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(54) **VEHICLE TOOL AND PARTS HOLDING TRAY**

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(57) **ABSTRACT**

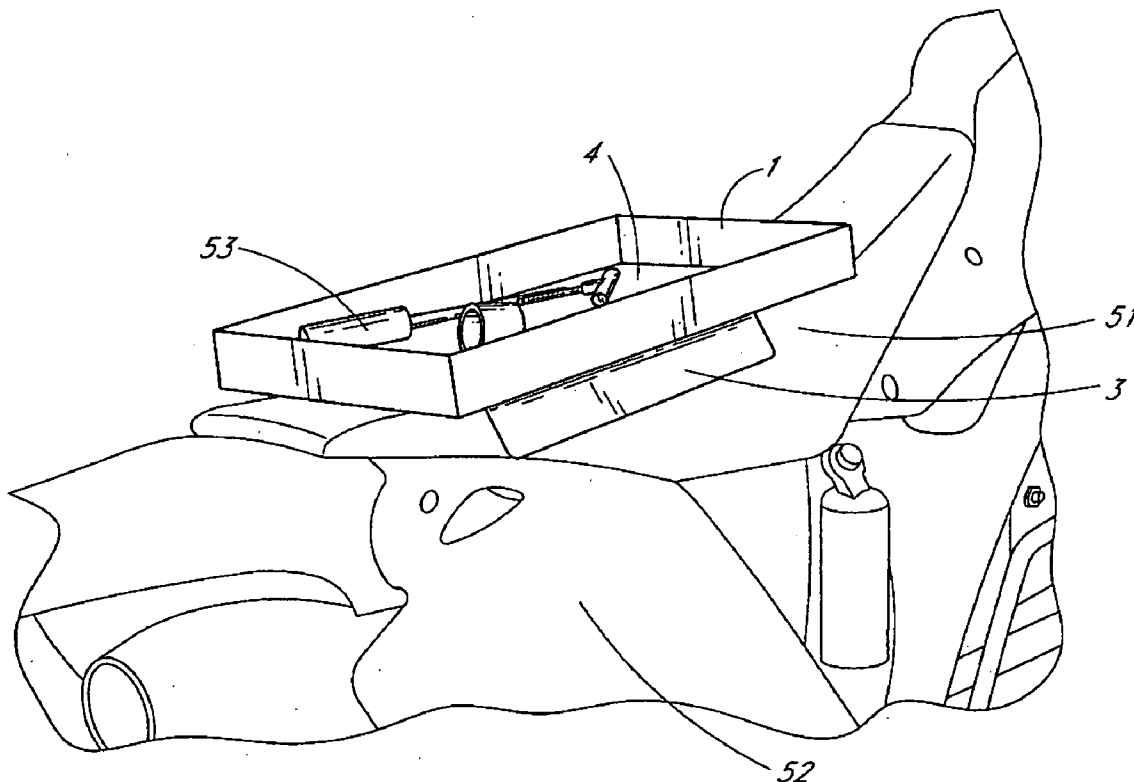
A tool and parts holding tray comprises a tray portion and at least two brackets. The tray portion comprises a bottom plate and side walls, the bottom plate and the sidewalls forming a receiving portion on one side of the bottom plate. The at least two brackets are attached to the tray portion on another side of the bottom plate, and are adapted for accommodating a portion of a vehicle. The brackets may be non-parallel to each other. Thus, a driver, rider, or a technician for a vehicle such as a motorcycle, a quad or three wheeler dirt bike, a street bike, a dual sport bike, snowmobile, personal watercraft and the like can put and get things like tools, parts, hardware, accessories, etc. within hands reach of the vehicle while repairing or inspecting the vehicle. A method of holding a tool or part to a portion of a vehicle.

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Related U.S. Application Data

(60) Provisional application No. 61/094,760, filed on Sep. 5, 2008.



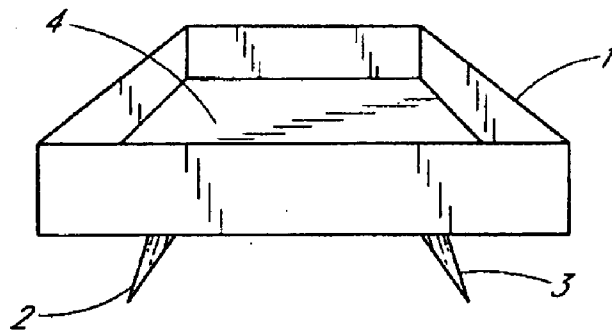


FIG. 1

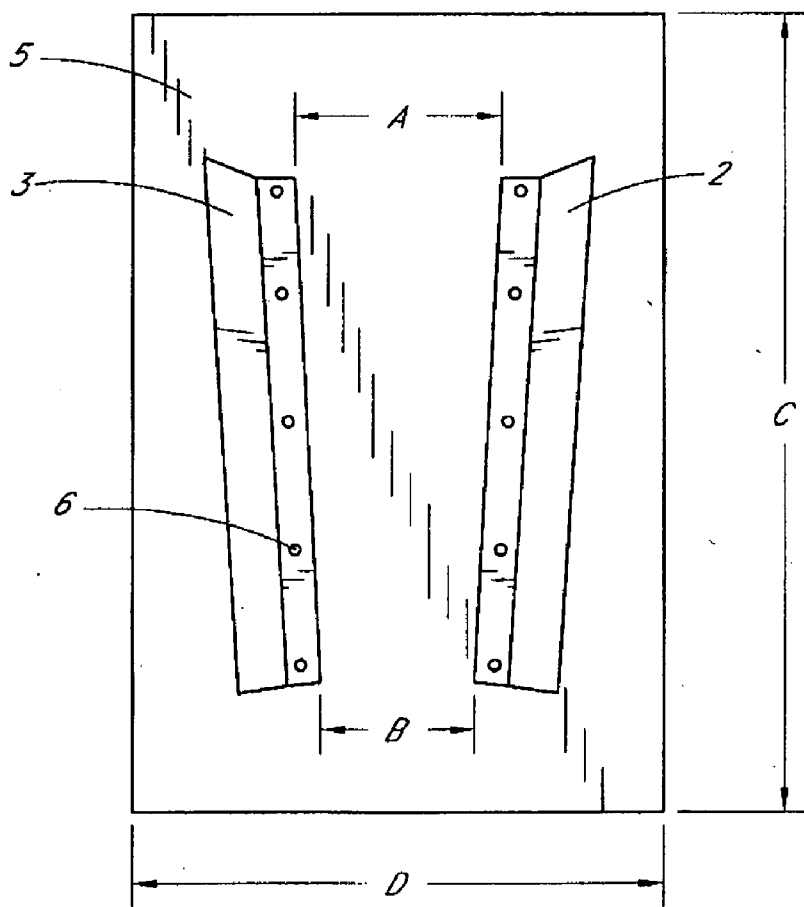


FIG. 2

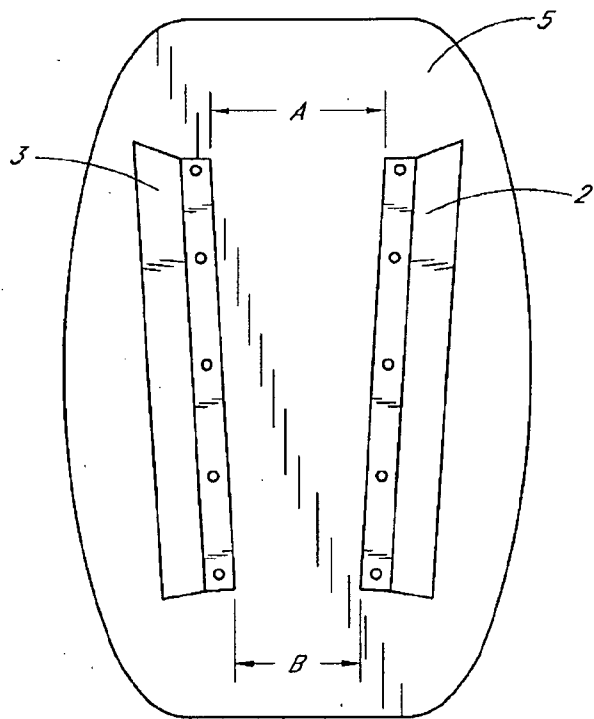


FIG. 3



FIG. 4A

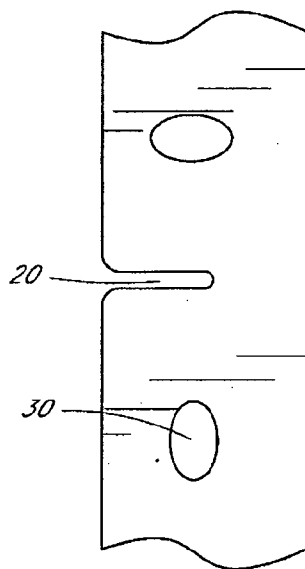


FIG. 4B

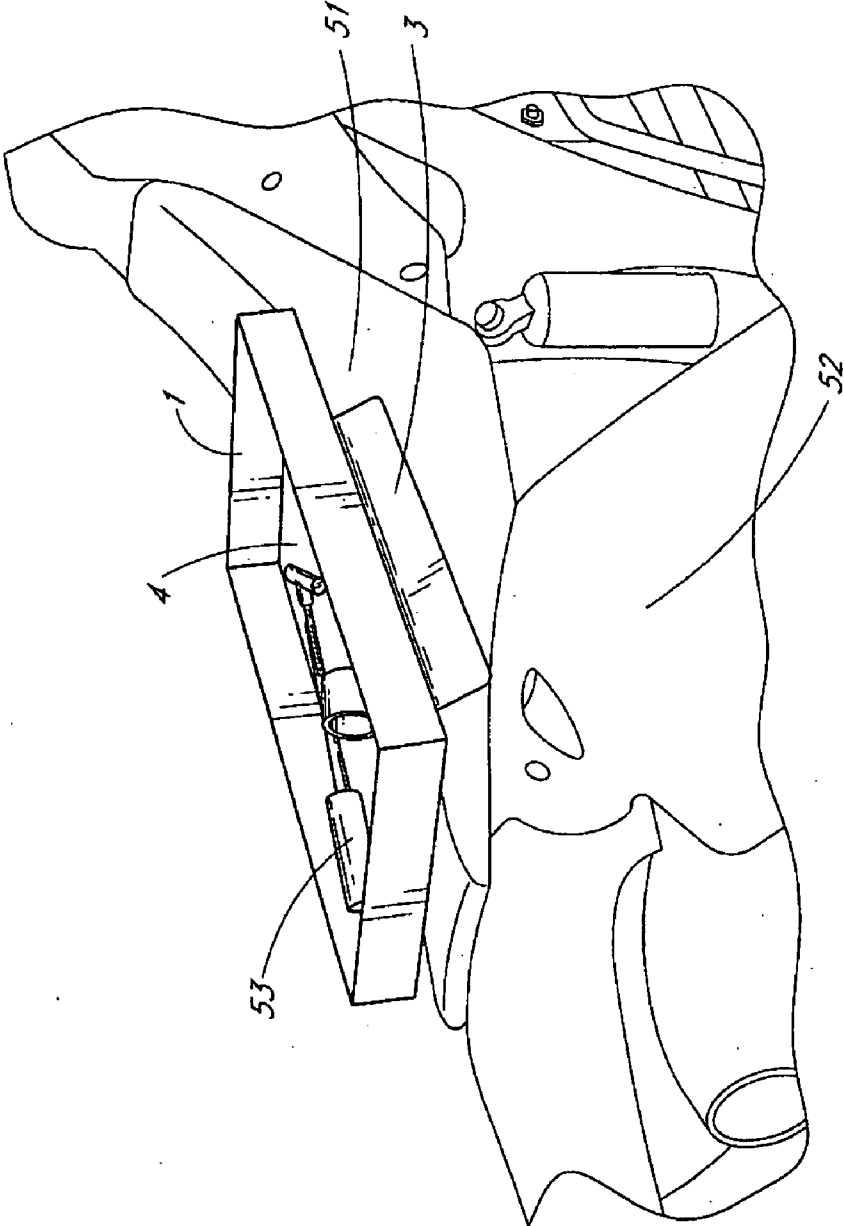


FIG. 5

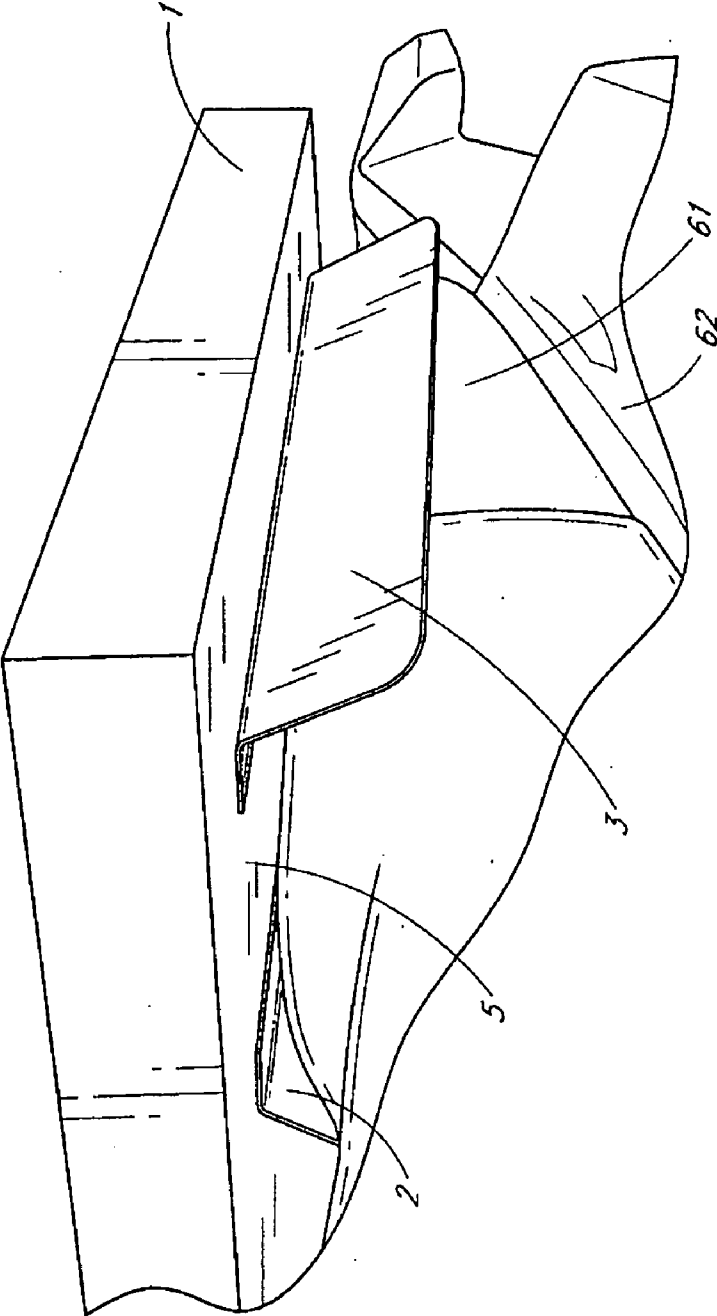


FIG. 6

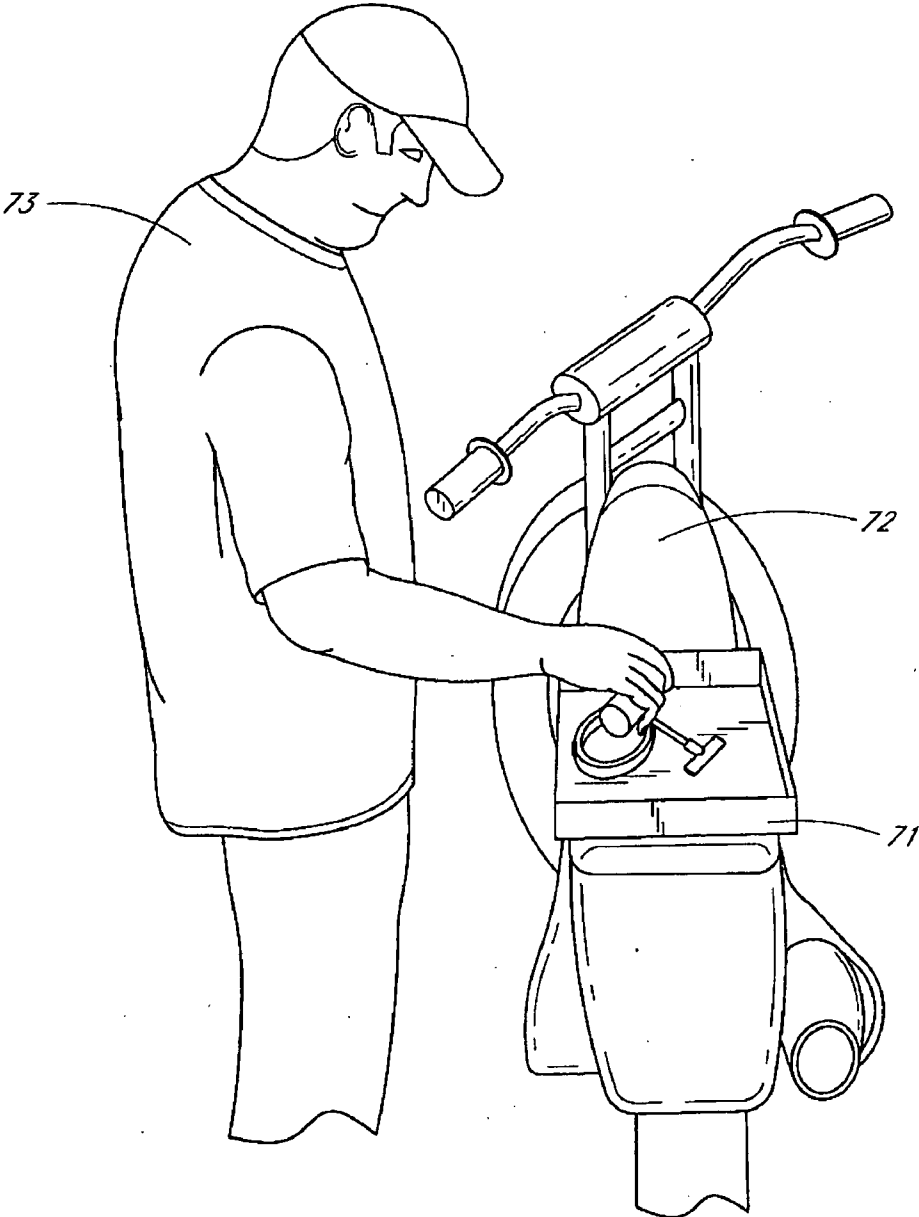


FIG. 7

VEHICLE TOO AND PARTS HOLDING TRAY

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Application No. 61/094,760, filed Sep. 5, 2008, which is incorporated herein by reference in its entirety.

BACKGROUND

[0002] 1. Field

[0003] The present application relates to a container that can be mounted on a vehicle, such as a motorcycle, a quad or three wheeler dirt bike, a street bike, a dual sport bike, snowmobile, personal watercraft, etc.

[0004] 2. Description of the Related Technology

[0005] In general, when a driver, rider, or a technician for a vehicle such as a motorcycle, a quad or three wheeler dirt bike, a street bike, a dual sport bike, snowmobile, personal watercraft, etc. is repairing or inspecting the vehicle, the driver, rider, or technician needs to get access to things like tools, parts, hardware, accessories, etc. within hands reach of the vehicle. These items are generally put on the ground or directly on the seat of the vehicle, which makes it inconvenient to get access to these things or they may roll off the seat into the dirt or under shop cabinetry. Sometimes parts are lost. Therefore, there is a need in the art to provide a device such that a driver, rider, or a technician for a vehicle such as a motorcycle, a quad or three wheeler dirt bike, a street bike, a dual sport bike, snowmobile, personal watercraft, etc. can get access to things like tools, parts, hardware, accessories, etc. within hands reach of the vehicle while the driver, rider, or technician is repairing or inspecting the vehicle.

SUMMARY

[0006] To fill this need, in certain embodiments, a seat mountable tool and parts holding tray is provided. The tool and parts holding tray may comprise a tray portion and one or more brackets extending from the bottom of the tray portion. The tray portion comprises a bottom plate and side walls, the bottom plate and the sidewalls forming a receiving portion on one side of the bottom plate. The brackets are attached to the tray portion on another side of the bottom plate, and are adapted for accommodating a portion of a vehicle, e.g., a seat of the vehicle. The brackets may extend non-parallel to each other. In some embodiments, the bracket positions may be adjustable.

[0007] In certain embodiments, a method of holding a tool or part to a portion of a vehicle is provided. The method may comprise resting a tool and parts holding tray on the portion of the vehicle. The tool and parts holding tray may comprise a tray portion and at least two brackets. The tray portion comprises a bottom plate and side walls. The bottom plate and the sidewalls form a receiving portion on one side of the bottom plate. The at least two brackets are attached to the tray portion on another side of the bottom plate. The method may additionally comprise accommodating the portion of the vehicle with the at least two brackets.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] In this disclosure:

[0009] FIG. 1 is a perspective view of a seat mountable tool and parts holding tray according to one embodiment of the present invention;

[0010] FIG. 2 is a bottom view of the seat mountable tool and parts holding tray as illustrated in FIG. 1;

[0011] FIG. 3 is a bottom view of a seat mountable tool and parts holding tray according to another embodiment of the present invention;

[0012] FIG. 4A is a sectional view of a seat mountable tool and parts holding tray according to a further embodiment of the present invention;

[0013] FIG. 4B illustrates examples of holes or openings formed on a segment of flat extension of the seat mountable tool and parts holding tray as illustrated in FIG. 4A;

[0014] FIG. 5 is an illustration of a seat mountable tool and parts holding tray that has been mounted on a vehicle;

[0015] FIG. 6 is another illustration of a seat mountable tool and parts holding tray that has been mounted on another vehicle; and

[0016] FIG. 7 is an illustration of a vehicle being inspected, onto which a tool and parts holding tray has been mounted.

DETAILED DESCRIPTION OF EMBODIMENTS

[0017] The following description is directed to certain embodiments of the invention. However, the invention can be embodied in a multitude of different ways. It should be apparent that the embodiments herein may be embodied in a wide variety of forms and that any specific structure, function, or both being disclosed herein is merely representative. An embodiment disclosed herein may be implemented independently of any other embodiments and two or more of these embodiments may be combined in various ways. For example, an apparatus may be implemented using any number of the embodiments set forth herein. In addition, such an apparatus may be implemented using other structure, functionality, or structure and functionality in addition to or other than one or more of the embodiments set forth herein.

[0018] In one embodiment, the apparatus comprises a tray portion and at least two brackets, which may project like fins from the tray portion. Brackets of other shapes are also feasible. The tray portion comprises a bottom plate and side walls. The bottom plate and the sidewalls form a receiving portion for receiving things like tools, parts, hardware, accessories, etc. The brackets are attached to the tray portion on the bottom, and are adapted for accommodating a portion of a vehicle, preferably a seat of a motorcycle, a quad or three wheeler dirt bike, a street bike, a dual sport bike, snowmobile, personal watercraft, etc. The at least two brackets are preferably non-parallel to each other in lengthwise extent and can accommodate various seats or other portions of different makes and models of vehicle. Using such a tool and parts holding tray, a driver, rider, or a technician for a vehicle such as a motorcycle, a quad or three wheeler dirt bike, a street bike, a dual sport bike, snowmobile, personal watercraft, etc. can put and get things like tools, parts, hardware, accessories, etc. in and from an enclosed or unenclosed but easily accessible place within hands reach of the vehicle while repairing or inspecting the vehicle. Such an apparatus prevents loss or misplacement of critical hardware and centralizes tools and hardware for timely adjustments and repair. The foregoing advantages make vehicle maintenance much easier.

[0019] FIG. 1 is a perspective view of a tool and parts holding tray according to one embodiment of the present invention. As illustrated in FIG. 1, the tool and parts holding tray comprises a tray portion and at least two brackets 2 and 3. The tray portion comprises a bottom plate 4 and sidewalls 1, which form a receiving portion on one side of the bottom plate

4. In one example, the sidewalls 1 are about one and a half inches high. The receiving portion thus defined can be used to hold various things like tools, parts, hardware, accessories, etc. In one example, the sidewalls 1 are formed integrally with the bottom plate 4. In another example, the sidewalls 1 are formed independently of the bottom plate 4 and then attached to the bottom plate 4 by various manners, such as welding, riveting, crimping, gluing, etc. The corners of the sidewalls can be manufactured in various manners and not limited to welding, riveting, crimping and gluing. Optionally, a lid (not illustrated in FIG. 1) may be provided so that the receiving portion of the tray portion can be covered wholly or partially. The lid may be hinged to one of the sidewalls 1.

[0020] As illustrated in FIG. 1, two brackets 2 and 3 are attached to the tray portion on another side of the bottom plate 4. The two brackets 2 and 3 are adapted for accommodating a portion of a vehicle, preferably a seat of a motorcycle, a quad or three wheeler dirt bike, a street bike, a dual sport bike, snowmobile, personal watercraft, etc. As illustrated, the outward extension of each of the two brackets 2 and 3 from the bottom of the tray portion may form an angle with the bottom plate 4, but can also be perpendicular to the bottom plate 4.

[0021] FIG. 2 is a bottom view of the tool and parts holding tray illustrated in FIG. 1. As illustrated in FIG. 2, the two brackets 2 and 3 are attached to the tray portion on an opposite side 5 of the bottom plate 4. In one example, the two brackets 2 and 3 are formed integrally with the tray portion. In another example, the two brackets 2 and 3 are formed independently of the tray portion and then attached to the bottom plate 4 of the tray portion by various manners, such as welding, riveting, crimping, gluing, etc. In the embodiment as illustrated in FIG. 2, the brackets 2 and 3 are attached to the opposite side 5 of the bottom plate 4 using rivets 6. The brackets 2 and 3 can be secured to the opposite side 5 of the bottom plate 4 in a fixed manner; they can also be attached to the opposite side 5 of the bottom plate 4 in various adjustable manners, such that, for example, the distances A and B of FIG. 2 can be adjusted. In either case, the brackets can accommodate various seats of different makes and models of vehicle, preferably a seat of a motorcycle, a quad or three wheeler dirt bike, a street bike, a dual sport bike, snowmobile, personal watercraft, etc. Examples of such vehicles include Honda CRF450, Honda CRF250, Kawasaki KXF450, Kawasaki KXF250, Suzuki RMZ450, Suzuki RMZ250, KTM SXF450, KTM SXF250, Yamaha YZF450, Yamaha YZF250, etc. Herein, Honda, Kawasaki, Suzuki, KTM, and Yamaha are trademarks of corresponding vehicle manufacturers. All foregoing products are commercially available on market.

[0022] One method of attaching the brackets 2 and 3 to the opposite side 5 of the bottom plate 4 in an adjustable manner would be to have studs on the brackets that extend through slots in the bottom of the tool tray. Wing-nuts could engage the studs on the other side of the tray to hold the brackets in place after adjustment in the slots. In other embodiments, more than two brackets can be formed on or attached to the opposite side 5 of the bottom plate 4.

[0023] In some embodiments, the two brackets 2 and 3 are separated from each other by about 5½ inches, illustrated as distance A, at one terminal portion of the brackets 2 and 3, and by about 4¾ inches, illustrated as distance B, at another terminal portion of the brackets 2 and 3. In the illustrated embodiment, the bottom plate 4 is substantially rectangular. The size of the bottom plate 4 may be about sixteen inches long, illustrated by distance C, and about nine inches wide,

illustrated by distance D. These dimensions have proven useful for securing the tool and parts holding tray to many currently utilized motorcycle seats. However, the bottom plate 4 and the brackets 2 and 3 can also have other sizes or positional relationship so that the tool and parts holding tray can accommodate seats or other portions of various vehicles, such as seats of various motorcycles, quads, snowmobile, personal watercraft, and the like. This includes all after market seats as well.

[0024] The bottom plate 4, sidewalls 1, and brackets 2 and 3 as illustrated in FIGS. 1 and 2 can be of a wide variety of materials. In one example, any one of them is made out of a quality grade aluminum. In other examples, any one of them is made out of plastic, steel, wood, stainless steel, ferrous metals or composite materials. However, the bottom plate 4, sidewalls 1, and brackets 2 and 3 are not limited to these materials.

[0025] In the embodiment as illustrated by FIGS. 1 and 2, the tool and parts holding tray can be placed onto a portion of a vehicle, for example, onto a seat of a motorcycle, a quad or three wheeler dirt bike, a street bike, a dual sport bike, snowmobile, or personal watercraft, for placing things like tools, parts, hardware, accessories, etc. within hands reach of the vehicle while the driver, rider, or the technician is repairing or inspecting the vehicle. Although securement to the seat of the vehicle has been found especially advantageous, the tool and parts holding tray can also be placed on the rear fender of such vehicles, on the frame or sub frame of such vehicles, or on or under various stands that are sold throughout the industry. These stands are mainly used for the motorcycle to sit on. The tool and parts holding tray can also be placed on the ground.

[0026] FIG. 3 illustrates a bottom view of a tool and parts holding tray according to another embodiment of the present invention. As illustrated in FIG. 3, an opposite side 5 of the bottom plate 4 has two curved sides and round apexes. The bottom plate 4 may also comprise other contours so long as the bottom plate 4 and the sidewalls 1 form a receiving portion to hold things like tools, parts, hardware, accessories, etc.

[0027] A mat or lining may be put into or formed inside the receiving portion, on the bottom plate 4 as illustrated in FIG. 1 (not illustrated in FIG. 3). The mat or lining can be of different shapes and/or textures and of different materials including rubber, vinyl, etc. and is not limited to either. The mat or lining of the tool and parts holding tray can keep things like tools, parts, hardware, accessories, etc. that have been placed inside the receiving portion clean and scratch free.

[0028] The tool and parts holding tray, at least the receiving portion, can be magnetized so that magnetic materials placed inside the receiving portion stick to the bottom plate 4 or sidewalls 1 of the tray portion and cannot freely roll or slide around.

[0029] FIG. 4A is a sectional view of a tray portion (brackets omitted) of a tool and parts holding tray according to a further embodiment of the present invention. As illustrated in FIG. 4, at least one of the sidewalls 1 comprises a flat extension 10 extending away from the receiving portion formed by the sidewalls 1 and the bottom plate 4. In one embodiment, holes or openings are formed, e.g., by drilling, on the flat extension 10 such that tools like screw drivers, pliers, knives, files, hammers, and wrenches can be accommodated in the holes or openings formed on one or more flat extensions 10.

[0030] FIG. 4B illustrates some examples of the holes or openings formed on one or more flat extensions 10 of the tool and parts holding tray as illustrated in FIG. 4A. FIG. 4B

illustrates a segment of the flat extension **10** only. As illustrated in FIG. 4B, the holes or openings may comprise different shapes or contours. A hole or opening may comprise an open contour (e.g., the hole or opening **20**) or a closed contour (e.g., the hole or opening **30**) with respect to the outer edge of the flat extension **10**.

[0031] The tool and parts holding tray can also have protective materials applied to the bottom or the inside, such as by spray coating. The color of the tool seat may also vary throughout. The colors can be painted on and are not limited to application. They can also be powder coated.

[0032] FIG. 5 is an illustration of a seat mountable tool and parts holding tray that has been mounted on a vehicle. As illustrated in FIG. 5, the tool and parts holding tray has been mounted on the seat **51** of a vehicle **52**, in which the bracket **3** on one side of the seat **51** and the bracket **2** (not illustrated) on another side of the seat **51** accommodate the seat **51** so that the tool and parts holding tray is securely mounted or placed on the seat **51** of the vehicle **52**. Also as illustrated in FIG. 5, a piece of hardware **53** is held in the receiving portion as defined by the bottom plate **4** and the sidewalls **1** of the tool and part holding tray.

[0033] FIG. 6 is another illustration of a seat mountable tool and parts holding tray that has been mounted on another vehicle. As illustrated in FIG. 6, the tool and parts holding tray has been mounted on a portion **61** of a vehicle **62**, in which the brackets **2** and **3** of the tool and parts holding tray accommodate the portion **61** of the vehicle **62**. Also as illustrated in FIG. 6, an opposite side **5** of a bottom plate of the tool and parts holding tray rests on the top of the portion **61** of the vehicle **62**. In the receiving portion (not illustrated) as defined by the bottom plate and the sidewalls **1** of the tool and parts holding tray, things like tools, parts, hardware, accessories, etc. can be put and held.

[0034] In addition to seat mounting, the tool and parts holding tray can be attached to other parts of the vehicle. In some cases, removal of the seat is desired. With the above described design, the tool and parts holding tray can be rotated 180 degrees, and will in many cases fit well on the sub-frame underneath the seat. In many cases, the design is also suitable for resting securely on the rear fender.

[0035] FIG. 7 is an illustration of a vehicle being inspected, onto which a tool and parts holding tray has been mounted. As illustrated in FIG. 7, the tool and parts holding tray **71** has been mounted on a portion of the vehicle **72**; tools, parts, hardware, accessories, etc. can be put and held in the tool and parts holding tray; a person **73** is inspecting the vehicle **72**. Such a person can get access to things like tools, parts, hardware, accessories, etc. that have been placed in the tool and parts holding tray within hands reach of the vehicle **72**.

[0036] The tool and parts holding tray as illustrated and described above can be used at various places, including vehicle shops, home or office garages, roadsides, beaches, competition fields, etc.

[0037] Although this invention has been disclosed in the context of certain embodiments and examples, the present invention extends beyond the specifically disclosed embodiments to other alternative embodiments and/or uses and obvious modifications and equivalents thereof. In addition, while several variations have been shown and described in detail, other modifications, which are within the scope of this disclosure, will be readily apparent. It is also contemplated that various combinations or sub-combinations of the specific features and aspects of the embodiments may be made. It

should be understood that various features and aspects of the disclosed embodiments can be combined with, or substituted for, one another in order to form varying modes of the disclosed embodiments. Thus, it is intended that the scope of the present invention herein disclosed should not be limited by the particular disclosed embodiments described above, but should be determined only by the claims that follow.

What is claimed is:

1. A tool and parts holding tray comprising:
 - a tray portion comprising a bottom plate and side walls, the bottom plate and the sidewalls forming a receiving portion on one side of the bottom plate; and
 - at least two brackets attached to the tray portion on another side of the bottom plate, adapted for accommodating a portion of a vehicle.
2. The tool and parts holding tray of claim 1, wherein the at least two brackets are adapted for accommodating a seat of the vehicle.
3. The tool and parts holding tray of claim 1, wherein the at least two brackets are separated from each other by about 4 and $\frac{3}{4}$ inches at one terminal portion of the at least two brackets and about 5 and $\frac{1}{2}$ inches at another terminal portion of the at least two brackets.
4. The tool and parts holding tray of claim 1, wherein the bottom plate comprises a substantially rectangular plate that has a side length of about 9 inches and another side length of about 16 inches.
5. The tool and parts holding tray of claim 2, wherein the bottom plate comprises a substantially oval plate that has a short axis of about 9 inches and a long axis of about 16 inches.
6. The tool and parts holding tray of claim 1, wherein at least one of the sidewalls comprises a flat extension to a side of the receiving portion.
7. The tool and parts holding tray of claim 6, wherein the flat extension comprises at least one opening, the at least one opening comprising a closed contour or an open contour.
8. The tool and parts holding tray of claim 1, wherein the at least two brackets are non-parallel to each other.
9. The tool and parts holding tray of claim 1, additionally comprising a third bracket attached to the tray portion on the other side of the bottom plate, adapted for accommodating the portion of the vehicle.
10. The tool and parts holding tray of claim 1, wherein at least one of the tray portion and the at least two brackets is made of a material selected from a group of aluminum, stainless steel, steel, ferrous metal, plastic, wood, and composite materials.
11. A method of holding a tool or part to a portion of a vehicle comprising:
 - resting a tool and parts holding tray on the portion of the vehicle, wherein the tool and parts holding tray comprises a tray portion and at least two brackets, wherein the tray portion comprises a bottom plate and side walls, the bottom plate and the sidewalls forming a receiving portion on one side of the bottom plate, and wherein the at least two brackets are attached to the tray portion on another side of the bottom plate; and
 - accommodating the portion of the vehicle with the at least two brackets.
12. The method of claim 11, wherein accommodating the portion of the vehicle comprises placing a seat of the vehicle between the at least two brackets.
13. The method of claim 11, additionally comprising placing the tool or part in the receiving portion.

14. The method of claim **11**, wherein at least one of the sidewalls comprises a flat extension to a side of the receiving portion, and the method additionally comprises placing the tool or part on the flat extension.

15. The method of claim **14**, wherein the flat extension comprises at least one opening, the at least one opening comprising a closed or open contour, and the placing the tool or part on the flat extension comprises placing the tool or part in the at least one opening.

16. The method of claim **11**, additionally comprising adjusting a positional relationship between the at least two

brackets based upon a contour of the portion of the vehicle so that the at least two brackets accommodate the portion of the vehicle in a substantially secured manner.

17. The method of claim **11**, wherein the tool and parts holding tray additionally comprises a third bracket attached to the tray portion on the other side of the bottom plate, and the method additionally comprising attaching the third bracket to the portion of the vehicle.

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