

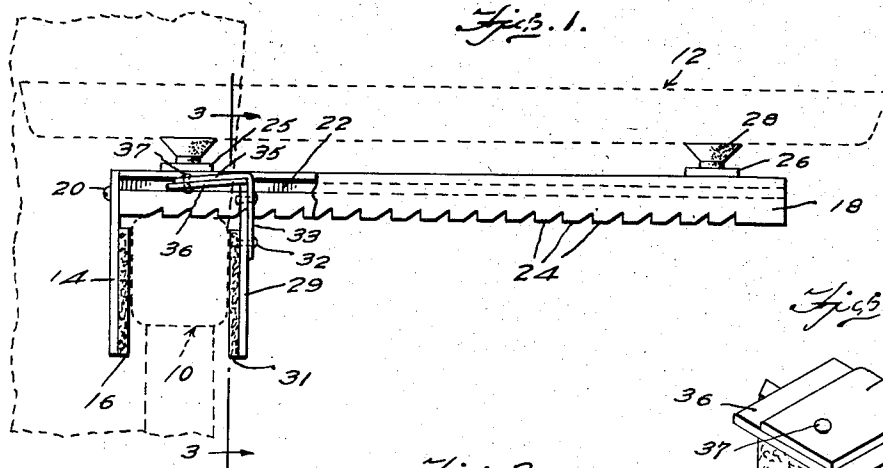
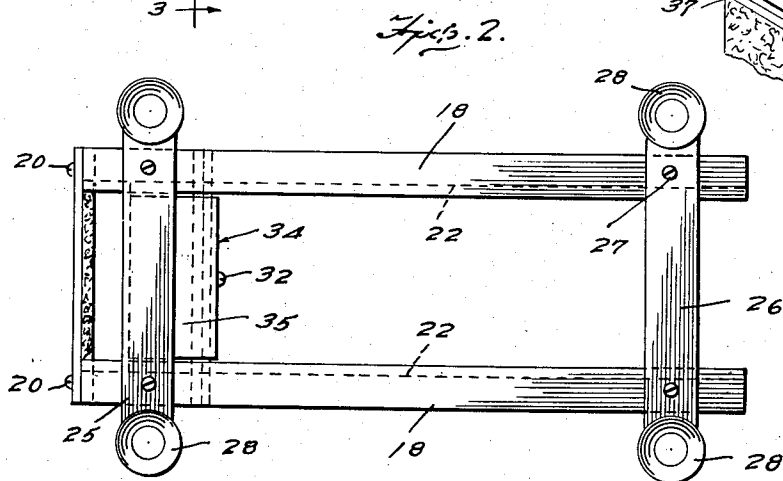
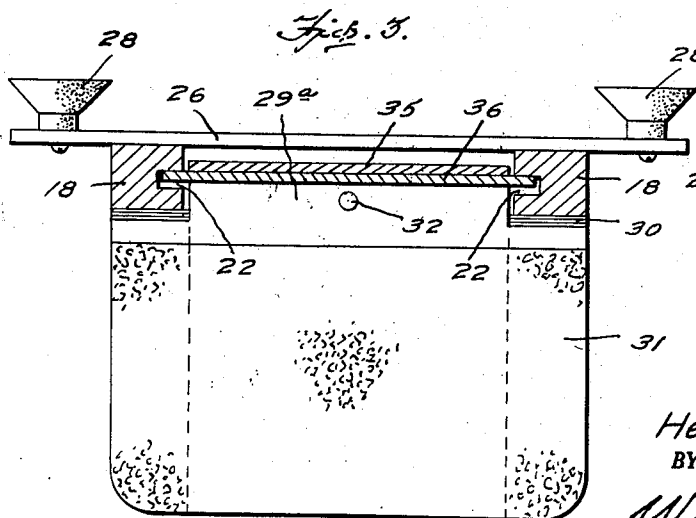
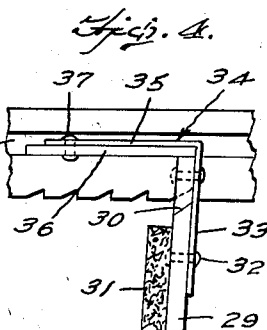
Jan. 6, 1959

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2,867,401

ADJUSTABLE CHAIR ARM GRIPPING TRAY HOLDER

Filed Aug. 24, 1953



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2,867,401

ADJUSTABLE CHAIR ARM GRIPPING TRAY HOLDER

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Application August 24, 1953, Serial No. 375,911

1 Claim. (Cl. 248—226)

This invention relates generally to the class of supports and is directed particularly to a device designed for attachment to a chair arm or other similar body for supporting a tray.

A principal object of the present invention is to provide an adjustable chair arm gripping tray holder wherein a fixed jaw and a movable jaw are provided in connection with a pair of tray supporting arms or rails, with novel means whereby the movable jaw can be locked to the arms or rails in any desired position along the latter without the employment of movable latching elements.

Another object of the invention is to provide in a device of the above described character a locking means for the movable jaw which is made effective by the movement of the movable jaw itself to a prescribed position with respect to the attached arms or rails.

A further and more specific object of the invention is to provide in a tray holder and support of the above described character, a locking means between the movable jaw and the supporting arms or rails which comprises holding teeth formed in or carried by the rails and engaging tongues carried by the movable jaw, the connection between the movable jaw and arms or rails being relatively loose whereby the movable jaw can be rocked to effect the desired engagement of the tongues with the teeth or their disengagement therefrom.

Still another object of the invention is to provide a tray holder of the above described character, wherein the supporting arms or rails carry suction cups which function to hold a tray on the arms.

Other objects and advantages of the invention will become apparent as the description of the same proceeds and the invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawings forming a part of the specification, with the understanding, however, that the invention is not to be limited to the exact details of construction shown and described since obvious modifications will occur to a person skilled in the art.

In the drawing:

Figure 1 is a view in side elevation of the adjustable tray holder, showing a portion of one rail broken away and illustrating a portion of a chair arm and a tray in dotted lines, in operative relation with the tray holder.

Figure 2 is a view in top plan of the invention.

Figure 3 is a sectional view, on an enlarged scale, taken substantially on the line 3—3 of Figure 1.

Figure 4 is a detailed view illustrating the locking jaw in open position with respect to a rail.

Figure 5 is a view in perspective of the top portion of the adjustable jaw, showing the slide member, coupling bracket and rack engaging tongues.

Referring now more particularly to the drawing the numeral 10 generally designates a chair arm, which is shown in dotted outline, and also in dotted outline is a tray which is generally designated 12.

While reference is made to a chair arm in association with the invention it is to be understood that the inven-

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tion is not limited to such use as it may be mounted on the top of the back of a car front seat, or on top of a chair or on the frame of a car door or in any other manner where the gripping jaws can be utilized to hold the tray supporting rails or arms in position.

In accordance with the present invention there is provided a fixed jaw plate 14 having a pad of sponge rubber or other suitable resilient material 16, secured across the inner or gripping face.

Positioned against the upper part of the gripping face of the fixed jaw 14 adjacent to opposite sides thereof are the ends of two elongate rails or arms 18. Any suitable means may be employed for fixing the arms to the jaw plate, the means here shown comprising the screws 20.

The inner or opposed faces of the arms or rails 18 are each provided with a slot, channel or groove 22 and the underside of each arm or rail 18 is provided throughout the major portion of its length with the transverse rack teeth 24.

Disposed transversely of the rails 18 adjacent to the inner and outer ends thereof are the inner and outer cross bars 25 and 26 respectively which rest upon the tops of the rails and are secured thereto in any suitable manner, the means here shown comprising screws 27. These cross bars rigidly connect the rails 18 together and extend at their ends slightly beyond the outer sides of the rails and secured to the top of each cross bar, at each end, is an upwardly directed rubber suction cup 28, the function of which will, hereinafter, be readily apparent.

Coacting with the fixed jaw 14, is a movable jaw plate 29 which has an overall width equal to the maximum width of the tray holder between the outer sides of the arms or rails 18. This jaw 29 has the central upwardly extending portion 29a which positions between the rails and at each vertical edge of the portion 29a there is formed a rack engaging blade or tongue 30 which extends across the toothed underside of the adjacent rail and is adapted to engage between a pair of the rack teeth.

The inner or jaw face of the movable jaw 29 is covered with a sponge rubber or other suitable resilient pad 31 for coaction with the pad 16 of the fixed jaw.

Secured against the back face of the movable jaw 29, by rivets 32 or in any other suitable manner, is a leg 33 of an angle bracket or plate which is generally designated 34. The other leg 35 of the angle bracket extends forwardly across the top edge of the tongue portion 29a of the movable jaw.

The angle between the legs 33 and 35 of the angle bracket is somewhat acute or, in other words is less than 90°.

The top leg 35 of the angle bracket extends across the top of a slide plate 36, to which it is secured by rivets or screws 37 or in any other suitable manner, and this slide, which extends across between the rails 18, is of sufficient length to have its opposite edges slidably engaged in the channels or grooves 22 as is clearly shown in Figure 3. As is also shown in this and other figures the thickness of the slide 36 is materially less than the height of the grooves or channels so that the slide can be tipped to an angle in the latter.

When the slide 36 is lying flat on the bottoms of the grooves or channels 22 as shown in Figure 4, the movable jaw plate 29 will be angled inwardly toward the bottom edge, or in other words, toward the fixed jaw 14, and when the slide is tipped or rocked to the position shown in Figure 1, the rack teeth engaging tongues or blades 30 will be elevated for engagement between a pair of teeth. As shown in Figure 4, when the slide is down and free to move in the channels the rack engaging blades or tongues will be free of or below the teeth.

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In the use of the present device it is believed that it will be readily apparent that the fixed jaw 14 is placed against the inner side of the arm 10 or other supporting body with the rails extending outwardly across the top of the arm and the movable jaw is then slid inwardly toward the fixed jaw until it is pressed firmly against the arm of the chair. As the jaw 29 comes into engagement with the chair arm and is forced against the latter it will be made to straighten up or come into a position parallel with the fixed jaw 14, which action will raise the outer edge of the slide and bring the rack engaging tongues or blades into position between the nearest pairs of rack teeth. The loosening of the jaws from the chair arm can be effected so as to facilitate the outward sliding of the movable jaw 29, by slightly elevating the outer ends of the rails which will effect the disengagement of the tongues or blades from the rack teeth.

It will also be apparent from the foregoing that when the tray 12 is placed upon the suction cups 28 a slight pressure upon the tray will cause the cups to firmly grip the bottom of the tray and thus hold it in position against accidental movement.

I claim:

A chair arm gripping tray holder comprising a fixed jaw for engaging one side of a chair arm, a pair of spaced parallel rails secured at one end to said fixed jaw to extend across the chair arm, opposed grooves in the inner side edges of said rails extending substantially through-

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out the length thereof, ratchet teeth on the bottom edge of each rail, spaced cross bars secured to the upper edges of said rails for supporting a tray, a cross plate slidably received in said grooves, said plate being of less thickness than the width of said grooves to permit rocking movement of said plate in said grooves, a movable jaw having a reduced portion disposed between said rails and providing shoulders disposed below said ratchet teeth, a beveled upper surface on each shoulder for engaging said ratchet teeth and means securing said movable jaw to said plate whereby upon movement of said movable jaw toward said fixed jaw and into clamping engagement with the opposite side of a chair arm, said plate may be rocked in said grooves to engage said beveled shoulders with said ratchet teeth to hold said movable jaw in clamping position and upon rocking said plate in the opposite direction said shoulders will be disengaged from said ratchet teeth to release said movable jaw from clamping position.

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