



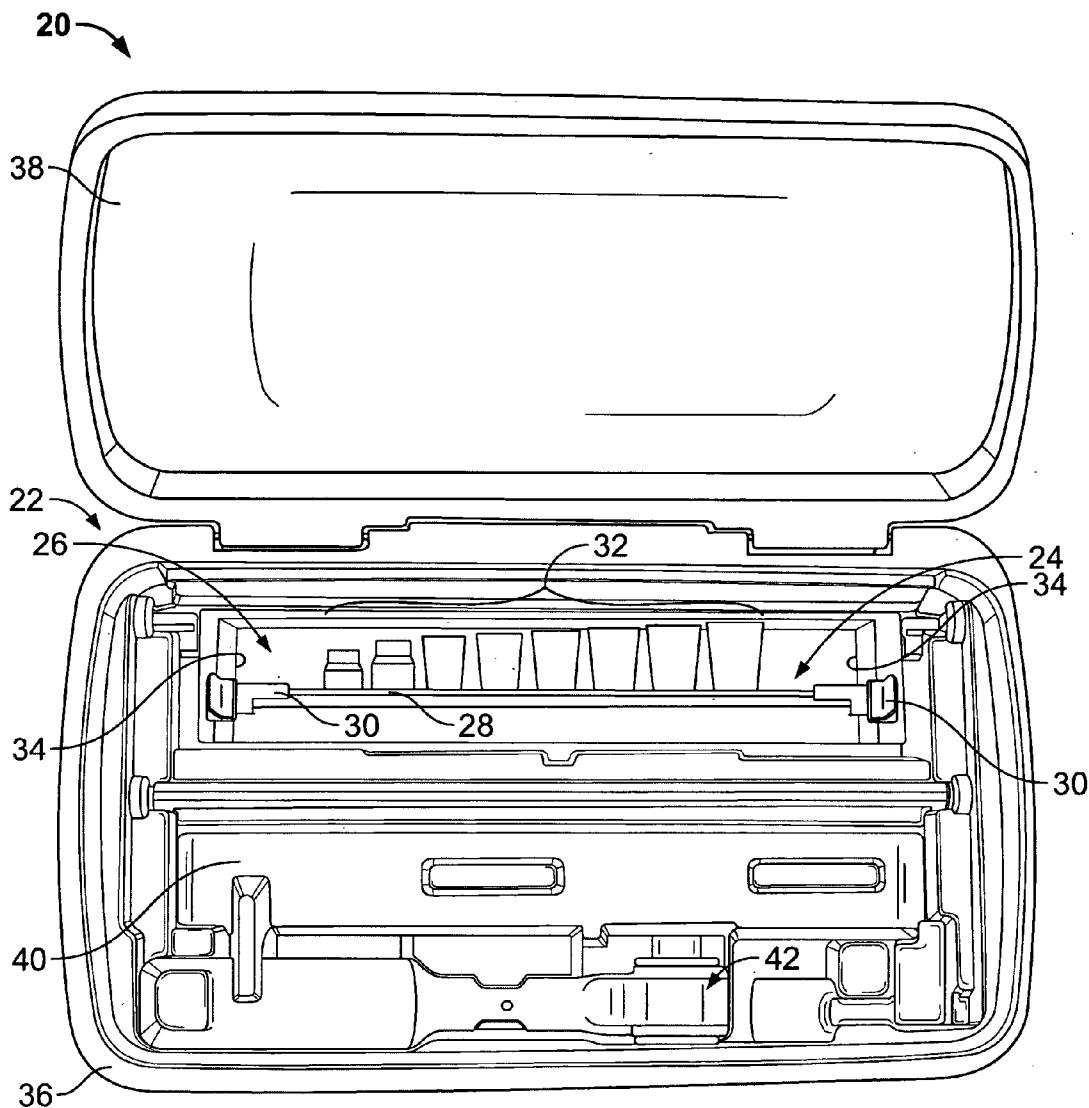
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Shih(10) **Pub. No.: US 2006/0201835 A1**(43) **Pub. Date: Sep. 14, 2006**(54) **TOOL ORGANIZER****Publication Classification**(75) Inventor: **Hsi Chen Shih**, Taipei (TW)(51) **Int. Cl.**
B65D 85/28 (2006.01)(52) **U.S. Cl.** **206/373**

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LOS ANGELES, CA 90071-1448 (US)**(57) **ABSTRACT**

A tool organizer is provided, having a housing and a tool holder received within a recess of the housing. The tool holder, which includes a body for holding a tool, is mounted in the recess such that the body of the tool holder can pivot relative to the housing. Thus, a user can orient the body of the tool holder upward to access to a tool and can pivot the body for storage within the recess. The tool holder is also configured to be removed from the housing. Thus, a user can take the tool holder without needing to carry the entire tool organizer.

(73) Assignee: **Test Rite Products Corporation**(21) Appl. No.: **11/076,544**(22) Filed: **Mar. 9, 2005**

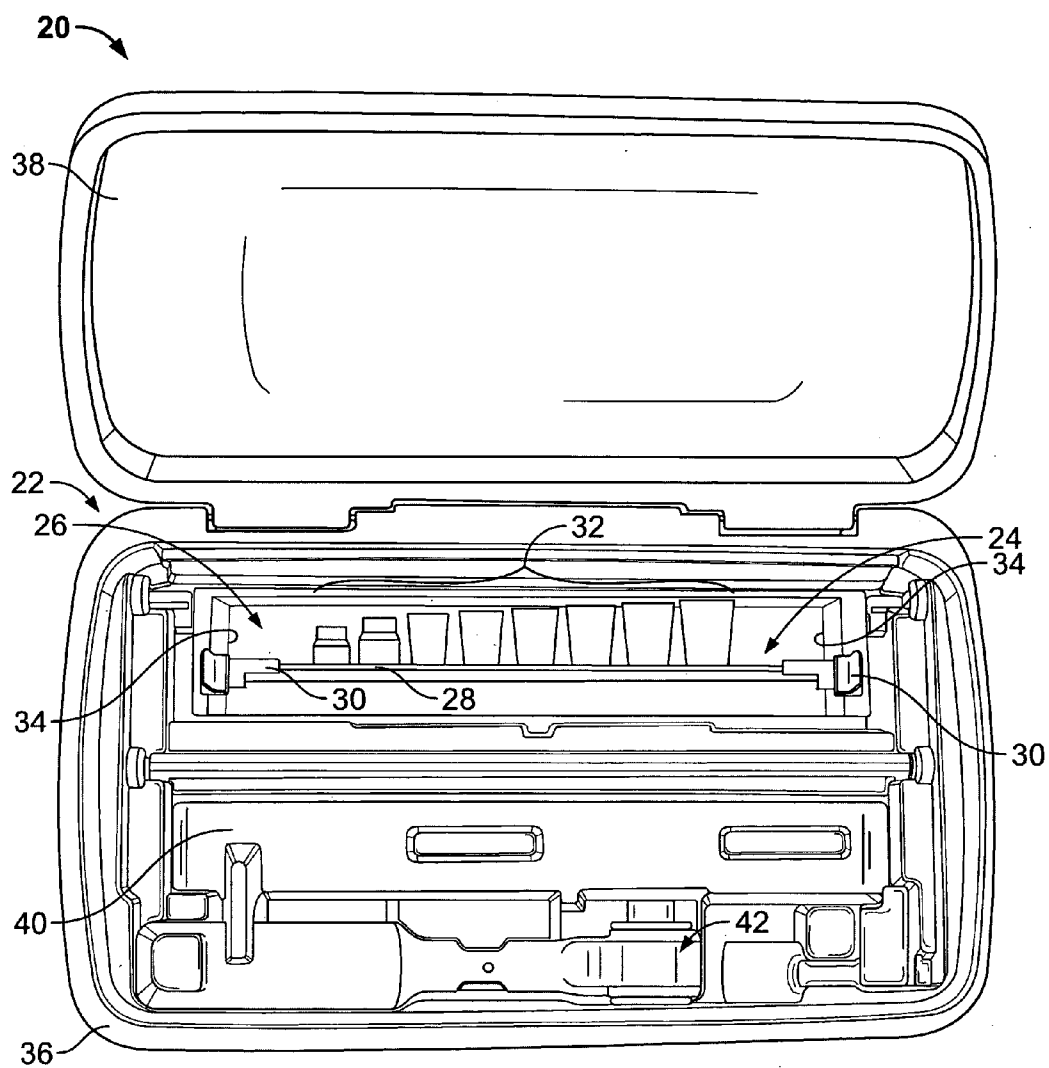


FIG. 1

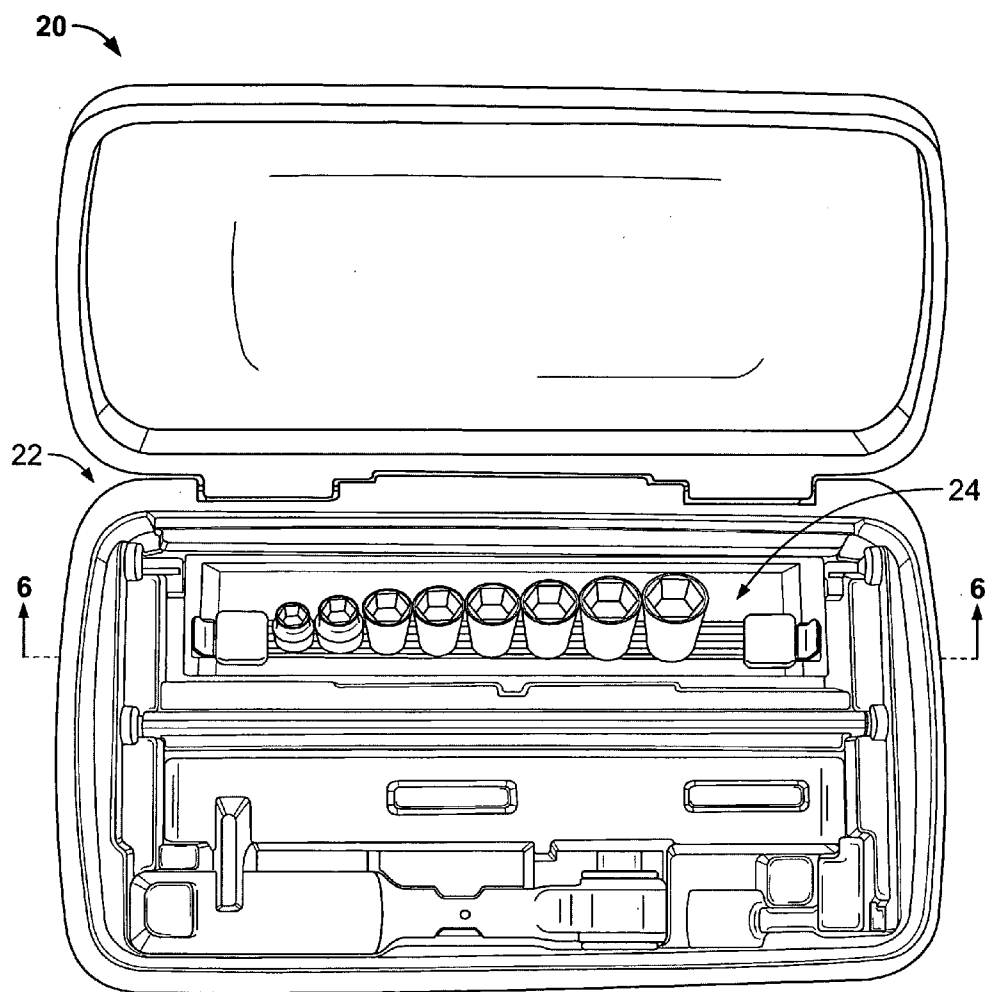


FIG. 2

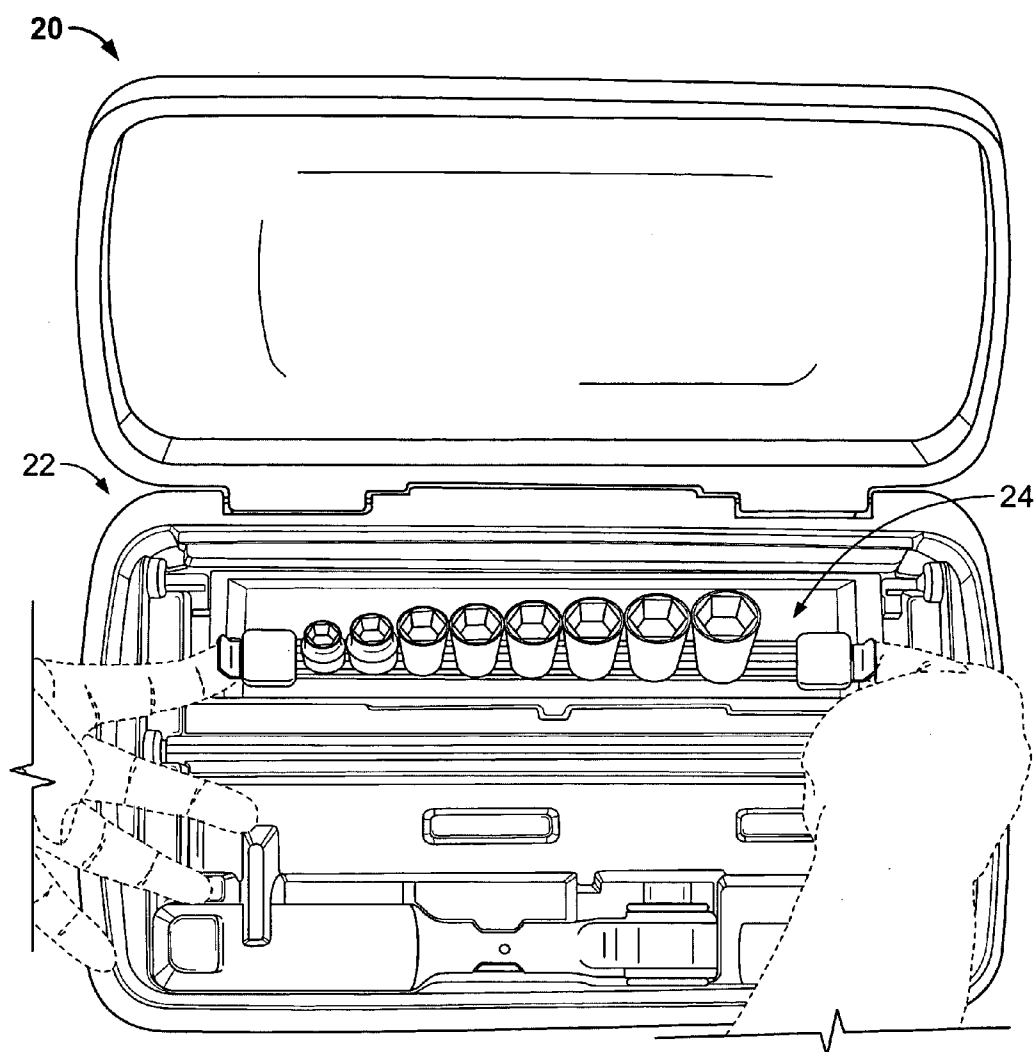


FIG. 3

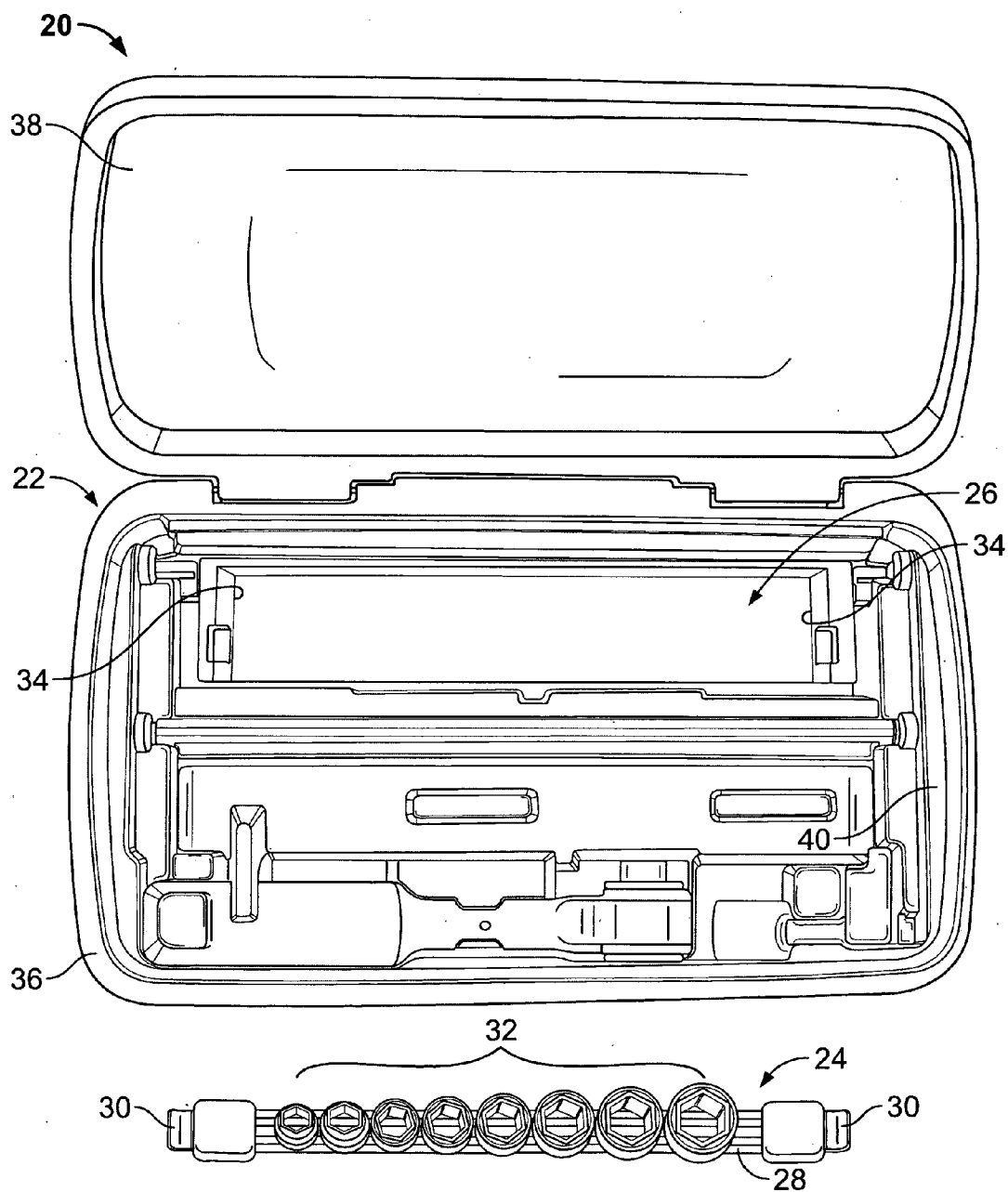


FIG. 4

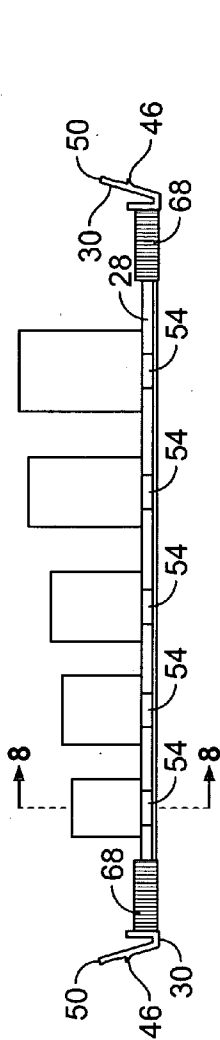


FIG. 5

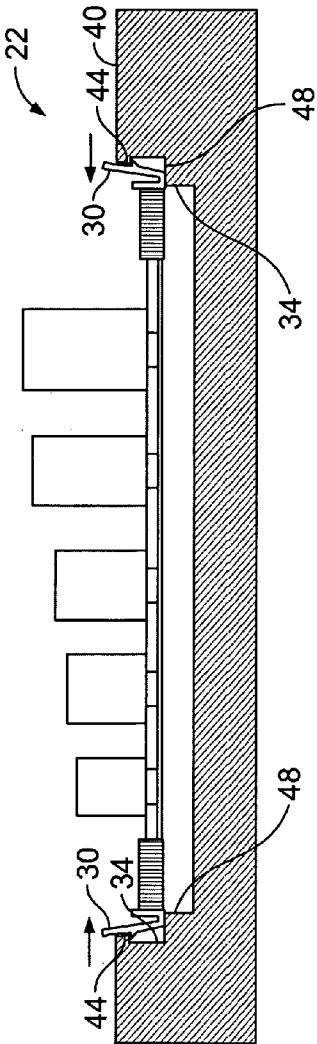


FIG. 6

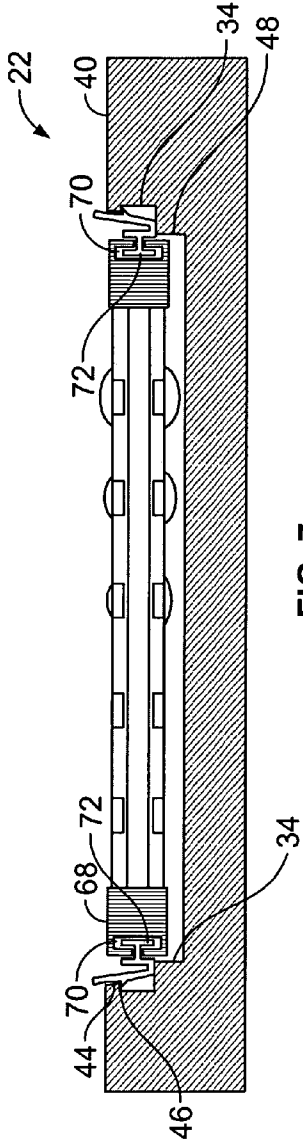
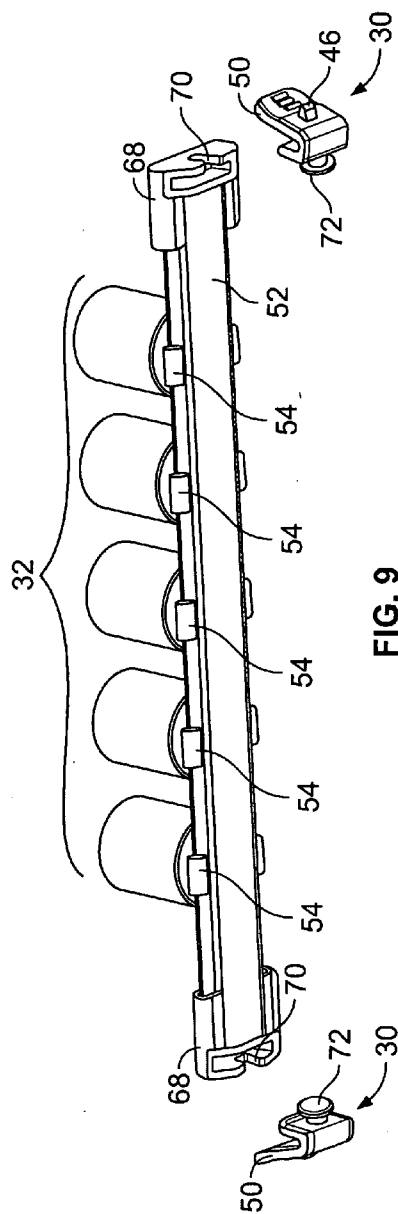
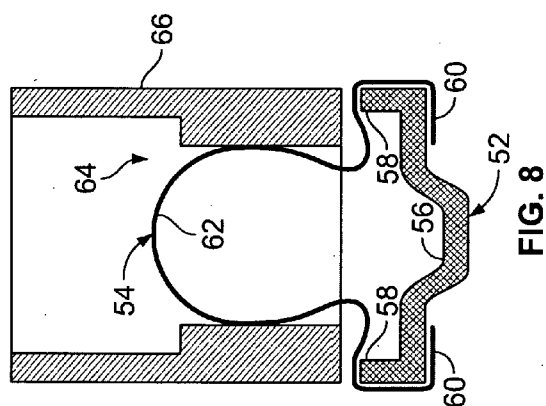


FIG. 7



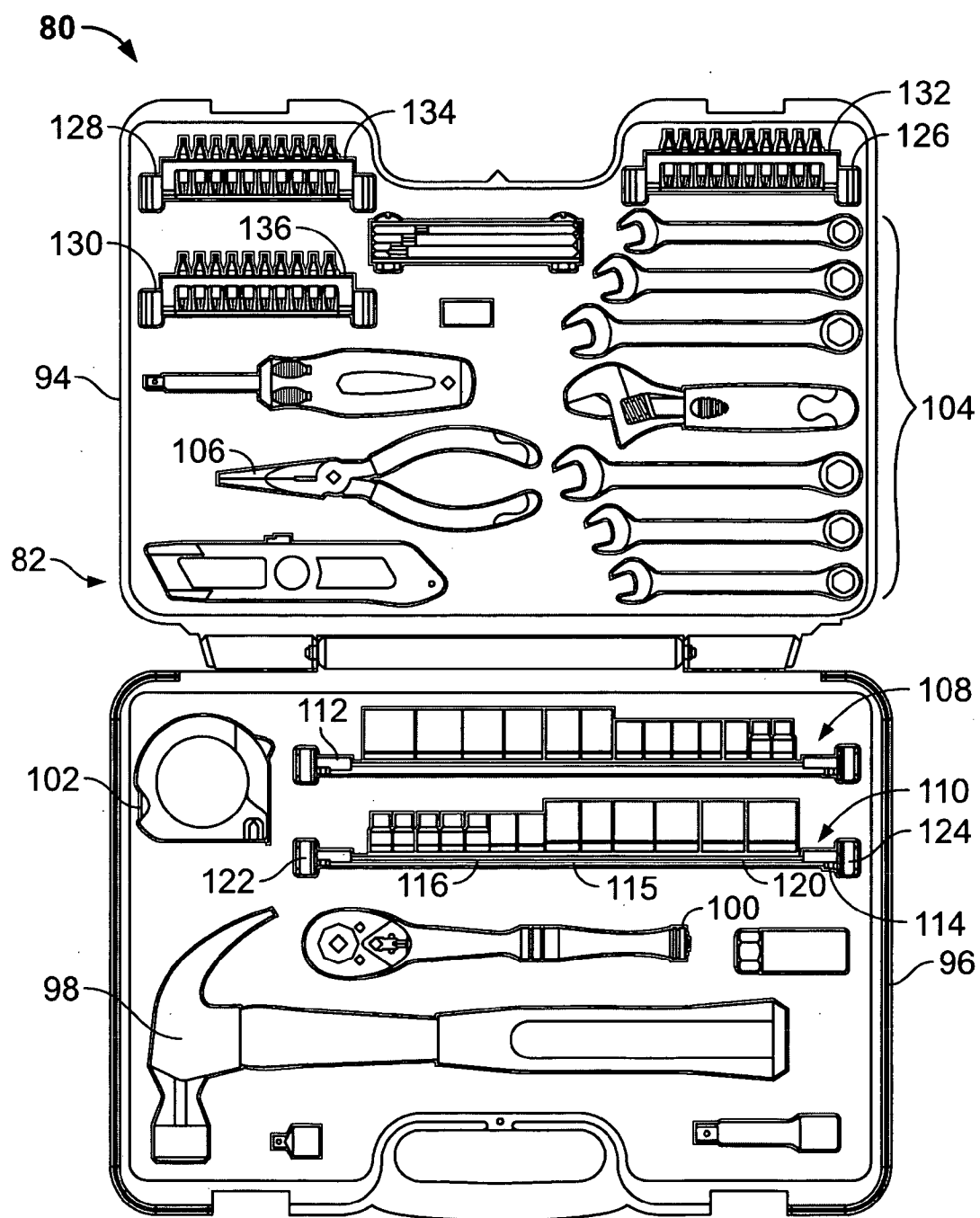


FIG. 10

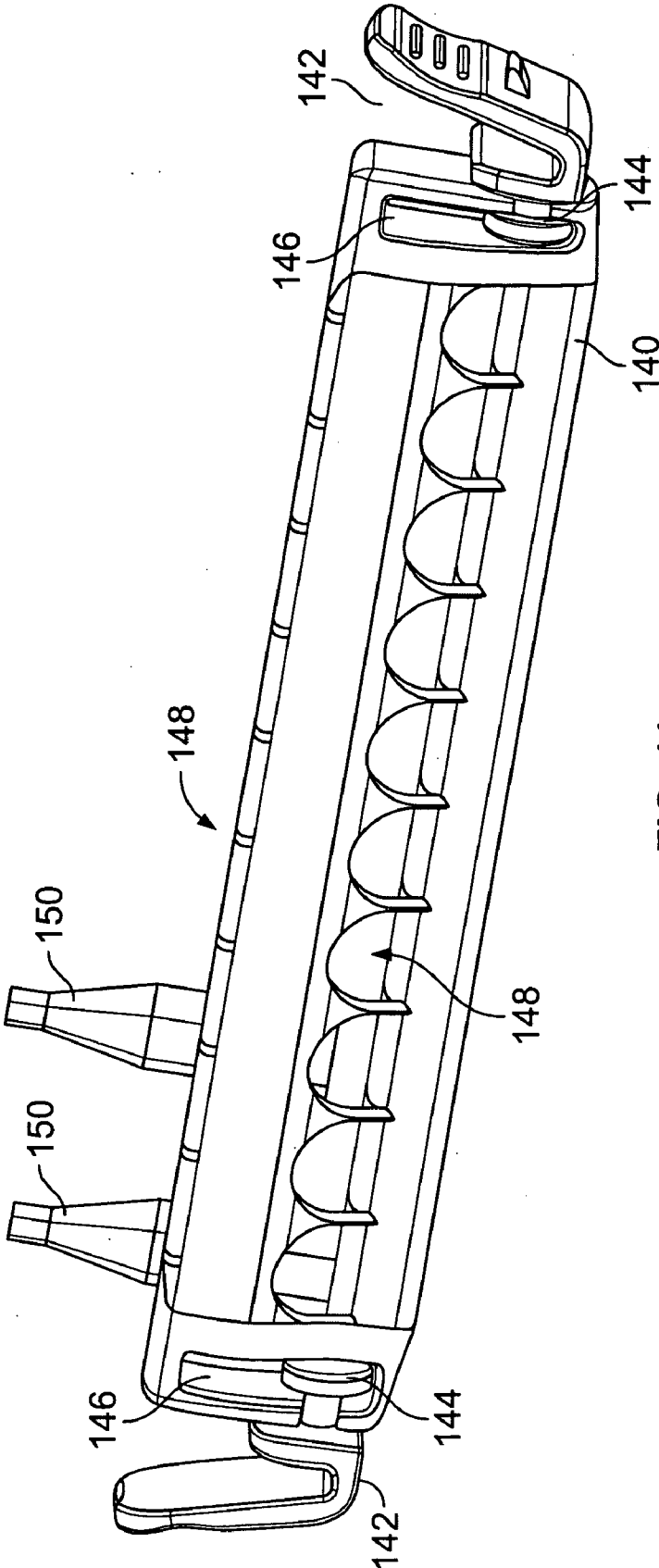


FIG. 11

TOOL ORGANIZER

BACKGROUND OF THE INVENTION

[0001] The present invention relates generally to tool organizers and, more particularly, to tool organizers having prescribed locations for sets of tools such as drill bits, screwdriver bits, and sockets.

[0002] Tool containers have long been used to store tools in an organized fashion. Properly organized tools should allow a user to find a desired tool quickly and, then, return it to its storage location. To that end, current tool organizers have prescribed locations for each tool. The locations are commonly configured to receive a single tool or accessory. In certain designs, the locations are defined by an interior surface of the container. In other designs, the container may include an array of compartments, each configured to house several tools and related accessories.

[0003] Although generally effective for organization, current containers have shortfalls. For example, the containers can be substantial in size to house a prescribed tool set, making it cumbersome to transport and use. As a result, some users may be inclined to not to bring the entire set to a job site; rather, only take those tools which are anticipated to be needed. Also, certain containers can be inconvenient to use, particularly in selecting and replacing tools. Thus, users can be negligent in returning the tool to its prescribed location.

[0004] It should, therefore, be appreciated that there remains a need for a tool container that allows users to remove a selected set of tools from the container that are nonetheless still organized. The present invention fulfills this need and others.

SUMMARY OF THE INVENTION

[0005] The invention resides in a tool organizer having a housing and a tool holder received within a recess of the housing. The tool holder, which includes a body for holding a tool, is mounted in the recess such that the body of the tool holder can pivot relative to the housing. Thus, a user can orient the body of the tool holder upward to access to a tool and can pivot the body for storage within the recess. The tool holder is also configured to be removed from the housing. Thus, a user can take the tool holder without needing to carry the entire tool organizer.

[0006] More specifically, and by way of example and not limitation, the tool holder includes two clips disposed at the ends of the tool holder and pivotally attached to the body. The clips are each configured to engage a corresponding side wall of the recess such that the body of the tool holder can pivot relative to the housing. For example, the clips can each include a post received within a slot defined by the body of the tool holder such that the body can rotate relative to the clip. Each clip can further include a distal portion angled outwardly relative to the body and configured to deflect upon engagement of the corresponding side wall.

[0007] In an exemplary embodiment, the housing includes a tray and a lid that cooperatively define an interior cavity such that, with the lid closed and the tool holder in place, the tool holder is disposed in the interior cavity of the housing.

[0008] In a detailed aspect of an exemplary embodiment, the body of the tool holder includes an elongated base and

a plurality of spring-biased supports extending upwardly from the base. Each spring-biased support is formed of a unitary piece having inwardly facing ends secured about the base and an upstanding intermediate portion for receiving a tool.

[0009] In another detailed aspect of an exemplary embodiment, the body further includes two caps attached to the ends of the base, each cap defining a slot for receiving a post of the corresponding clip.

[0010] For purposes of summarizing the invention and the advantages achieved over the prior art, certain advantages of the invention have been described herein. Of course, it is to be understood that not necessarily all such advantages may be achieved in accordance with any particular embodiment of the invention. Thus, for example, those skilled in the art will recognize that the invention may be embodied or carried out in a manner that achieves or optimizes one advantage or group of advantages as taught herein without necessarily achieving other advantages as may be taught or suggested herein.

[0011] All of these embodiments are intended to be within the scope of the invention herein disclosed. These and other embodiments of the present invention will become readily apparent to those skilled in the art from the following detailed description of the preferred embodiments having reference to the attached figures, the invention not being limited to any particular preferred embodiment disclosed.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] Embodiments of the present invention will now be described, by way of example only, with reference to the following drawings in which:

[0013] **FIG. 1** is a perspective view of a tool organizer in accordance with the invention, depicting a tool holder pivotally mounted to a housing.

[0014] **FIG. 2** is a perspective view of the tool organizer of **FIG. 1**, depicting the tool holder rotated upward.

[0015] **FIG. 3** is a perspective view of the tool organizer of **FIG. 1** depicting the tool holder being removed from the housing

[0016] **FIG. 4** is a perspective view of the tool organizer of **FIG. 1**, depicting the tool holder removed from the housing.

[0017] **FIG. 5** is an elevational view of the tool holder of the tool organizer of **FIG. 1**.

[0018] **FIG. 6** is a cross-sectional view, taken along line 6-6 in **FIG. 2**, depicting the tool holder rotated upward.

[0019] **FIG. 7** is a cross-sectional view, similar to **FIG. 6**, depicting the tool holder rotated for storage.

[0020] **FIG. 8** is cross-sectional view, taken along line 8-8 of the **FIG. 5**, depicting a socket mounted to a spring-biased support of the tool holder.

[0021] **FIG. 9** is a partially exploded, perspective view of the tool holder of the tool organizer of **FIG. 1**.

[0022] **FIG. 10** is a plan view of a second embodiment of a tool organizer in accordance with the invention, depicting a housing having multiple recesses for receiving tools and tool holders.

[0023] FIG. 11 is a perspective view of a tool holder from the tool organizer of FIG. 10.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0024] With reference now to the drawings, and particularly FIGS. 1-4, there is shown a tool organizer 20 having a housing 22 and a tool holder 24 received within a recess 26 of the housing. The tool holder includes a body 28 for securing tools and two clips 30 pivotally attached to the body at opposing ends of the holder. In the exemplary embodiment, the tool holder is configured to receive a set of sockets 32 of various sizes. The clips of the tool holder are configured to engage corresponding side walls 34 of the recess, enabling the body of the tool holder to pivot relative to the housing. More particularly, a user can orient the holder upward (FIG. 2) to access to the sockets and can pivot the tool holder for storage within the recess (FIG. 1). In this manner, a user can remove and return the sockets to the holder, while the holder is within the housing. The tool holder can also be removed from the housing, by pressing the clips inward (FIG. 3). Thus, a user can take the socket set held by the tool holder without needing to carry the entire tool organizer.

[0025] The housing 22 is made of plastic and can be formed by molding, or other economical high-production techniques. The housing includes a tray 36 and a lid 38 configured to cooperatively define an interior cavity. An interior surface 40 of the tray defines the recess 26 such that, with the lid closed and the tool holder 24 in place, the tool holder 24 is disposed in the interior cavity of the housing. The recess has a sufficient depth to receive the tool holder, when pivoted for storage (see, FIG. 7). In the exemplary embodiment, the interior surface further defines a recess 42 for receiving a socket wrench (not shown) via snap-fit.

[0026] With reference now to FIGS. 5-7, the interior surface 40 provides facing side walls 34 configured to engage the clips 30 of the tool holder 24. More particularly, each side wall has a lip 44 configured to engage a catch 46 defined by an outer surface of the clip. Each side wall further includes a ledge 48 sized to support a lower edge of the clip. The clips are each configured to engage the corresponding side wall of the recess such that the body of the tool holder can pivot relative to the housing. Each clip includes a distal portion 50 angled outwardly relative to the body 28 and configured to deflect upon engagement of the corresponding side wall. To remove the tool holder from the recess, the clips are pressed inward, allowing the catch to disengage from the lip. In other embodiments, the clip can be attached to the side wall and configured to engage the tool holder.

[0027] With reference now to FIGS. 8 and 9, the body 28 of the tool holder 24 includes an elongated base 52 and a plurality of spring-biased supports 54 extending upwardly from the base. The base is formed of metal and includes a central channel 56 and longitudinal edges 58. In the exemplary embodiment, each spring-biased support is formed of an elongated strip of metal. Each spring-biased support has inwardly facing ends 60 secured about the longitudinal edges of the base. In this manner, each support is slidably disposed on the base. Each spring-biased support further includes an upstanding intermediate portion 62 that engages a bore 64 of the corresponding socket 66. The number and

size of the supports can vary, to accommodate differing socket sets, or other tool sets, as desired.

[0028] The body 28 further includes two caps 68 attached at each end of the base 52 for pivotally securing the clips. Each cap defines a slot 70 for receiving a post 72 of the corresponding clip. The post is received in the slot via snap-fit. Both the post and slot are cooperatively sized to facilitate pivoting of the clip relative to the body.

[0029] With reference now to FIG. 10, a second embodiment of a tool organizer 80 is shown, including a housing 82 configured to receive five pivotable tool holders (112, 114, 132, 134, 136). The housing includes a lid 94 and a tray 96 hinged to each other, cooperatively defining an interior cavity and recesses for the tool holders. Both the lid and the tray further define snap-fit recesses for receiving various types of tools, e.g., hammer 98, socket wrench 100, tape measure 102, wrench set 104, and pliers 106, via snap-fit.

[0030] In the exemplary embodiment, the two recesses 108, 110 of the tray 96 are configured to receive corresponding tool holders 112, 114, each supporting a socket set. The tool holders for the socket sets are similarly configured to the tool holder 24 of FIG. 1, including a body 116 having an elongated base 118 and a plurality of spring-biased supports 120 extending upwardly from the base to which each socket is mounted. The body further includes two caps 122 attached at each end of the base 116 for pivotally securing clips 124. The clips are configured to engage side walls of the corresponding recess, enabling the body of the tool holder to pivot relative to the housing.

[0031] The lid 94 of the housing 82 defines three recesses 126, 128, 130 configured to receive corresponding tool holders 132, 134, 136, each supporting a bit set. As best seen in FIG. 11, the tool holders for the bit sets include a body 140 configured to receive the bit set and two clips 142 configured to engage corresponding side walls of the recess. Each clip includes a post 144 received in a corresponding slot 146 defined by the body 140 to facilitate pivoting of the tool holder. The body defines apertures 148, each sized to receive a bit 150.

[0032] It should be appreciated from the foregoing that the present invention provides a tool organizer having a housing and a tool holder received within a recess of the housing. The tool holder, which includes a body for holding a tool, is mounted in the recess such that the body of the tool holder can pivot relative to the housing. Thus, a user can orient the body of the tool holder upward to access to a tool and can pivot the body for storage within the recess. The tool holder is also configured to be removed from the housing. Thus, a user can take the tool holder without needing to carry the entire tool organizer.

[0033] Although the invention has been disclosed in detail with reference only to the exemplary embodiments, those skilled in the art will appreciate that various other embodiments can be provided without departing from the scope of the invention. Accordingly, the invention is defined only by the claims set forth below.

I claim:

1. A tool organizer, comprising:

a housing defining a recess having first and second side walls in spaced relationship;

- a tool holder configured to be received in the recess such that a pivot axis of the tool holder extends between the first and second side walls, the tool holder including a body configured to receive a plurality of tools; and
- a deflectable clip disposed between the first side wall and the body of the tool holder such that the body of the tool holder can pivot relative to the housing about the pivot axis and that the tool holder can be removed from the housing.
- 2. A tool organizer as defined in claim 1, wherein the clip detachably engages the first side wall, thereby facilitating removal of the tool holder from the recess.
- 3. A tool organizer as defined in claim 1, the housing having a tray and a lid configured to cooperatively define an interior cavity, the tray defining the recess on an interior surface thereof such that, with the lid closed and the tool holder in place, the tool holder is disposed in the interior cavity of the housing.
- 4. A tool organizer as defined in claim 1, wherein the body of the tool holder includes a spring-biased support configured to receive a single tool.
- 5. A tool organizer as defined in claim 1, wherein the clip includes a post received within a slot defined by the body of the tool holder such that the body can rotate relative to the clip.
- 6. A tool organizer as defined in claim 5, wherein the first side wall includes a lip configured to engage a catch defined by an outer surface of the clip.
- 7. A tool organizer as defined in claim 5, wherein the clip includes a distal portion angled outwardly relative to the body and configured to deflect upon engagement of the corresponding side wall.
- 8. A tool organizer as defined in claim 1, wherein the body includes an elongated base and a plurality of spring-biased supports extending upwardly from the base, each spring-biased support configured to receive a tool.
- 9. A tool organizer as defined in claim 8, wherein each spring-biased support is formed of a unitary piece having inwardly facing ends secured about the base and an upstanding intermediate portion.
- 10. A tool organizer, comprising:
 - a housing defining a recess having opposing side walls; and
 - a tool holder having first and second opposing ends, the tool holder including
 - a body configured to secure a tool,
 - a first clip disposed at the first end of the holder and pivotally attached to the body, and
 - a second clip disposed at the second end of the holder and pivotally attached to the body, the first and second clips each configured to engage the corresponding side wall of the recess such that the body of the tool holder can pivot relative to the housing and that the tool holder can be removed from the housing.

- 11. A tool organizer as defined in claim 10, wherein the body includes an elongated base and a plurality of spring-biased supports extending upwardly from the base configured to receive a tool.
- 12. A tool organizer as defined in claim 10, wherein the first and second clips each include a distal portion angled outwardly relative to the body and configured to deflect upon engagement of the corresponding side wall.
- 13. A tool organizer as defined in claim 10, wherein the body includes an elongated base and a plurality of spring-biased supports extending upwardly from the base configured to receive a tool.
- 14. A tool organizer as defined in claim 10, wherein the body includes
 - a first cap at the first end of the holder, the first cap defining a slot for receiving a post of the first clip, and
 - a second cap at the second end of the holder, the second cap defining a slot for receiving a post of the second clip.
- 15. A tool organizer as defined in claim 10, wherein the opposing side walls of the recess each include a portion configured to deflect upon engagement of the corresponding clip.
- 16. A tool organizer, comprising:
 - a housing defining a recess having opposing side walls; and
 - a tool holder having first and second opposing ends, the tool holder including
 - a body configured to secure a tool, the body defining a first slot disposed at the first end of the holder and a second slot disposed at the first end of the holder,
 - a first clip having a post pivotally received within the first slot of the body, and
 - a second clip having a post pivotally received within the second slot of the body, the first and second clips each configured to engage the corresponding side wall of the recess such that the body of the tool holder can pivot relative to the housing and that the tool holder can be removed from the housing.
- 17. A tool organizer as defined in claim 16, wherein the body includes an elongated base and a plurality of spring-biased supports extending upwardly from the base configured to receive a tool.
- 18. A tool organizer as defined in claim 16, wherein the first and second clips each include a distal portion angled outwardly relative to the body and configured to deflect upon engagement of the corresponding side wall.
- 19. A tool organizer as defined in claim 16, wherein the opposing side walls of the recess each include a portion configured to deflect upon engagement of the corresponding clip.

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