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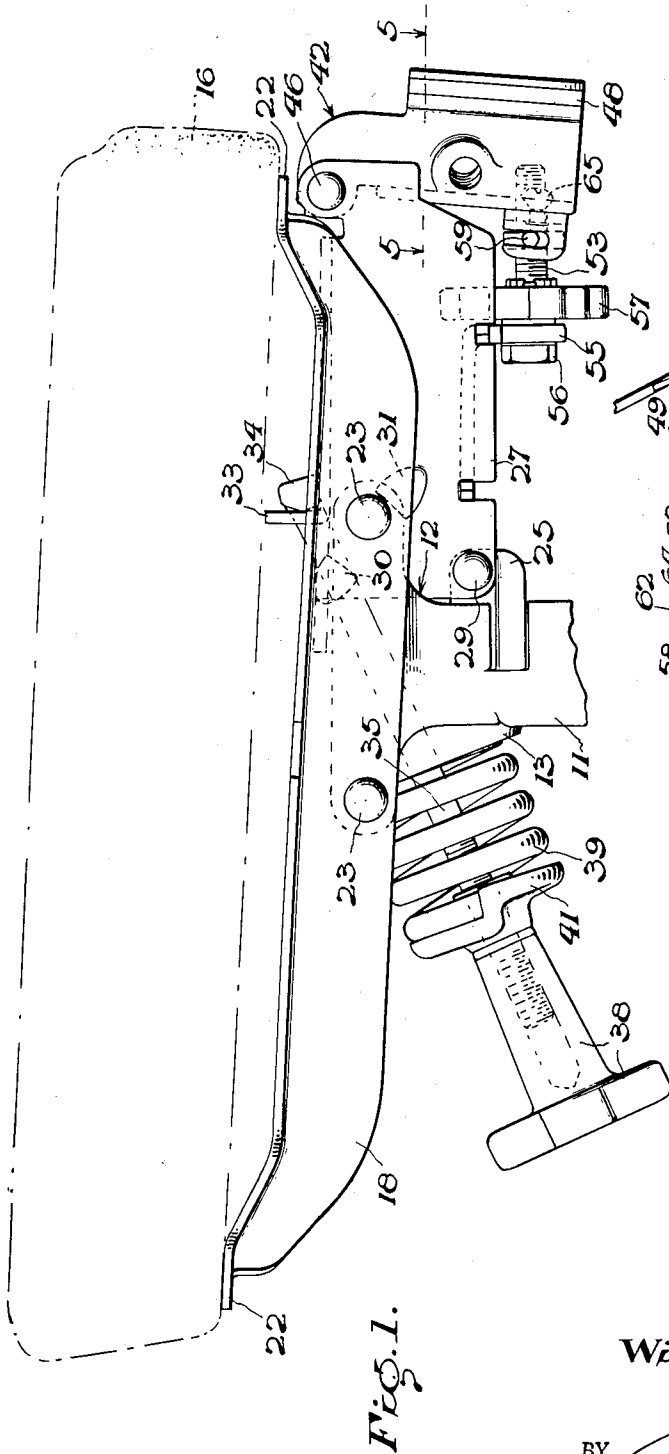
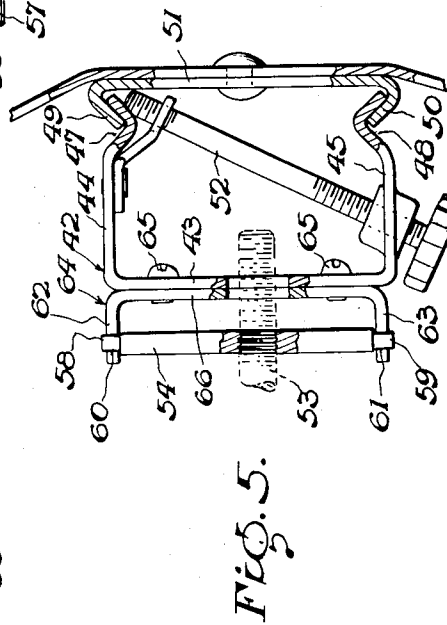
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2,756,807

ADJUSTING MEANS FOR ADJUSTABLE CHAIR IRONS

Filed Jan. 6, 1955

3 Sheets-Sheet 1



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FIG. 2.

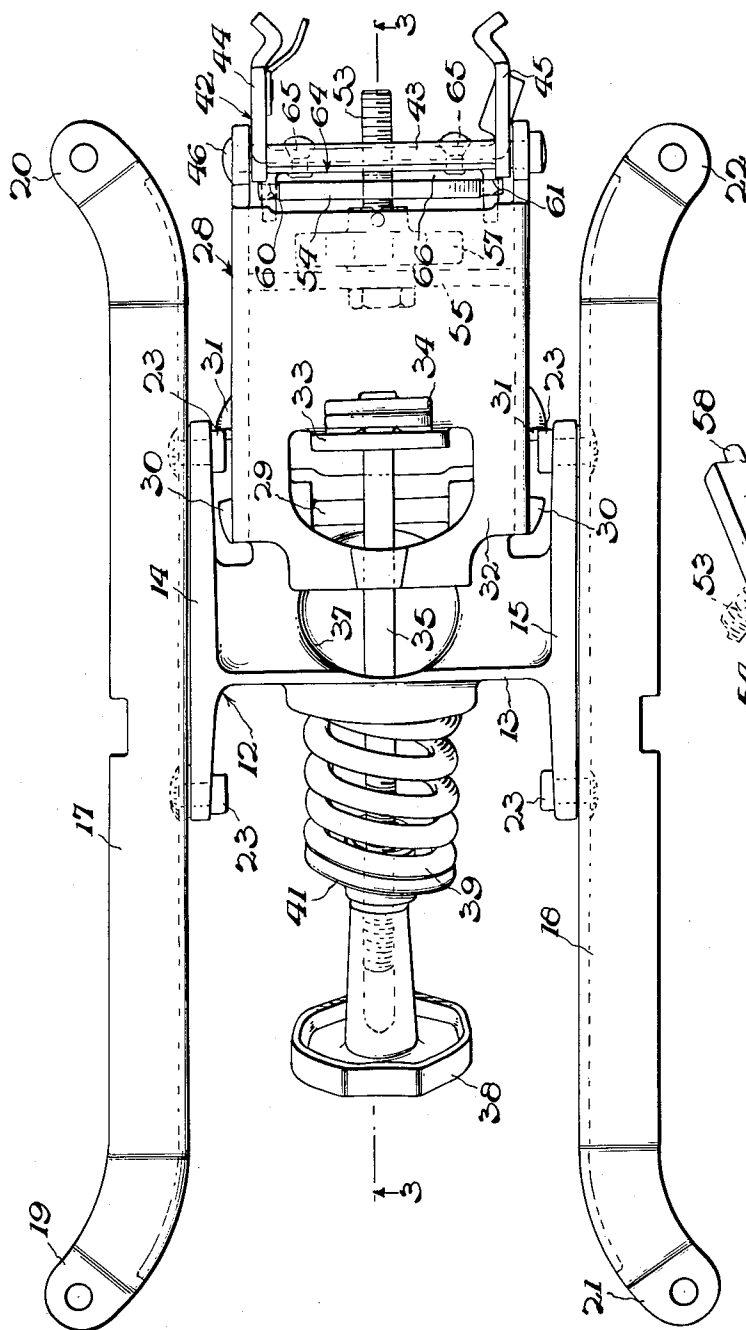
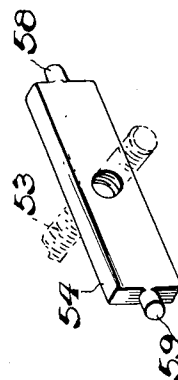


FIG. 4.



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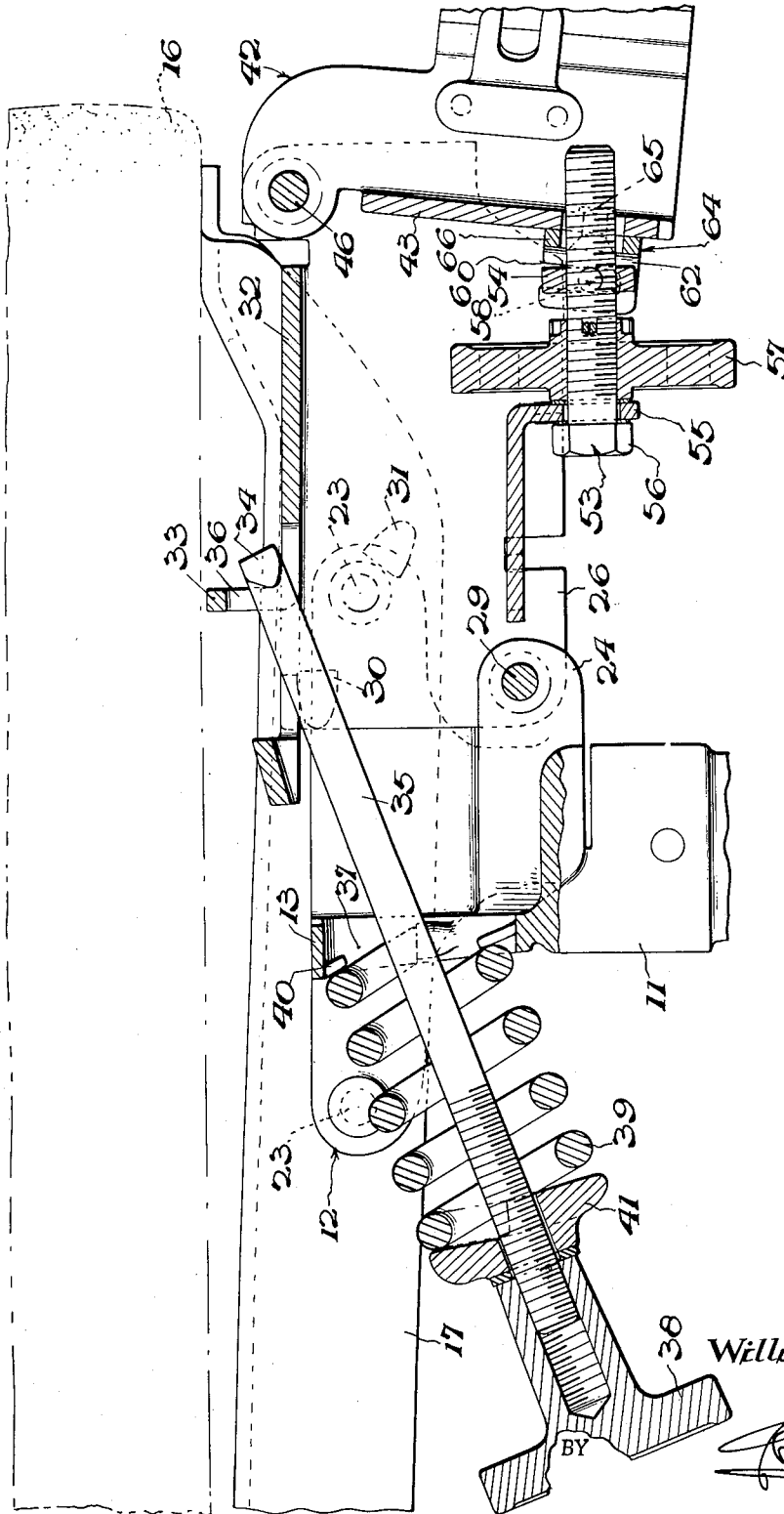


Fig. 3.

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ADJUSTING MEANS FOR ADJUSTABLE CHAIR IRONS

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Application January 6, 1955, Serial No. 480,120

2 Claims. (Cl. 155—157)

This invention relates to adjustable chairs and is more particularly concerned with novel means for mounting and adjusting the back rest of swivel type chairs relative to the seat of the chair.

One of the objects of the invention is the provision of such a chair in which the back rest is tiltable on a horizontal axis and novel means are employed to adjust the angle of tilt thereof relative to the chair seat.

A further object of the invention is the provision of a two-part back rest bracket for a chair of the type mentioned in which the two parts are hinged to each other and adjustable relative to each other by means in combination with an adjusting bolt which prevents binding between the two parts.

Other objects and advantages of the invention will be apparent from the following description considered together with the accompanying drawing.

In the drawing:

Fig. 1 is a side elevational view of a swivel chair partly broken away, showing an embodiment of the invention, without the back rest bar.

Fig. 2 is a top plan view of the same embodiment.

Fig. 3 is an enlarged cross sectional view along the line 3—3 of Fig. 2.

Fig. 4 is a perspective view of the trunnion nut forming a part of the embodiment.

Fig. 5 is a plan section view along the line 5—5 of Fig. 1 with the back rest bar member in place.

Referring with more particularity to the drawing in which like numerals designate like parts, the embodiment is illustrated in connection with a swivel type chair, commonly used in business offices, having a supporting central post 11 projecting upwardly from a base structure (not shown). The post 11 is surmounted by a base member 12 of generally U-shaped section, having a front wall 13, and side walls 14 and 15.

The chair seat 16 is mounted on a pair of laterally spaced longitudinal beams 17 and 18, the ends 19, 20 and 21, 22 of which are attached directly to the bottom of the seat by screws, rivets, bolts, welding, or any other suitable means.

The beams 17 and 18 are secured to the side walls 14 and 15 of the base member 12 by means of rivets 23 or any other suitable means.

The base member 12 has a pair of rearwardly projecting lobes or ears 24 and 25 to which the vertical sides 26 and 27 of an inverted channel section 28, forming one part of a two-part back rest bracket, is hinged by means of a pintle 29, said channel extending rearwardly from the pintle.

The degree of hinge movement of the channel 28 relative to the base 12 is limited by a pair of abutments 30 and 31, on each of the side walls 26 and 27, straddling a projecting portion of an adjacent rivet 23.

The upper wall 32 of the channel has an upwardly projecting lip 33, the rear side of which engages a lug 34 on the end of a pull rod 35. The pull rod 35 passes

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downwardly and forwardly through a hole 36 in the lip 33 and through another hole 37 in the front wall 13 of the base 12.

The forward end of the rod 35 is threaded and provided with a removable knob 38. Between the knob and the hole 37 a coil spring 39 is disposed. The upper or inner end of the coil spring is disposed against an annular seat 40 and the forward end rests against an abutment header 41, substantially as shown.

By these means, therefore, resilient tension can be applied in varying amounts to the channel member 28 to hold it in its uppermost position.

The other part 42 of the two part back rest bracket is in the general shape of a vertical channel having a front wall 43 and side walls 44 and 45. The upper ends of the walls 44 and 45 are hinged directly to the first part of the bracket by means of a pintle or hinge pin 46. The side walls 44 and 45 have vertical grooves 47 and 48, respectively, for slidably engaging intumed edges or runners 49 and 50 of the back rest column 51. This permits vertical adjustment of the back rest and it is held in selected positions of adjustment by a set screw 52 carried by the bracket part 42 for engagement with column 51, substantially as shown.

Pivotal adjustment of the bracket part 42 relative to the bracket part 28, so as to change the tilt of the back rest, is done by means of an adjusting screw 53 and a trunnion nut 54. The adjusting screw 53 has one end rotatably mounted on a vertical member 55 depending from the bracket part 28. Axial displacement of a screw 53 relative to the member 55 is prevented by means of a flange 56 on one side of the member 55 and a finger wheel 57 for manually turning the screw, on the other side. The other end of the screw 53 projects rearwardly and threadedly engages the nut 54. The nut 54 comprises laterally extending trunnions 58 and 59 which are pivotally mounted in slots 60 and 61 of arms 62 and 63 of a channel bracket 64, the slots being in a plane generally transverse to the longitudinal axis of the screw 53, and acting as bearings for the trunnions. The bracket 64 is secured to the front of the bracket part 42 by screws 65 or any other suitable means. The web portion 66 of the bracket 64, as well as the bracket part 42 are provided with apertures for receiving the rearward end of the screw, substantially as shown. By these means, adjustment of the relative positions of the bracket parts 28 and 42 is effected by turning the finger wheel 57, and the trunnion nut 54 mounted in the slots 60 and 61 prevents any binding therebetween, within wide limits of relative positions of the bracket parts.

I claim:

1. In a chair mount comprising a base member, means for securing a chair seat to said member, a two-part back rest bracket having one part hinged to said base, resilient means holding said part in a predetermined hinged position relative to the base member, the second part of the bracket being hinged to the first part and means for changing the hinged position of said second part relative to the first part, said means comprising an adjusting screw rotatably carried by the first part and a trunnion nut pivotally carried by the second part and threadedly engaged with the adjusting nut, said trunnion nut having a pair of laterally projecting trunnions at the ends, a U-shaped member having apertures receiving and holding said trunnions, said U-shaped member being rigidly secured to the said second part of the bracket, and means for manually rotating said screw.

2. In a chair mount comprising a base member, means for securing a chair seat to said member, a two-part back rest bracket having one part hinged to said base, resilient means holding said part in a predetermined

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hinged position relative to the base member, the second part of the bracket being hinged to the first part and means for changing the hinged position of said second part relative to the first part, said means comprising an adjusting screw rotatably carried by the first part and threadedly engaged with the adjusting nut, said trunnion nut having a pair of laterally projecting trunnions at the ends, a U-shaped member having apertures receiving and holding said trunnions, said apertures being elongated in a plane generally transverse to the longitudinal

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axis of the screw, said U-shaped member being rigidly secured to the said second part of the bracket, and means for manually rotating said screw.

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