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(54) TOOL HOLDER

A tool holder (100) includes a tool holder body (110) defining a front surface (120) and a back surface (130). The front surface (120) defines at least one tool holder cavity (124) extending from the front surface (120) towards the back surface (130). The back surface (130) defines a plane (X-X') parallel to and coinciding with the back surface (130). A plug element (300) is adapted to be coupled with the at least one tool holder cavity (124) and includes a coupling element (320) and a connecting element (310) coupled to the coupling element (320). The connecting element (310) allows connection of at least one implement (214) to the plug element (300). The tool holder (100) is characterized in that the plug element (300) further includes a spacer element (330) coupled to the connecting element (310). The spacer element (330) extends away from the connecting element (310). The spacer element (330) extends between the connecting element (310) and the plane (X-X') defined by the back surface (130).

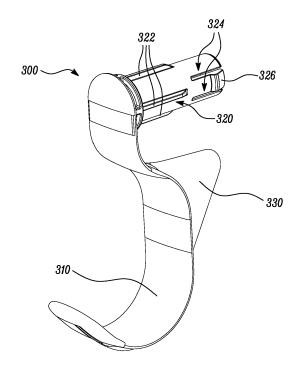


FIG. 3

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TECHNICAL FIELD

[0001] The present disclosure relates to a tool holder. More particularly, the present disclosure pertains to a tool holder for holding one or more tools.

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BACKGROUND

[0002] A tool holder is used to support and store a tool when the tool is not in use. Further, the tool holder may be used to display the tool in promotional activities, for example, at shops. Many different types of tool holders for supporting, storing, or displaying the tool are known. Some of the known tool holders allow storage and support of the tools by hanging the tools in a vertical orientation. However, the hanging tools have the tendency to rotate due to the load of implements attached to these tools. Further, supporting portions on which the tools are hanged may bend due to the load transverse by the tools. This may lead to an accidental dislodging of the tools. Further, this may interfere with the space occupied by other tools stored in or with the tool holder.

[0003] Thus, there is a need of an improved tool holder which allows simple, convenient, and safe storage of at least one tool. Further, the tool holder may allow for unobstructed storage of various tools stored in or with the tool holder

SUMMARY

[0004] In view of the above, it is an objective of the present invention to solve or at least reduce the drawbacks discussed above. The objective is at least partially achieved by a tool holder. The tool holder includes a tool holder body defining a front surface and a back surface. The front surface defines at least one tool holder cavity extending from the front surface towards the back surface. The back surface defines a plane parallel to and coinciding with the back surface. A plug element is adapted to be coupled with the at least one tool holder cavity. The plug element includes a coupling element and a connecting element coupled to the coupling element. The coupling element is adapted to be received within the at least one tool holder cavity and the connecting element is adapted to allow connection of at least one implement to the plug element. The tool holder is characterized in that the plug element further includes a spacer element coupled to the connecting element. The spacer element extends away from the connecting element. Further, the spacer element extends between the connecting element and the plane defined by the back surface.

[0005] Thus, the present disclosure provides the simple, convenient, and user-friendly tool holder that stores or hangs wide variety of different tools or tool accessories without any mutual obstruction. The tool holder stores or hangs tools or tool accessories using metal rods and plug

elements that further includes connecting elements. The plug elements are provided with the spacer elements to improve the stability of the plug elements or the connecting elements against any sort of bend, distortion, or rotation due to the weight or load of the stored or hanged tools or tool accessories.

[0006] According to an embodiment of the present disclosure, the connecting element is a hook. However, in some embodiments, the connecting element is a basket. The connecting element may be such that it may be able to hang or store at least one tool or at least one tool accessory.

[0007] According to an embodiment of the present disclosure, the tool holder includes a plurality of holes for wall-mounting of the tool holder. Plurality of holes are drilled in the tool holder for wall-mounting of the tool holder. The plurality of holes may additionally be provided with wall-mounting option including one or more of a screw, nuts, and rivets.

[0008] According to an embodiment of the present disclosure, the spacer element is telescopic. The spacer element bridges a gap between the connecting element and the plane defined by the back surface (or a wall surface to which the tool holder is mounted) and provides stability to the plug element and in particular to the connecting element.

[0009] According to an embodiment of the present disclosure, the spacer element be hingedly coupled to the connecting element. The spacer element may be hingedly coupled to the connecting element such that the spacer element may be rotated to a correct orientation or position as per the requirement and may thereby be locked afterwards in the correct orientation or position.

[0010] Other features and aspects of this invention will be apparent from the following description and the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] The invention will be described in more detail with reference to the enclosed drawings, wherein:

FIG. 1 shows a front view of a coupling between a tool holder and a plug element, in accordance with an aspect of the present disclosure;

FIG. 2 shows a perspective view of a tool holder, in accordance with an aspect of the present disclosure; and

FIG. 3 shows a perspective view of a plug element, in accordance with an aspect of the present disclosure.

DESCRIPTION OF EMBODIMENTS

[0012] The present invention will be described more fully hereinafter with reference to the accompanying

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drawings, in which example embodiments of the invention incorporating one or more aspects of the present invention are shown. This invention may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein; rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art. For example, one or more aspects of the present invention may be utilized in other embodiments and even other types of structures and/or methods. In the drawings, like numbers refer to like elements.

[0013] Certain terminology is used herein for convenience only and is not to be taken as a limitation on the invention. For example, "upper", "lower", "front", "rear", "side", "longitudinal", "lateral", "transverse", "upwards", "downwards", "forward", "backward", "sideward", "left," "right," "horizontal," "vertical," "upward", "inner", "outer", "inward", "outward", "top", "bottom", "higher", "above", "below", "central", "middle", "intermediate", "between", "end", "adjacent", "proximate", "near", "distal", "remote", "radial", "circumferential", or the like, merely describe the configuration shown in the Figures. Indeed, the components may be oriented in any direction and the terminology, therefore, should be understood as encompassing such variations unless specified otherwise.

[0014] FIG. 1 illustrates a tool holder 100. The tool holder 100 is used to hold, support, or display at least one tool 200 or at least one tool accessory 210. The at least one tool 200 of the present disclosure is at least one garden tool 200 and the at least one tool accessory 210 is at least one handle 212 and at least one implement 214 of the at least one garden tool 200. The at least one implement 214 may be removably coupled to the at least one handle 210 to form the at least one tool 200. However, in actual implementation of the present disclosure, the tool holder 100 may store any other tool used for applications other than gardening without limiting the scope of present disclosure in any manner.

[0015] The tool holder 100 helps in properly organizing and storing the at least one tool 200 or the at least one tool accessory 210 when not in use. The proper organization or arrangement of the at least one tool 200 or the at least one tool accessory 210 on the tool holder 100 allows easy access of the at least one tool 200 or the at least one tool accessory 210 when required for use. Further, the tool holder 100 may be utilized in tool stores or shops for proper display of the at least one tool 200 or the at least one tool accessory 210 available for purchase.

[0016] The tool holder **100** may be manufactured using one or more of thermoplastic material, wood, or metal. However, the tool holder **100** may be manufactured using any other material as used or known in the art, without limiting the scope of the present disclosure.

[0017] With continued reference to FIG. 1 and further reference to FIG. 2, the tool holder 100 includes a tool holder body 110. The tool holder body 110 includes a

front surface 120, a back surface 130, a pair of side surfaces 140, a top surface 150 and a bottom surface 160. The top surface 150 and the bottom surface 160 define a length of the tool holder 100 along a longitudinal axis W-W'. The top surface 150 and the bottom surface 160 define the length of the tool holder **100** along a plane X-X' defined by the back surface **130**. The plane X-X' is parallel to the back surface **130.** Further, the plane X-X' coincides with the back surface 130. The pair of side surfaces 130 define a width of the tool holder 100 along a lateral axis Y-Y' of the tool holder 100. The longitudinal axis W-W' is perpendicular to the lateral axis Y-Y'. Further, the length of the tool holder 100 is preferably at least thrice the width (along the lateral axis Y-Y') of the tool holder 100. However, any other suitable relationship between the length and the width of the tool holder 100 may be used without limiting the scope of the present disclosure in any manner.

[0018] The front surface 120 includes a plurality of holes 122 for wall-mounting of the tool holder 100 along a wall surface. The plane X-X' defined by the back surface 130 may be the wall surface. Further, plurality of holes 122 are drilled in the tool holder 100 for wall-mounting of the tool holder 100 by any means known in the related art. The plurality of holes 122 may additionally be provided with wall-mounting option including one or more of a screw, nuts, and rivets.

[0019] In some embodiments, the wall-mounting option including one or more of a screw, nuts, and rivets may be integrally received on purchase with the tool holder **100**. Such integrated wall mounting option allows to easily mount the tool holder **100** on different installations such as a wall, a column, a post, and the like in horizonal, vertical or any other orientation as desired.

[0020] The back surface 130 of the tool holder 100 faces the installations when the tool holder 100 is mounted. In some embodiments, the tool holder 100 may be suspended on different installations using a plurality of brackets (not shown) provided on the back surface 130 of the tool holder 100. In some embodiments, the tool holder 100 may be permanently welded with the installation. In some embodiments, the tool holder 100 may be mounted on the installation using a plurality of belts attached on the back surface 130 of the tool holder 100 such that the plurality of belts may wrap upon the circular installation such as the post.

[0021] The pair of side surfaces 140 includes a plurality of cavities 142 (as shown in FIG. 2) along the lateral axis Y-Y'. The plurality of cavities 142 are adapted to hold a plurality of metal rods 144 (as shown in FIG. 1), i.e., one cavity 142 for one metal rod 144. The plurality of cavities 142 of the present disclosure are formed as four cavities 142 in a row-wise arrangement such as two cavities 142 are in a first row and remaining two cavities 142 are in a second row. The shape and size of two cavities 142 in the first row differ from shape and size of two cavities 142 in the second row. This type of arrangement allows the use of metal rods 144 of different dimensions. This

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type of arrangement further allows the use of metal rods **144** at different depths along the longitudinal axis W-W'. Same type of cavity arrangement, as discussed above may be implemented on the other side surface **140** of the tool holder **100**. However, any other arrangement of the plurality of cavities **142** is within the scope of the present disclosure.

[0022] In some embodiments, the plurality of cavities 142 may be through cavities such that the plurality of metal rods 144 inserted from one of the side surfaces 140 may pass through the width of the tool holder 100 along the lateral axis Y-Y'. In case of plurality of through cavities 142, some part of the plurality of metal rods 144 extends away from each of the two side surfaces or the pair of side surfaces 140.

[0023] Further, the plurality of metal rods 144 held in the plurality of cavities 142 are designed to hold or support the at least one handle 212 of the at least one tool 200. The at least one handle 212 may be manufactured from wood, aluminum, or other material without limiting the scope of the disclosure. The at least one handle 212 may be the regular handle or the telescopic handle. Further, the at least one handle 212 may include grips for properly holding the at least one handle 212 of the at least one tool 200. The grips may be provided at more than one location along the length of the at least one handle 212 as per the ergonomic requirements. The grips may preferably be manufactured from silicone. However, any other suitable material may be employed for manufacturing of the grips.

[0024] Each of the at least one handle 212 requires two metal rods 144 out of the plurality of metal rods 144 for proper support in storage position of the at least one handle 212. The two metal rods 144 required for support of one handle 212 may not necessarily be inserted or held in the plurality of cavities 142 arranged in the same row. However, it may be preferable to insert the two metal rods 144 required for support of one handle 212 in the plurality of cavities 142 arranged in the same row.

[0025] The at least one handle 212 includes at least one locking member 216 (as shown in FIG. 1) such the at least one locking member 216 removably hangs or takes support on one of the metal rods 144 out of two metal rods 144 required for support of the at least one handle 212. Further, the other metal rod 144 out of the two metal rods 144 with which the at least one locking member 216 does not engages may prevent the accidental dislodging of the at least one handle 212 by acting as a counter for the rotational torque of the at least one handle 212. Thus, at least one handle 212 extends along the longitudinal axis W-W' below the plurality of cavities 142 in a stable manner.

[0026] In some embodiments, the plurality of cavities 142 are formed proximate the top surface 150 of the tool holder 100. The plurality of cavities 142 proximate the top surface 150 of the tool holder 100 ensures that there is sufficient vertical extent of the tool holder 100 along the longitudinal axis W-W' below the plurality of cavities

142. This may serve as a counter against the gravity acting on the at least one tool 200 (or the at least one handle 212) which hangs onto the tool holder 100. Thus, the plurality of cavities 142 may be formed at any length along the longitudinal axis W-W' of the tool holder 100 such that a part of the at least one tool 200 (or the at least one handle 212) extends along the longitudinal axis W-W' and receives support from the side surfaces 140 of the tool holder body 110 of the tool holder 100.

[0027] In some embodiments, the at least a part of the at least one tool 200 below the plurality of cavities 142 responsible for its support is about 2 cm, or any other suitable value depending upon factors such as size, weight, profile, type of the at least one tool 200 or the tool holder 100. Thus, the part of the at least one tool 200 which extends along the longitudinal axis W-W' gets support from the tool holder body 110, particularly the side surfaces 140 of the tool holder 100. This eliminates the general tendency of the at least one tool 200 (or the at least one handle 212) to hang obliquely and thus allows support and proper hanging of the at least one tool 200 (or the at least one handle 212) substantially vertically on the tool holder 100.

[0028] With continued reference to FIGS. 1 and 2, the front surface 120 of the tool holder body 110 of the tool holder 100 is adapted to receive at least one tool 200 (or the at least one implement 214). The at least one implement 214 may be one or more of a shovel, a rake, a plough, a spade, a hoe, a weed puller, a broom, a brush, ice scraper, a trowel, a sprayer, or the like.

[0029] The front surface 120 of the tool holder body 110 defines at least one tool holder cavity 124. The at least one tool holder cavity 124 is defined along the length of the tool holder 100. The at least one tool holder cavity 124 is defined along the longitudinal axis W-W'. Further, an axis Z-Z' (as shown in FIG. 2) perpendicular to the longitudinal axis W-W' and the lateral axis Y-Y' passes through the at least one tool holder cavity 124. The at least one tool holder cavity 124 extends from the front surface 120 towards the back surface 130 of the tool holder body 110.

[0030] The at least one tool holder cavity 124 may preferably have depth equivalent to the depth of the tool holder 100 along the Z-Z' axis. In some embodiments, the at least one tool holder cavity 124 may taper along its depth. In some embodiments, the at least one tool holder cavity 124 may preferably have circular shape. However, the at least one tool holder cavity 124 may have any other shape without limiting the scope of the present disclosure.

[0031] In some embodiments, the material of the at least one tool holder cavity 124 is similar to the material of the tool holder body 110. In some embodiments, the material of the at least one tool holder cavity 124 is different from the tool holder body 110.

[0032] In some embodiments, the at least one tool holder cavity 124 is integrally formed the tool holder body 110 by any suitable manufacturing means known in the

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related art. In some embodiments, the at least one tool holder cavity **124** is formed as a separate element to be attached to the tool holder body **110** by any suitable means known in the related art after respective manufacturing of the tool holder body **110** and the at least one tool holder cavity **124**.

[0033] Further, the at least one tool holder cavity 124 include a set of ribs 126. The set of ribs 126 includes a plurality of annular ribs in the at least one tool holder cavity 124. The set of ribs 126 may at least partially extend along the depth of the at least one tool holder cavity 124. The ribs of the set of ribs 126 may have any suitable shape without limiting the scope of the present disclosure in any manner. The set of ribs 126 of the at least one tool holder cavity 124 are operatively coupled to a plug element 300 (as shown in FIGS. 1 and 3).

[0034] The plug element 300 (as shown in FIG. 1) is adapted to be coupled with the at least one tool holder cavity 124. The plug element 300, as illustrated in detail in FIG. 3, includes a coupling element 320 and a connecting element 310 coupled to the coupling element 320. In some embodiments, the coupling between the connecting element 310 and the coupling element 320 is removable coupling. In some embodiments, the coupling between the connecting element 310 and the coupling element 320 is permanent coupling. Any known suitable coupling method may be used for the removable or permanent coupling of the connecting element 310 and the coupling element 320 without limiting the scope of the present disclosure.

[0035] The coupling element 320 is adapted to be received within the at least one tool holder cavity 124. The coupling element 320 includes a set of ribs 322. The set of ribs 322 includes a plurality of annular ribs on the circumference or perimeter of the coupling element 320. The set of ribs 322 partially extend along the length of the coupling element 320. The set of ribs 322 may have shape similar or different to the first set of ribs 126. The coupling element 320 further includes a plurality of annular fingers 324 towards its end. Some (or all) of the plurality of fingers 324 include protrusions 326. The protrusions 326 may help in removable but secure coupling between the at least one tool holder cavity 124 and the coupling element 320. The protrusions 326 may help in friction or snap on coupling between the at least one tool holder cavity 124 and the coupling element 320. The protrusions 326 may slide along the depth of the at least one tool holder cavity 124 until the coupling element 320 is at least partially received within the at least one tool holder cavity 124 to form secure coupling.

[0036] Further, when the coupling element 320 is received within the at least one tool holder cavity 124, the set of ribs 126 and the set of ribs 322 engage together to allow the plug element 300 to removably couple with the at least one tool holder cavity 124.

[0037] With continued reference to FIG. 3, the connecting element 310 (as already referred above) is adapted to allow connection of the at least one implement 214 to

the plug element **300**. In some embodiments, the connecting element **310** is a hook (as shown in **FIGS**. **1** and **3**). The hook may be used to hang the at least one tool **200**, or the at least one tool accessory **210** from the tool holder **100**. The at least one tool **200**, or the at least one tool accessory **210** may include a loop surface for insertion in the hook. In some embodiments, the connecting element **310** may be a basket. The basket may be used to store the at least one tool **200**, or the at least one tool accessory **210**. However, in actual implementation of the present disclosure, the connecting element **310** may be any component that may assist in hanging, supporting, displaying, or storing the at least one tool **200**, or the at least one tool accessory **210**.

[0038] In some embodiments, the connecting element 310 may be such that it may be capable of receiving different types of commonly known and available implements 214 thereby adding versatility to the tool holder 100. In some embodiments, the connecting element 310 may be a hollow cylindrical body (not shown) provided with the coupling element 320 such that the hollow cylindrical body may be inclined in a substantially upward direction away from the direction of ground surface. The hollow cylindrical body may serve to support, or store the at least one tool 200, or the at least one tool accessory 210. However, in actual implementation, the connecting element 310 may be a hollow body of any other shape provided with the coupling element 320. For example, the at least one tool holder cavity 124 may be three tool holder cavities 124. One of the cavities from the three tool cavities 124 proximate to the bottom surface 160 may receive the plug element 300 with the connecting element 310 as the hook, or the basket coupled with the coupling element 320. One of the two remaining cavities from the three tool cavities 124 may receive the plug element 300 with the connecting element 310 as the hollow cylindrical body coupled with the coupling element 320 while the other cavity may receive the plug element 300 with the connecting element 310 as a hollow spherical body coupled with the coupling element 320.

[0039] Further, the plug element 300 includes a spacer element 330 (as shown in FIG. 3) coupled to the connecting element 310. The spacer element 330 extends away from the connecting element 310. The spacer element 330 at least partially extends between the connecting element 310 and the plane X-X' defined by the back surface 130 of the tool holder body 110. The spacer element 330 bridges a gap between the connecting element 310 and the back surface 130. The spacer element bridges the gap between the connecting element 310 and the plane X-X' when the coupling element 320 is inserted in the at least one tool holder cavity 124.

[0040] The spacer element 330 may provide support and stability to the plug element 300 and particularly to the connecting element 310 when the at least one tool 200, or the at least one tool accessory 210 is hanged with (in case of the hook), or, stored into (in case of the basket) the connecting element 310. The spacer element

330 may prevent the plug element 300 and particularly the connecting element 310 from getting bent or getting out of shape due to the weight of the hanged or stored the at least one tool 200, or the at least one tool accessory 210.

[0041] Further, as demonstrated in FIG. 1, if there are handles 212 hanged in the side surfaces 140, they may make use of the free space created by virtue of the spacer element 330 and may be stored or hanged freely without any sort of obstruction from the connecting element 310 or the at least one tool 200, or the at least one tool accessory 210 hanged or stored with the tool holder 100 by use of the connecting element 310. An operator may remove the stored handles 212 from the tool holder 100 without disturbing the connecting element or the stored or hanged tools or tool accessories.

[0042] In some embodiments, the spacer element 330 may be permanently integrated or coupled with the connecting element 310. In some embodiments, the spacer element 330 may be removably attached with the connecting element 310. In some embodiments, the material user for manufacturing of the spacer element 330 may be same as the material used for manufacturing of the connecting element 310. In some embodiments, the material user for manufacturing of the spacer element 330 may be different from the material used for manufacturing of the connecting element 310. In some embodiments, the material user for manufacturing of the spacer element 330 is hard and rigid material such that it may provide stability to the plug element 300 and particularly to the connecting element 310 and may not deform itself due to the weight of the hanged or stored the at least one tool 200, or the at least one tool accessory 210.

[0043] In some embodiments, the spacer element 330 may be telescopic to conveniently bridge variable gaps that may be present between the connecting element 310 and the plane X-X'.

[0044] In some embodiments, there may be more than one spacer elements 330 permanently or removably coupled with the connecting element 310 to further strengthen the stability of the plug element 300 or the connecting element 310.

[0045] In some embodiments, the spacer element 330 may be slidable along the surface of the connecting element 310 to maneuver the spacer element 330 to the correct position on the connecting element 310 as per the requirement. In some embodiments, the spacer element 330 may be hingedly coupled to the connecting element 310 such that the spacer element 330 may be rotated to a correct orientation or position as per the requirement and may thereby be locked afterwards in the correct orientation or position.

[0046] In some embodiments, the ends of the spacer element 330 may be provided with a rubber like or foam like material such that the spacer element **330** may not be able to temper the wall surface to which the tool holder 100 may be mounted.

[0047] Thus, the present disclosure provides the safe,

simple, convenient, and user-friendly tool holder 100 that stores or hangs wide variety of different tools 200 or tool accessories 210 without any mutual obstruction. The tool holder 100 stores or hangs tools 200 or tool accessories 210 using metal rods 144 and plug elements 300 that further includes connecting elements 310. The plug elements 300 are provided with the spacer elements 330 to improve the stability of the plug elements 300 or the connecting elements 310 against any sort of bend, distortion, or rotation due to the weight or load of the stored or hanged tools 200 or tool accessories 210.

[0048] In the drawings and specification, there have been disclosed preferred embodiments and examples of the invention and, although specific terms are employed, they are used in a generic and descriptive sense only and not for the purpose of limitation of the scope of the invention being set forth in the following claims.

LIST OF ELEMENTS

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[0049	1
100	Tool Holder
110	Tool Holder Body
120	Front Surface
122	Holes
124	Tool Holder Cavity
126	Ribs
130	Back Surface
140	Side Surface
142	Cavity
144	Metal Rod
150	Top Surface
160	Bottom Surface
200	Tool
210	Tool Accessory

212 Handle

Implement 214

216 Locking Member 300 Plug Element

310 Connecting Element 320 Coupling Element

322 Ribs 324 Fingers 326 **Protrusions**

330 Spacer Element

X-X' Plane Y-Y' Lateral Axis W-W' Longitudinal Axis

Z-Z' Axis

Claims

1. A tool holder (100) comprising:

a tool holder body (110) defining a front surface

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(120) and a back surface (130), wherein the front surface (120) defines at least one tool holder cavity (124) extending from the front surface (120) towards the back surface (130), and wherein the back surface (130) defines a plane (X-X') parallel to and coinciding with the back surface (130);

a plug element (300) adapted to be coupled with the at least one tool holder cavity (124), the plug element (300) including:

a coupling element (320) adapted to be received within the at least one tool holder cavity (124); and

a connecting element (310) coupled to the coupling element (320), wherein the connecting element (310) is adapted to allow connection of at least one implement (214) to the plug element (300);

characterized in that:

the plug element (300) further comprises a spacer element (330) coupled to the connecting element (310), wherein the spacer element (330) extends away from the connecting element (310), and wherein the spacer element (330) extends between the connecting element (310) and the plane (X-X') defined by the back surface (130).

- 2. The tool holder (100) of claim 1, wherein the connecting element (310) is a hook.
- **3.** The tool holder **(100)** of claim 1-2, wherein the connecting element **(310)** is a basket.
- **4.** The tool holder **(100)** of any of the preceding claims, wherein the tool holder **(100)** includes a plurality of holes **(122)** for wall-mounting of the tool holder **(100)**.
- **5.** The tool holder **(100)** of claim 1, wherein the spacer element **(330)** is telescopic.
- 6. The tool holder (100) of claim 5, wherein the spacer element (330) bridges a gap between the connecting element (310) and the back surface (130).
- 7. The tool holder (100) of claim 5-6, wherein the spacer element (330) be hingedly coupled to the connecting element (310).

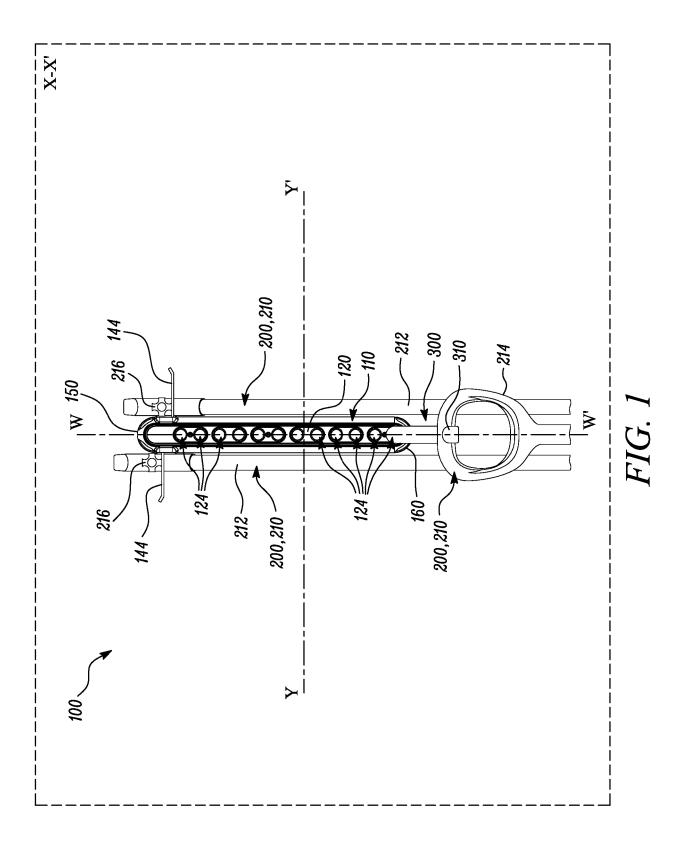
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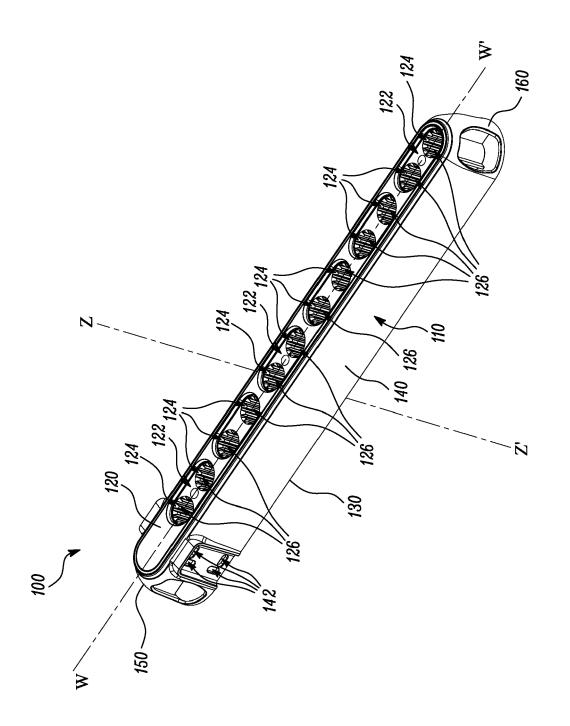
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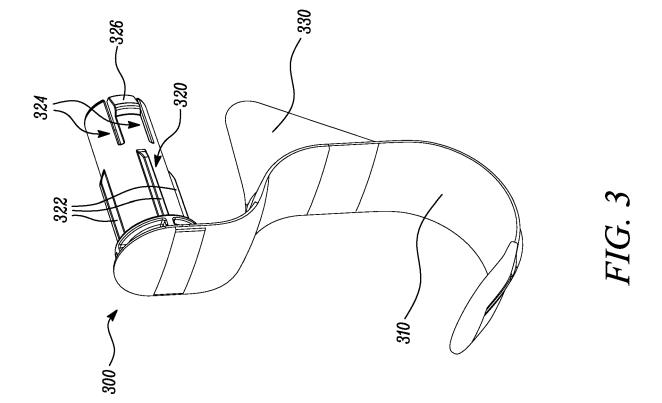
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25-07-2022

10			Patent document ed in search report		Publication date		Patent family member(s)		Publication date
		EP	2861386	В1	16-01-2019	AU	2013277825		18-09-2014
						CN	104203501		10-12-2014
15						DK	2861386		25-03-2019
, 0						EP	2861386		22-04-2015
						HK	1199632		10-07-2015
						NZ	630322		29-07-2016
						PL	2861386		31-07-2019
						RU	2014146713		10-08-2016
20						SE	1250650		20-12-2013
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