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F. B. McNEAL ET AL

ADJUSTABLE TRAY

Filed June 20, 1924

2 Sheets-Sheet 1

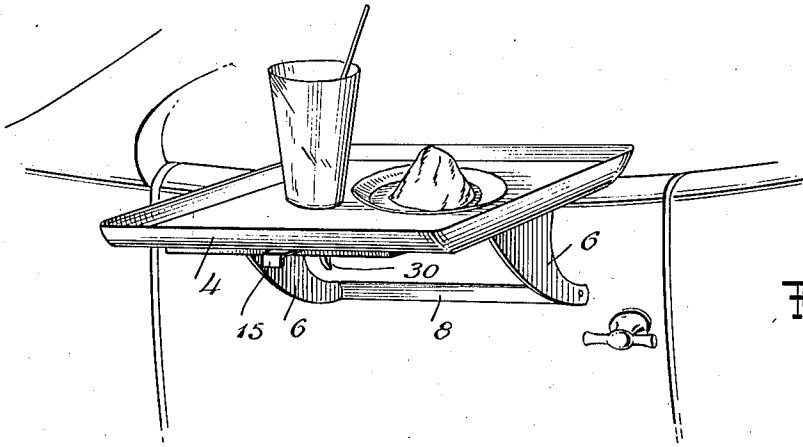


Fig. 1.

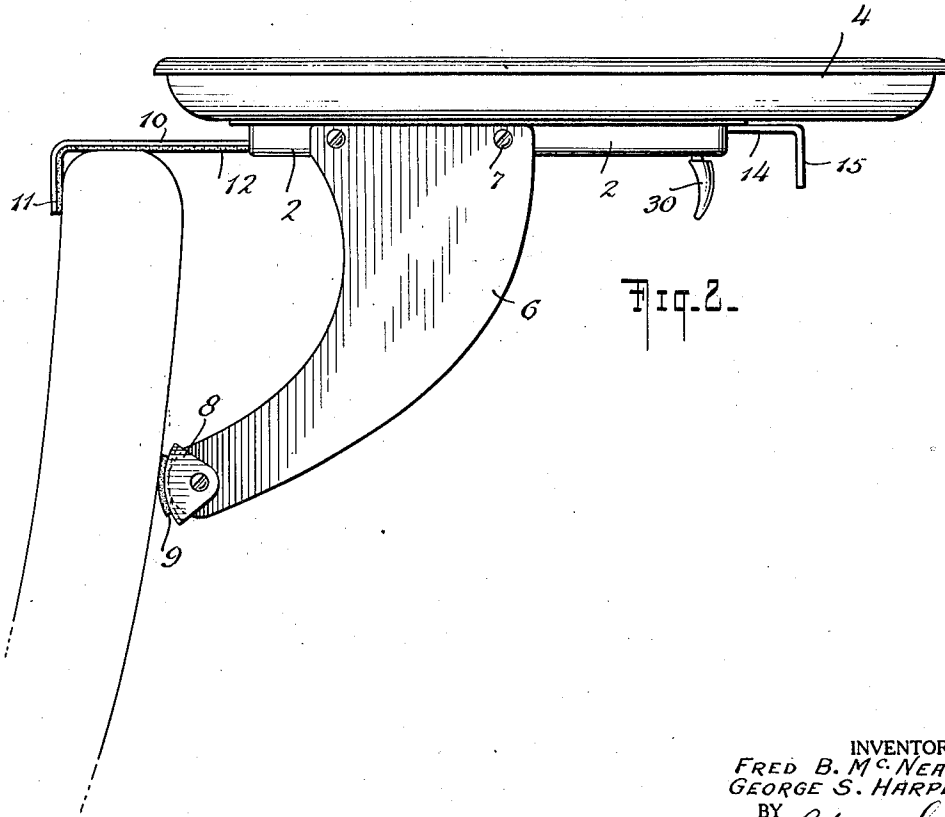


Fig. 2.

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Fig. 3.

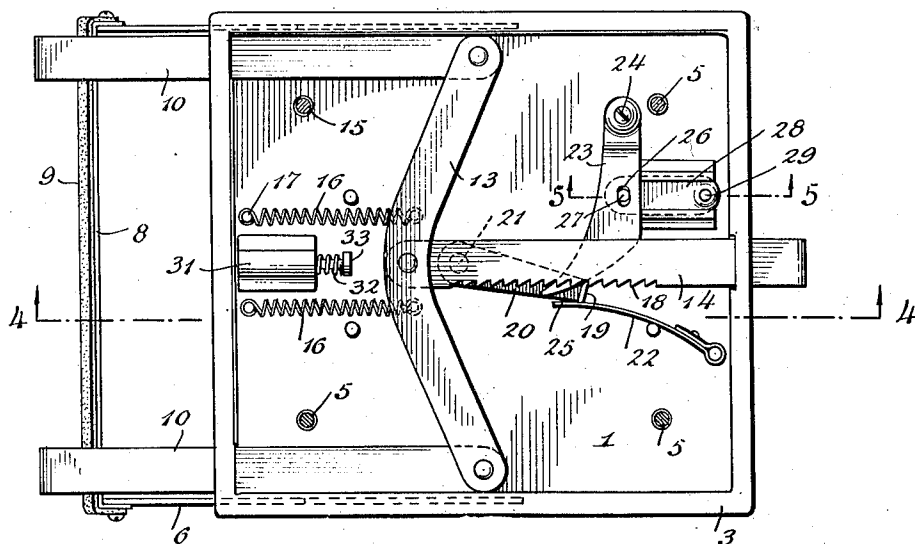


Fig. 4.

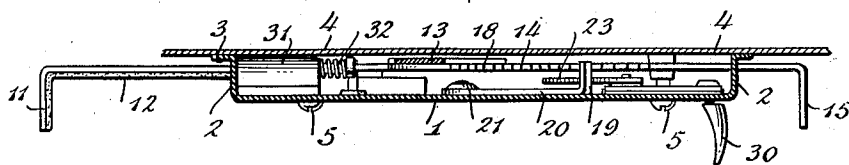
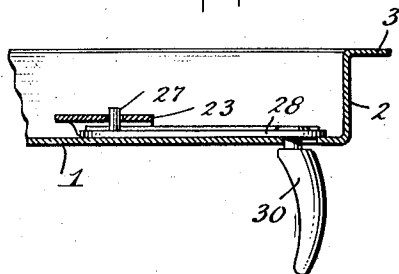


Fig. 5.



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## UNITED STATES PATENT OFFICE.

FRED B. McNEAL AND GEORGE S. HARPER, OF TULSA, OKLAHOMA, ASSIGNORS TO R. P. NEAVLES, OF TULSA, OKLAHOMA.

## ADJUSTABLE TRAY.

Application filed June 20, 1924. Serial No. 721,170.

This invention relates to adjustable trays which are adapted for many and various uses, but which are designed especially to be used in connection with automobiles in order to support refreshments being served to the occupants of such or other vehicles.

The invention has for its primary object to provide a device of the character stated which shall be simple in construction, effective in operation and adapted to be readily attached to or removed from a door or panel of a vehicle without injury thereto. Such and other objects of the invention hereinafter stated are accomplished by the means hereinafter described and illustrated in the accompanying drawings although it is to be understood that changes, modifications and variations of such construction may be embodied without departing from the invention.

As illustrated in the accompanying drawings, Figure 1, is a perspective view of the device attached to the door of an automobile. Figure 2, is a side elevation of the device shown in Figure 1.

Figure 3, is a plan of the device shown in Figures 1 and 2 with the top plate removed.

Figure 4, is a longitudinal section taken on the line 4-4 of Figure 3 and Figure 5 is a section taken on the line 5-5 of Figure 3.

In the drawings in which corresponding reference numerals indicate corresponding parts throughout the several features,

1 represents the bottom of a casing having side walls 2, the side walls 2 being provided with horizontal outer flanges 3, for the purpose of supporting a top plate 4. The top plate is secured to the bottom of the body of the casing by means of studs or screws 5, or other suitable means for holding the body and top of the casing securely together.

Brackets 6, are connected at their upper end with the body of the casing preferable with the side walls thereof by means of screws 7, or otherwise. The free ends of the brackets 6, are connected by a cross bar 8, and the outer face of said cross bar is preferably curved and provided with a bearing strip 9, of soft material such as felt, so that when the free ends of the brackets are brought in contact with the door or other portion of a vehicle, in order to press and support the tray in position, the cross bar will not mar the vehicle in any respect,

and also so that the curved surface of the cross bar of the brackets may have a bearing against the doors of vehicles of varying transverse curvatures.

Side bars 10, are supported within the body of the tray, preferably near the outer margin thereof, with their edges bearing against the side walls 2 of the tray, so as to enable the sides of the side bars to be supported by said side walls against torsional movement in one direction. The outer or free ends of the side bars 10 are offset as at 11, to enable said ends to grip, and have a bearing, against the inner wall of the door or other part of the vehicle.

The under surface and outer ends of the side bars 10 are provided with a covering of soft material 12, such as felt, to protect the finish of the parts of the vehicle clamped thereby, from injury.

The inner ends of the bars 10, are connected with a cross bar 13, and a draw arm 14 is connected with said cross bar 13, the outer end of said arm 14 being provided with a lip 15. By means of such construction an outward pull on the lip 15 draws the cross bar 13 forward and brings the opposite ends 11, of the side bars 10 against the inner wall of the door or other part of the vehicle.

Springs 16, are connected at one end to studs 17 attached to the casing and the other end of said springs is connected with said cross bar 13 whereby an outward pull on the draw arm 14, by means of the lip 15 stretches said springs and places them under tension. The arm 14 is provided on one edge with the teeth or serrations 18 which are engaged by the end 19 of a lever 20 pivotally mounted on a stud 21 secured to the body of the tray. As the bars 10 are drawn forward, the end of the lever 20 slides over the teeth 19 and when the bars 10 are clamped at their ends firmly against the door of a vehicle, the end 19 of the lever 20 is held in engagement with the teeth of the arm 14 by means of a spring 22 which holds the parts against accidental displacement.

Means are provided for releasing the outer end 19 of said lever from engagement with the teeth of the arm 14 when it is desired to remove the tray from the door of a vehicle such means consisting of a lever 23 pivoted on a stud 24, which is secured to the

tray, the free end 25 or edge of said lever being curved so as to have a sliding engagement with the outer end 19 of the lever 20.

5 Lever 20 is provided with an opening preferably a slot 26 which is engaged by a pin 27, the pin being attached to a sliding link 28 which is provided with a stud 29 by means of which a trigger 30, is connected  
10 to said link.

An outward pull on the trigger 30 draws the free curved end of edge 25 on the lever 23 forward and releases the outer end 19 of the lever 20 from engagement with teeth  
15 18 of the arm 14 and permits the bars 10 to be released from engagement with the door of the vehicle and removed therefrom.

The backward movement of the cross bar 13, may if desired, be cushioned by any  
20 suitable means such as a casing 31, having contained therein a spring 32, mounted upon a stud having a head 33.

By means of the construction hereinbefore described it will be seen, that the device may  
25 be quickly and even hurriedly attached to the door of an automobile or other vehicle even without injury thereto, even while the tray is filled with plates containing eatables, and glasses containing liquids, without disturbing the contents of the tray to the slight-  
30 est extent and when desired removed from the vehicle, without handling the dishes or glasses during the attaching or removing operation.

35 What we claim and desire to secure by Letters Patent is:

1. An adjustable tray supporting device including a body, brackets carried by said body and capable of engagement with a suitable support, side bars normally projected  
40 from one end of said body and movable into the same and having support-engaging members at the outer ends thereof capable of engagement with said support to thereby  
45 cooperate with said brackets to maintain said body substantially horizontal, means for guiding said side bars in their movements relative to the body, resilient means connecting said side bars with said body to  
50 yieldably maintain said bars in projected position, means for moving said side bars into said body and to operative position against the tension of said resilient means, releasable means for latching said side bars  
55 in their operative positions, and means carried by the body for cushioning the return movement of said side bars to normal position upon release of said latching means.

2. An adjustable tray supporting device including a body, brackets carried by said body and capable of engagement with a suitable support, side bars normally projected from one end of said body and movable into the same and having support-engaging members at the outer ends thereof  
65 capable of engagement with said support to thereby cooperate with said brackets to maintain said body substantially horizontal, means for guiding said side bars in their movements relative to the body, resilient  
70 means connecting said side bars with said body to yieldably maintain said bars in projected position, a rack bar for moving said side bars into said body and to operative position against the tension of said resilient  
75 means, a spring pressed lever pivoted to said body and engageable with said rack bar for maintaining said side bars in operative position, a releasing member also pivoted to said body and engageable with said lever  
80 to release the same from engagement with said rack bar to permit of the return of said side bars to normal position, and means for cushioning the return movement of said side bars.

3. An adjustable tray supporting device including a body, brackets carried by said body and capable of engagement with a suitable support, side bars normally projected from one end of said body and movable into the same and having support-engaging members at the outer ends thereof  
90 capable of engagement with said support to thereby cooperate with said brackets to maintain said body substantially horizontal, means for guiding said side bars in their movements relative to the body, resilient  
95 means connecting said side bars with said body to yieldably maintain said bars in projected position, a rack bar for moving said side bars into said body and to operative position against the tension of said resilient  
100 means, a spring pressed lever pivoted to said body and engageable with said rack bar for maintaining said side bars in operative position, and a releasing member also pivoted to said body and having a wiping engagement with said lever to release the same  
105 from engagement with said rack bar to permit of the return of said side bars to normal position.

In testimony whereof we have affixed our signatures.

FRED B. McNEAL.  
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