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ADJUSTMENT FOR SEAT BACKS

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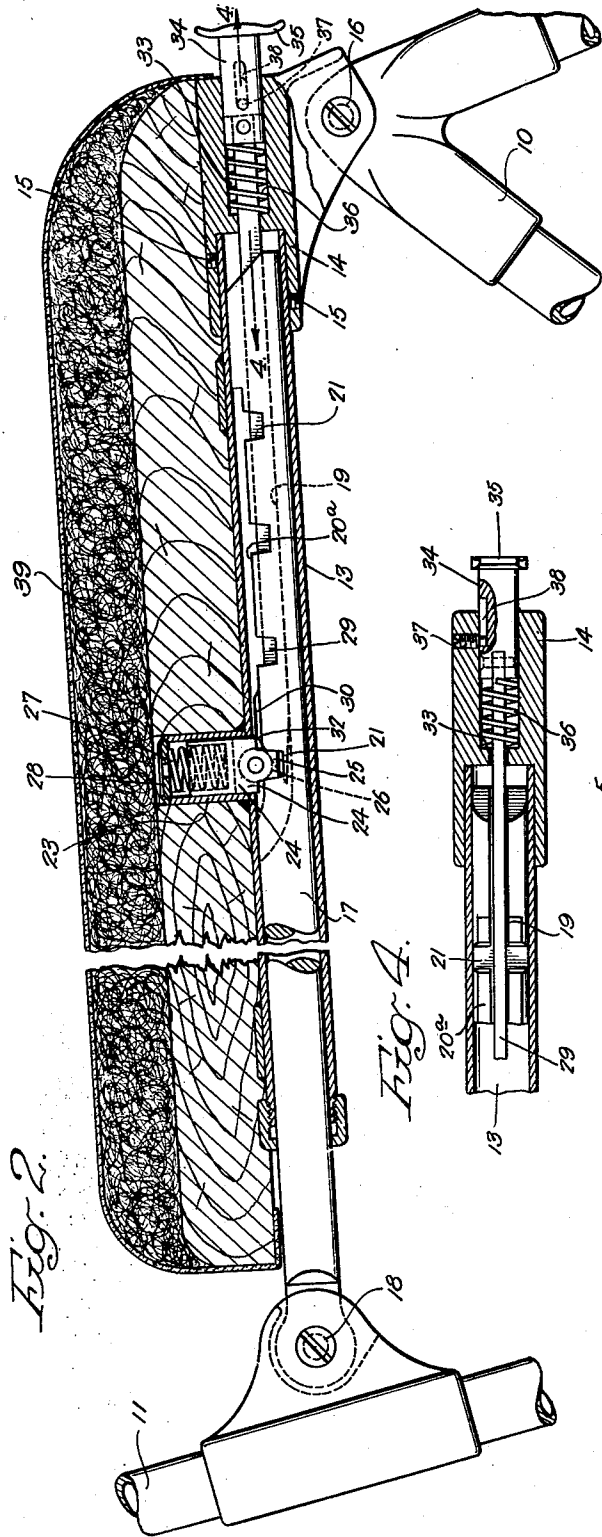
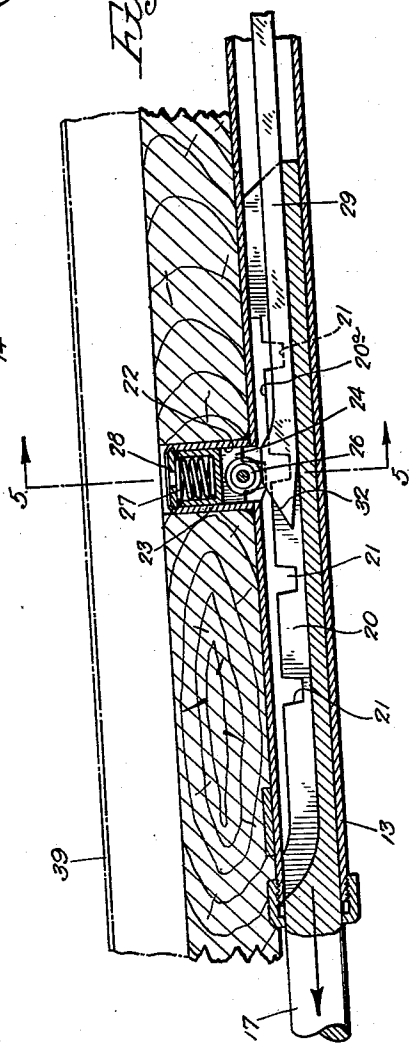


Fig. 4.

Fig. 3.



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# UNITED STATES PATENT OFFICE

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## ADJUSTMENT FOR SEAT BACKS

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4 Claims. (Cl. 155—159)

This invention relates to improvements in adjustable reclining back seats, and more particularly to a control for use in conjunction with said seats.

5 An important object of the invention is the provision of a means which will positively lock the back thereof in any desired adjusted position, and which at the same time may be very readily controlled by an occupant of the seat.

10 A further object of the invention is to provide a construction of this character which may function as a support for the arm rest of the seat, which may be very readily produced, and will be durable and efficient in service, and may be readily applied.

15 These and other objects I attain by the construction shown in the accompanying drawings wherein for the purpose of illustration I have shown a preferred embodiment of my invention, and wherein:

20 Fig. 1 is a side elevation of a chair embodying a seat back control constructed in accordance with my invention;

25 Fig. 2 is an enlarged vertical sectional view through the arm rest and control unit;

30 Fig. 3 is a fragmentary view similar to Fig. 2 showing the control in released position to permit adjustment of the seat back;

35 Fig. 4 is a horizontal sectional view through the forward end of the control; and

40 Fig. 5 is a section on the line 5—5 of Fig. 3.

Referring now more particularly to the drawings, the numeral 10 generally designates the main frame of a chair, and 11 a seat back pivoted to said main frame at 12. In accordance with my invention I provide a control unit comprising a tube 13 having at its forward end a head 14 secured to the tube in any suitable manner, as generally indicated at 15. This head is pivoted to the main frame as at 16, the head being provided with an ear permitting such pivotal connection. Slidable within the tube, and preferably fairly snugly fitting in the same is a bar 17, the rear end of which is pivoted to the seat back intermediate the ends thereof as at 18. The forward end of this bar has in its upper surface a longitudinal slot 19 and the walls 20 at opposite sides of the slot are provided with spaced notches 21. A chamber 22 is provided which communicates with the upper surface of the tube at the approximate center thereof, this chamber being at present shown as produced by attaching to the tube 13, a short tube 23, the upper end of which is closed. Slidable within the chamber is a latch element 24 which, as clearly shown in

Fig. 5, embodies spaced arms 25 adapted to engage in the notches 21 of the walls. Between these arms 25 a roller 26 is mounted. A spring 27 extending between the upper end of the latch element and the closed upper end 28 of the chamber constantly urges the latch member downwardly to cause engagement of arms 25 in notches 21.

60 Slidable in the slot 19 is a control rod 29, this control rod having its inner end formed with a head 30, the longitudinal end face of which is formed as a cam 32 for co-action with roller 26. This rod extends into a cavity 33 formed in the head 15 and has secured thereto an operating head 34, the outermost end of which is constructed as a finger piece 35. A spring 36 constantly urges the operating head, and accordingly rod 29 outwardly, movement of the head being limited positively by a pin 37 operating in a groove 38 in the head.

75 It will be seen that rearward movement of head 34 from the position shown in Fig. 1 will, through engagement of the cam face 32 with the roller, lift the latch element 24, and disengage the same from the notches 21, so that the seat back may be moved. With release of the head 34, the latch is enabled to resume its normal position and will reengage in the notches and hold the bar 17 in the selected position. Due to the fact that the tube 13 and bar 17 may, with a construction of this character, have a sliding fit upon one another, and the tube 13 is held against any possible rotation, due to its pivotal connection with the frame 10, a construction of this character may be conveniently employed as a mounting for the arm rest 39, as shown in the present illustration. It will be noted that the side walls 20 are somewhat reduced in height at points intermediate their ends as indicated at 20a, the shoulder at the end of this reduction constituting a stop having engagement with the latch to prevent complete withdrawal of bar 17.

85 Since the construction is capable of a certain range of modification without in any manner departing from the spirit of my invention, I do not wish to limit myself thereto except as hereinafter claimed.

I claim:

1. In apparatus of the type described, the combination with a chair frame and a seat back pivoted at its lower end to said frame, of a tube connected at one end to the seat frame, a bar slidable in said tube and pivotally connected at its rear end to the seat back at a point spaced from the pivot point thereof, a spring-pressed latch

carried by the tube, said bar having in its tube-engaging end a longitudinal slot and having notches for co-action with the latch, and an operating element constructed and arranged to dis-

5 engage the latch from the notches of the bar, said operating element being slidable in the slot of the bar and having a portion extended from the tube whereby it may be operated.

2. In apparatus of the type described in combination with a chair frame, a seat back pivoted to said frame, a tube secured to the seat frame, a bar slidable in said tube and pivoted at its rear end to the seat back at a point spaced from the pivot of the seat back, a latch element carried by one of said bar and tube and adapted to engage in notches in the other thereof, and a member longitudinally shiftable in the tube and having a cam face for co-action with the latch to disengage it from an engaged notch and thereby permit movement of the seat back, the bar having a longitudinal slot in which said member operates.

3. In apparatus of the type described, the combination with a chair frame and a seat back pivoted at its lower end to said frame of a tube connected at one end to the seat frame, a bar slidable in said tube and pivotally connected at its rear end to the seat back at a point spaced from the pivot point thereof, a spring-pressed latch carried by the tube, said bar having in its tube-engaging end a longitudinal slot and having notches for co-action

with the latch, an operating element constructed and arranged to disengage the latch from the notches of the bar, said operating element being slidable in the slot of the bar, and having a portion extended from the tube whereby it may be operated, said latch including spaced arms for engagement in the notches of the bar, and a roller between said arms for cooperation with said operating element.

4. In apparatus of the type described, the combination with a chair frame and a seat back pivoted at its lower end to said frame of a tube connected at one end to the seat frame, a bar slidable in said tube and pivotally connected at its rear end to the seat back at a point spaced from the pivot point thereof, a spring-pressed latch carried by the tube, said bar having in its tube-engaging end a longitudinal slot and having notches for co-action with the latch, an operating element having a cam terminal to disengage the latch from the notches of the bar, said operating element being slidable in the slot of the bar and having a portion extended from the tube whereby it may be operated, said latch including spaced arms for engagement in the notches of the bar, and a roller between said arms for cooperation with the cam terminal on said operating element.

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