Oct. 7, 1941. A. E. GAVERTH 2,258,488

CHAIR

Filed Jan. 19, 1940 2 Sheets-Sheet 1

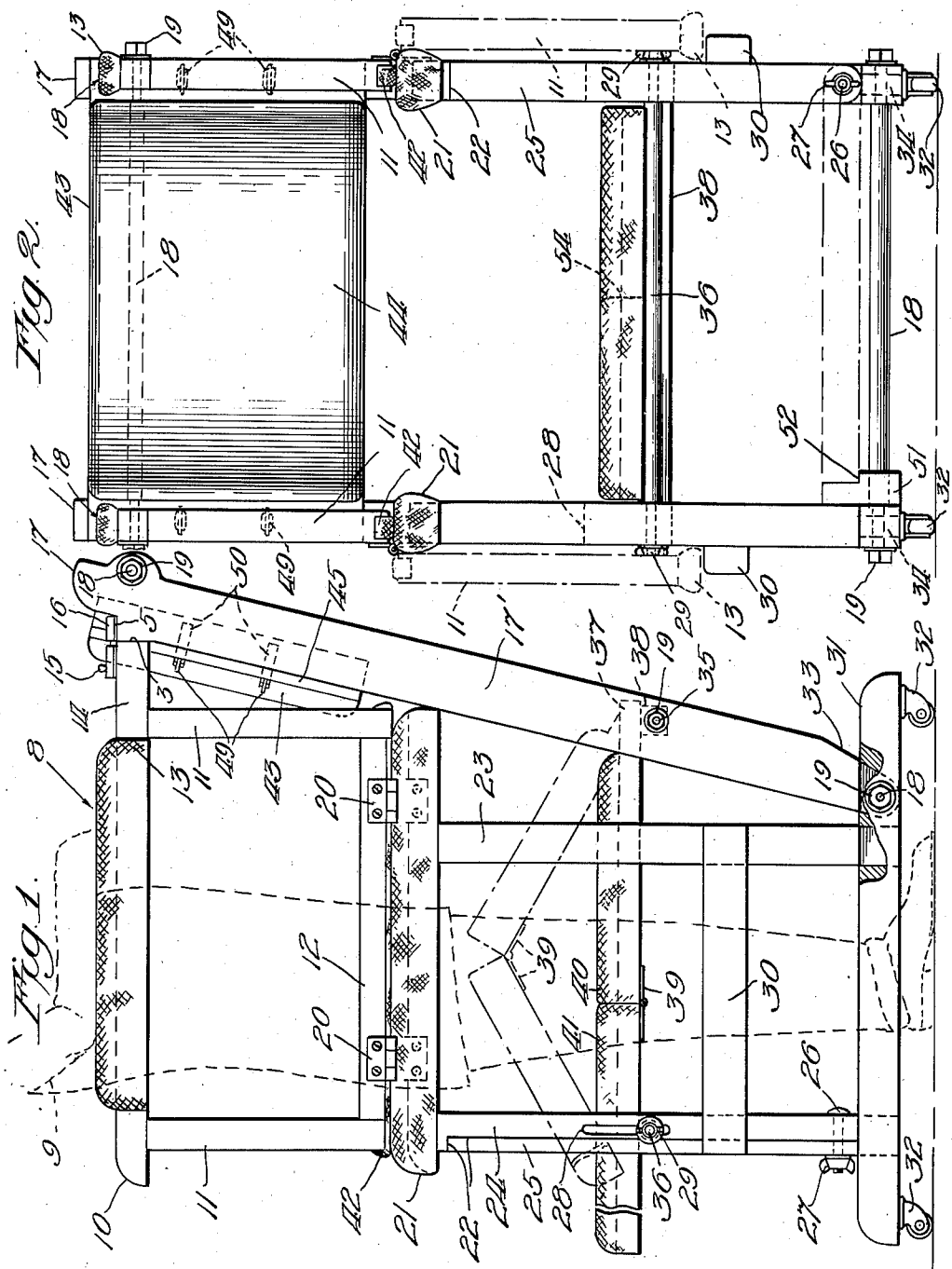


Fig. 2.

Fig. 1.

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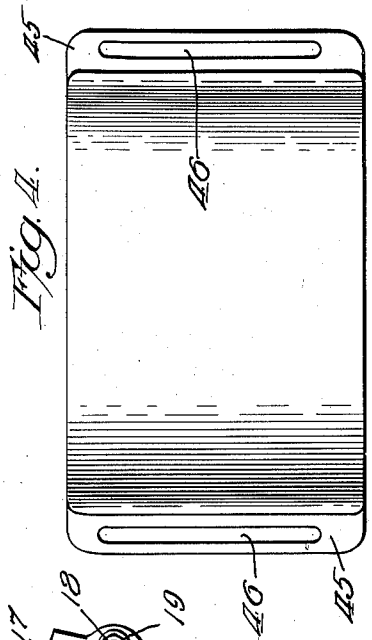


Fig. 4.

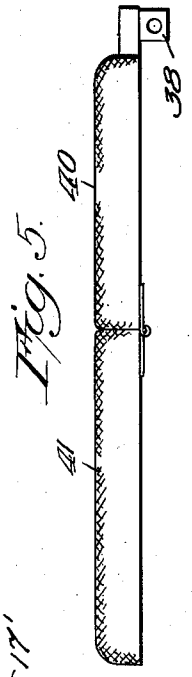


Fig. 5.



Fig. 6.

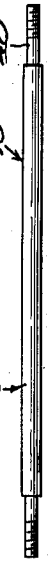


Fig. 7.

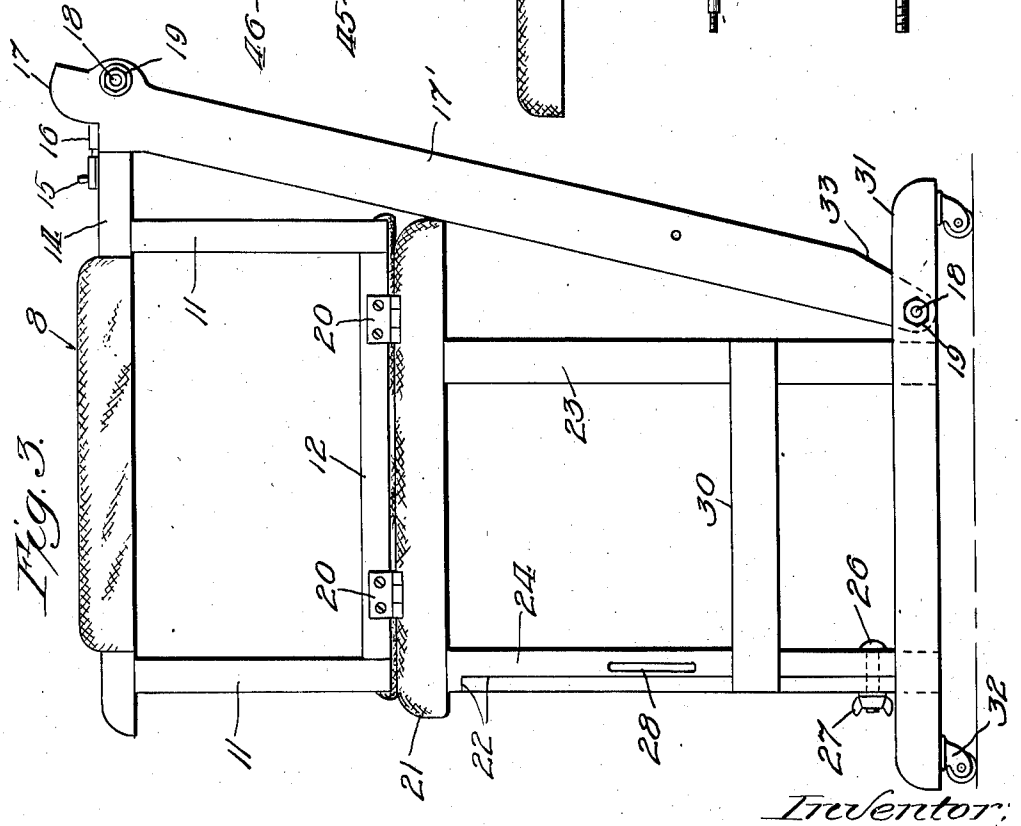


Fig. 3.

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UNITED STATES PATENT OFFICE

2,258,488

CHAIR

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Application January 19, 1940, Serial No. 314,600

5 Claims. (Cl. 155—22)

This invention relates to articles of furniture adapted for the convenience of invalids.

One of the main objects of my invention is to provide a chair or similar article of furniture for invalids, embodying a structure in the chair which will adapt it for use as a walking support for invalids.

Another object of my invention is to provide a seat which may be compactly folded up in alignment with the back of the chair and extensible arm rests articulately secured to the chair arm rests, which will enable an invalid to use the article of furniture as a convenient support for both arms below the elbow thus enabling an invalid to use my invention as a walking support.

Another object of my invention is to provide a foldable foot rest which may be compactly secured to the side frame comprising a part of my invention so that it will not interfere with the use of my invention when it is transformed to a walking support.

Another object of my invention is to provide an adjustable and slidable back rest for positioning the same for the maximum comfort to invalids, when my invention is used as a chair.

Another object of my invention is to provide a split seat arrangement which will permit one half section of the seat to incline at an angle whereas the other section will permit the leg of a person seated thereon to hang in normal position.

Another object of my invention is to provide an article of furniture to be described which may be readily and conveniently taken apart and thus be more compact for transportation or for carrying along in the compartment provided for this purpose in an automobile.

Another object of my invention is to provide a simple, practical, useful article of the character to be described, which will also be economical to manufacture in quantity production.

Other features and advantages resident in my invention will become apparent by referring to the accompanying drawings and the ensuing description wherein like symbols are used to designate like parts and in which;

Fig. 1 shows a side view of my invention with certain portions in cross-section in order to bring out the details of construction.

Fig. 2 shows a front view of my invention.

Fig. 3 shows a detailed arrangement of one of the side frame members in assembly with one back frame member of the same comprising structural details.

Fig. 4 shows a detailed plan view of the back rest portion.

Fig. 5 shows a detailed view of the seat structure.

Fig. 6 shows a view of the central tie rod member to permit the seat to articulate thereon.

Fig. 7 shows a view of one of the tie rods used in assembling the different parts comprising my invention.

Referring to the drawings, especially Figures 1 and 2, I show my invention comprised of a number of structural details. The numeral 8 generally designates my invention, and the numeral 9 indicates a person in dotted lines shown in position ready to use my invention for walking purposes.

The arms below the elbow rest on the secondary arm rest 13 of my invention, the distance of the secondary arm rest 13 from the floor for a normal person of average height being approximately four feet.

My invention comprises two side frame members as indicated in the structural details Figure 3 which are made up of the following parts; the back frame member 17 is shaped approximately as indicated and is provided with a ledge portion 53 in order to support the member 16 of a standard latch arrangement or device, the other portion being secured to the member 14 comprising the top arm support of the secondary arm rest 13 of my invention.

The device 15 is a spring bolt of a standard type which snaps into engagement automatically with the recess provided in the member 16, so that when the member 10 is swung up, the bolt in the member 15 will engage the recess in the member 16. The top frame member is comprised of the arm support 14 which is upholstered as indicated at 13 connected to the side members 11 in any suitable manner such as screws or nails, the said members designated 11 in turn are connected to the frame member 12 thus making a rectangular and rigid support.

The lower portion of the chair is comprised of the following structural details. A primary arm rest member which is preferably upholstered as indicated at 21, two side support members, a front member 24, and a rear member 23, rigidly secured to the member 21, and a lower member 31, rigidly secured to the said front and rear members 24 and 23 respectively.

To the lower member 31 which is suitably mortised out, is secured the back frame member 17, which is preferably tapered at the lower edge 33 in order to reduce the cross-sectional dimension of the tenon which is to be formed thereon

indicated at 34, and which is to be fitted rigidly to the mortised recess in the members 31.

The back frame member 17 is placed preferably in an angular position the purpose of which is readily obvious in order to arrange the chair so as to provide an inclined plane for adjusting the back rest in an inclined position as indicated.

The secondary arm rest frame-work 19 is attached to the primary arm rest frame-work by virtue of standard hinges designated 20 which permits the members 10 to be raised in an upward position and held in that position by the locking devices 15 and 16, or when the article of furniture is preferably to be used as a walking support or walking aid to a person.

Moreover, the member 10 may be folded downwardly as indicated in dotted position in the front view of Figure 2, in which case the article is used as a chair and the arm rests 21 are used for the convenience of resting the arms of a person reclining on the chair.

The lower member of the frame-work 31 is mounted on suitable universal casters 32 which will permit the device to be wheeled about in any direction desirable.

It is also to be noticed that the members 10 when folded downwardly as indicated in dotted position are provided at their upper portion with suitable upholstery designated 42 in order that an invalid resting on the chair who may rest his arm on the upholstered portion 21 and also on the upholstered portion 42 will find absolute comfort.

My invention is preferably assembled in the units shown, namely, there are two units of the combined detailed structure as explained in the foregoing description as illustrated in Figure 3, having the back frame members 17 which are provided with suitable holes to receive the tie rods 18 and 35 illustrated in the view Figure 6 and Figure 7; whereas the rod 35 is used to position articulately the seat structure 37 which is comprised of a two piece arrangement, sections 40 and 41 suitably upholstered and hingedly connected by the hinge 39 permitting the seat to be folded in the manner suggestively indicated by the dotted lines Figure 1.

The members 40 and 41 by virtue of the hinge arrangement may be folded back one upon the other and the folded arrangement of the seat brought into alignment with the rear portion 17' or the hollow portion behind the portion 17' of the back frame members 17.

The seat 37 has a cleat 38 securely attached thereto which is suitably bored in order to receive the body portion of the tie rod 35 which is provided with a reduced shoulder portion 47 and a further reduced shoulder which is suitably threaded in order to receive the washers and the nuts 19 for tieing up the frame-work suitably.

The tie rods 18 are inserted in the holes at the top and bottom of the back frame member 17, and suitable washers and lock-nuts 19 secured to the reduced threaded shoulder extension 48 in order to tie up the frame-work rigidly and securely.

Each side frame-work may be provided with one or more side cleats 30 for reinforcement of the article of furniture generally, or may embody any other structural arrangement known to the art for strength purposes.

The front member 24 is provided with a recessed portion 22 in order to accommodate the foot rest 25 when it is desired to use the item as a walking aid or support.

The member 31 in the view Figure 2 on the left hand side has secured thereto a foot rest abutting member 51 having a notched portion 52 in order to receive in rigid abutting relationship the foot rest 25 when the device is used as a chair.

The foot rest is articulately secured to the member 24 by the stud 26 and the wing nut 27.

In certain instances it may be required to support invalids with their lower extremities in a raised position, and by virtue of the articulate structure of the seat 37 heretofore explained, the seat 37 may be lifted above or below the horizontal plane by virtue of the tie rod member 36 which is similar to the tie rod member 18 and which is furnished with a reduced shoulder extension which is suitably threaded in order to receive washers and wing-nuts 29.

The front member 24, is provided with an elongated slotted recess 28 on each side in order to receive the reduced shoulder portion 48 of the tie rod 36, and thus by moving the rod 36 to a plane other than the horizontal plane, the wing-nuts tightening the rod and holding it in a certain position will provide a seat at an inclined position to the desired angle that may be required.

In some instances however, the patient or invalid reclining in the chair may require maintaining one leg in the raised or angular position, whereas the patient may find more comfort by keeping the other leg in the normal manner resting on the foot rest when in the dotted position indicated in Figure 2.

In that event, viewing the seat in Figure 2, the seat may also be parted at the center as indicated by a dotted line 54 so that the right or left handed portion may be lifted independently, and one side of the seat folded back on the line 39, and then turned about the fulcrum 35 and the collapsed assembly of the right or left section placed between the portion 17' of the member 17, thus permitting the person to rest on the remaining seat section with one leg horizontal, and one leg normally resting on the foot rest 25. Or the remaining seat section may be adjusted to an angular position within the confines of the slot 28. The seat indicated in the drawing has been illustrated of such length for special instances, where it is required to support both legs in a horizontal position up to and including the feet. Either of the two front seat portions produced as the result of splitting the seat portion 41 may be arranged to hang downwardly by folding in the direction indicated at dotted lines of Figure 1, causing the split seat portion to clear the rod 36, and thus provide comfortable seating for a patient with either leg supported in a horizontal position, the remaining leg in a normal position resting on the foot rest 25.

The seat may be made considerably shorter than indicated in Figure 1, in order to be able to part the same as indicated at 54 so as to permit supporting only one leg in horizontal plane, or in inclined planes to the horizontal within the range of adjustment of the rod member 36 and within the range of adjustment of the slot 28.

The back portion designated 43 is comprised of a rectangularly shaped arrangement which may be recessed in concave fashion as indicated in the view Figure 2 and designated 44 and is provided with two extension ledges 45 one on each side, provided with the slotted portion 46. The slotted portion 46 cooperates with the thumb screws 49 which have extensions 50 threaded into the back frame member 17, so as to enable one

to adjust the height of the back rest **43** to the most desirable and comfortable position for a person's back when seated. It will permit the back member **43** to be positioned so that the back of a person is supported and not the head, or it may be raised to where the upper portion of the back and the head may recline comfortably thereon, or any other position permissible thru the range of adjustment provided.

The foot rest member **25** is indicated in full lines in the position it will occupy in the view Figure 1 and Figure 2 when my invention is used as a walking aid, in which event the seat will be collapsed as heretofore described, and be in alignment with the space between the portions **17'** of the back frame members **17**.

When sitting in the chair, the invalid may be wheeled about by any person or nurse who is taking care of the individual. When the seat is folded up, the members **40** and **41** are made to coincide and the collapsed assembly of the seat is positioned within the confines of the portion **17'** between the members **17** hence, the individual or patient may utilize the device as a walking aid, and this is clearly depicted and illustrated by the figure of a person designated by the numeral **9** shown in Figure 1.

The universal casters permit movement in any direction and a patient is given firm support by virtue of the secondary arm rests **13** and walks with greater confidence.

My invention may be used as a wheeled chair when it is set up as shown by the full lines in Figure 1, except that the secondary arm rests **13** are folded down to the dotted position indicated in Figure 2. In which event the foot rest **25** is in the position shown by the dotted lines Figure 2. In this position one of the seat sectional assemblies (caused by partition at **54** Figure 2) may be folded back and confined within the spaces **17'** thus permitting one limb to assume a horizontal or inclined position and the other limb normally resting on foot rest **25**. If desired, the person reclining on my invention may be wheeled about by someone.

My invention may be used as a walking aid by simple and slight transformation. First the seat sections **40** and **41** (four sections comprising the seat when the seat is parted on the lines **54** Figure 2) are folded over congruently by virtue of hinges **39** and then turned about the fulcrum **35** to be concealed between the portion **17'**. The foot rest **25** is caused to be raised until it coincides with the recess **22** and the thumb screw **27** tightened. The secondary arm rests **13** are in the position shown in full lines in Figure 1. A person may step within the opening of my invention facing in the position indicated by the dotted figure of a person standing up (see Figure 1) and rest his elbows and arms on the upholstered portions of the secondary arm rests **14** and push the walker forward which action is facilitated by the casters **32**.

When it is desired to take the article of furniture to a camp, or when it is desired to transport the same, it can readily be done by removing the rods **18**, **35**, and **36** and placing the two end frame works together, the seat, back members, and the tie rods in a more compact arrangement. Arranged in this compact form it may be transported about and readily assembled when the destination is reached.

Altho, I have shown a preferred form of my invention, I reserve the right to all modification and improvements encompassed within the spirit and scope of my invention; my invention to be limited only to the appended claims.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. In an article of furniture, side frame members rigidly secured in laterally spaced relation, a back frame at the rear edge of said side frames and rigidly secured thereto, a seat frame extending between said side frames and pivoted to said back frame and foldable thereagainst, primary arm rests mounted on the side frames and secondary arm rests hinged to said primary arm rests to extend vertically thereabove or to fold downwardly alongside said side frames, and means releasably securing said secondary arm rests in the vertical position.

2. In an article of furniture, in combination with side frame members, and a seat frame comprising, two members hingedly secured, one of said seat members being articulately secured between the said side frame members, the remaining seat member divided into two portions adapted to be independently placed in operative position, adjustable positioning means secured to the front of the said side frame members adapted to vary the height of the forward portion of the said seat member, the said positioning means comprising slotted portions in the front uprights of said side frame members, a rod member secured to the said slotted portions, and lock nut means for securing adjustably the said rod member in fixed position.

3. An article of furniture comprising, side frame members rigidly secured in laterally spaced relation, a back frame at the rear edge of said side frames and rigidly secured thereto, a seat frame extending between said side frames and pivoted to said back frame and foldable thereagainst, the said seat frame comprising, two members hingedly secured, one of said seat members articulately secured between the said side frame members, the remaining seat member divided into two portions adapted to be independently placed in operative position, primary arm rests mounted in the side frames and secondary arm rests hinged to said primary arm rests to extend vertically thereabove or to fold downwardly alongside said side frames, and means releasably securing said secondary arm rests in the vertical position.

4. An article of furniture comprising, side frame members rigidly secured in laterally spaced relation, a back frame at the rear edge of said side frames and rigidly secured thereto, a seat frame extending between said side frames and pivoted to said back frame and foldable thereagainst, the said seat frame comprising two members hingedly secured, one of said seat members articulately secured between the said side frame members, the remaining seat member divided into two portions adapted to be independently placed in operative position, primary arm rests mounted on the side frames and secondary arm rests hinged to said primary arm rests to extend vertically thereabove or to fold downwardly alongside said side frames, means releasably securing said secondary arm rests in the vertical position, and a concealable foot rest member articulately secured to one side frame member and adapted to be supported on the other side frame member.

5. An article of furniture comprising, side frame members rigidly secured in laterally spaced relation, a back frame at the rear edge of said side frames and rigidly secured thereto, a seat

frame extending between said side frames and pivoted to said back frame and foldable thereagainst, the said seat frame comprising, two members hingedly secured, one of said seat members articulately secured between the said side frame members, the remaining seat members divided into two portions adapted to be independently placed in operative position, primary arm rests mounted in the side frames and secondary arm rests hinged to said primary arm rests to extend vertically thereabove or to fold downwardly alongside said side frames, means releasably securing said secondary arm rests in the vertical position, and adjustable positioning means secured to the front of the said frame members adapted to vary the height of the forward portion of the said seat frame, the said means comprising slotted portions in the front uprights of said side frame members, a rod member secured to the said slotted portions, and lock nut means for securing adjustably the said rod member in fixed position.

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