

EXTERNAL VEHICLE STORAGE CONTAINER

BACKGROUND

[0001] The embodiments herein relate generally to vehicle accessories, and more particularly, to an external vehicle storage container specifically designed to attach to the lug posts/spare tire apparatus on the rear/back gate of any vehicle.

[0002] Spare tires mounted on the rear/back gate of a vehicle are heavy. In fact, often the vehicles that include these rear mounted spare tires are oversized, and many occupants are unable to actually change a flat without help. As such, including such a spare tire on the rear of the vehicle is often unnecessarily adding weight to the vehicle.

[0003] Moreover, drivers are always looking for additional storage in their vehicles. While there are storage compartments and devices that attach to the rear-mounted spare tire, there does not currently exist a storage component that attaches to the vehicle in place of the spare tire.

[0004] Therefore, what is needed is an external vehicle storage container that attaches to the lug posts/spare tire apparatus in place of a spare tire to provide additional storage.

SUMMARY

[0005] Some embodiments of the present disclosure include an externally mounted storage compartment configured to attach to lug posts/spare tire apparatus in place of a spare tire on a rear gate of a vehicle. The externally mounted storage compartment may include a compartment body; a centrally positioned attachment compartment built into the compartment body, wherein the centrally positioning attachment compartment includes a plurality of lug nut orifices configured to engage with lug posts extending from the rear gate of the vehicle to removably secure the container body to the vehicle; and a door hingeably attached to a forward rim of the container body, the door configured to open and close with respect to the container body to provide access to and prevent access to an interior of the container body.

BRIEF DESCRIPTION OF THE FIGURES

[0006] Having thus described the invention in general terms, reference is now made to the accompanying figures, which show different views of different example embodiments.

DETAILED DESCRIPTION OF CERTAIN EMBODIMENTS

[0007] In the following detailed description of the invention, numerous details, examples, and embodiments of the invention are described. However, it will be clear and apparent to one skilled in the art that the invention is not limited to the embodiments set forth and that the invention

can be adapted for any of several applications.

[0008] The device of the present disclosure may be used as an external storage container for a vehicle and may comprise the following elements. This list of possible constituent elements is intended to be exemplary only, and it is not intended that this list be used to limit the device of the present application to just these elements. Persons having ordinary skill in the art relevant to the present disclosure may understand there to be equivalent elements that may be substituted within the present disclosure without changing the essential function or operation of the device.

[0009] The various elements of the device of the present disclosure may be related in the following exemplary fashion. It is not intended to limit the scope or nature of the relationships between the various elements and the following examples are presented as illustrative examples only.

[0010] By way of example, and referring to Figs. 1-3, some embodiments of the present disclosure include an externally mounted storage compartment 10 configured to attach to lug posts/spare tire apparatus in place of a spare tire on a vehicle 12, the externally mounted storage compartment 10 comprising a compartment body 1; a centrally positioned attachment compartment 12 built into the compartment body 1, wherein the centrally positioning attachment compartment 12 comprises a plurality of lug nut orifices configured to engage with lug nut studs extending from the rear gate of the vehicle 12 to removably secure the container body 1 to the vehicle 12; and a door hingeably attached to a forward rim of the container body 1, the door configured to open and close with respect to the container body 1 to provide access to and prevent access to an interior of the container body 1, as desired. In some embodiments, the storage compartment 10 may further comprise at least one removable shelf 6 removably inserted into the interior of the container body 1, wherein the removable shelf 6 may function as a partition and/or as an extra organizational structure within the container body 1.

[0011] As shown in the Figures, the door may comprise a right door 7 hingeably attached to a right edge of the outer rim of the container body 1 and a left door 4 hingeably attached to a left edge of the outer rim of the container body 1, wherein the right door 7 and the left door 4 are designed to meet in the middle of the container body 1. In such embodiments, a vertical front support bar 5 may extend along an upper height and a lower height of the container body 1, wherein the front support bar 5 may function as a partition and may also prevent the doors from being pushed into an interior of the container body 1. As shown in Fig. 2, in some embodiments, the

right door 7 and left door 4 may each comprise a semicircular cutout, wherein neither door is designed to cover the attachment component compartment 2. Rather, a separate cover 3 may removably engage with the attachment component compartment 2. In some embodiments, the cover 3 may include a brake light ring 8 attached to an outer edge thereof.

[0012] In embodiments, a lock 9 may also be operatively attached to the door, wherein the lock 9 may comprise a button or other mechanism to disengage the lock 9, allowing the door to open.

[0013] While the storage container 10 of the present disclosure is depicted in the drawings as being substantially rounded-square shape, the container 10 is not limited to any particular shape or size, so long as the container body 1 is configured to removably engage with the lug nut studs on the rear gate of the vehicle 12 in place of a spare tire. Also, while the container 10 is shown with a left door and a right door that meet in the middle, the container 10 is not limited to such configuration, and the use of any variation of door or doors is envisioned. The storage container 10 of the present disclosure may be made of any suitable materials and, in some embodiments, may comprise a lightweight, hard material, such as a plastic or metal, wherein the material is configured to withstand environmental factors, such as snow, rain, sun, and the like.

[0014] To use the device of the present disclosure, a person would remove the spare tire from the rear gate or rear end of their vehicle. The container body 1 may be positioned such that the lug nut orifices engage with the lug nut studs extending from the rear of the vehicle 12, and lug nuts may be tightened from an interior of the attachment component compartment 2 to secure the container body 1 to the vehicle 12. In embodiments, the back plate of the container body 1 may comprise additional strength structure and support to provide solid attachment to the vehicle. Once the container body 1 is secure, the cover 3 may be placed over the attachment component compartment 2 to conceal the lug nuts. The door(s) may then be open, closed, locked, or unlocked, and items may be stored within the container body. Thus, the storage compartment 10 of the present disclosure may function as an alternative to a vehicle spare tire and may offer a lightweight option to increase vehicle fuel efficiency by lowering overall weight while simultaneously increasing vehicle storage space.

[0015] Persons of ordinary skill in the art may appreciate that numerous design configurations may be possible to enjoy the functional benefits of the inventive systems. Thus, given the wide variety of configurations and arrangements of embodiments of the present invention

the scope of the invention is reflected by the breadth of the claims below rather than narrowed by the embodiments described above.

WHAT IS CLAIMED IS:

1. An externally mounted storage compartment configured to attach to lug posts/spare tire apparatus in place of a spare tire on a rear gate of a vehicle, the externally mounted storage compartment comprising:

a compartment body;

a centrally positioned attachment compartment built into the compartment body, wherein the centrally positioning attachment compartment comprises a plurality of lug nut orifices configured to engage with lug posts extending from the rear gate of the vehicle to removably secure the container body to the vehicle; and

a door hingeably attached to a forward rim of the container body, the door configured to open and close with respect to the container body to provide access to and prevent access to an interior of the container body.

ABSTRACT

An externally mounted storage compartment configured to attach to lug posts/spare tire apparatus in place of a spare tire on a rear gate of a vehicle may include a compartment body; a centrally positioned attachment compartment built into the compartment body, wherein the centrally positioning attachment compartment includes a plurality of lug nut orifices configured to engage with lug posts extending from the rear gate of the vehicle to removably secure the container body to the vehicle; and a door hingeably attached to a forward rim of the container body, the door configured to open and close with respect to the container body to provide access to and prevent access to an interior of the container body.