

July 27, 1926.

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1,593,835

ADJUSTABLE TRAY

Filed June 11, 1925

2 Sheets-Sheet 1

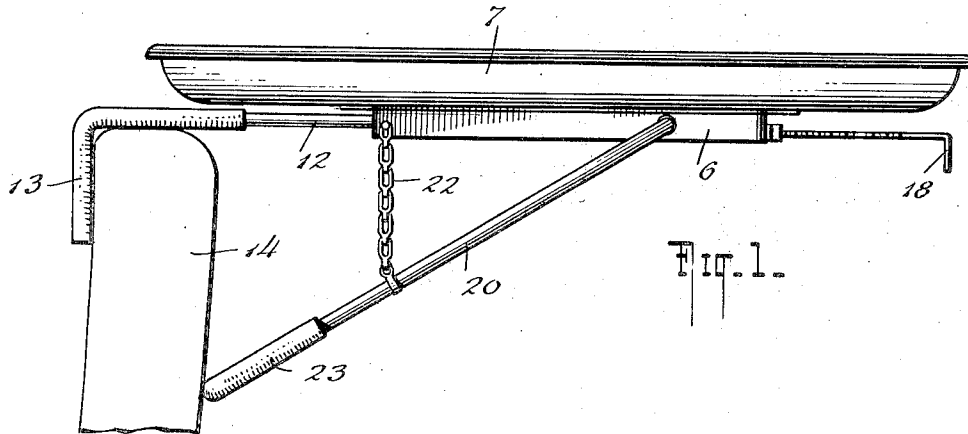


Fig. 1.

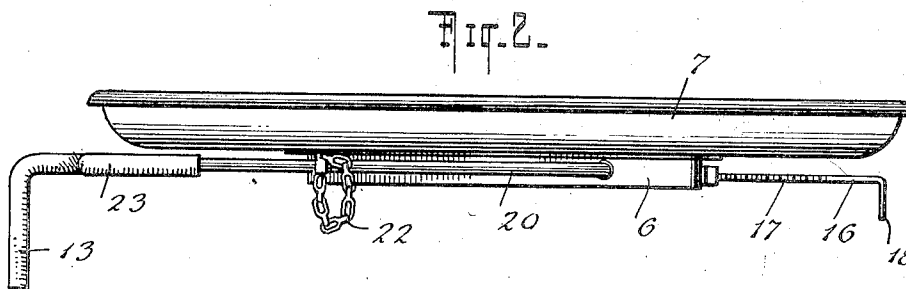


Fig. 2.

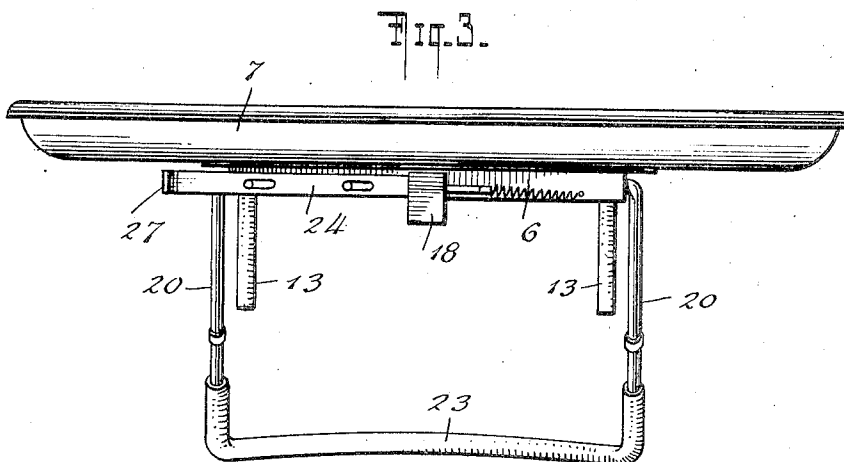


Fig. 3.

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Fig. 4.

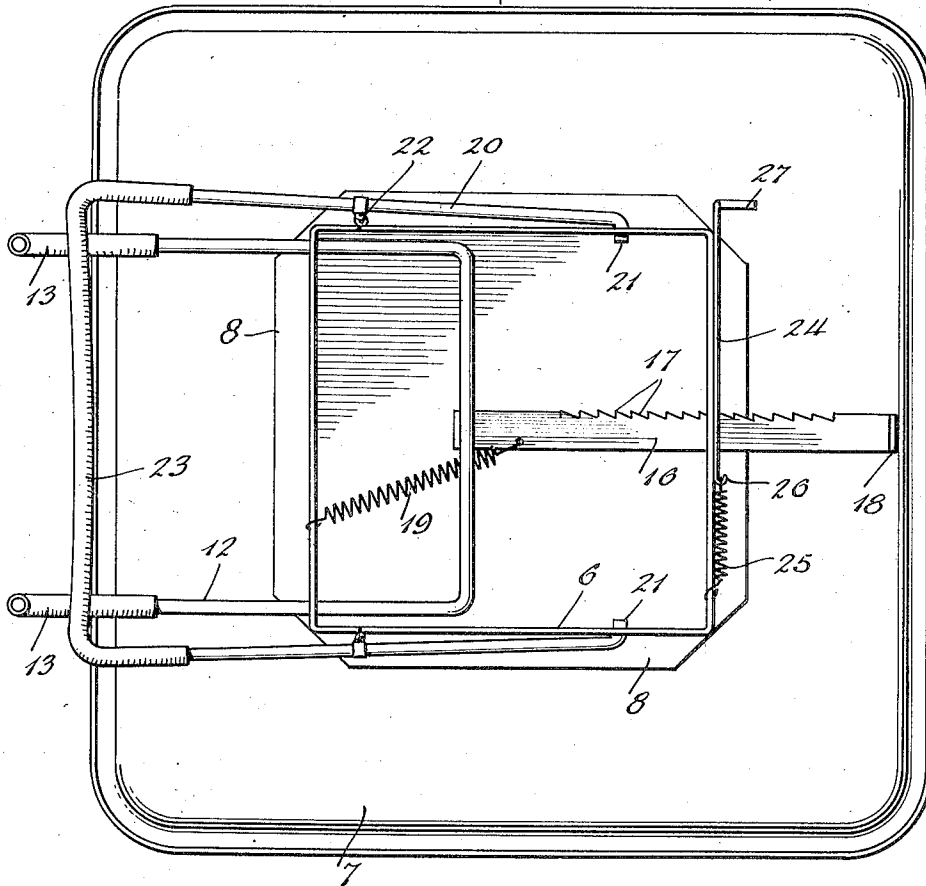
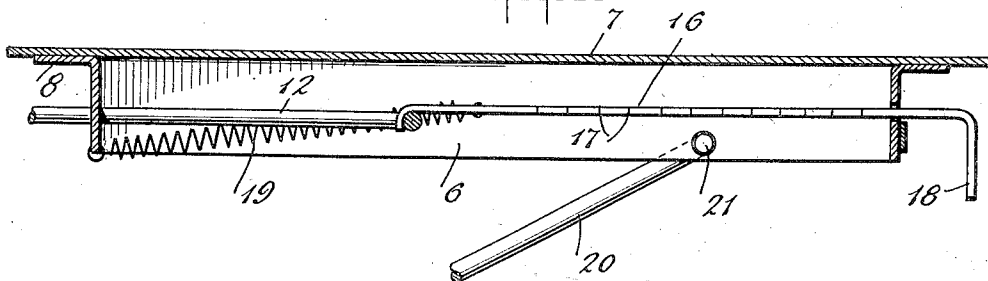


Fig. 5.



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UNITED STATES PATENT OFFICE.

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ADJUSTABLE TRAY.

Application filed June 11, 1925. Serial No. 36,521.

This invention relates to improvements in adjustable trays, and has particular reference to that type which may be employed for serving food and refreshments to occupants of automobiles and other vehicles.

An object of the invention is to provide an improved tray which may be readily attached to and detached from the door of a vehicle or other support and which, when not in use, may be folded or collapsed to occupy a minimum space.

Another object is to provide the tray with cooperating supporting members both of which are movable relative to the tray when mounting the latter in operative position.

A further object is to provide a simple and effective means for projecting one of the supporting members from a normally inoperative position to an operative position wherein said member is capable of being engaged with a support.

The above and other objects will appear more clearly from the following detailed description, when taken in connection with the accompanying drawings, which illustrate a preferred embodiment of the inventive idea.

In the drawings—

Figure 1 is a side elevation of a tray illustrating the manner of its attachment to a support;

Figure 2 is a side elevation showing the tray in its inoperative position;

Figure 3 is an end elevation;

Figure 4 is a bottom plan view; and

Figure 5 is a longitudinal section.

Referring more particularly to the accompanying drawings, the invention is shown as comprising a rectangular supporting frame 6 to which a tray 7 is secured by flanges 8 carried by the frame.

Slidably mounted in one side of the supporting frame 6 is a supporting member 12 of substantially U-shaped formation, the extremities of which are bent laterally and covered with a protecting tube 13 of rubber or any other suitable material, said extremities being adapted to engage a door 14 or other support, as illustrated in Figure 1. To the bight portion 15 of the supporting member 12 there is secured by soldering, or otherwise an operating element 16 in the form of a bar having a portion of one edge thereof provided with rack teeth 17 for a purpose which will presently appear. The bar 16 extends through the side of the frame

6 opposite that through which the sides of the frame 12 extend and the free extremity 18 of said bar is bent laterally to form a finger grip which will permit of the member 12 being withdrawn to its retracted or inoperative position when the tray is not in use. When the member 12 is so withdrawn a retractile spring 19 connecting the bar 16 with the frame 6 is placed under tension so that when the bar 16, which is held retracted by a mechanism presently to be described, is released, the spring 19 will contract and thus project the member 12 outwardly of the frame to its operative position, as illustrated in Figure 1.

The invention further includes an additional supporting member 20, also of substantially U-shaped formation, which member has its extremities 21 intumed and pivotally mounted in suitable openings formed in opposite sides of the frame 6. The sides of the supporting member 20 are connected to the frame 6 by flexible elements 22 to limit the movement of the member 20 to its operative position. The bight portion of the member 20 is covered by a flexible protective tubing 23 which engages with the door 14 or other support to prevent marring or scratching of the latter when the device is in operative position.

A locking and releasing mechanism for the bar 16 is provided and this mechanism preferably comprises a latch 24 slidably mounted on the frame 6 adjacent the end 18 of said bar for transverse movement with respect to the bar 16. One end of the latch 14 is normally held in engagement with the rack teeth 17 by means of a retractile spring 25, one end of which is secured to a reduced projection 26 formed upon said end of the latch, while the other end is secured to the frame 6. A lateral extension 27 is formed upon the end of the latch 24 opposite that which engages the teeth 17 to provide a finger grip so that the latch 24 may be readily withdrawn from engagement with the teeth 17 against the tension of the spring 25. When this is done the bar 16 is released and the spring 19 contracts and acts to project the supporting member 12 to its operative position, the outward movement of said member being limited by engagement of the bight portion 15 thereof with the side of the frame 6 in which said member is slidably mounted. After the member 12 has been projected the ends thereof may be engaged over

the support 14 and the member 20 then dropped to its operative position and also engaged with the support to maintain the tray 7 in a substantially horizontal position.

5 The member 12 may be retracted to its inoperative position by simply exerting a pull upon the bar 16 through the medium of the finger grip 18. During this movement of the member the latch 24 will ride
10 freely over the teeth 17 and after the member 12 has been fully retracted said latch will maintain the same in its retracted position until the latch is again operated.

What is claimed is:

15 1. In a tray supporting apparatus, a supporting member, a frame having means in one side thereof in which said supporting member is slidable, a rack bar secured to said supporting member and having one end
20 projecting through the opposite side of said frame, said bar terminating at said end in a grip for moving said supporting member to a retracted position with respect to said frame, a sliding latch carried by the frame
25 and directly engageable with said rack bar to releasably maintain said supporting member in its retracted position, a spring connecting the first mentioned side of said frame with said rack bar and operable to
30 project said supporting member to its extended position when said sliding latch is actuated to disengage said rack bar, and a second supporting member pivoted to the other side of said frame and cooperating
35 with the first named supporting member to attach said frame to a support in a substantially horizontal position.

2. In a tray supporting apparatus, a substantially U-shaped supporting member, a
40 frame having means in one side thereof in which said supporting member is slidable, a rack bar secured to said supporting mem-

ber and having one end projecting through the opposite side of said frame, a spring
45 actuated latch slidable on the second mentioned side of said frame for longitudinal movement relative thereto and releasably engageable with said rack bar to retain the supporting member in retracted position, a
50 spring connecting the first mentioned side of said frame with said rack bar and operable to project said supporting member to its extended position when said latch is actuated to disengage said rack bar, and a
55 second supporting member pivoted to the other side of said frame and cooperating with the first named supporting member to attach said frame to a support in a substantially horizontal position.

3. In a tray supporting apparatus, a sup-
60 porting member, a tray carrying frame having means in one side thereof in which said supporting member is slidable, a rack bar secured at one end to said supporting member and terminating at its other end in a
65 grip for moving said supporting member to a retracted position with respect to said frame, a latch carried by said frame and directly engageable with said rack bar to releasably maintain said supporting member
70 in its retracted position, a spring connecting said frame with said rack bar and operable to project said supporting member to an extended position relative to said frame when said latch is actuated to disengage said
75 rack bar, and a second supporting member pivoted to said frame and cooperating with the first named supporting member to attach said frame to a support.

In testimony whereof, we have affixed our
80 signatures.

FRED B. McNEAL.
REX P. NEAVLES.