United States Patent

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[15] **3,674,299**

[45] **July 4, 1972**

[54] ADJUSTABLE TRUNK LID HOLDER

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[22] Filed: **Dec. 4, 1970**

[21] Appl. No.: **95,106**

[52] **U.S. Cl.** **292/262**

[51] **Int. Cl.** **E05c 17/04**

[58] **Field of Search** ..... 292/262, 263, 288, 338, 339, 292/258; 248/354 S, 354 R; 217/61

[56] **References Cited**

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Primary Examiner—Robert L. Wolfe

[57] **ABSTRACT**

A device for stationarily securing a passenger car trunk lid at a partly opened position so to permit transportation of large objects that normally cannot be enclosed within the trunk compartment, the device comprising an adjustable arm assembly, comprised of a pair of arms attached pivotly together at their one ends and which can be rigidly secured at a desired angle, and the opposite ends of the arms each having an adjustable clamp one of which is secured to an edge of the trunk lid and the other of which is attached to the edge of the trunk compartment opening.

1 Claim, 4 Drawing Figures

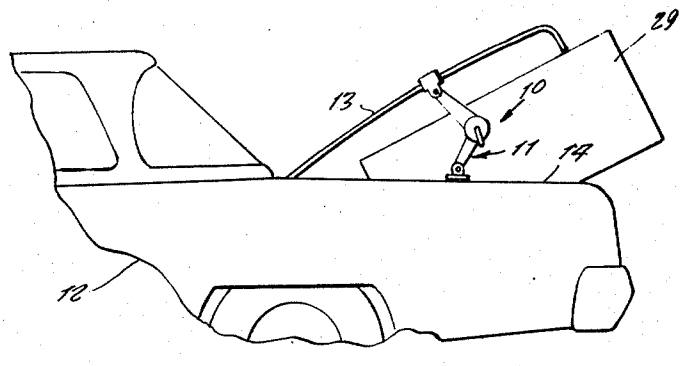
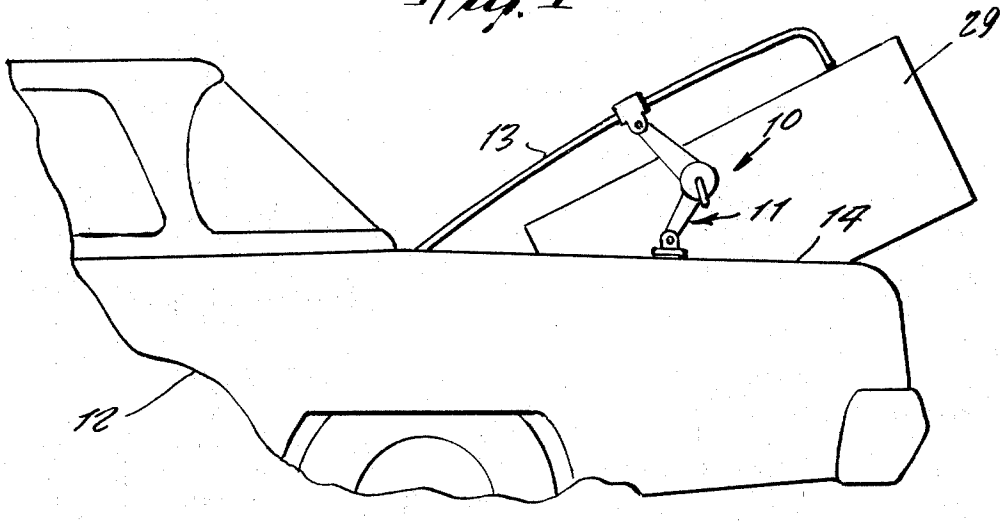


Fig. 1



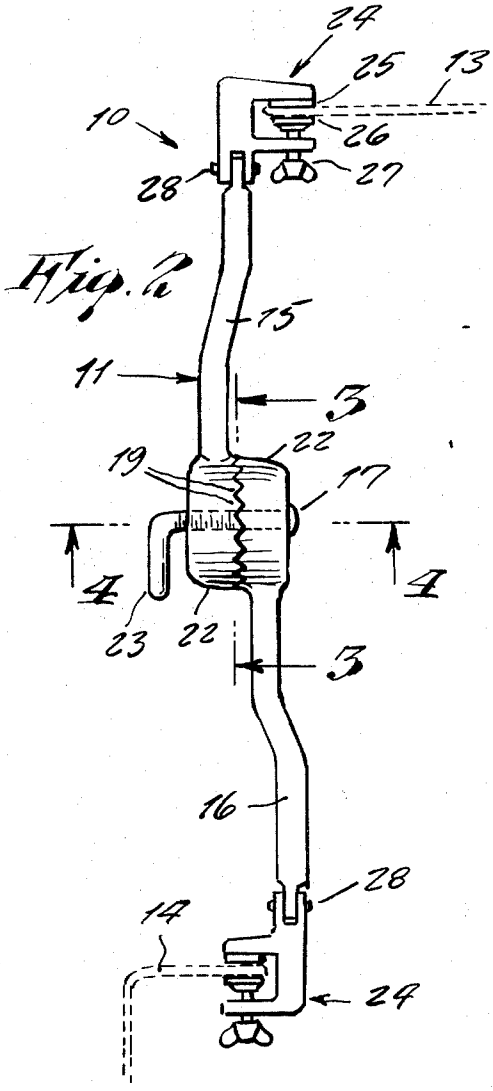
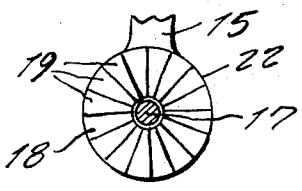


Fig. 2

Fig. 3



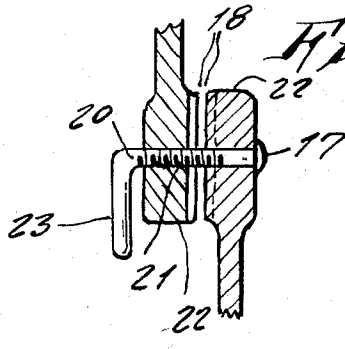


Fig. 4

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ADJUSTABLE TRUNK LID HOLDER

This invention relates generally to automotive vehicles. More specifically the present invention relates to a trunk lid holder.

It is generally well known that a conventional automotive vehicle is not designed for transporting relatively oversized or large objects. Thus when a person is required to transport an oversized item that cannot fit within the trunk compartment, he is obliged to travel with the trunk compartment lid in a partly opened up position. Thus the large object can protrude outwardly of the trunk compartment. The motorist is then obliged at the same time to tie down the trunk lid so that it does not freely slap upwardly and downwardly and which would otherwise damage the lid of the vehicle.

Heretofore such tie-down means may comprise ropes and other similar devices all of which are time consuming to apply and which often may become loosened so to form an insecure holder. This situation is accordingly in want of improvement.

Accordingly it is the principal object of the present invention to provide an adjustable trunk lid holder which is specifically designed for rigidly securing the trunk lid in any desired open position and which will prevent the trunk lid from eventually becoming loosened from the holder while the vehicle travels across a rough or uneven road.

Another object of the present invention is to provide an adjustable trunk lid holder which can be quickly and easily adjusted and secured in a desired position.

Still another object of the present invention is to provide an adjustable trunk lid holder which will not in any way injure the trunk lid or the vehicle body to which it is applied.

Still another object of the present invention is to provide an adjustable trunk lid holder which can be manufactured as an accessory for placement into existing vehicles, or which can alternately be included in the original manufacture of future vehicles.

Other objects of the present invention are to provide an adjustable trunk lid holder which is simple in design, inexpensive to manufacture, rugged in construction, easy to use and efficient in operation.

These and other objects will be readily evident upon a study of the following specification and the accompanying drawing wherein:

FIG. 1 is a side elevation view of the present invention shown in operative use,

FIG. 2 is a rear elevation view thereof,

FIG. 3 is a view in direction 3—3 of FIG. 2, and

FIG. 4 is a cross-sectional view taken on the line 4—4 of FIG. 2.

Referring now to the drawing in detail, the reference numeral **10** represents an adjustable trunk lid holder according to the present invention wherein there is an arm assembly **11** that can be readily attached upon an automotive vehicle **12** so as to selectively secure a trunk lid **13** at a desired pivotable position respective to the vehicle body **14**, as shown in FIG. **1**.

The arm body **11** includes a pair of arms **15** and **16** which at their one ends are attached pivotally together for pivoting about a pin **17**. Each of the arms **15** and **16** at this end are enlarged so to form a relatively large circular face **18** for placement in abutment with the face **18** of the other arm.

As is shown in FIGS. **2** and **3** of the drawing, each of these faces **18** are provided with a series of radially extending teeth **19** so that when the faces are in adjacent abutment position, the arms **15** and **16** cannot pivot relative to each other about the pin **19** that extends centrally and transversely through the faces **18**.

The pin **17** includes a portion thereof provided with a screw

thread **20** for threadingly engaging within a threaded opening **21** formed in one of the enlargements **22** formed on one of the arm ends, and the pin also includes an angularly extending crank handle **23** at one end thereof, thus permitting the faces to be separated from each other as shown in FIG. **4** or to be brought together as shown in FIG. **2**. When the faces are separated as shown in FIG. **4**, it is obvious that the arms **15** and **16** are now freely pivotable respective to each other, and when the arms are in the position as shown in FIG. **2**, the arms are in fixed relative position so that when used as shown in FIG. **1**, they do not change their set position.

At the opposite end of each of the arms **15** and **16** there is an adjustable clamp **24** which includes a fixed jaw **25** and a movable jaw **26** between which the trunk lid **13** or the vehicle body **14** adjacent the trunk opening are receivable.

The movable jaw **26** is accomplished by means of a threaded wing bolt **27** for securely bearing against the object being clamped.

It is to be additionally noted that each of the clamps **24** are attached pivotally free to the ends of the arms **15** and **16** by means of a transverse extending pin **28** which thus allows the clamps to be aligned with the object being grasped by the clamps.

In operative use, it is now evident that when a relatively large object **29** is placed within the trunk compartment of the automotive vehicle **12**, and it extends outwardly therefrom, the trunk lid **13** cannot be fully closed. Accordingly with the present invention the lid is brought down until it comes in contact with the top of the object **29**, as shown in FIG. **1** after which the adjustable trunk lid holder **10** is then secured to the lid and the car body as shown in FIGS. **1** and **2**, thereby preventing the trunk lid from freely slapping up and down while the automobile is traveling even across a rough road.

What I now claim is:

1. In an adjustable trunk lid holder, the combination of an arm assembly, said arm assembly being comprised of a pair of arms which at their one ends are attached pivotally together, said ends being selectively rigidly secured together, and the opposite ends of said arms being each provided with a clamp for securement to a trunk lid and to a trunk body for fixedly supporting said trunk lid in a desired position, each of said arms at said pivoted ends being provided with an enlargement having a circular face, said faces of said arms being positioned for abutment against each other, a transverse pin extending centrally through said faces for pivotally securing said arms together, and each of said faces being provided with a plurality of radially extending teeth for meshing together so to secure said arms in a fixed, unpivotable position, one of said enlargements being provided with a clearance opening for said pin, and the other said enlargement being provided with a threaded opening for said pin, said pin having an external thread for engagement with said threaded opening, one end of said pin having an enlarged head for bearing against an opposite side of one said enlargement, and the opposite end of said pin having a crank handle for selectively drawing said enlargements towards each other into a securement position, the opposite ends of each of said arms supporting a clamp, each said clamp including a fixed jaw and a movable jaw, said movable jaw comprising a threaded winged bolt for selectively moving toward said fixed jaw, each of said clamps being secured pivotally free upon the ends of said arms, and said jaws being located on opposite sides of a longitudinal axis of the arm assembly, so to grasp a side edge area around a trunk compartment opening and a trunk lid which are designed for adjacent alignment when the lid is closed.

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