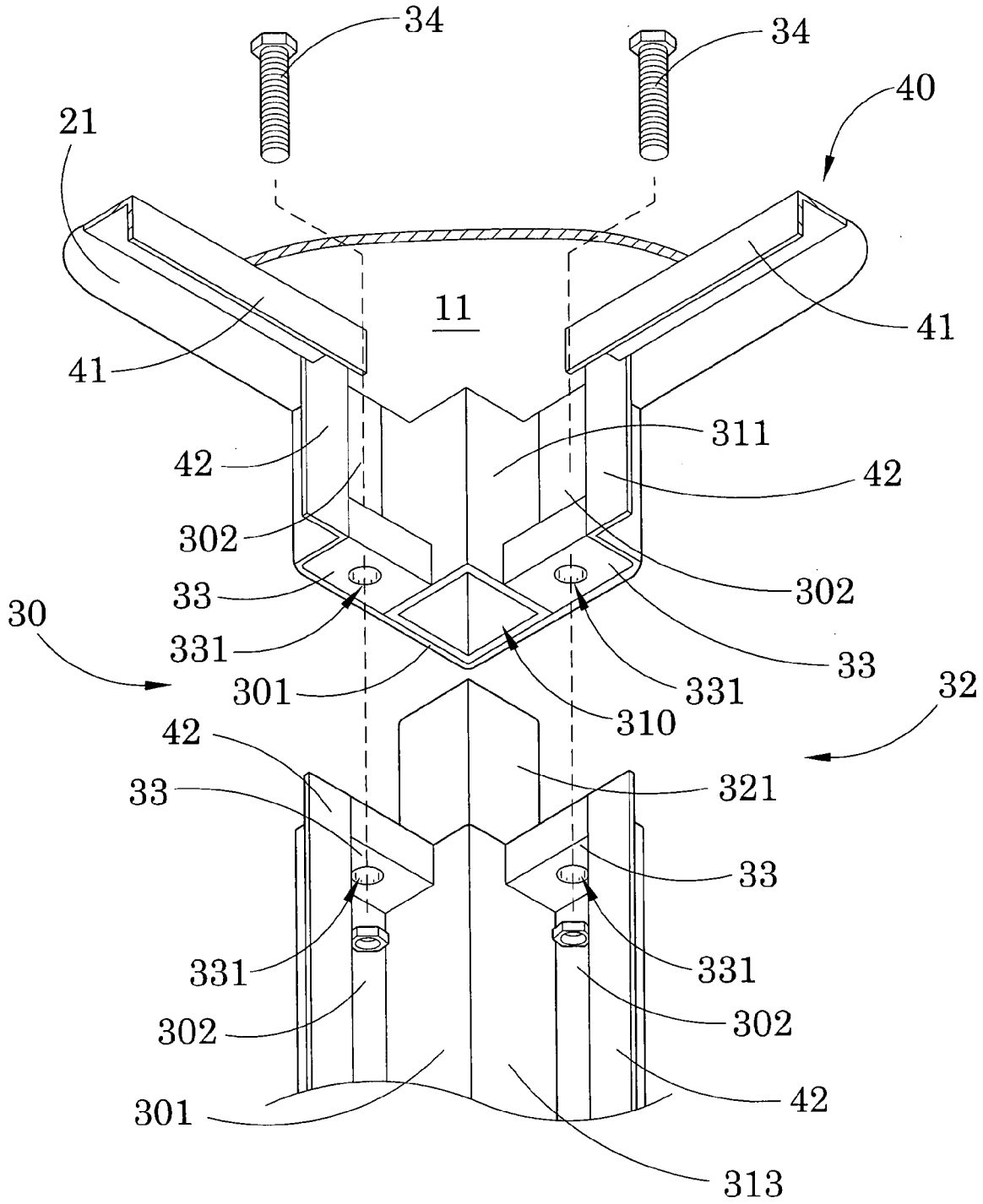


FIG. 2

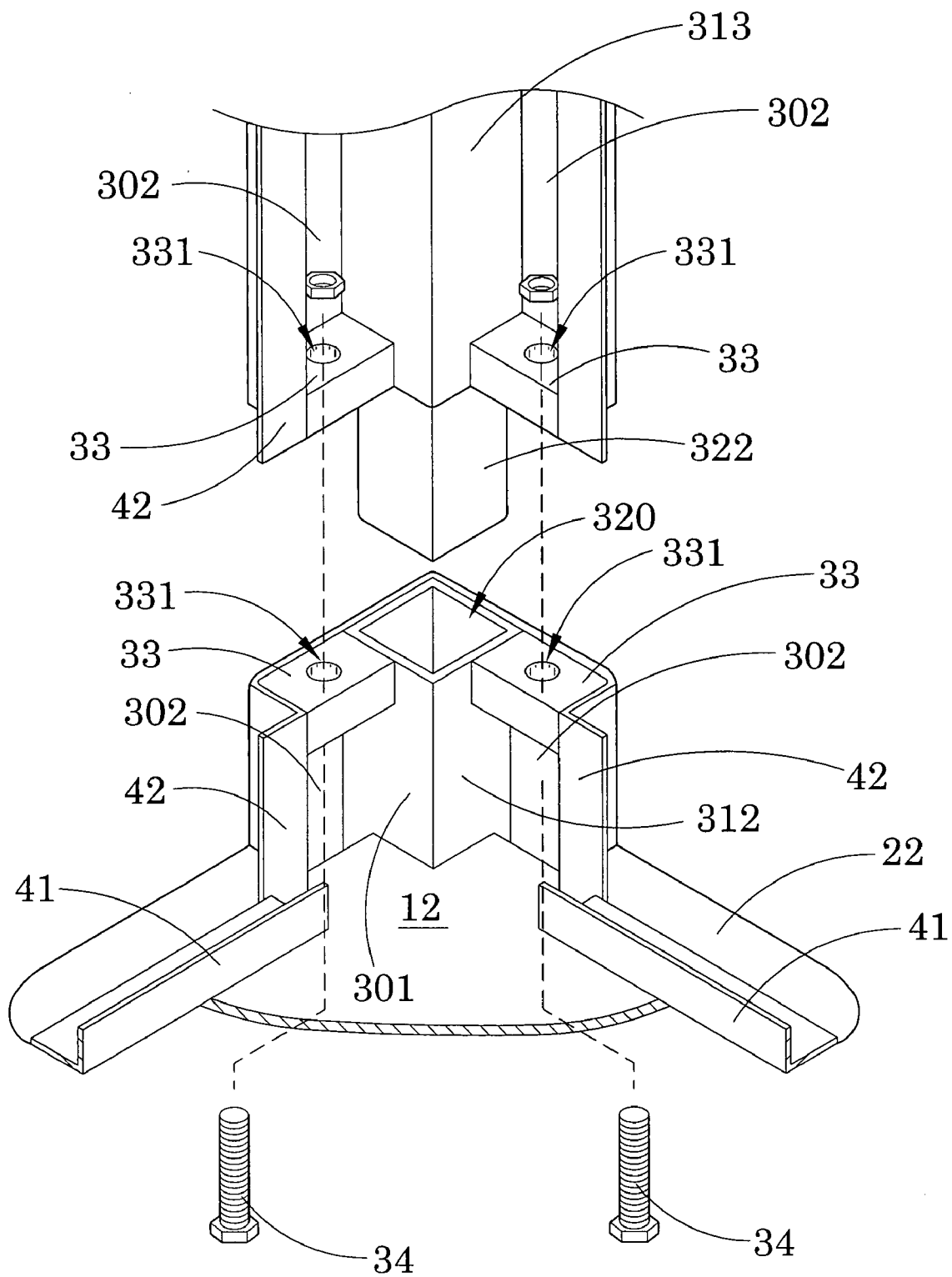


FIG.3

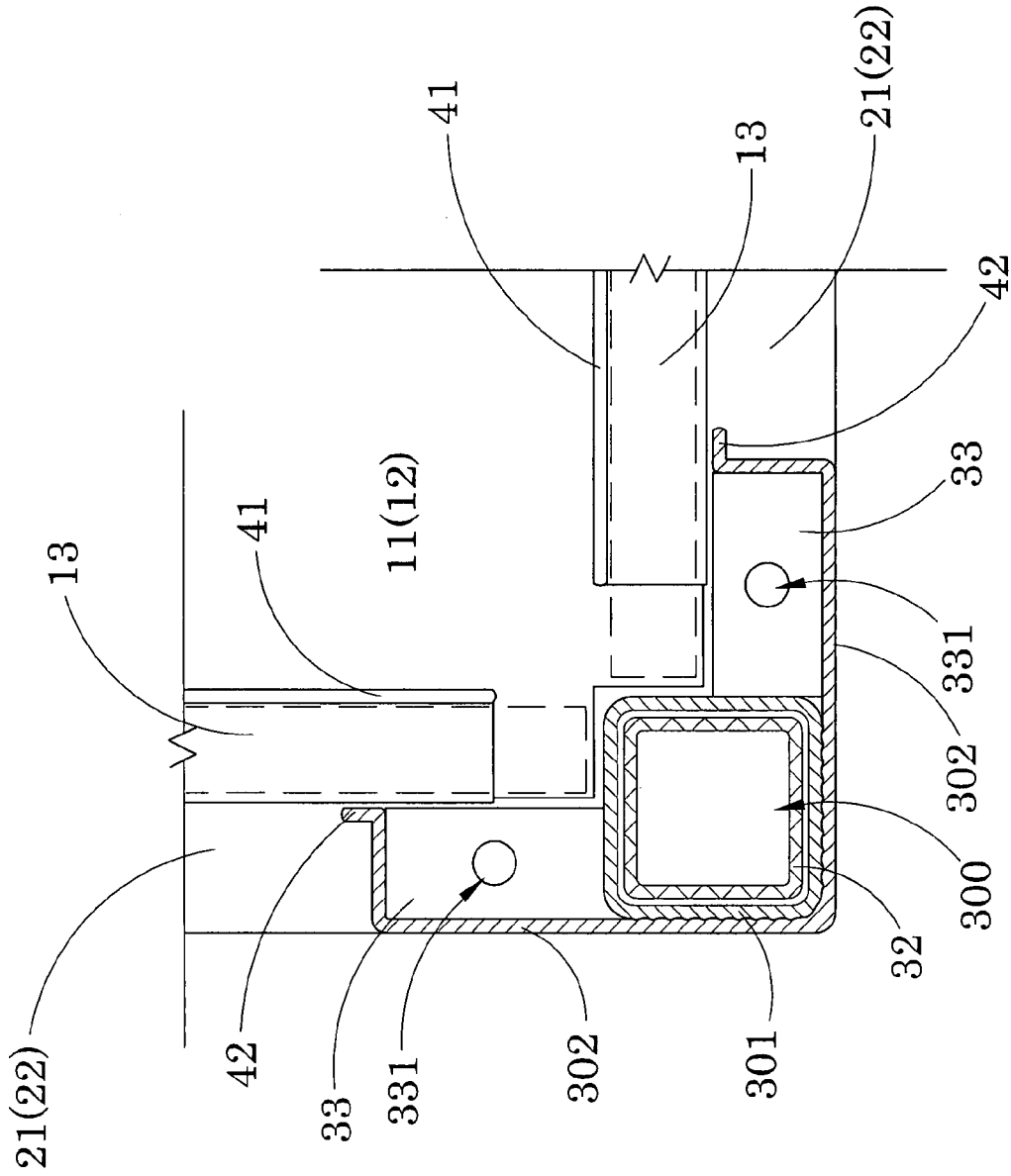


FIG.4

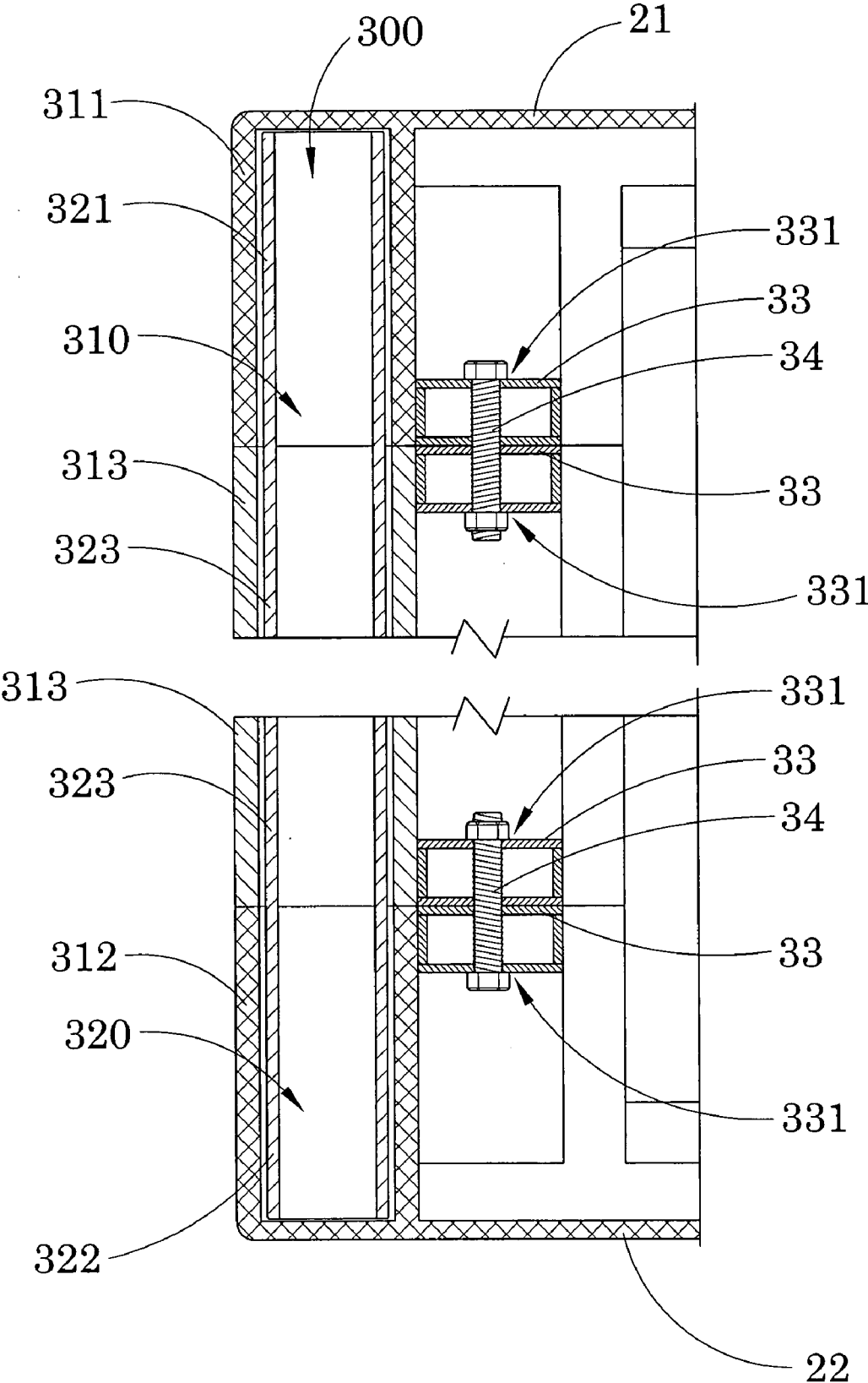


FIG. 5

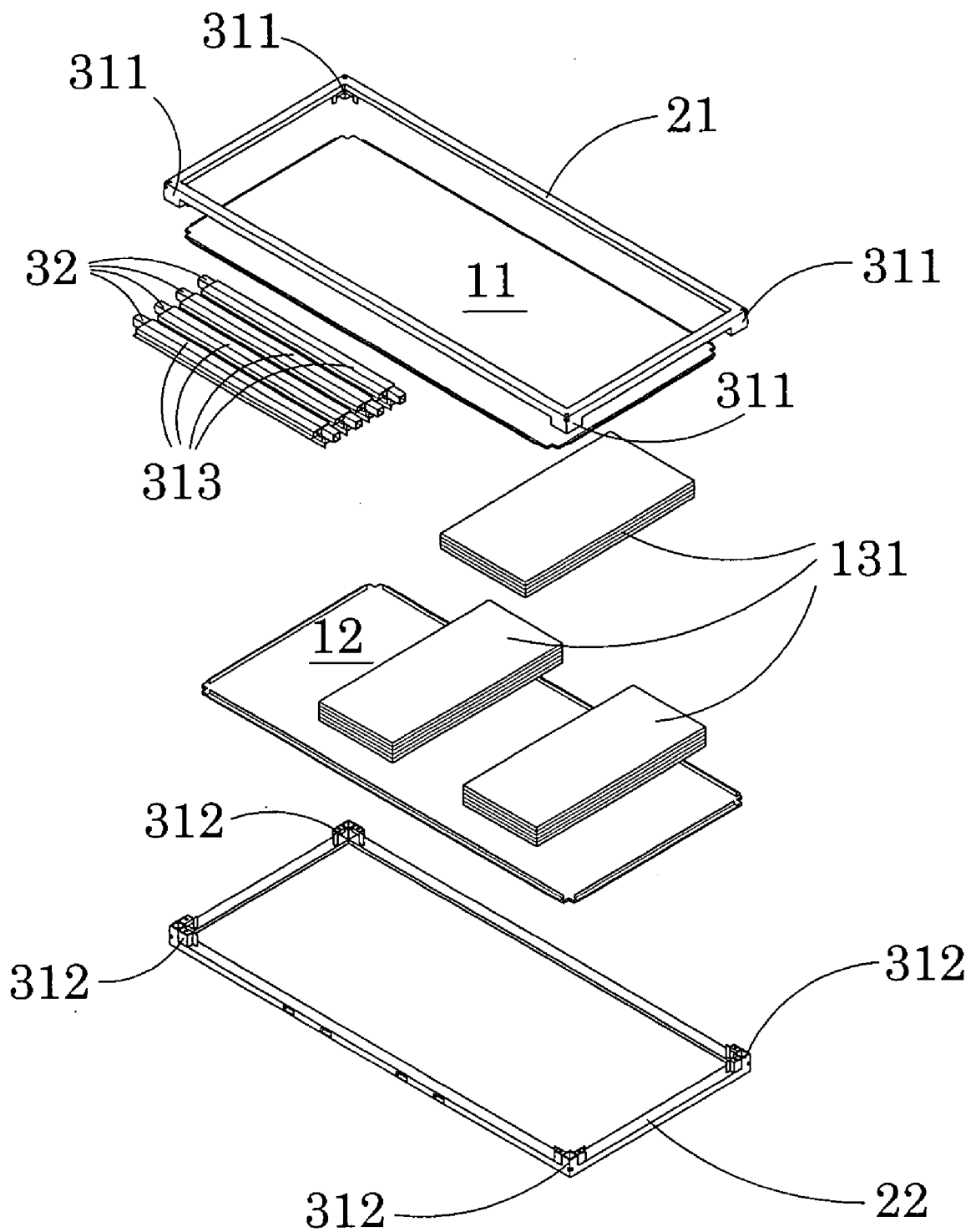


FIG.6

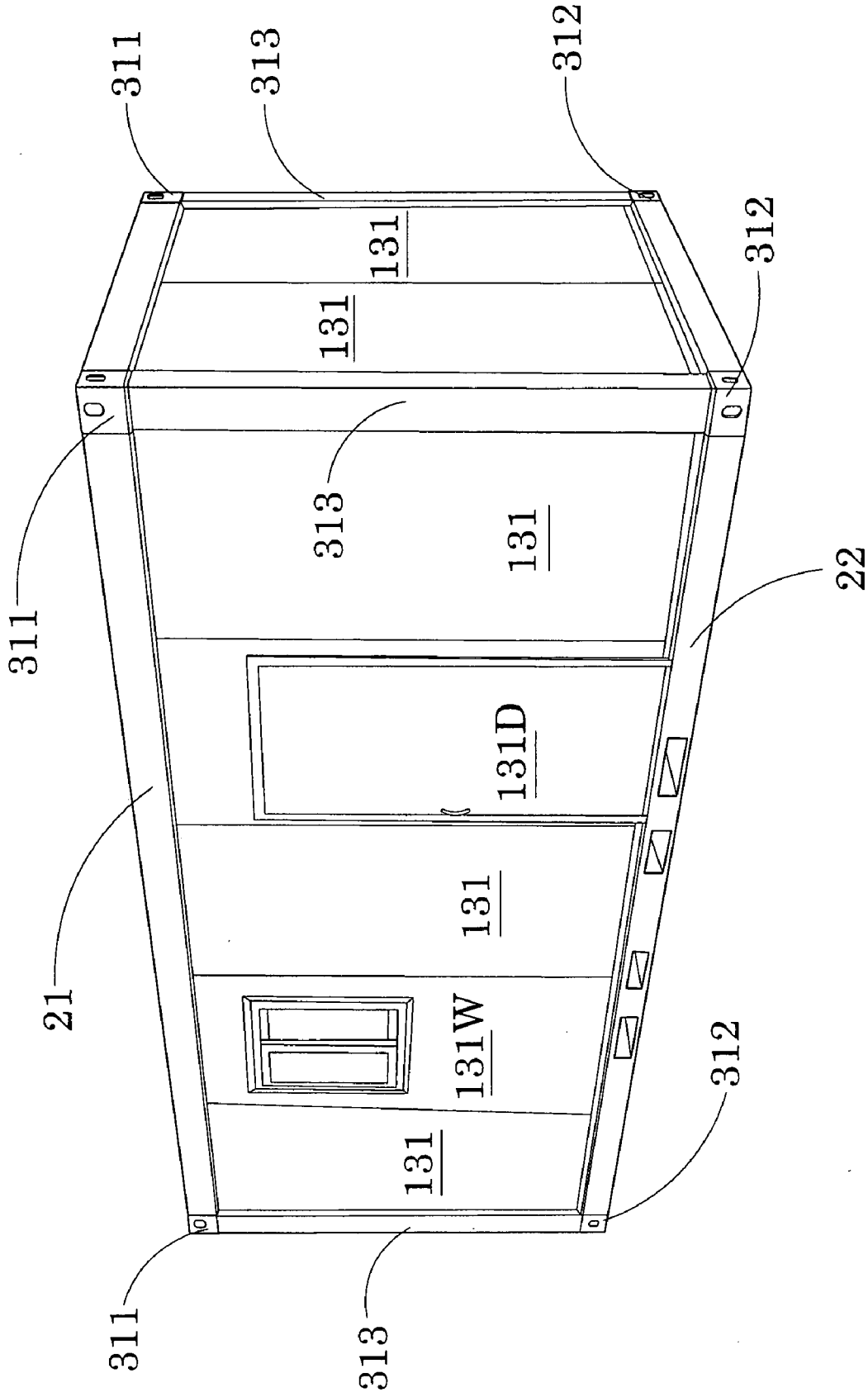


FIG. 7



**JOINT STRUCTURE FOR PORTABLE WORK AND STORAGE CONTAINER**

**BACKGROUND OF THE PRESENT INVENTION**

**[0001]** 1. Field of Invention

**[0002]** The present invention relates to a portable work and storage container, and more particularly to the joint structure for the portable work and storage container, wherein the joint structure not only enhances the rigid structure of the portable work and storage container but also allows the portable work and storage container to be disassemble for storage and transportation.

**[0003]** 2. Description of Related Arts

**[0004]** A storage container, such as a cargo, is considered as one of common tools for transporting a load over land, sea, or through the air. A conventional storage container comprises four sidewalls, a top wall, a bottom wall, and a frame structure supporting the walls to form a rectangular shaped container. Since the load is relatively heavy, generally more than thousands pounds, the storage container must be transported by lifting machine from one spot to another spot. Thus, the frame structure must be rigid enough to support the heavy load.

**[0005]** Instead of carrying the load, the storage container is recently used as a portable work container. For example, the portable work container is set up when the building is under construction such that people are able to temporary work in the portable work container. A mobile home can also be built by the portable work container. No matter what the storage container is set up as a storage cargo, portable work container, or the mobile home, the frame structure must be strong enough to withstand the environmental influence, such as wind or rain, and to protect the load or people inside the storage container.

**[0006]** In addition, the storage container requires lots of space for storage or transportation even though the storage container is empty. In other words, the storage container cannot be disassembled for storage and transportation purposes. It is because the frame structure must be formed in one piece structure to maximize the strength of the storage container. Therefore, when the storage container is empty, the mover can only carry one storage container at one time to transport the storage container from one place to another place.

**[0007]** An improved storage container includes a joint to disassemble the frame structure such that two or more storage containers can be transported at the same time. However, the joint, especially for the movable joint parts thereof, will substantially weaken the overall structure of the frame structure because the stress will be created around the joint. Therefore, it is a conflict between the strength enhancement of the storage container and the collapsible feature of the storage container for easily transportation. The existing storage container obviously cannot achieve the current needs of the users to provide both strength enhancement and collapsible feature for the storage container.

**SUMMARY OF THE PRESENT INVENTION**

**[0008]** A main object of the present invention is to provide a joint structure for a portable work and storage container, wherein the joint structure not only enhances the rigid structure of the portable work and storage container but also allows the portable work and storage container to be disassemble for storage and transportation.

**[0009]** Another object of the present invention is to provide a joint structure for a portable work and storage container, wherein a plurality of reinforcement shafts, which are made of relatively rigid material such as steel or even concrete, are used as a pillar to rigidly support the portable work and storage container.

**[0010]** Another object of the present invention is to provide a joint structure for a portable work and storage container, wherein the upper and lower joints are detachably coupling with the reinforcement shafts such that the portable work and storage container can be set up to provide a rigid structural configuration and can be collapsed into an impact size.

**[0011]** Another object of the present invention is to provide a joint structure for a portable work and storage container, wherein the storage container is easy to assemble and disassemble without weakening the strength of the joint structure.

**[0012]** Another object of the present invention is to provide a joint structure for a portable work and storage container, wherein each of the surrounding panels of the surrounding wall is replaceable for multiple usages.

**[0013]** Another object of the present invention is to provide a joint structure for a portable work and storage container, which does not require to alter the original structural design of the storage container, so as to minimize the manufacturing cost of the storage container incorporating with the existing lifting machine.

**[0014]** Another object of the present invention is to provide a joint structure for a portable work and storage container, wherein no expensive or complicated structure is required to employ in the present invention in order to achieve the above mentioned objects. Therefore, the present invention successfully provides an economic and efficient solution for providing a rigid configuration for the storage container and for enhancing the transportation ability when the storage container is folded into an impact size.

**[0015]** Accordingly, in order to accomplish above objects, the present invention provides a portable work and storage container, comprising a wall frame, a supporting frame and a joint structure.

**[0016]** The wall frame comprises a top wall, a bottom wall, and a surrounding wall defining a storage compartment there-within. The supporting frame comprises a top retention frame encirclingly mounting to the top wall and a bottom retention frame encirclingly mounting to the bottom wall, wherein the surrounding wall is mounted between the top and bottom retention frames.

**[0017]** The joint structure couples the top retention frame with the bottom retention frame, wherein the joint structure comprises a plurality of joint members spacedly extended between the top and bottom retention frames, and a plurality of reinforcing shafts.

**[0018]** Each of the joint members comprises an upper joint having an upper socket downwardly extended from the top retention frame, a lower joint having a lower socket upwardly extended from the bottom retention frame to align with the upper socket, and a shaft holder alignedly mounting between the upper and lower joints to form a reinforcement channel between the upper and lower sockets through the shaft holder.

**[0019]** The reinforcing shafts are disposed within the reinforcement channels and coupling between the upper and lower joints through the shaft holders respectively, wherein each of the reinforcing shafts has an upper portion received in the respective upper socket, a lower portion received in the respective lower socket, and a mid-portion received within

the respective shaft holder such that the joint structure reinforces the a strength between the top and bottom retention frames to rigidly support the wall frame.

[0020] These and other objectives, features, and advantages of the present invention will become apparent from the following detailed description, the accompanying drawings, and the appended claims.

#### BRIEF DESCRIPTION OF THE DRAWINGS

[0021] FIG. 1 is an exploded perspective view of a portable work and storage container with a joint structure according to a preferred embodiment of the present invention.

[0022] FIG. 2 is a perspective view of the joint structure for portable work and storage container according to the above preferred embodiment of the present invention illustrating the constitution of the upper joint and the upper portion of the reinforcement shaft.

[0023] FIG. 3 is a perspective view of the joint structure for portable work and storage container according to the above preferred embodiment of the present invention illustrating the constitution of the lower joint and the lower portion of the reinforcement shaft.

[0024] FIG. 4 is a top sectional view of the joint structure for the portable work and storage container according to the above preferred embodiment of the present invention.

[0025] FIG. 5 is a side sectional view of the joint structure for the portable work and storage container according to the above preferred embodiment of the present invention.

[0026] FIG. 6 is perspective view of the portable work and storage container according to a preferred embodiment of the present invention, illustrating the portable work and storage container being collapsed via the joint structure.

[0027] FIG. 7 illustrates an alternative mode of the surrounding wall of the portable work and storage container according to the above preferred embodiment of the present invention, illustrating the portable work and storage container being assembled as a work office or a mobile home.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0028] Referring to FIG. 1 of the drawings, a portable work and storage container according to a preferred embodiment of the present invention is illustrated, wherein the portable work and storage container comprises a wall frame 10, a supporting frame 20 and a joint structure 30.

[0029] The wall frame 10 comprises a top wall 11, a bottom wall 12, and a surrounding wall 13 defining a storage compartment 101 therewithin.

[0030] The supporting frame 20 comprises a top retention frame 21 encirclingly mounting to the top wall 11 and a bottom retention frame 22 encirclingly mounting to the bottom wall 12, wherein the surrounding wall 13 is mounted between the top and bottom retention frames 21, 22.

[0031] As shown in FIGS. 1 to 4, the joint structure 30 couples the top retention frame 21 with the bottom retention frame 22, wherein the joint structure 30 comprises a plurality of joint members 31 spacedly extended between the top and bottom retention frames 21, 22, and a plurality of reinforcing shafts 32.

[0032] Each of the joint members 31 comprises an upper joint 311 having an upper socket 310 downwardly extended from the top retention frame 21, a lower joint 312 having a lower socket 320 upwardly extended from the bottom reten-

tion frame 22 to align with the upper socket 310, and a shaft holder 313 alignedly mounting between the upper and lower joints 311, 312 to form a reinforcement channel 300 between the upper and lower sockets 310, 320 through the shaft holder 313.

[0033] The reinforcing shafts 32 are disposed within the reinforcement channels 300 and coupling between the upper and lower joints 311, 312 through the shaft holders 313 respectively, wherein each of the reinforcing shafts 32 has an upper portion 321 received in the respective upper socket 310, a lower portion 322 received in the respective lower socket 320, and a mid-portion 323 received within the respective shaft holder 313 such that the joint structure 30 reinforces the a strength between the top and bottom retention frames 21, 22 to rigidly support the wall frame 10.

[0034] As shown in FIG. 1, the top wall 11, the bottom wall 12, and the surrounding wall 13 are made of durable but light weight material to enclose the storage compartment 101. Accordingly, each of the top and bottom walls 11, 12 has a rectangular shape forming a roof and a floor of the portable work and storage container respectively.

[0035] The surrounding wall 13 comprises a plurality of surrounding panels 131 connecting edge-to-edge to enclose the storage compartment 101. Every two neighboring surrounding panels 131 can be detached with each other such that one of the surrounding panels 131 can be replaced by a door panel 131D or a window panel 131W to re-configure the use of the portable work and storage container. Accordingly, the portable work and storage container as shown in FIG. 1 is configured as a storage cargo while the portable work and storage container as shown in FIG. 7 is configured as a portable office or a mobile home.

[0036] Each of the top and bottom retention frames 21, 22 has a rectangular shape, wherein peripheral edges of the top and bottom walls 11, 12 are encircled within the top and bottom retention frames 21, 22. The top retention frame 21 has a plurality of lifting slots spacedly formed thereat for a lifting machine to lift up the portable work and storage container via a cable in a suspended manner. The bottom retention frame 22 also has a plurality of hoisting slots formed thereat for a hoisting machine to lift up the portable work and storage container. In other words, the portable work and storage container of the present invention can be transported from one place to another place by the existing machine.

[0037] As shown in FIGS. 2 and 3, the upper and lower joints 311, 312 are integrally and spacedly extended from the top and bottom retention frames 21, 22 respectively to enhance the strength of each of the upper and lower joints 311, 312. In particularly, the upper and lower joints 311, 312 are integrally provided at corners of the top and bottom retention frames 21, 22 respectively. Furthermore, the opening of the upper socket 310 is facing downwardly towards the lower joint 312 and the opening of the lower socket 320 is facing upwardly towards the upper joint 311, wherein the openings of the upper and lower sockets 310, 320 are aligned with each other.

[0038] As shown in FIGS. 1 to 3, each of the shaft holders 313 has two end portions detachably coupling with the upper and lower joints 311, 312 respectively such that the top and bottom retentions 21, 22 are adapted to be disassembled when the shaft holders 313 are detached from the upper and lower joints 311, 312. It is worth to mention that when the end portions of each of the shaft holders 313 are coupled with the respective upper and lower joints 311, 312, the reinforcement

channel 300 is formed from the upper socket 310 to the lower socket 320 through the interior of the shaft holder 313.

[0039] As it is mentioned, the conventional joint structure includes movable joint parts that make the structure of the container floppy. Since the upper and lower portions 321, 322 of the reinforcing shaft 32 are received in the upper and lower joints 311, 312 while the mid-portion 323 received within the shaft holder 313, the joint structure 30 of the present invention does not provide any unwanted movable movement once the end portions of each of the shaft holders 313 are locked with the upper and lower joints 311, 312.

[0040] Each of the joint members 31 comprises a tubular sleeve 301 receiving the respective reinforcing shaft 32 therealong and two joint panels 302 outwardly and integrally extended from the tubular sleeve 301 to reinforce a structure of the tubular sleeve 301. Accordingly, the cross section of each of the upper and lower joints 311, 312 is the same as the cross section of the shaft holder 313. In other words, an upper section of the tubular sleeve 301 is defined as the upper socket 310 of the upper joint 311, a lower section of the tubular sleeve 301 is defined as the lower socket 320 of the lower joint 312, and a mid-section of the tubular sleeve 301 is defined as the interior of the shaft holder 313.

[0041] Accordingly, each of the tubular sleeves 301 is constructed by the respective upper joint 311, the lower joint 312, and the shaft holder 313 to form the reinforcement channel 300. In other words, the reinforcement channel 300 is formed by the upper socket 310, the lower socket 320, and the interior of the shaft holder 313.

[0042] As shown in FIGS. 2 to 4, two joint panels 302 are perpendicularly extended from each other to form a corner pillar of the portable work and storage container. In addition, the tubular sleeve 301 is integrally coupled at the corner of the joint panels 302 such that the structural configuration of the joint member 31 forms a triangular structure to evenly distribute the loading force to the top and bottom retention frames 21, 22. It is worth to mention that the tubular sleeve 301 is hidden behind the joint panels 302 when the portable work and storage container is set up. Accordingly, each of the joint panels 302 has three portions formed at the upper joint 311, the lower joint 312 and the shaft holder 313. Therefore, when the shaft holder 313 is coupled between the upper and lower joints 311, 312, the tubular sleeve 301 and the joint panels 302 are formed between the top and bottom retention frames 21, 22.

[0043] According to the preferred embodiment, the joint structure 30 further comprises a plurality of connecting panels 33 sidewardly extended from the upper joints 311, the lower joints 312 and the end portions of each of the shaft holders 313 respectively, and a plurality of panel lockers 34 detachably coupling between two the corresponding connecting panels 33 so as to detachably connect the two end portions of the shaft holders 313 with the upper and lower joints 311, 312 respectively.

[0044] As shown in FIGS. 2 to 4, two of the connecting panels 33 are sidewardly and integrally extended from the tubular sleeve 301 to the joint panels 302 at each of the upper joints 311, lower joints 312, and the end portions of the shaft holder 313. It is worth to mention that the joint panels 302, the tubular sleeve 301, and the connecting panels 33 form a triangular reinforcing structure of the joint member 31 to enhance the strength of the joint member 31 as a pillar of the portable work and storage container of the present invention.

[0045] As shown in FIG. 2, the two connecting panels 33 are provided at the upper joint 311 at a position that the upper socket 310 is positioned between the two connecting panels 33. In addition, another two connecting panels 33 are provided at the upper end portion of the shaft holder 313, wherein the two connecting panels 33 at the upper joint 311 are overlapped with the two connecting panels 33 at the upper end portion of the shaft holder 313 respectively to align the upper socket 310 with the interior of the shaft holder 313, such that each of the panel lockers 34 is detachably coupled the two overlapped connecting panels 33 so as to detachably affix the upper end portion of the shaft holder 313 with the upper joint 311.

[0046] Likewise, the two connecting panels 33 are provided at the lower joint 312 at a position that the lower socket 320 is positioned between the two connecting panels 33, as shown in FIG. 3. In addition, another two connecting panels 33 are provided at the lower end portion of the shaft holder 313, wherein the two connecting panels 33 at the lower joint 312 are overlapped with the two connecting panels 33 at the lower end portion of the shaft holder 313 respectively to align the lower socket 320 with the interior of the shaft holder 313, such that each of the panel lockers 34 is detachably coupled the two overlapped connecting panels 33 so as to detachably affix the lower end portion of the shaft holder 313 with the lower joint 312.

[0047] Once the upper and lower end portions of the shaft holder 313 are detachably affixed to the upper and lower joints 311, 312 respectively, the reinforcement channel 300 is formed from the upper joint 311 to the lower joint 312 through the interior of the shaft holder 313. It is worth to mention that when the upper and lower end portions of the shaft holder 313 are unlocked from the upper and lower joints 311, 312 respectively, the shaft holder 313 is detached from the top and bottom retention frames 21, 22 so as to collapse the portable work and storage container of the present invention.

[0048] As shown in FIGS. 2 to 4, each of the connecting panels 33, having a mounting hole 331, is integrally, outwardly and transversely extended from the tubular sleeve 301 such that when the two corresponding connecting panels 33 are overlapped to align the mounting holes 331 with each other, the respective panel locker 34 is detachably coupled with the connecting panels 33 through the mounting holes 331.

[0049] Each of panel lockers 34 is an elongated screw having a length longer than the total thickness of two overlapped connecting panels 33, such that the panel locker 34 is extended through the mounting holes 331 to detachably couple the two connecting panels 33 with each other. Accordingly, the assemble/disassemble operation of the shaft holder 313 is relatively simple and easy by screwing/unscrewing the panel locker 34 with the connecting panels 33.

[0050] According to the preferred embodiment, each of the reinforcement channels 300 has a non-circular cross section, wherein each of the reinforcement shafts 32 has a non-circular cross section corresponding to the reinforcement channel 300 such that when the reinforcement shaft 32 is disposed in the respective reinforcement channel 300, the reinforcement shaft 32 is retained to prevent a rotational movement within the reinforcement channel 300. As shown in FIGS. 2 to 4, each of the reinforcing channels 300 has a square cross sec-

tion while each of the reinforcing shafts **32** also has the corresponding square cross section to fit into the respective reinforce channel **300**.

**[0051]** Accordingly, each of the reinforcing shafts **32** is made of rigid material such as steel or even concrete, wherein each of the reinforcing shafts **32** form the main supporting pillar of the portable work and storage container of the present invention. Each of the reinforcing shafts **32** can be a hollow shaft or a solid shaft. As shown in FIG. 5, a top side of each of the reinforcing shafts **32** is biased against the top retention frame **21** when the upper portion **321** of the reinforcing shaft **32** is received in the upper socket **310** of the upper joint **311**. Likewise, a bottom side of each of the reinforcing shafts **32** is biased against the bottom retention frame **22** when the lower portion **322** of the reinforcing shaft **32** is received in the lower socket **320** of the lower joint **312**. Therefore, each of the reinforcing shafts **32** is formed the main pillar to support between the top and bottom retention frames **21, 22** and is held within the respective reinforcement channel **300**.

**[0052]** It is worth to mention that when the top and bottom retention frames **21, 22** are coupled via the joint structure **30**, the reinforcing shafts **32** are rigidly supported between the top and bottom retention frames **21, 22** to enhance the strength of the portable work and storage container. In addition, the top and bottom retention frames **21, 22** can be detached from each other via the joint structure **30** such that the portable work and storage container can be collapsed to form an impact size as shown in FIG. 5.

**[0053]** As shown in FIGS. 1 to 3, the portable work and storage container further comprises a panel guide **40** for guiding the surrounding wall **13** between the top and bottom retention frames **21, 22**, wherein the panel guide **40** comprises two longitudinal guiders **41** attaching to peripheral edge portions of the top and bottom walls **11, 12** respectively and a transverse guider **42** outwardly and integrally extended from each of the joint members **31** such that peripheral edge of the surrounding wall **13** is sandwiched between the longitudinal and transverse guiders **41, 42** to retain the surrounding wall **13** in position.

**[0054]** As shown in FIG. 1, each of the longitudinal guiders **41**, having a L-shaped cross section, is affixed to the peripheral edge portion of each of the top and bottom walls **11, 12** to bias against an inner side of the surrounding wall. It is worth to mention that the longitudinal guiders **41** at the top wall **11** is arranged to guide the upper longitudinal edge of surrounding wall **13** at the inner side thereof while the longitudinal guiders **41** at the bottom wall **12** is arranged to guide the lower longitudinal edge of surrounding wall **13** at the inner side thereof.

**[0055]** As shown in FIG. 4, the transverse guider **42** is outwardly and integrally extended from the connecting panel **33** to bias against an outer side of the surrounding wall. As shown in FIGS. 2 to 3, the transverse guider **42** is arranged to guide the side transverse edge of the surrounding wall **13** at the outer side thereof. Accordingly, a gap between the longitudinal guider **41** and the transverse guider **42** must be at least larger than a thickness of the surrounding wall **13**. Therefore, the surrounding wall **13** can be securely held between the top and bottom retention frames **21, 22** by holding the upper longitudinal edges of surrounding wall **13** at the inner side via the longitudinal guiders **41** and the side transverse edges of the surrounding wall **13** at the outer side thereof via the transverse guiders **42**.

**[0056]** In order to assemble the container of the present invention, the user is able to couple the joint structure **30** between the top and bottom retention frames **21, 22** by disposing the reinforcing shafts **32** within the reinforcement channels **300** respectively and detachably coupling the shaft holders **313** with the upper and lower joints **311, 312**. When the container is needed to be disassembled, the user is able to detach the shaft holders **313** from the upper and lower joints **311, 312** and remove the reinforcing shafts **32** from the reinforcement channels **300**, such that the container can be collapsed into an impact size for storage or transportation, as shown in FIG. 6.

**[0057]** One skilled in the art will understand that the embodiment of the present invention as shown in the drawings and described above is exemplary only and not intended to be limiting.

**[0058]** It will thus be seen that the objects of the present invention have been fully and effectively accomplished. It embodiments have been shown and described for the purposes of illustrating the functional and structural principles of the present invention and is subject to change without departure from such principles. Therefore, this invention includes all modifications encompassed within the spirit and scope of the following claims.

What is claimed is:

1. A portable work and storage container, comprising:
  - a wall frame which comprises a top wall, a bottom wall, and a surrounding wall defining a storage compartment therewithin; and
  - a supporting frame which comprises a top retention frame encirclingly mounting to said top wall and a bottom retention frame encirclingly mounting to said bottom wall, wherein said surrounding wall is mounted between said top and bottom retention frames; and
  - a joint structure for coupling said top retention frame with said bottom retention frame, wherein said joint structure comprises:
    - a plurality of joint members spacedly extended between said top and bottom retention frames, each of said joint members comprising an upper joint having an upper socket downwardly extended from said top retention frame, a lower joint having a lower socket upwardly extended from said bottom retention frame to align with said upper socket, and a shaft holder alignedly mounting between said upper and lower joints to form a reinforcement channel between said upper and lower sockets through said shaft holder; and
    - a plurality of reinforcing shafts being disposed within said reinforcement channels and coupling between said upper and lower joints through said shaft holders respectively, wherein each of said reinforcing shafts has an upper portion received in said respective upper socket, a lower portion received in said respective lower socket, and a mid-portion received within said respective shaft holder such that said joint structure reinforces said a strength between said top and bottom retention frames to rigidly support said wall frame.
2. The portable work and storage container, as recited in claim 1, wherein each of said shaft holders has two end portions detachably coupling with said upper and lower joints respectively such that said top and bottom retentions are adapted to be disassembled when said shaft holders are detached from said upper and lower joints.

3. The portable work and storage container, as recited in claim 1, wherein each of said joint members comprises a tubular sleeve receiving said respective reinforcing shaft therealong and two joint panels outwardly and integrally extended from said tubular sleeve to reinforce a structure of said tubular sleeve.

4. The portable work and storage container, as recited in claim 2, wherein each of said joint members comprises a tubular sleeve receiving said respective reinforcing shaft therealong and two joint panels outwardly and integrally extended from said tubular sleeve to reinforce a structure of said tubular sleeve.

5. The portable work and storage container, as recited in claim 2, wherein said joint structure further comprises a plurality of connecting panels sidewardly extended from said upper joints, said lower joints and said end portions of each of said shaft holders respectively, and a plurality of panel lockers detachably coupling between two said corresponding connecting panels so as to detachably connect said two end portions of said shaft holders with said upper and lower joints respectively.

6. The portable work and storage container, as recited in claim 4, wherein said joint structure further comprises a plurality of connecting panels sidewardly extended from said upper joints, said lower joints and said end portions of each of said shaft holders respectively, and a plurality of panel lockers detachably coupling between two said corresponding connecting panels so as to detachably connect said two end portions of said shaft holders with said upper and lower joints respectively.

7. The portable work and storage container, as recited in claim 5, wherein each of said connecting panels, having a mounting hole, integrally, outwardly and transversely extended from said tubular sleeve such that when said two corresponding connecting panels are overlapped to align said mounting holes with each other, said respective panel locker is detachably coupled with said connecting panels through said mounting holes.

8. The portable work and storage container, as recited in claim 6, wherein each of said connecting panels, having a mounting hole, integrally, outwardly and transversely extended from said tubular sleeve such that when said two corresponding connecting panels are overlapped to align said mounting holes with each other, said respective panel locker is detachably coupled with said connecting panels through said mounting holes.

9. The portable work and storage container, as recited in claim 4, further comprising a panel guide for guiding said surrounding wall between said top and bottom retention frames, wherein said panel guide comprises two longitudinal guiders attaching to peripheral edge portions of said top and bottom walls respectively and a transverse guider outwardly and integrally extended from each of said joint members such that peripheral edge of said surrounding wall is sandwiched between said longitudinal and transverse guiders to retain said surrounding wall in position.

10. The portable work and storage container, as recited in claim 8, further comprising a panel guide for guiding said surrounding wall between said top and bottom retention frames, wherein said panel guide comprises two longitudinal guiders attaching to peripheral edge portions of said top and bottom walls respectively and a transverse guider outwardly and integrally extended from each of said joint members such that peripheral edge of said surrounding wall is sandwiched

between said longitudinal and transverse guiders to retain said surrounding wall in position.

11. The portable work and storage container, as recited in claim 1, wherein each of said reinforcement channels has a non-circular cross section, wherein each of said reinforcement shafts has a non-circular cross section corresponding to said reinforcement channel such that when said reinforcement shaft is disposed in said respective reinforcement channel, said reinforcement shaft is retained to prevent a rotational movement within said reinforcement channel.

12. The portable work and storage container, as recited in claim 8, wherein each of said reinforcement channels has a non-circular cross section, wherein each of said reinforcement shafts has a non-circular cross section corresponding to said reinforcement channel such that when said reinforcement shaft is disposed in said respective reinforcement channel, said reinforcement shaft is retained to prevent a rotational movement within said reinforcement channel.

13. The portable work and storage container, as recited in claim 10, wherein each of said reinforcement channels has a non-circular cross section, wherein each of said reinforcement shafts has a non-circular cross section corresponding to said reinforcement channel such that when said reinforcement shaft is disposed in said respective reinforcement channel, said reinforcement shaft is retained to prevent a rotational movement within said reinforcement channel.

14. The portable work and storage container, as recited in claim 1, wherein said upper and lower joints are integrally and spacedly extended from said top and bottom retention frames respectively.

15. The portable work and storage container, as recited in claim 13, wherein said upper and lower joints are integrally and spacedly extended from said top and bottom retention frames respectively.

16. The portable work and storage container, as recited in claim 1, wherein each of said reinforcing shafts has a top side biasing against said top retention frame when said upper portion of said reinforcing shaft is received in said upper socket of said upper joint, and a bottom side biasing against said bottom retention frame when said lower portion of said reinforcing shaft is received in said lower socket of said lower joint.

17. The portable work and storage container, as recited in claim 8, wherein each of said reinforcing shafts has a top side biasing against said top retention frame when said upper portion of said reinforcing shaft is received in said upper socket of said upper joint, and a bottom side biasing against said bottom retention frame when said lower portion of said reinforcing shaft is received in said lower socket of said lower joint.

18. The portable work and storage container, as recited in claim 15, wherein each of said reinforcing shafts has a top side biasing against said top retention frame when said upper portion of said reinforcing shaft is received in said upper socket of said upper joint, and a bottom side biasing against said bottom retention frame when said lower portion of said reinforcing shaft is received in said lower socket of said lower joint.

19. The portable work and storage container, as recited in claim 1, wherein each of said top and bottom retention frames has a rectangular shape that said upper and lower joints are provided at corners of said top and bottom retention frames respectively.

**20.** The portable work and storage container, as recited in claim **18**, wherein each of said top and bottom retention frames has a rectangular shape that said upper and lower joints are provided at corners of said top and bottom retention frames respectively.

**21.** The portable work and storage container, as recited in claim **4**, wherein said surrounding wall comprises a plurality of surrounding panels connecting edge-to-edge to enclose said storage compartment.

**22.** The portable work and storage container, as recited in claim **10**, wherein said surrounding wall comprises a plurality of surrounding panels connecting edge-to-edge to enclose said storage compartment.

**23.** The portable work and storage container, as recited in claim **20**, wherein said surrounding wall comprises a plurality of surrounding panels connecting edge-to-edge to enclose said storage compartment.

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