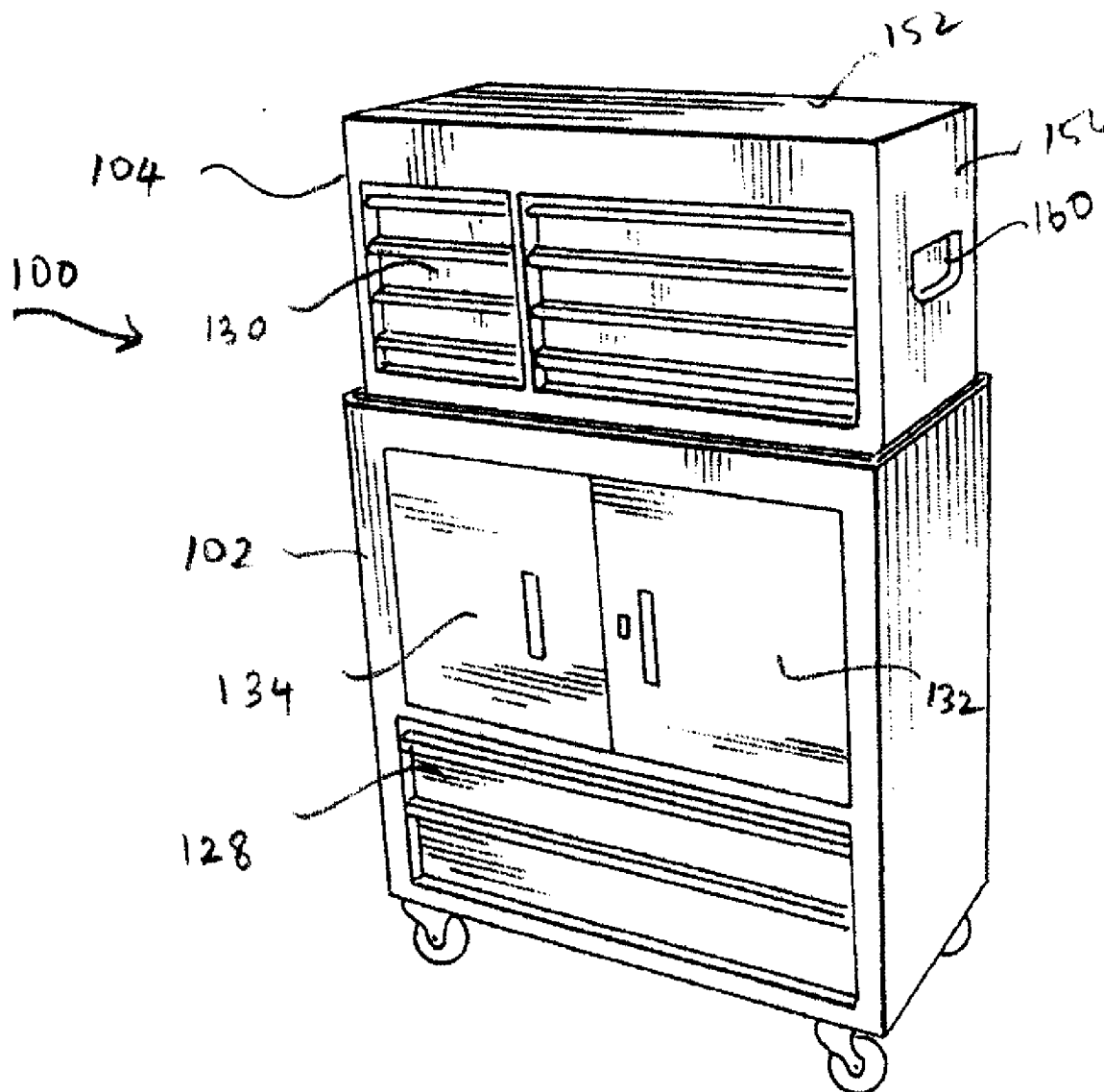


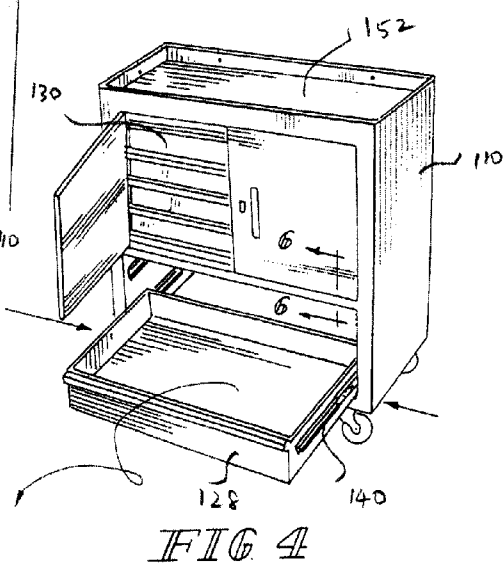
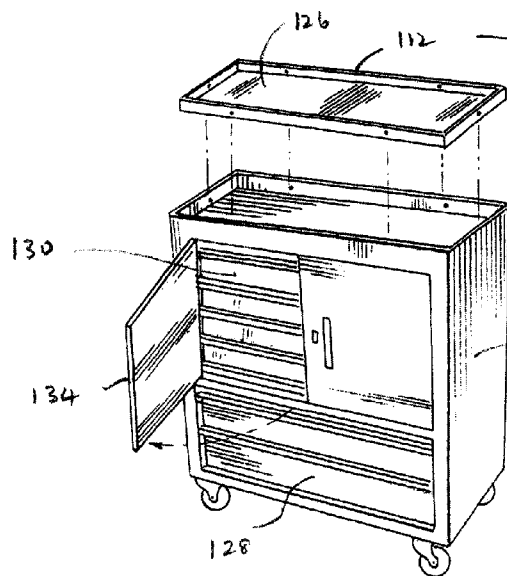
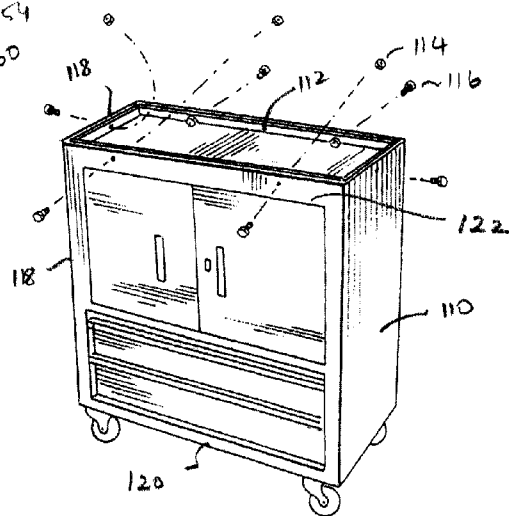
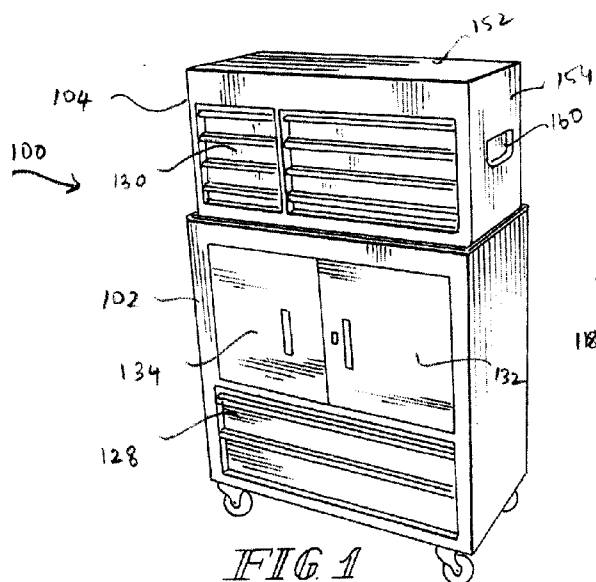


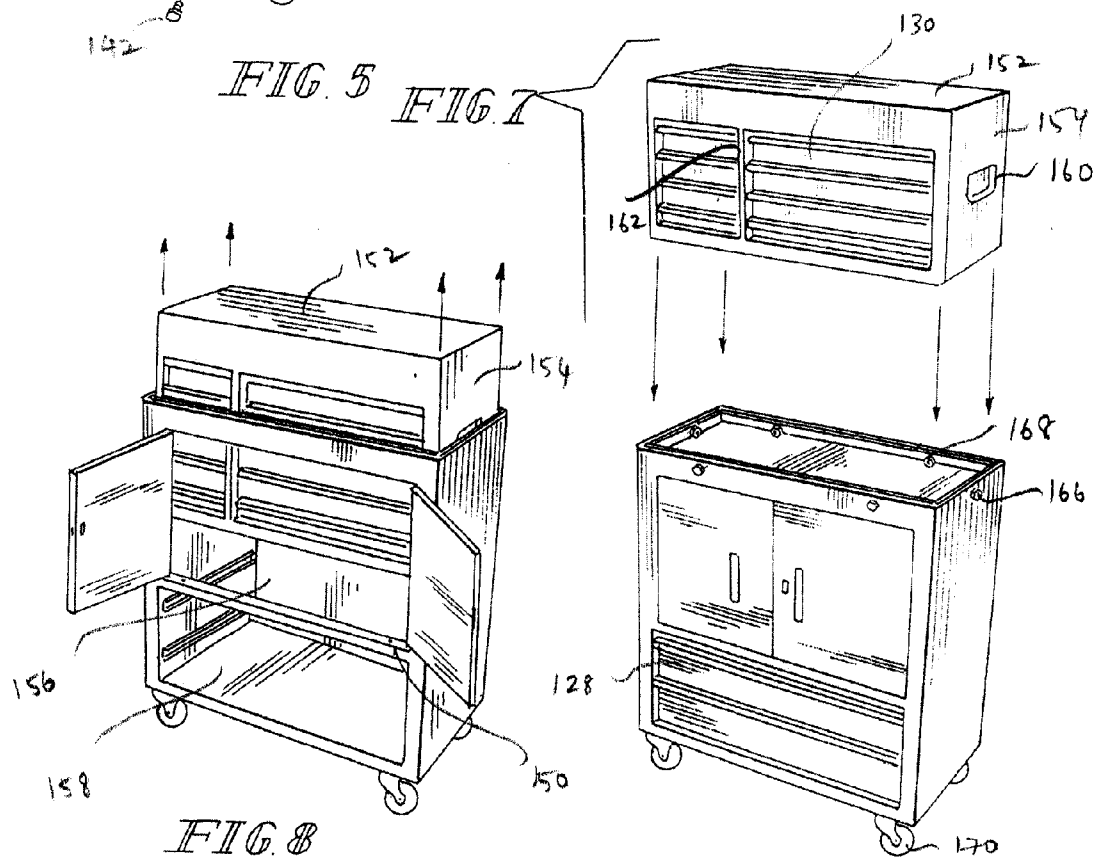
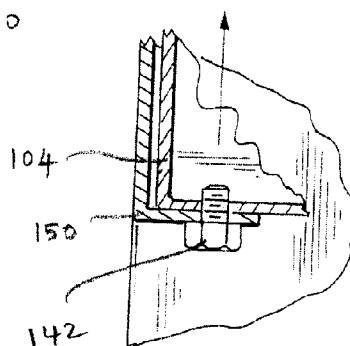
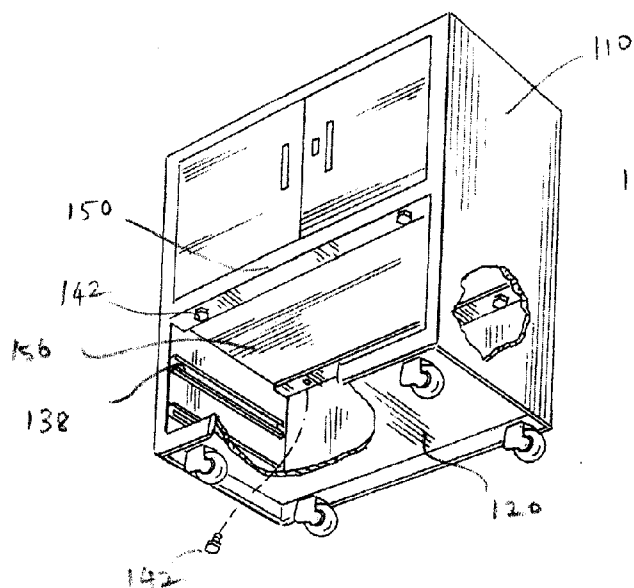
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(19) **United States**(12) **Patent Application Publication****Fiscus et al.**(10) **Pub. No.: US 2007/0290583 A1**(43) **Pub. Date: Dec. 20, 2007**(54) **SPACE EFFICIENT TOOL CHEST ASSEMBLY**(22) Filed: **Jun. 15, 2006**(75) Inventors: **Jon Fiscus**, Schaumburg, IL (US);
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CHICAGO, IL 60690-2786(52) **U.S. Cl.** **312/107**(73) Assignee: **GEELONG SALES COMPANY**
INTERNATIONAL LTD.,
Kowloon (HK)(57) **ABSTRACT**

A tool chest assembly includes a lower cabinet and an upper cabinet. The upper cabinet is configured to fit inside the lower cabinet during shipping or storage to save space. The tool chest assembly is configured for easy set-up and handling.

(21) Appl. No.: **11/424,279**





SPACE EFFICIENT TOOL CHEST ASSEMBLY

FIELD

[0001] The present disclosure generally relates to tool chests or tool boxes.

BACKGROUND

[0002] Tool boxes or tool chests generally include a large cabinet with one or more trays or drawers. Large tool chests occupy a significant amount of space and therefore increase the cost of shipping and storage. Smaller tool boxes or tool chests do not provide adequate space to retain tools or other equipments. Therefore, a tool chest that is configured with ease to occupy a minimal space during shipping or storage and yet that provides adequate space for retaining tools, is desired.

SUMMARY OF THE INVENTION

[0003] The present disclosure relates to a tool chest assembly that is efficient and economical to ship or store and easy to handle and set-up.

[0004] A tool chest assembly includes:

[0005] a lower cabinet having an interior cavity and including a top member removably coupled to the lower cabinet;

[0006] an upper cabinet configured to be positioned inside the interior cavity of the lower cabinet during shipping or storage; and

[0007] the top member of the lower cabinet being adapted to support the upper cabinet when the lower cabinet and the top cabinet are engaged in a set-up configuration.

[0008] The lower cabinet may include one or more trays and the trays may be capable of outward sliding movement. The upper cabinet may include one or more trays that are capable of outward sliding movement.

[0009] The lower cabinet may also have a front access opening to the interior cavity and optionally, the front access opening may include a door connected to one of the cabinet members. The upper cabinet may have a front access opening to the interior cavity.

[0010] In the tool chest assembly disclosed herein, in a preferred embodiment, the upper cabinet may be secured to the lower cabinet by a plurality of nuts and bolts. The upper cabinet may be positioned within the lower cabinet such that the upper cabinet does not have substantial lateral or vertical movement within the interior cavity of the lower cabinet during transport or storage.

[0011] A tool chest assembly configured for shipping includes:

[0012] an outer cabinet configured to provide an interior cavity and including a top member removably coupled to the outer cabinet; and

[0013] an inner cabinet positioned inside the interior cavity of the outer cabinet, wherein the inner cabinet is removably secured to the outer cabinet during shipping or storage.

[0014] A method of configuring a tool chest assembly for shipping or storage and for disassembly or setting up, the method includes the steps of:

[0015] providing a tool chest assembly that includes

[0016] an outer cabinet having an interior cavity and including a top member removably coupled to the outer cabinet;

[0017] an inner cabinet configured to be positioned within the interior cavity of the outer cabinet during shipping or storage;

[0018] positioning the inner cabinet within the outer cabinet and securing the inner cabinet to the outer cabinet, such that the inner cabinet does not have substantial lateral or vertical movement within the interior cavity of the outer cabinet during transport or storage;

[0019] disassembling the tool chest assembly by removing the top member coupled to the outer cabinet and removing the inner cabinet from the outer cabinet; and

[0020] installing the inner cabinet on top of the outer cabinet and securing the inner cabinet to the outer cabinet, resulting in a set-up configuration.

BRIEF DESCRIPTION OF THE DRAWINGS

[0021] The drawings are provided to illustrate an apparatus used for some of the embodiments of the disclosure. It is envisioned that alternate configurations of the embodiments of the present disclosure maybe adopted without deviating from the scope of the disclosure.

[0022] FIG. 1 is a perspective front view of the tool chest assembly having an upper and a lower cabinet in a set-up configuration.

[0023] FIG. 2 is a perspective front view of the lower cabinet in a shipping or storage configuration.

[0024] FIG. 3 is a partial exploded front perspective view of the lower cabinet and the upper cabinet that is positioned inside the lower cabinet.

[0025] FIG. 4 is a front perspective view of the lower cabinet with a slidable receiving portion.

[0026] FIG. 5 is a lower front perspective view, with parts in cross section, of the lower cabinet.

[0027] FIG. 6 is an enlarged cross-sectional view showing the engagement of a bottom member of upper cabinet with an internal support of the lower cabinet.

[0028] FIG. 7 is an exploded view of the lower and the upper cabinets of the tool chest during assembly.

[0029] FIG. 8 is a front perspective view of the tool chest assembly illustrating the removal of the upper cabinet positioned within the lower cabinet.

DETAILED DESCRIPTION OF AN EXAMPLE EMBODYING THE BEST MODE OF THE INVENTION

[0030] A tool chest assembly **100** of the present disclosure in a set-up or open configuration is shown in FIG. 1. As illustrated in FIG. 1, the tool chest assembly **100** includes a lower cabinet **102** and an upper cabinet **104**. As explained in greater detail below, the lower cabinet **102** and the upper cabinet **104** of the tool chest assembly **100** are also designated as an outer cabinet **102** and an inner cabinet **104**, respectively, in a packed or closed configuration that is suitable for shipping or storage. Therefore, reference to the lower cabinet **102** and the upper cabinet **104** also refer to the outer and inner cabinets respectively. The lower cabinet **102** may include a series of wheels **170** for mobility.

[0031] The lower/outer cabinet 102 in a closed or packed configuration is illustrated in FIG. 2. In relation to this view, the lower cabinet 102 has a right side member 110, a left side member 118, a top member 112, a bottom member 120, and a front member 122. The top member 112 is removably secured to at least one of the left side member 118 or the right side member 110 of the lower cabinet 102. The top member 112, for example, is preferably secured to the members of the lower cabinet 102 by a series of nuts 114 and bolts 116. The top member 112 may also be secured by a spring loaded biased protrusion and recess, a latch or any other suitable securing member. The right and left side members 110, 118, the top member 112, the bottom member 120, and the front member 122 enclose a lower interior cavity 156 within the lower cabinet 102.

[0032] The top member 112 of the lower cabinet 102 is removed by releasing the nuts 114 and bolts 116 as illustrated in FIG. 3. The top member 112 of the lower cabinet 102 has a horizontal surface 126. As illustrated, the lower cabinet 102 has one or more trays 128 and the upper cabinet 104 has one or more trays 130. The trays 128 and 130 are adapted to slide forward as illustrated in FIG. 4. The tray 128 has a track 140 to enable the forward sliding motion of the tray 128. The tray 128 of the lower cabinet 102 may be positioned below or above the lower interior cavity that is accessible by a right access door 132 or a left access door 134. The lower interior cavity 156, accessible by the doors 132 and 134, is configured to receive and accommodate the upper cabinet 104 during shipping or storage.

[0033] A partition 150 is positioned within the front member 122, such that the lower interior cavity 156 is partitioned to accommodate the upper cabinet 104 during shipping or storage and to provide space for the one or more trays 128 positioned below the partition member 150 as illustrated in FIG. 5. The partition 150 can extend fully or partially in a lateral direction, thereby providing a base for storing tools or other equipment within the lower interior cavity 156 in the open or set-up configuration. The upper cabinet 104 is removably secured to the partition 150 through a series of bolts 142, as illustrated in FIG. 6.

[0034] The upper cabinet 104 has a top member 152 and a right side member 154. The upper cabinet 104 is configured to fit within the lower interior cavity 156 of the lower cabinet during shipping or storage. The upper cabinet 104 is removed from the partition 150 by removing the bolts 142 and the upper cabinet 104 is pulled upwards in a sliding fashion as illustrated in FIG. 8.

[0035] The upper cabinet 104 has a hand recess 160 for handling the movement and installation of the upper cabinet 104. As illustrated in FIG. 7, the upper cabinet 104 has one or more forward slidable trays 130. Optionally, the trays 130 may be separated by a vertical partition 162 of the upper cabinet 104. The upper cabinet 104 may also have an upper interior cavity that is not occupied by any tray and simply provides an open space for storing tools or other equipment.

[0036] During assembly, the upper cabinet 104 is lifted from the interior cavity of the lower cabinet and is positioned on top of the lower cabinet 102. After positioning the upper cabinet 104 on top of the top member 112, the two cabinets 102 and 104 are secured by bolts 114 and nuts 116.

[0037] As described in detail below, during shipping or storage, the upper/inner cabinet 104 of the tool chest 100 is positioned within the interior cavity 156 of the lower/outer cabinet 102. The top member 112 is removably coupled to

the outer cabinet 102. During transport or storage, the inner cabinet 104 may be removably secured to the outer cabinet 102 by a plurality of bolts 142. The inner cabinet 104 is positioned within the outer cabinet 104 by lowering the inner cabinet 104 into the interior cavity 156 of the outer cabinet 102. Optionally, the inner cabinet 104 may be secured to the outer cabinet 102 by a plurality of bolts 142 to minimize lateral or vertical movement during transport. Then, the top member 112 is removably coupled to the outer cabinet 102 by a series of nuts 114 and bolts 116.

[0038] During disassembly or for setting up the tool chest 100, the top member 112 is removed from the outer cabinet 102. The inner cabinet 104 is lifted from the outer cabinet 102 by removing the bolts 142, if the bolts 142 are used to secure the inner cabinet 104. The top member 112 is coupled to the outer/inner cabinet 102. The inner/upper cabinet 104 is positioned on top of the top member 112 of the lower cabinet 102. The upper cabinet 104 is then secured to the lower cabinet 102 by a series of nuts 168 and bolts 166.

[0039] While embodiments have been illustrated and described in the drawing and foregoing description, such illustrations and descriptions are considered to be exemplary and not restrictive in character, it being understood that only illustrative embodiments have been shown and described and that all changes and modifications that come within the spirit of the disclosure are desired to be protected. The applicant has provided description and figures which are intended as illustrations of embodiments of the disclosure, and are not intended to be construed as containing or implying limitation of the disclosure to those embodiments. There are a plurality of advantages of the present disclosure arising from various features set forth in the description. It will be noted that alternative embodiments of the disclosure may not include all of the features described yet still benefit from at least some of the advantages of such features. Those of ordinary skill in the art may readily devise their own implementations of the disclosure and associated methods, without undue experimentation, that incorporate one or more of the features and/or steps of the disclosure and fall within the spirit and scope of the present disclosure and the appended claims.

1. A tool chest assembly comprising:

a lower cabinet having an interior cavity and including a top member removably coupled to the lower cabinet; an upper cabinet configured to be positioned inside the interior cavity of the lower cabinet during shipping or storage; and the top member of the lower cabinet being adapted to support the upper cabinet when the lower cabinet and the top cabinet are engaged in a set-up configuration.

2. The tool chest assembly of claim 1, wherein lower cabinet comprises at least one tray, the tray being capable of outward sliding movement.

3. The tool chest assembly of claim 1, wherein upper cabinet comprises at least one tray, the tray being capable of outward sliding movement.

4. The tool chest assembly of claim 1, wherein the lower cabinet has a front access opening to the interior cavity, the front access opening comprising a door connected to one of the cabinet members.

5. The tool chest assembly of claim 1, wherein the upper cabinet is secured to the lower cabinet by a plurality of nuts and bolts.

6. The tool chest assembly of claim 1, wherein the upper cabinet has a front access opening to the interior cavity.

7. The tool chest assembly of claim 1, wherein the upper cabinet is positioned within the lower cabinet such that the upper cabinet does not have substantial lateral or vertical movement within the interior cavity of the lower cabinet during transport or storage.

8. A tool chest assembly configured for shipping comprising:

- an outer cabinet configured to provide an interior cavity and including a top member removably coupled to the outer cabinet; and

- an inner cabinet positioned inside the interior cavity of the outer cabinet, wherein the inner cabinet is removably secured to the outer cabinet during shipping or storage.

9. The tool chest assembly of claim 8, wherein outer cabinet comprises at least one tray, the tray being capable of outward sliding movement.

10. The tool chest assembly of claim 8, wherein inner cabinet comprises at least one tray, the tray being capable of outward sliding movement.

11. The tool chest assembly of claim 8, wherein the outer cabinet has a front access opening to the interior cavity, the front access opening comprising a door connected to one of the cabinet members.

12. The tool chest assembly of claim 8, wherein the outer cabinet is secured to the outer cabinet by a plurality of nuts and bolts.

13. The tool chest assembly of claim 8, wherein the inner cabinet has a front access opening to the interior cavity.

14. The tool chest assembly of claim 8, wherein the inner cabinet is positioned within the outer cabinet such that the inner cabinet does not have substantial lateral or vertical movement within the interior cavity of the outer cabinet during transport or storage.

15. A method of configuring a tool chest assembly for shipping or storage and for disassembly or setting up, the method comprising:

- providing a tool chest assembly comprising

- an outer cabinet having an interior cavity and including a top member removably coupled to the outer cabinet;

- an inner cabinet configured to be positioned within the interior cavity of the outer cabinet during shipping or storage;

- positioning the inner cabinet within the outer cabinet and securing the inner cabinet to the outer cabinet, such that the inner cabinet does not have substantial lateral or vertical movement within the interior cavity of the outer cabinet during transport or storage;

- disassembling the tool chest assembly by removing the top member coupled to the outer cabinet and removing the inner cabinet from the outer cabinet; and

- installing the inner cabinet on top of the outer cabinet and securing the inner cabinet to the outer cabinet, resulting in a set-up configuration.

16. The method of claim 15, wherein the inner cabinet is secured to the outer cabinet by a plurality of nuts and bolts.

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