A utility box lid is provided which includes multiple storage levels. The utility box includes a plurality of inner compartments configured to receive lift out trays, which when inserted form the multiple storage levels. The utility box has a plurality of split covers, each one hinged by a separate, individual hinge, where the hinges are positioned relatively in parallel with the diameter of the bucket.
UTILITY BOX LID

FIELD OF THE INVENTION

[0001] The invention relates to a multi-purpose utility box configured to fit on existing buckets, cans, or the like.

BACKGROUND OF THE INVENTION

[0002] Many regard proper storage as key to safeguarding valuables from loss, damage, or the like, as well as finding the valuables when they are needed or desired. In this regard, U.S. Pat. No. 6,460,287, issued Oct. 8, 2002, to Louie, is directed to a combination tackle box and fish container lid; U.S. Pat. No. 5,802,760, issued Sep. 8, 1998, to Campbell, is directed to a fishing bucket; U.S. Pat. No. 5,755,057, issued May 26, 1998, to Dancer, is directed to a fishing accessory container; U.S. Pat. No. 5,659,995, issued Aug. 26, 1997, to Hoffman, is directed to a bucket sized fisherman’s tackle box; U.S. Pat. No. 5,547,098, issued Aug. 20, 1996, to Jordan, is directed to a container with stackable trays and adjustable partitions; U.S. Pat. No. 5,386,922, issued Feb. 7, 1995, to Jordan, is directed to a container with stackable trays; U.S. Pat. No. 5,337,892, issued Aug. 16, 1994, to Zaffina, is directed to a tackle box and assembly; U.S. Pat. No. 4,911,295, issued Mar. 27, 1990, to Venegoni, is directed to a bucket organizer tray; U.S. Pat. No. 4,759,148, issued Jul. 26, 1988, to Love, is directed to a fishing accessory container; and U.S. Pat. No. 3,751,845, issued Aug. 14, 1973, to Van Leeuwen, is directed to a fishing bucket.

[0003] An unfulfilled need exists for a versatile utility box that may be integrated with existing buckets, cans, and/or the like, to maximize usable storage space.

SUMMARY OF THE INVENTION

[0004] According to an aspect of the invention, an apparatus is provided that comprises a utility box which may be configured as a lid for a bucket (such as, e.g., 1 gallon, 2 gallon, 3 gallon, 4 gallon, 5 gallon, 6 gallon, or any other capacity). The utility box may be divided into multiple levels of storage (e.g., 4 levels). The main body of the utility box may include a plurality of inner compartments (such as, e.g., two equal (or unequal) size compartments), each having a separate split cover. A plurality of lift out trays (e.g., two) may be provided, each of which may be configured to be held by one or more tray support ribs in an associated inner compartment of the utility box. The split covers may each be hinged by separate, individual hinges, where the hinges may be positioned relatively in parallel with the diameter of the bucket. The split covers may include an integrally formed latch and the base of the utility box may include an integral hang tab that is configured to receive the latch. At least one floor of the lower storage areas of the utility box may be removable to provide access to the bucket contents without removing the utility box.

[0005] Additional features, advantages, and embodiments of the invention may be set forth or apparent from consideration of the following detailed description and drawings. Moreover, it is noted that both the foregoing summary of the invention and the following detailed description are exemplary and intended to provide further explanation without limiting the scope of the invention as claimed.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] The accompanying drawings, which are included to provide a further understanding of the invention, are incorporated in and constitute a part of this specification, illustrate embodiments of the invention and together with the detailed description serve to explain the principles of the invention. No attempt is made to show structural details of the invention in more detail than may be necessary for a fundamental understanding of the invention and the various ways in which it may be practiced.

[0007] FIG. 1 shows a perspective side view of an example of an eco-friendly utility box mated to a bucket, according to principles of the invention;

[0008] FIG. 2 shows a perspective cross-section cut side view of the eco-friendly utility box mated to the bucket of FIG. 1;

[0009] FIG. 3 shows a perspective side view of the eco-friendly utility box of FIG. 1, according to principles of the invention;

[0010] FIG. 4 shows a perspective side view of an example of a lift out tray which may be used with the eco-friendly utility box of FIG. 1, according to principles of the invention; and

[0011] FIG. 5 shows a top view of the eco-friendly utility box of FIG. 1, according to principles of the invention.

[0012] The present invention is further described in the detailed description that follows.

DETAILED DESCRIPTION OF THE INVENTION

[0013] The embodiments of the invention and the various features and advantageous details thereof are explained more fully with reference to the non-limiting embodiments and examples that are described and/or illustrated in the accompanying drawings and detailed in the following description. It should be noted that the features illustrated in the drawings are not necessarily drawn to scale, and features of one embodiment may be employed with other embodiments as the skilled artisan would recognize, even if not explicitly stated herein. Descriptions of well-known components and processing techniques may be omitted so as to not unnecessarily obscure the embodiments of the invention. The examples used herein are intended merely to facilitate an understanding of ways in which the invention may be practiced and to further enable those of skill in the art to practice the embodiments of the invention. Accordingly, the examples and embodiments herein should not be construed as limiting the scope of the invention, which is defined solely by the appended claims and applicable law. Moreover, it is noted that like reference numerals represent similar parts throughout the several views of the drawings.

[0014] It is common practice in the home building industry to provide building materials (such as, e.g., joint compound, paint, plaster, adhesives, stains, and the like) in buckets or cans, which frequently end up in landfills. The buckets or cans are typically made from materials comprising plastics, metals, or the like. The buckets and cans may have various capacities, typically ranging from, for example, a gallon to six gallons. Since many of these materials degrade very slowly, the buckets and cans are presenting significant environmental...
issues. For example, the buckets and cans are filling landfills with matter that may take hundreds, if not thousands of years to degrade.

[0015] FIG. 1 shows a perspective side view of an example of an eco-friendly utility box 115 that may be mated as a lid to a bucket 110, according to principles of the invention. As seen, the utility box 115 may be inserted into the bucket 110 to form a unitary storage structure 100. The utility box 115 and/or the bucket 110 may comprise a material, such as, for example, but not limited to, plastic, metal, wood, fiberglass, glass, ceramic, stone, or the like. At least one floor of the lower storage areas of the utility box 115 may be removable (or openable) to provide access to the bucket contents without removing the utility box.

[0016] The utility box 115 may comprise a pair of split covers 150A, 150B. Each of the split covers 150A, 150B may include a hinged side 130A, 130B, respectively, and a latched side 140A, 140B, respectively. The hinged sides 130A, 130B, may have a longitudinal axis (e.g., along the z-axis) which is substantially parallel to the diameter of the bucket 110 and substantially parallel to the plane formed by the x-axis and z-axis. Each of the split covers 150A, 150B may comprise a hinge mechanism 135 (such as, e.g., a pivot hinge, butt/mortise hinge, continuous hinge, piano hinge, concealed hinge, butterfly hinge, parliament hinge, strap hinge, H hinge, HL hinge, or the like) to allow for pivoting of the split covers 150A, 150B about the longitudinal Z-axis of the split covers 150A, 150B (i.e., about the longitudinal axis of the hinged sides 130A, 130B). The split covers 150A, 150B may be configured to be coupled to the utility box 115 via a snap-lock fastening mechanism (not shown), which may be provided on either (or both) the hinged sides 130A, 130B and/or the latched sides 140A, 140B. The utility box 115 may further include a molded on hang tag 137, which may be configured to be removable, and a core thru hole 139 for aerator tube access to the bucket 110.

[0017] The bucket 110 may include, for example, but is not limited to, a five gallon (or any practical capacity) bucket. The bucket 110 may comprise a substantially cylindrical shape, as shown, e.g., in FIG. 1, or it may comprise any other shape, including, for example, but not limited to, a rectangular shape (e.g., rectangular buckets or cans provided with certain food goods, such as, e.g., cheeses, or the like). The bucket 110 may comprise a pivoting handle 120 for carrying the bucket 110. According to an aspect of the invention, the bucket 110 may be provided with the utility box 115 as a unitary structure 100. Alternatively, a user may obtain a new bucket 110 or remove the contents (such as, e.g., joint compound, plaster, paint, food goods, or the like) from an existing bucket 110 and insert the utility box 115 into the bucket 110. The user may clean the bucket 110 before inserting the utility box 115 into the bucket 110.

[0018] FIG. 2 shows a perspective cross-section cut side view of the unitary structure 100, comprising the utility box 115 mated to the bucket 110, as shown in FIG. 1. The utility box 115 may comprise an engaging member 250 (such as, e.g., but not limited to, a lip, a tongue, a groove, or the like) along its perimeter to lockably engage a lip member 260 along the perimeter of the bucket 110, thereby fastening the utility box 115 to the bucket 110. As seen in FIG. 2, the utility box 115 may comprise at least one lift out tray 170 (170A, 170B). The lift out trays 170A, 170B may each be configured to be placed in the utility box 115, as shown, e.g., in FIG. 2, such that the lift out trays 170A, 170B create four levels of storage in the utility box 115. For example, when inserted into the utility box 115, the lift out trays 170A, 170B may create two upper levels 210, 220 of storage and two lower levels 230, 240 of storage. At least one floor 340 (shown in FIG. 3) of the lower levels 230, 240 may be removable (or openable) to provide access to the contents of the bucket 110 without removing the utility box 115. The floor 340 may be configured to open by means of, for example, but not limited to, a hinge, a tongue-groove arrangement (e.g., for a sliding floor portion), or the like.

[0019] It is noted that the utility box 115 is not limited to four levels of storage, but, instead may include any number of levels of storage (such as, e.g., 1, 2, 3, 4, or the like). In this regard, the lift out trays 170A, 170B may comprise multi-level trays (not shown). For example, the lift out tray 170A (or 170B) may be inserted into a further tray that is deeper in the y-direction (e.g., along the y-axis) than the lift out tray 170A (or 170B), but less than the depth of the utility box 115, thereby providing a three level storage. A further lift out tray may be provided that has a smaller depth along the y-direction than the lift out tray 170A (or 170B), which may be inserted in the lift out tray 170A (or 170B) to create an additional level of storage. The lift out tray 170A (or 170B) may include one or more further tray support ribs (not shown) for receiving and holding further lift out trays.

[0020] FIG. 3 shows a perspective side view of the utility box 115 of FIG. 1, according to principles of the invention. As seen in FIG. 3, the utility box 115 may comprise a latch 310 and a latch receiver 320, which may be configured to lockably receive the latch 310. The latch 310 may be integrally formed (e.g., molded) with the split cover 150, or it may be affixed to the split cover 150 by means of, for example, but not limited to, an adhesive (e.g., glue, cement, epoxy, or the like), a mechanical structure (e.g., bolt, nut, screw, nail, rivet, or the like), or the like. The latch receiver 320 may be integrally formed (e.g., molded) with the utility box 115 body (or base), or it may be affixed to the utility box 115 body by means of, for example, but not limited to, an adhesive (e.g., glue, cement, epoxy, or the like), a mechanical fastener (e.g., bolt, nut, screw, nail, rivet, or the like), or the like.

[0021] The utility box 115 may comprise a plurality of tray support ribs 330, as shown in, e.g., FIG. 3. The tray support ribs 330 may be provided on any one or more sides of the inner compartment of the utility box 115, so as to support the lift out tray 170A (or 170B). Further, the tray support ribs 330 may comprise various lengths along the y-direction, as well as various thicknesses, so as to provide support for multiple trays in a single compartment of the utility box 115. For example, the tray support ribs 330 may comprise a first set of four tray support ribs on the inner compartment wall proximate the hinged side 130 and a second set of four tray support ribs on the inner compartment wall proximate the hinged side 130. Two of the tray support ribs of the first set of four tray support ribs may have a first length (such as, for example, but not limited to, four inches) and the remaining two tray support ribs of the first set of four tray support ribs may have a second length (such as, for example, but not limited to, six inches), with the second set of tray support ribs having similar lengths. In this instance, the shorter tray support ribs may hold a first lift out tray 170A (or 170B) and the longer tray support ribs may hold a further lift out tray (not shown). The tray support ribs 330 may be integrally formed (e.g., molded) with the utility box 115 body, or the support ribs 330 may be affixed to the utility box 115 body by means of, for example, an adhe-
sive (e.g., glue, cement, epoxy, or the like), a mechanical fastener (e.g., bolt, nut, screw, nail, rivet, or the like), or the like.

[0022] FIG. 4 shows a perspective side view of an example of a lift out tray 170, which may be used with the utility box 115, shown in FIGS. 1-3, according to principles of the invention. The lift out tray 170 may comprise one or more inserts 410 and a tray 420. The inserts 410 may be configured to engage a recessed portion in the tray 420 upon insertion. Further, the inserts may be integrally formed (e.g., molded) with the tray 420. The lift out tray 170, including the inserts 410 and tray 420, may comprise one or more materials comprising, for example, but not limited to, plastic, metal, wood, fiberglass, glass, ceramic, stone, or the like.

[0023] FIG. 5 shows a top view of the utility box 115 of FIG. 1, according to principles of the invention.

[0024] Although the utility box 115 has been described with two inner compartments which are configured to receive lift out trays 170, it is noted that the utility box 115 may comprise any number of inner compartments (such as, e.g., one, two, three, four, or more). In this regard, the utility box 115 may comprise any number of split covers 150 configured to cover the inner compartments (such as, e.g., one, two, three, four, or more).

[0025] While the invention has been described in terms of exemplary embodiments, those skilled in the art will recognize that the invention can be practiced with modifications in the spirit and scope of the appended claims. These examples given above are merely illustrative and are not meant to be an exhaustive list of all possible designs, embodiments, applications or modifications of the invention.

What is claimed:

1. A utility box that is configured to be inserted into a bucket or can, comprising:
   an inner compartment configured to hold a lift out tray; and a split cover configured to open and close, wherein the split cover comprises at least one of a hinge side and a latch side.
2. The utility box according to claim 1, wherein the inner compartment comprises:
   a tray support rib configured to hold the lift out tray.
3. The utility box according to claim 2, wherein the tray support rib is configured on a wall of the inner compartment proximate the hinge side.
4. The utility box according to claim 2, wherein the tray support rib is configured on a wall of the inner compartment proximate the latch side.
5. The utility box according to claim 1, wherein the inner compartment comprises two inner compartments, and wherein the split cover comprises two split covers.
6. The utility box according to claim 1, further comprising:
   a lift out tray configured to be held by at least one tray support rib.
7. The utility box according to claim 5, further comprising:
   two lift out trays configured be held by a plurality of tray support ribs configured in the two inner compartments.
8. The utility box according to claim 1, wherein the utility box comprises multiple levels of storage.
9. The utility box according to claim 1, wherein the utility box comprises four levels of storage.
10. The utility box according to claim 1, wherein a floor of the inner compartment is removable to provide access to contents within the bucket.
11. A unitary structure comprising a utility box and a bucket, comprising:
    an inner compartment configured to hold a lift out tray; and a split cover configured to open and close, wherein the split cover comprises at least one of a hinge side and a latch side.
12. The unitary structure according to claim 11, wherein the inner compartment comprises:
    a tray support rib configured to hold the lift out tray.
13. The unitary structure according to claim 12, wherein the tray support rib is configured on a wall of the inner compartment proximate the hinge side.
14. The unitary structure according to claim 12, wherein the tray support rib is configured on a wall of the inner compartment proximate the latch side.
15. The unitary structure according to claim 11, wherein the inner compartment comprises two inner compartments, and wherein the split cover comprises two split covers.
16. The unitary structure according to claim 11, further comprising:
    a lift out tray configured to be held by at least one tray support rib.
17. The unitary structure according to claim 15, further comprising:
    two lift out trays configured be held by a plurality of tray support ribs configured in the two inner compartments.
18. The unitary structure according to claim 11, wherein the utility box comprises multiple levels of storage.
19. The unitary structure according to claim 11, wherein the utility box comprises four levels of storage.
20. A utility box having a substantially circular perimeter, comprising:
    an inner compartment configured to hold a lift out tray; and a split cover configured to open and close, wherein the split cover comprises at least one of a hinge side and a latch side, and wherein the split cover comprises a portion that includes a substantially circular shape.

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