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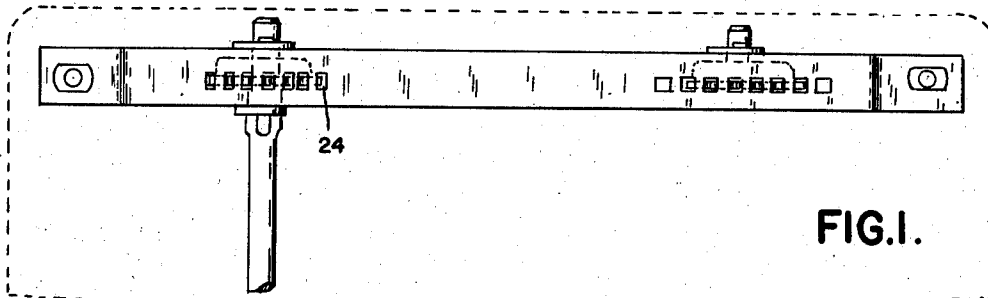
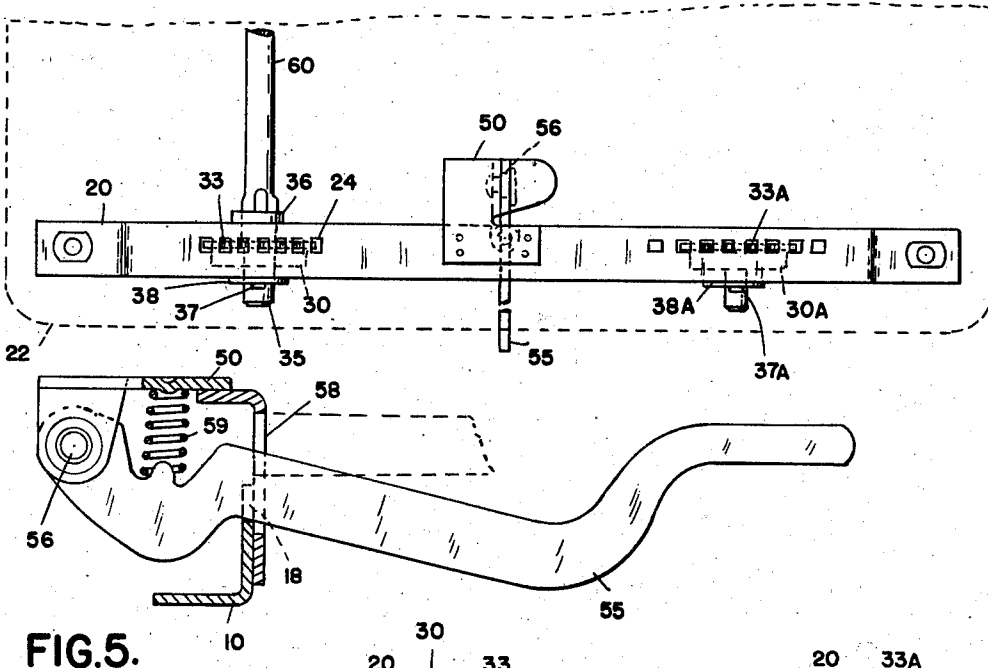
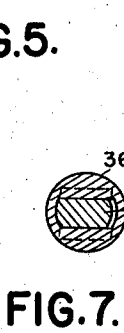
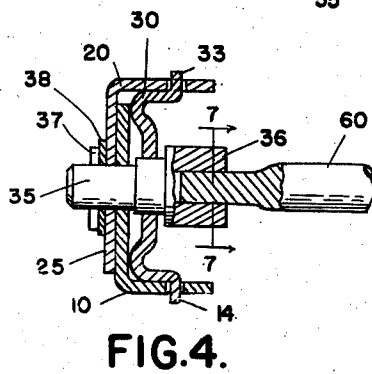
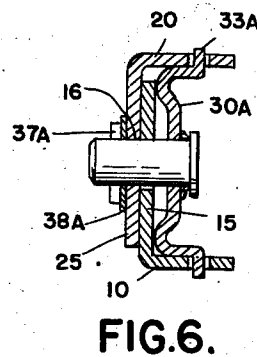
W. S. SAUNDERS ET AL

2,126,142

SEAT SUPPORTING MEANS

Filed Nov. 3, 1937

2 Sheets-Sheet 1



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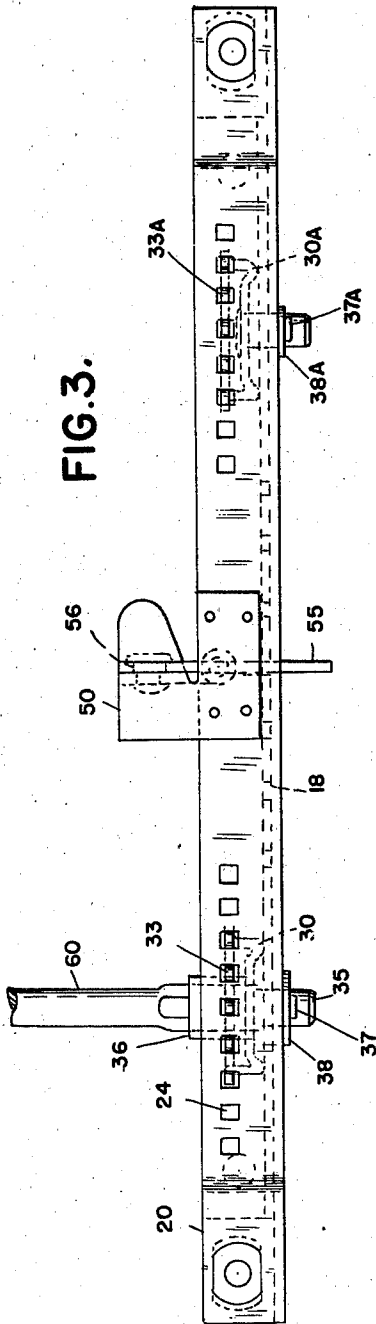
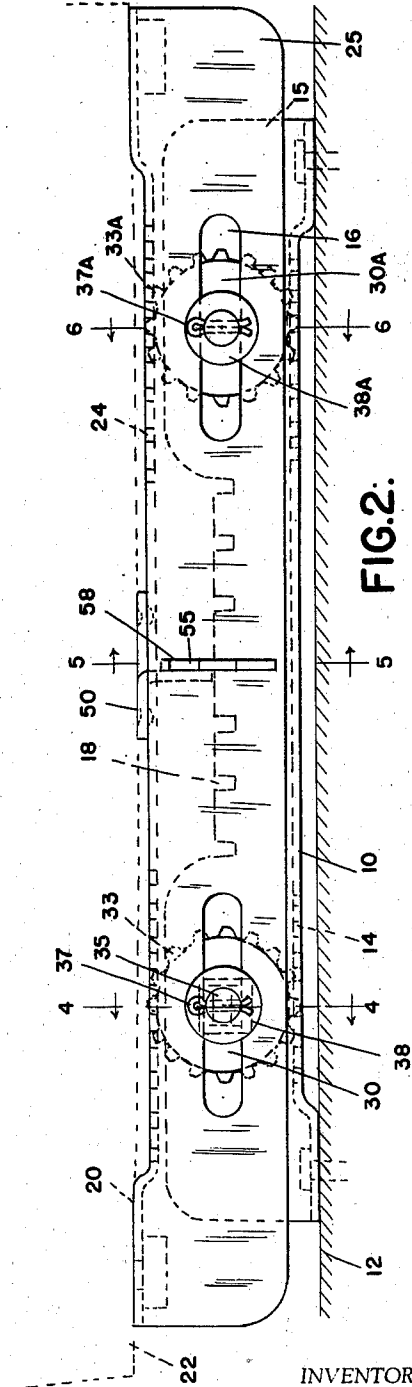
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SEAT SUPPORTING MEANS

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2 Sheets-Sheet 2



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2,126,142

SEAT SUPPORTING MEANS

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Application November 3, 1937, Serial No. 172,591

4 Claims. (Cl. 155—14)

This invention relates to improved adjustable supporting means for seats, and is particularly concerned with improvement and simplification of the seat supporting means disclosed in the previously filed copending application of Andrew L. Johnson, Serial No. 172,593, filed Nov. 3, 1937.

An important object of the present invention is to provide a simplified assembly of the character indicated having overlapping vertical guide portions preventing lateral movement of the seat with respect to the floor or support, and incorporating bearing surfaces of substantial area in the form of parallel transverse webs between which are disposed rollers of improved construction arranged to distribute effectively the load of the carriage and controllingly guide the carriage in its movement with respect to the track.

A further object is to provide improved cross connecting means for synchronizing the movement of the carriage portions of two such assemblies employed in supporting opposite ends of a seat.

Other objects and advantages will be apparent from the following description wherein reference is made to the accompanying drawings illustrating a preferred embodiment of the invention and wherein similar reference numerals designate similar parts throughout the several views:

Figure 1 is a top plan view of adjustable supporting means incorporating the principles of this invention, the synchronizing shaft being partly broken away and the relative position of a seat supported thereby diagrammatically indicated.

Figure 2 is a side elevational view of the improved mechanism, showing the latching means.

Figure 3 is an enlarged top plan view of the improved track and carriage assembly and latching mechanism.

Figures 4, 5 and 6 are cross-sectional views taken on the lines 4—4, 5—5 and 6—6, respectively of Figure 2 and looking in the direction of the arrows; and

Figure 7 is a detailed cross section taken substantially on the line 7—7 of Figure 4 and looking in the direction of the arrows.

Referring now to the drawings, reference character 10 designates the horizontal or base flange portion of a track element of substantially right-angular section, the base flange being secured to the floor at its ends, while its central portion is somewhat elevated from the supporting floor 12 and serially perforated as at 14, the longitudinal row of holes serving to define rack teeth. The other flange 15 of the track stands vertically and is longitudinally slotted near its ends as at 16.

An intermediate portion of the vertical web is of reduced height and provided along its top with a plurality of notches 18, for the locking mechanism presently to be described.

The carriage element is of similar right angular section, and may also be of sheet metal. Its horizontal flange 20 is directly secured to the under side of the seat 22, while its dropped central portion, which overlies and is parallel to the horizontal track flange is also serially perforated, as at 24 to provide rack tooth portions meshing with peripheral gear teeth 33 formed upon rollers 30—30A which are arranged between the horizontal flanges 10, 20. The vertical flange 25 projecting downwardly from the carriage lies beside the vertical flange 15 of the track and is provided with longitudinal slots aligned with slots 16 of the track flange. The roller shafts project through and travel freely in the aligned slots.

As best shown in Figures 4 and 6, each roller consists of a cupped sheet metal element whose periphery, except for the radially projecting teeth 33, 33A, is substantially cylindrical, the load of the carriage being carried upon such cylindrical portions of the rollers. The front roller 30 is provided with a rectangular central opening, and the portion of the stub shaft 35 upon which it is mounted is of similar section, the roller being thus fast upon the shaft. The inner end of the shaft is provided with a rectangular socket portion designated 36, while the outer end of the shaft extends through the aligned slots 16 and is secured against escape by a cotter pin 37. The rear roller 33A may be of similar shape and construction but centrally provided with a round hole through which the axle pin 35A projects, such pin also projecting through the aligned slots. Between the retaining cotter pins 37, 37A and the carriage flange, spring washers as 38, 38A may be provided to urge the parts together and prevent rattling.

Secured to the central portion of the horizontal carriage flange is a bracket 50 having a downwardly bent ear to which is pivoted the latching lever 55, swingable about its pivot 56 into and out of engagement with the notches 18. The lever projects through a slot 58 in the vertical flange of the carriage, and is urged downwardly by a spring 59.

It will be understood that these supporting assemblies are used in symmetrically opposite pairs, one beneath and near each end of the supported seat. The latching means is preferably omitted from one of said assemblies, as will be noted from an inspection of Figure 1. To insure uniform and simultaneous movement of the carriages of the

two assemblies, a synchronizing shaft 60 is provided, connecting the forward roller spindles 35 thereof. At its ends the shaft is flattened sufficiently to fit into the opposed inwardly facing socketed portions 36 of the opposite forward rollers, thereby keying front rollers to the shaft.

While it will be apparent that the illustrated embodiment of this invention is well calculated to adequately fulfill the objects and advantages primarily stated, it is to be understood that the invention is susceptible to variation, modification and change within the spirit and scope of the subjoined claims.

What we claim is:

1. A track and carriage assembly for rollably supporting a seat or the like, comprising a track member having a vertical flange and a horizontal flange, the carriage member having a vertical flange projecting beside the first mentioned vertical flange and having a horizontal flange overlying the first-mentioned horizontal flange, said vertical flanges having longitudinal slots which are aligned during movement of the carriage with relation to the track, rollers arranged between the horizontal flanges of the track and carriage and bearing the load of the latter, gear teeth projecting from said rollers, said horizontal flanges being provided with rack portions meshing with said gear teeth, a stub shaft supporting one of said

rollers and projecting through and adapted to travel in said aligned slots, said roller being fast upon said stub shaft, and keying means carried by said stub shaft and accessible from one side of said assembly, whereby an extension shaft may be keyed to said stub shaft.

2. Means as set forth in claim 1 in which said track member and said carriage member are of substantially right angular section, the vertical flanges thereof being in slidable engagement, and the horizontal flanges thereof projecting in the same direction, said rollers having a cylindrical surface lying between said horizontal flange portions, and said keying portion being carried by the end of the stub shaft farther from said vertical flanges.

3. Roller and guiding means for a seat supporting assembly or the like comprising a cupped sheet metal element having a substantially cylindrical surface, a supporting web for said cylindrical surface joining the latter at one end thereof, and gear teeth projecting radially outwardly from the other end of said cylindrical surface.

4. Means as set forth in claim 3 in which said web and teeth are integral with said cylindrical portion.

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