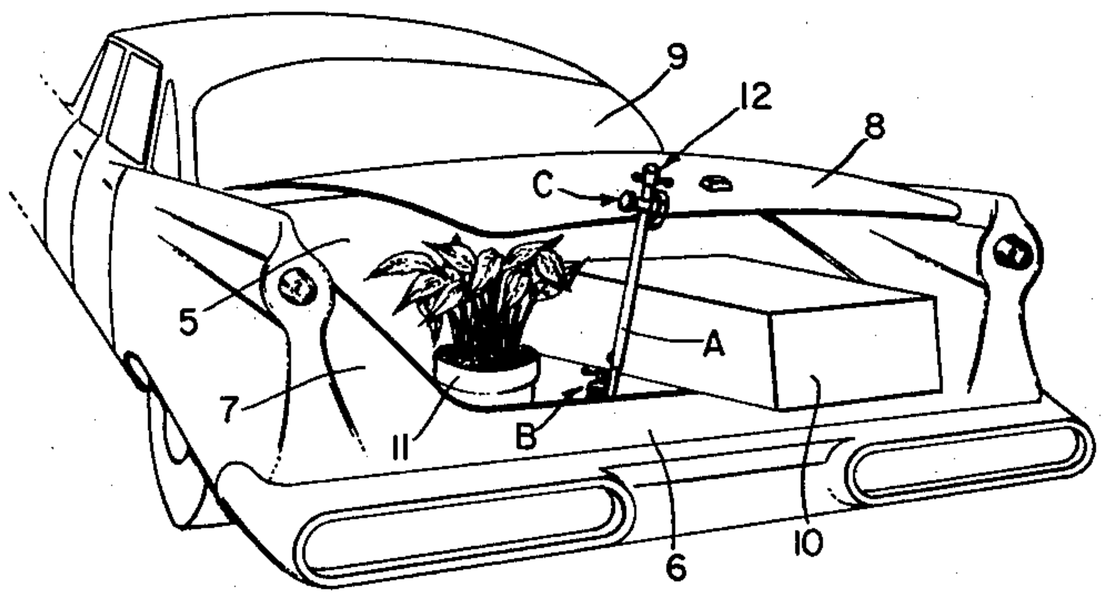
April 27, 1965 J. D. BROWN 3,180,668

COMPARTMENT LID HOLDER FOR AUTOMOBILES

Filed July 27, 1962

Fig. 1



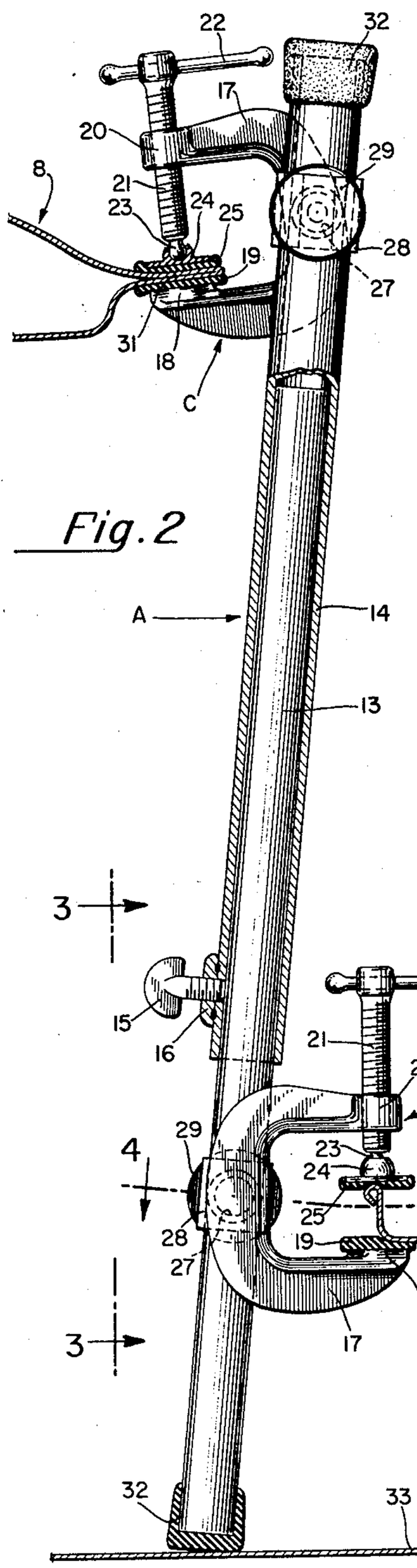


Fig. 2

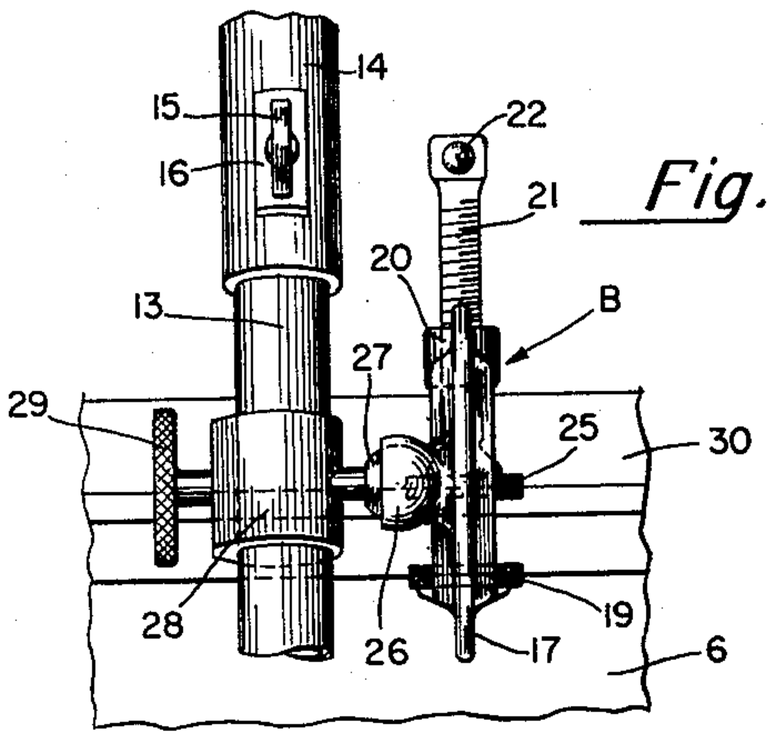


Fig. 3

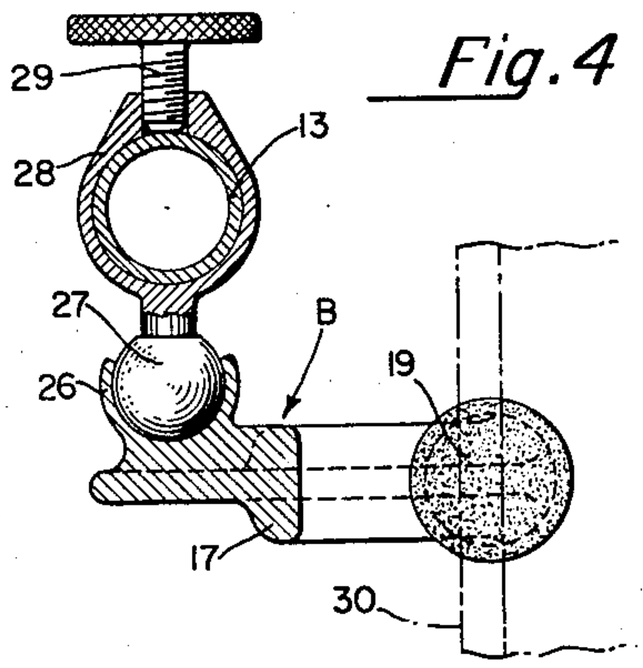


Fig. 4

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COMPARTMENT LID HOLDER FOR AUTOMOBILES

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The invention relates to a device of the type designed for holding a compartment lid, particularly the trunk lid of an automobile in a partially open position.

It is well-known that occasionally something has to be carried in the trunk of a car which is too large or bulky to permit the complete closing of the trunk lid. So as to prevent the, mostly spring-biased, trunk lid from opening all the way and thereby impeding the view of the driver, it is customary to use a piece of string, rope, wire or a coil spring, the ends of which are slid through holes or fastened to projections of the car body and of the lid. This is, however, very awkward and unsatisfactory. Holes for the rope or the like are often hard to find or non-existent or they may be covered by the bulky object located in the trunk. The holes, such as cut-outs, mostly have sharp, ragged edges which cut through the string or rope after a relatively short drive. An important additional shortcoming of these known expedients is that the lid, so as to prevent it from flapping up and down, has to be fully and firmly pressed down onto the object in the trunk compartment; this is often undesirable or even prohibitive because in doing so, the object in the trunk may be stratched or otherwise damaged, for instance be bent or broken.

The object of the invention is not only to overcome the aforesaid shortcomings of known devices but to achieve additional advantages and to provide a novel holder believed to be applicable to all or nearly all constuctions of trunks and trunk lids now in use, without requiring any changes or other adaptations.

The aforesaid and other objects and advantages are achieved in accordance with the invention by a, preferably tubular, substantially rigid rod and a pair of means, preferably clamps, adapted to engage respectively the margin of the trunk opening and of the lid or any other parts of car body and lid which offer themselves for engagement by the means.

More specifically, the novel holder incorporates the following further features which add to its adaptability and general usefulness. Both of the engagement means are securable in different positions to the rod along the length thereof, and one end of said rod is adapted to engage the bottom of the trunk compartment so as to transfer through the rod at least part of the weight of the trunk lid to said bottom. The engagement means are universally swingable relative to the rod by universal journal connections provided laterally of the engagement means between the latter and the rod, the swingability permitting adjustment of the engaging means to the relative angular position of the rod on the one hand and body parts or lid to be engaged by them on the other hand.

Further objects, advantages and features of the invention as well as specific advantageous details thereof will be more fully disclosed by the following description of one embodiment of the invention and by the illustration thereof in the attached drawing.

In the drawing:

FIG. 1 is a fragmentary, diagrammatic, small three-quarter rear view of an automobile having its trunk lid held in partially open position by the novel holder.

FIG. 2 is a fragmentary section along a longitudinal, vertical plane, showing the novel holder in elevation and

partially in section on a substantially larger scale than FIG. 1.

FIG. 3 is a fragmentary elevation of part of the rod, of the lower engagement means and of part of the margin of the trunk opening, the view being taken in the direction of the arrows 3—3 of FIG. 2; and

FIG. 4 is a fragmentary section along line 4—4 of FIG. 2.

The automobile shown in FIG. 1 comprises a trunk compartment 5 having an opening surrounded by stationary lower and lateral body portions 6, 7, a trunk lid 8 and a rear window 9. Shown within the compartment 5 are a large box 10, extending rearwardly beyond the lower member 6 of the trunk opening, and a pot 11 with a plant therein, extending upwardly beyond the confines of the compartment 5 when its lid 8 is closed. For accommodating the objects 10 and 11 within the compartment, the lid 8 has to be held in about the position shown in FIG. 1, so that on the one hand the lid will not press on the plant and on the other hand will not be raised by the customary balancing springs (not shown) to a completely open position in which it would block the driver's view through rear window 9.

For securely and stationarily holding lid 8 in the shown or in any other partly open position, a brace or holder 12 is provided which is diagrammatically shown in FIG. 1 and the details of which are illustrated in FIGS. 2 to 4.

The main elements of this brace or holder 12 are a rod A and two clamps B and C. The rod is composed of two telescoping members, preferably tubes, 13 and 14, the outer member 14 being provided with a wing-bolt 15, screw-threaded into a nut 16 which latter is permanently attached, such as by welding, to tube 14. Upon loosening of bolt 15, the parts 13, 14 can be longitudinally pulled out or pushed together and then by retighting bolt 15 secured in any desired lengthwise position.

The clamps B and C are preferably, for manufacturing economy, identical with each other. They have a C-frame 17, one leg of which presents a supporting surface 18 provided with a somewhat resilient or soft cover 19, whereas the end of the other leg has a hub portion 20 into which is screw-threaded a bolt 21 operable by a slidable handle 22. The other end of bolt 21 has a ball head 23, swingably encased by a correspondingly shaped ball socket on pressure member 24. The engagement surface of member 24 is likewise covered with a somewhat resilient or soft cover 25.

The mid-portion of clamp 17 has a lateral ball socket 26, swingably receiving a ball member 27, which latter is formed on a sleeve 28. Each sleeve 28 is adapted to slide on rod part 13 or 14 respectively and has screw-threaded therein a hand screw 29 so as to secure sleeve 28 in any desired position along the length and around the circumference of the respective rod part.

The clamps B and C are, as visible from the drawing, adapted to engage marginal portions of the compartment opening enclosures 6 or 7 and lid 8 respectively. Clamp B engages by its parts 18, 19 and 24, 25 the water drainage and reinforcing channel 30 and the upper clamp C engages by its corresponding parts the outwardly projecting overlap flange or portion 31 of lid 8. The resilient or soft coverings 19, 25 prevent marring or other damage of the body or lid portions engaged by the clamps.

The margins of compartment openings (trunk as well as motor compartments) are in present-day automobiles universally formed as shown in the drawing or very similar thereto. Consequently, the new holder can be used in connection with any present-day automobile or at least approximately so. It may be mentioned here that occasionally it may be desirable to use the new holder for the motor compartment so as to keep the lid in open posi-

tion during driving or to prevent it from being blown down by strong winds when working on the motor.

The ends of the members 13, 14 are provided with caps 32 of preferably soft material such as rubber or plastic so that one of them may firmly engage the bottom 33 of the trunk compartment. Besides, these caps prevent injury to persons or objects by the unprotected ends of rod A and serve as retainers against inadvertent removal of the sleeves 28.

It is easily understood that the angular adjustability of the clamps relative to the rod permits the clamps to be turned to any possible angular position of the parts of compartment and lid to be engaged by them. It also permits any angular position of the rod itself in case a particular angular position should be necessary to by-pass outwardly projecting contents of the trunk compartment. For instance, when very large and wide objects in the trunk extend over the entire width of the trunk it is possible to attach the brace or holder to the side margins of opening and lid.

It is furthermore obvious from the drawing and from the foregoing specification that the new brace holds the trunk lid firmly in any desired position without the latter being able to flap up or down and without the danger of the brace giving away.

The invention is not restricted to the illustrated and described embodiments or details thereof but is susceptible to simplifications, modifications and adaptations.

What is claimed is:

1. Compartment lid holder for automobiles comprising a substantially rigid rod, a pair of engagement means, said means being adapted for releasably gripping respectively a margin of the lid and a margin of the compartment opening so as to hold the lid in open position, both of said engagement means being lengthwise adjustably secured to said rod, and one end of said rod being adapted to engage the bottom of the trunk compartment so as to transfer through the rod at least part of the weight of the trunk lid to the bottom of the compartment.

2. Holder according to claim 1, in which said engagement means each have a journal connection with said rod adapted for universal adjustment of the angular position of such means, relative to said rod, said universal connection being a ball-and-socket joint and being arranged laterally of said means and said rod between the two.

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