Feb. 20, 1923. 1,446,043

J. J. HOGAN

LEG REST ATTACHMENT FOR CHAIRS

Filed May 1, 1922 2 sheets-sheet 1

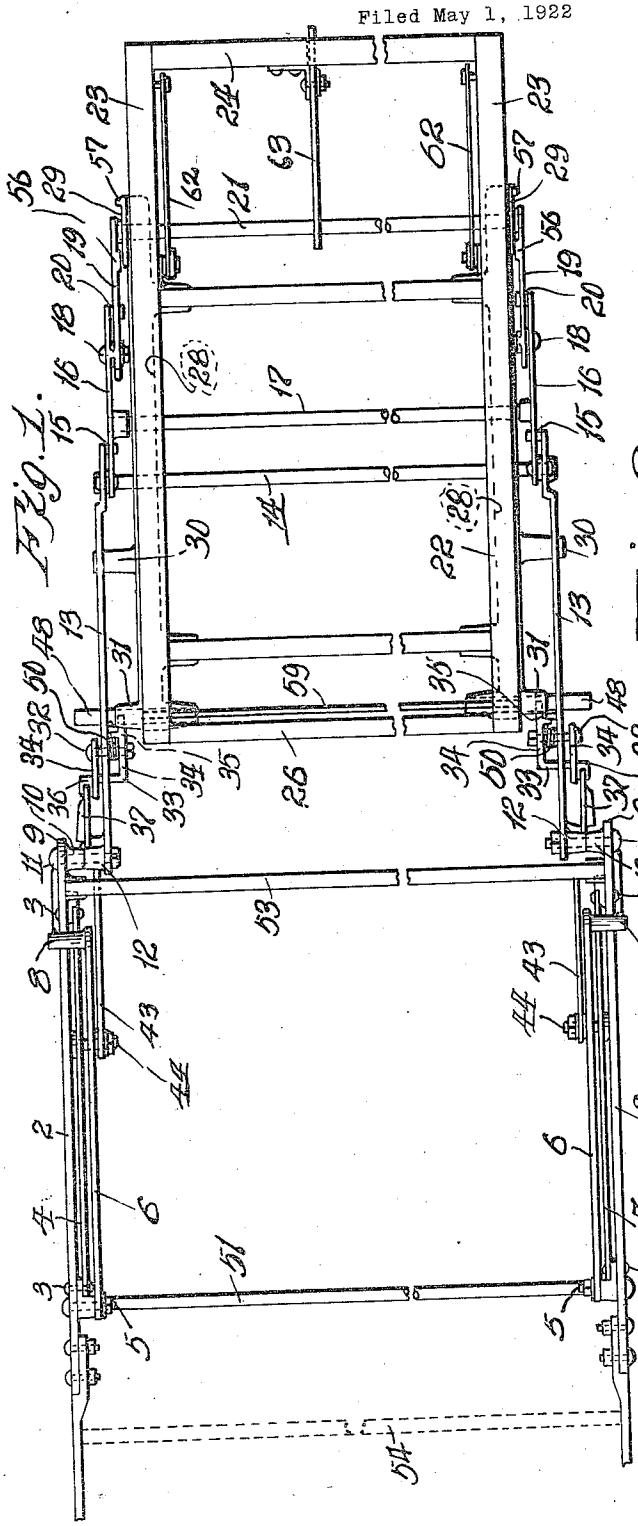


Fig. 1.

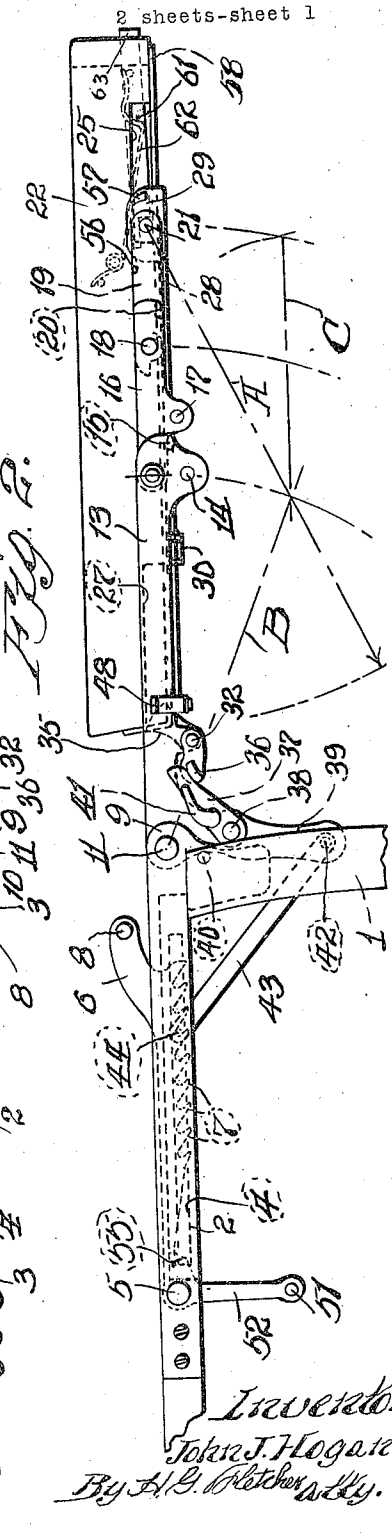


Fig. 2.

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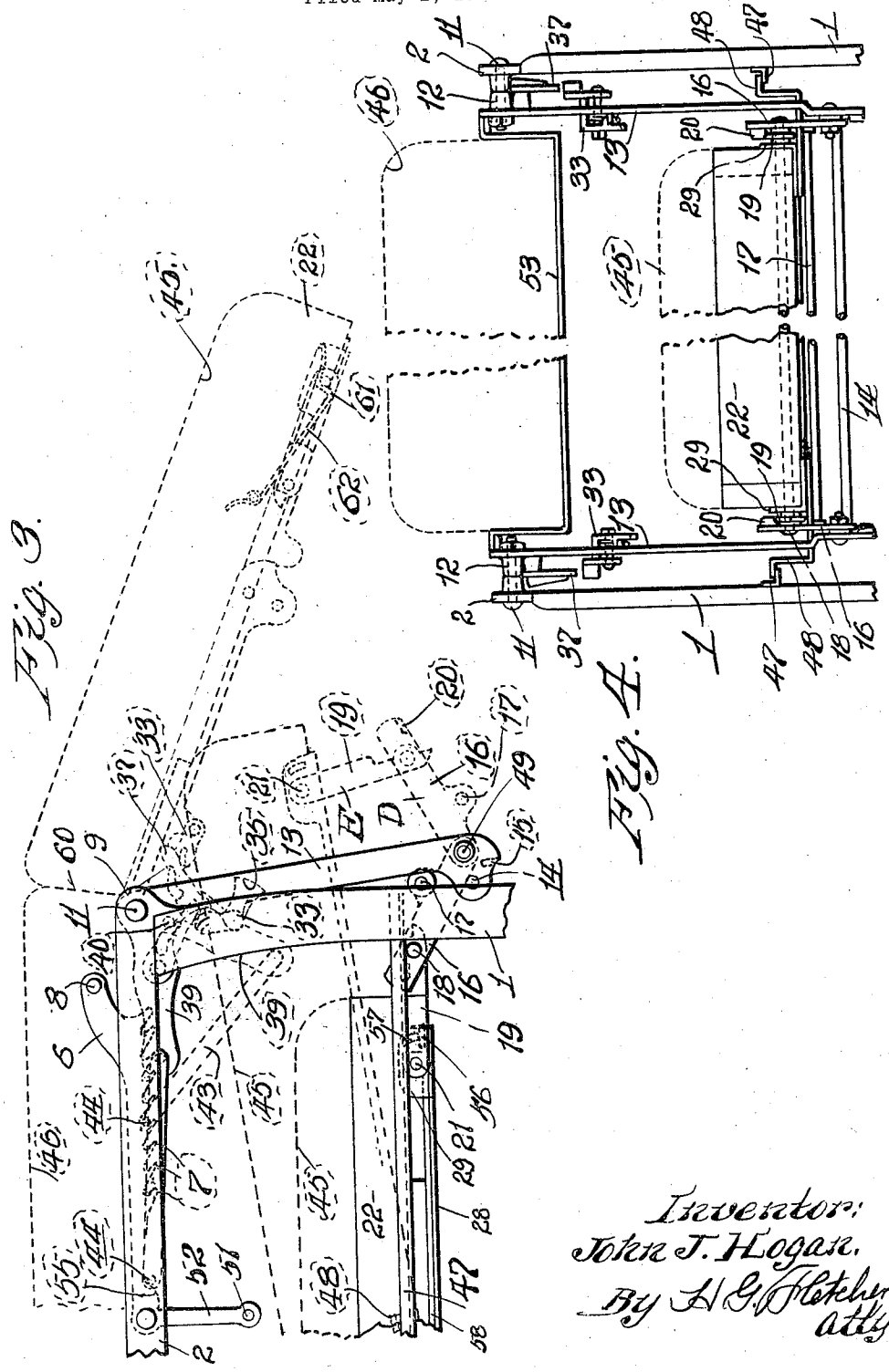


Fig. 3.

Fig. 4.

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Patented Feb. 20, 1923. 1,446,043

UNITED STATES PATENT OFFICE.

JOHN J. HOGAN, OF ST. LOUIS, MISSOURI.

LEG-REST ATTACHMENT FOR CHAIRS.

Application filed May 1, 1922. Serial No. 557,682.

To all whom it may concern:

Be it known that I, JOHN J. HOGAN, a citizen of the United States of America, and a resident of the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in a Leg-Rest Attachment for Chairs, of which the following is a specification.

This invention relates to an improvement in reclining chairs, and has for its primary object the purpose of providing an improved adjustable and demountable leg-rest.

Another object of the invention is to provide a chair with improved means whereby a leg-rest can be readily swung to positions of adjustment to the seating cushion of the chair, from a position beneath the seating cushion.

A further object of the invention is to provide improved means in an adjustable leg-rest for adapting it to overstuffed upholstered chairs.

Other and further objects will appear in the specification, and be specifically pointed out in the appended claims, reference being had to the accompanying drawings, exemplifying the invention, and in which:—

Figure 1 is a plan view of a fragmentary portion of the frame of a chair showing this improved leg-rest applied thereto.

Figure 2 is a side elevation of Fig. 1.

Figure 3 is a view similar to Fig. 2 but showing the leg-rest in different positions.

Figure 4 is a front elevation of Fig. 3.

Referring by numerals to the accompanying drawings, each of the front chair legs 1 are secured at their upper ends to respective side members 2, said side members being braced together in a desirable manner.

Arranged horizontally and secured inwardly of each of the side members 2 by riveting or the like such as 3 is a guiding member 4, and pivotally secured at 5 to each of said side members adjacent each respective guiding member is a releasing lever 6 each having a plurality of teeth 7 depending from its under side and provided with a handle 8, said teeth of each of said lever 6 being disposed lengthwise of each of the guiding members 4.

Each of the side members 2 at its front end is provided with an extending portion 9, and extending inwardly from each portion 9 is a horizontally arranged boss 10, each of said bosses being for the reception of a bolt 11, each bolt at its inner end supporting the bossed end 12 of a swingable arm 13, each of said arms adapted to be forwardly extended from between the side members 2.

A horizontally extended tie-rod 14 is provided for spacing and bracing the forwardly extending ends of the arms 13 together (see Fig. 1), each of said arms being provided with an inwardly extending lug 15, said lugs 15 being located adjacent the tie-rod 14, and swingably attached to each of said arms for co-operation with a respective lug is a link 16, said links being tied together by a horizontally extending tie-rod 17, each of said links 16 intermediate of its ends being each pivotally secured at 18 to a respective link 19, each of said links 16 being provided with a lug 20 each of said lugs 20 being for co-operation with a respective link 19, said links 19 being secured together by a horizontally arranged tie-rod 21.

From an inspection of Fig. 1 it will be noted that the pairs of arms 13, links 16 and pair of links 19 are in spaced apart relation, and adapted to be arranged therebetween is a leg-rest frame 22 which is provided with side members 23, and formed in each of said side members adjacent the end member 24 is a slot 25 and formed in each side member adjacent the end member 26 is a slot 27.

A runner 28 is arranged beneath the under side of each of the side members 23, each of said runners at one end having an upwardly extending portion 29, said portion 29 being in opposing disposition to one another and are for the reception of the tie-rod 21 of the pair of links 19, said tie-rod 21 extending through each of the slots 25.

Extended from each of the runners 28 intermediate of their ends is an outwardly disposed lug 30, said lugs 30 being in opposite disposition to each other and each adapted to under engage a respective arm 13, and extended from one end of each of said runners is a lug 31, said lugs 31 also being oppositely disposed and are shorter in length than the lugs 30.

Borne by each of the arms 13 is a horizontally extending bolt 32, each of said bolts supporting a swingable member 33, each of said members being provided with a pair of bolt engaging portions 34, each of said

members 33 having a cam portion 35, each cam portion adapted to under engage a respective lug 31 of each runner 28.

Each of the members 33 is provided with a portion 36 which is disposed opposite to the cam portion 35, and for engagement with each portion 36 of each member 33 is a tripping member 37, each of said members 37 being pivoted at 38 to the depending portion 39 of each respective arm 13.

Extending inwardly from each of the side members 2 is a lug 40, each of said lugs being in the path of travel of the raised surfaces 41 of a respective tripping member 37, and connected at 42 to each depending portion 39 is an arresting link 43, each of said links bearing a horizontally extending pin 44 at its opposite end for engaging between respective teeth 7 of each releasing lever 6.

The leg-rest frame 22 is provided with a cushion 45, whereas a seating cushion 46 is provided between the side members 2 of the chair, said seating cushion 46 being supported on transversely extending cross members 53 and 54.

In the operation of a device of this improved character, assuming that the leg-rest frame 22 and its cushion 45 is disposed beneath the seating cushion 46 as shown in Figs. 3 and 4, the operator upon engaging the end member 24 of the frame 22 and pulling outwardly thereon will cause said frame to be withdrawn from beneath the seating cushion 46, the inner end of said frame as designated by the end member 26 thereof being slidingly borne upon a pair of oppositely disposed track ways 47, said frame 22 being indirectly engaged on said track ways by the track engaging members 48 which are secured to a respective runner 28 in opposite disposition from one another.

This forwardly drawing of the frame 22 from beneath the seating cushion 46 will cause the pairs of links 16 and 19 to fold, in which the links 16 will be swung upwardly on their respective pivots 49 through which they are secured to the ends of the arms 13, thereby elevating the forward end of the frame 22, and as said frame is continually drawn outwardly and as the forward end of the frame is upheld by the operator said pairs of links 16 and 19 will commence to unfold as shown by dotted lines in Fig. 3, and as the frame is continually pulled outwardly the respective co-operating pairs of links 16 and 19 will assume alined positions and will be retained in such alined positions by engagement of the lugs 20 of the links 16 against the under sides of respective links 19.

During the outward drawing movement of the frame 22, the pair of arms 13 are caused to swing on their respective pivots 11, and as soon as the pairs of co-operating links 16 and 19 have assumed straightened or alined positions, further continued outer movement of said frame will tend to cause the respective arms 13 to assume straightened or alined positions with each co-operating pair of links 16 and 19. In the assuming of the straightened positions of the pair of arms 13 relative to the pair of co-operating links 16 and 19, after said links 16 and 19 have been straightened, the end of the frame 22 bearing the end member 26 will be swung upwardly on the radius A taken from the tie-rod 21 (see Fig. 2), in which each lug 31 will be caused to respectively engage a cam portion 35 of each respective member 33 and force said cam portions out of their paths, and as soon as said lugs 31 move far enough upwardly, said cam portions will become seated beneath said lugs 31 by the respective springs 50, said cam portions of each respective member 33 holding the frame 22 in extended position as shown in Figs. 1 and 2.

In carrying out the aforesaid operation, it is to be noted that when the arms 13 are being swung upwardly, each respective link 43 pivotally secured thereto as designated at 42 will be moved thereby, and in which the pin 44 of each link will be engaged between respective pairs of teeth of the respective releasing levers 6.

During the pulling and lifting operation of the leg-rest 22, if it were desired to repose in an inclining position, such position can be maintained by the pins 44 of the respective links 43 automatically engaging the respective teeth 7 of the releasing lever 6.

Assuming that the occupant of the chair desires to lower the leg-rest from the positions shown in Figs. 1 and 2, he elevates either of the releasing levers 6 by lifting the engaged teeth of said levers from the pins 44 of the respective links 43, the releasing of said pins and links allowing the leg-rest frame 22 to swing downwardly by its own weight. So that the releasing lever 6 will be moved together when either of them are elevated; a tie-rod 51 is secured to the depending ends 52 for tying them together.

In disposing the frame 22 beneath the seating cushion 46 either of the releasing levers 6 are swung upwardly on their pivots 5 and upon the releasing of each pin 44 of the respective links 43 from the teeth 7 of said lever 6, the arms 13 will be allowed to swing downwardly and in which the raised portion 41 of each member 37 upon being engaged by a respective pin 40 will force said members 37 downwardly against the portion 36 of each member 33, thereby forcing the cam portions 35 of each of the members 33 from beneath respective lugs 31 of the frame 22, the releasing of the cam portions 35 from beneath the respective lugs 31 of the frame 22 will allow said frame to fall and in which the arms 13 and co-operable pairs of links 16 and 19 will assume the approximate positions shown in the dotted

indicating lines B and C respectively (see Fig. 2).

After the arms 13 and respective links 16 and 19 have assumed the positions as indicated by the dotted lines B and C, further inward movement of the frame 22 will bring the track engaging members 48 into engagement with the forward end of the respective track ways 47.

Further inward movement of the frame 22 upon the track ways 47 will cause the links 16 and 19 to fold, on account of further down and rearward movement of the arms 13 being stopped by engagement of the pins 44 of the links 43 with respective shoulders 55 of the releasing levers 6, said folding of said links 16 and 19 assuming the positions shown in dotted lines D and E in Fig. 3, and in which the links 16 will swing upon their respective pivots 49 of the arms 13, said links 16 and 19 finally assuming the positions in full lines in Fig. 3, the links 19 each bearing a lug 56, sustaining the forward end of the frame 22 against swinging downward by engagement of each of said lugs 56 with a respective lug 57, each of said lugs 57 being borne by a respective extending portion 29 of each runner 28.

Each of the side members 23 of the frame 22 are provided with a runner 58, each runner 58 resting on respective runners 28, said runners 58 also providing retaining walls to the respective slots 25 and 27 formed on each of the side members 23.

The slots 25 and 27 of the frame 22 are for the purpose of permitting said frame to be slidably moved upon the runners 28, said frame and said runners 28 being tied together by the tie-rod 21 which passes through the pair of slots 25 and the tie-rod 59 which passes through the pair of slots 27, said tie-rod 59 being arranged between and secured to said runners 28.

The sliding of the frame 22 upon the runners 28 is required for closing the gap provided between adjacent meeting edges 60 of the leg-rest cushion 45 and seating cushion 46, when the cushion 45 is in a position inclined from the horizontal. In this connection, when the frame 22 is moved upwardly into abutment with the seating portion 46, the catching portion 61 of the leaf springs 62 which are borne by the frame 22 will engage the tie-rod 21 thereby holding said frame in its upwardly shifted position.

When the leg-rest is raised to a horizontal position in alinement with the seating cushion 46 the position of the frame 22 will be outwardly relative to the slots 25 and 27 thereof, said frame being held in its extended position by the catching member 63 engaging the tie-rod 21.

What I claim is:—

1. A leg-rest attachment for a chair, a seating portion with which said leg-rest is to co-operate, a pair of arms between which said leg-rest is adapted to be arranged each being stationarily pivoted to the chair adjacent said seating portion, a pair of links co-operable with each of said arms, one of said links of each of said pair of links being secured to said leg-rest, and co-operable means for allowing each of said arms and its co-operable pair of links to be held in extended positions.

2. A leg-rest attachment for a chair, a seating portion with which said leg-rest is to co-operate, a pair of arms between which said leg-rest is adapted to be arranged each being pivoted to the chair adjacent said seating portion each of said arms having its respective pivot held against displacement, a pair of links co-operable with each of said arms, one of said links of each of said pair of links being secured to said leg-rest, co-operable means for allowing each of said arms and its co-operable pair of links to be held in extended positions, and means for up-holding said leg-rest between said arms when said arms and their respective links are moved in extended positions.

3. A leg-rest attachment for a chair, a seating portion with which said leg-rest is to co-operate, a pair of arms between which said leg-rest is adapted to be arranged each being stationarily pivoted to the chair adjacent said seating portion, a pair of links co-operable with each of said arms, one of said links of each of said pair of links being secured to said leg-rest, co-operable means for allowing each of said arms and its co-operable pair of links to be held in extended positions, means for up-holding said leg-rest between said arms when said arms and their respective links are moved in extended positions, and means for releasing said up-holding means.

4. A leg-rest attachment for a chair comprising a pair of releasing levers each bearing a series of teeth, a pair of swingable arms stationarily pivoted to the chair each being provided with arresting means for co-operation with respective teeth of said levers, a pair of links pivotally secured to each of said arms, a frame swingable between said arms and their respective links, one of said links of each of said pair of links being pivotally secured to said frame adjacent one end, means for up-holding the opposite end of said frame between said arms, and releasing means for said up-holding means.

5. In a chair, a pair of stationarily held side members therefor, an arm pivotally secured to each of said side members, a link secured to the extending end of each of said arms, means provided on each of said arms for holding each respective link in extending alinement therewith, a second link connected to each of said other links, said first men-

tioned links each being provided with means whereby each respective second link can be extended in alinement therefrom, a frame arranged between said arms and their respective links and pivotally secured between said second pair of links, a movable member borne by each of said arms having engagement with the under side of said frame at one end, means for holding said arms and their respective links in different positions of inclination, and means for releasing each of said members of said arms for allowing one end of said frame to swing downwardly.

6. In a chair, a pair of stationarily held side members therefor, an arm pivotally secured to each of said side members, a link secured to the extending end of each of said arms, means provided on each of said arms for holding each respective link in extending alinement therewith, a second link connected to each of said other links, said first mentioned links each being provided with means whereby each respective second link can be extended in alinement therefrom, a frame arranged between said arms and their respective links and pivotally secured between said second pair of links, a movable member borne by each of said arms having engagement with the under side of said frame at one end, means for holding said arms and their respective links in different positions of inclination, means for releasing each of said members of said arms for allowing one end of said frame to swing downwardly, and a track way arranged below said side members for the reception of the downwardly swung end of said frame.

7. A leg-rest attachment for a chair comprising a pair of releasing levers each bearing a series of teeth, a pair of swingable arms stationarily pivoted to the chair each being provided with arresting means for co-operation with respective teeth of said levers, a pair of links pivotally secured to each of said arms, a frame swingable between said arms and their respective links, one of said links of each of said pair of links being pivotally secured to said frame adjacent one end, means for up-holding the opposite end of said frame between said arms, releasing means for said up-holding means, and a track way for receiving the released end of said frame.

8. A leg-rest attachment for a chair comprising a pair of releasing levers each bearing a series of teeth, a pair of swingable arms stationarily pivoted to the chair each being provided with arresting means for co-operation with respective teeth of said levers, a pair of links pivotally secured to each of said arms, a frame swingable between said arms and their respective links, one of said links of each of said pair of links being pivotally secured to said frame adjacent one end, means for up-holding the opposite end of said frame between said arms, releasing means for said up-holding means, and a track way for receiving the released end of said frame, each of said pairs of links adapted to fold for supporting the opposite end of said frame when the released end of said frame is located on said track way.

9. An attachment for a chair comprising a pair of side members, an arm swingably secured to each side member each having its pivot fixedly secured to a respective side member, said arms being for the support of a leg-rest, a link extended upwardly from each of said arms each bearing an arresting pin at its upper extending end, and a pair of releasing levers each bearing a series of teeth each being swingably secured to a respective side member, the teeth of each lever adapted to be engaged by a respective arresting pin of each respective link.

10. An attachment for a chair comprising a pair of side members, an arm swingably secured to each side member each having its pivot fixedly secured to a respective side member, said arms being for the support of a leg-rest, a link extended upwardly from each of said arms each bearing an arresting pin at its upper extending end, a horizontally extending guideway for each of said pins, and a pair of releasing levers each bearing a series of teeth each being swingably secured to a respective side member, the teeth of each lever adapted to be engaged by a respective arresting pin of each respective link.

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