(No Model.)

3 Sheets—Sheet 1.

E. I. GALLOWAY

RECLINING CHAIR.

No. 487,919. Patented Dec. 13, 1892.

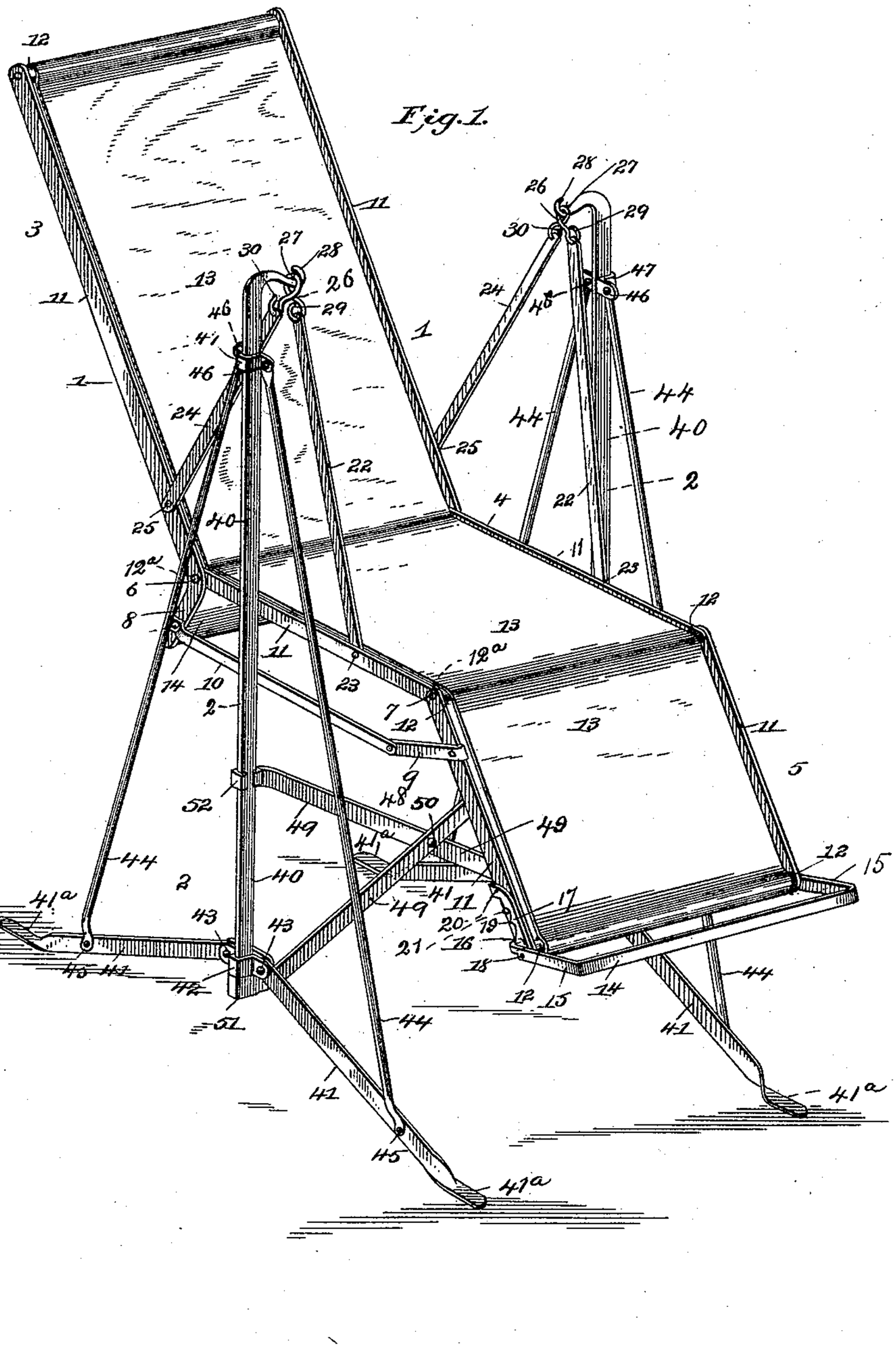

Fig. 1.

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Fig. 2.

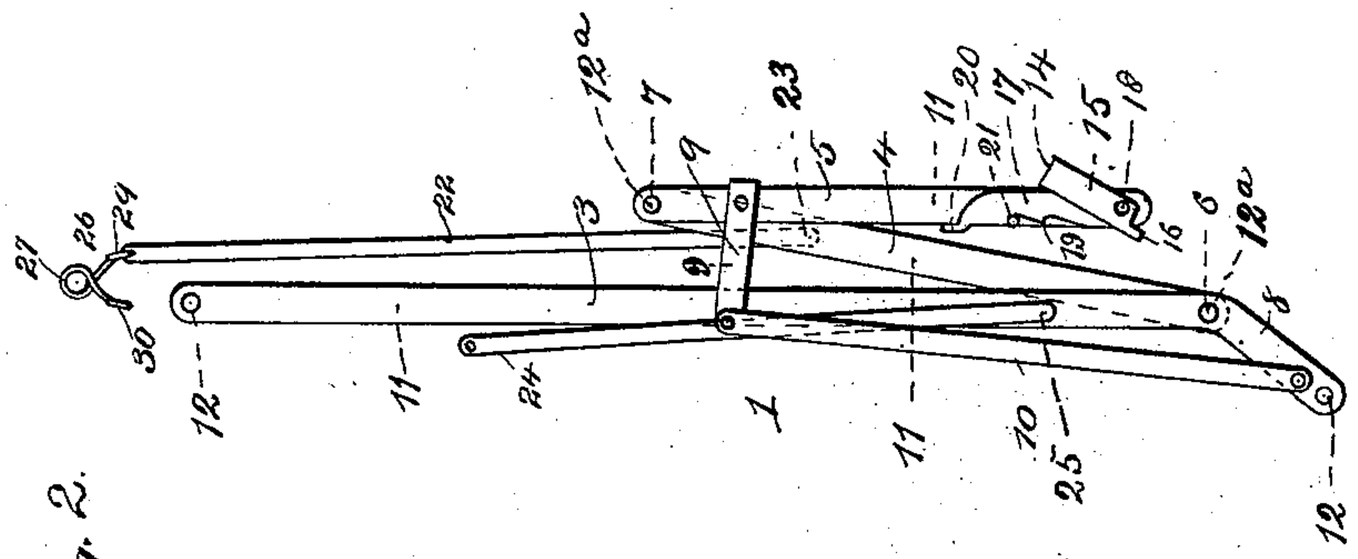

Fig. 4.

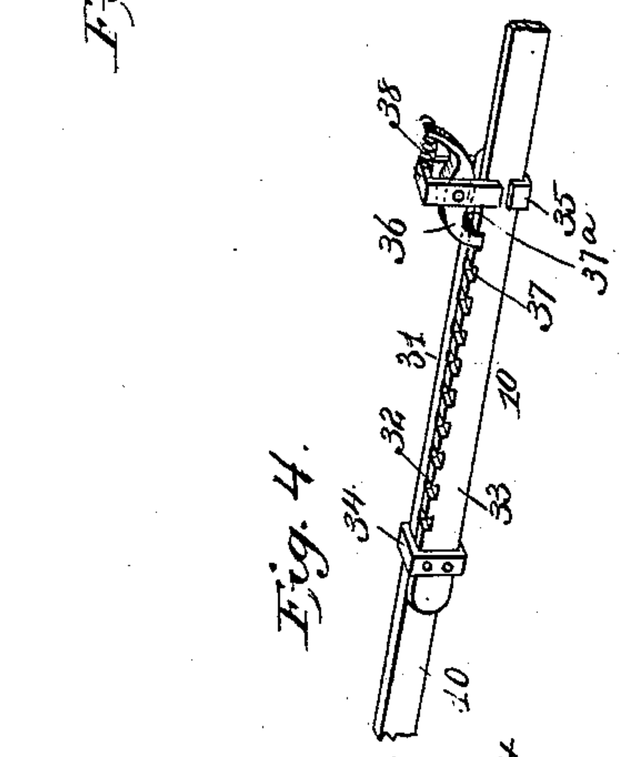

Fig. 3

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3 Sheets—Sheet 3.

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RECLINING CHAIR.

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Fig. 6.

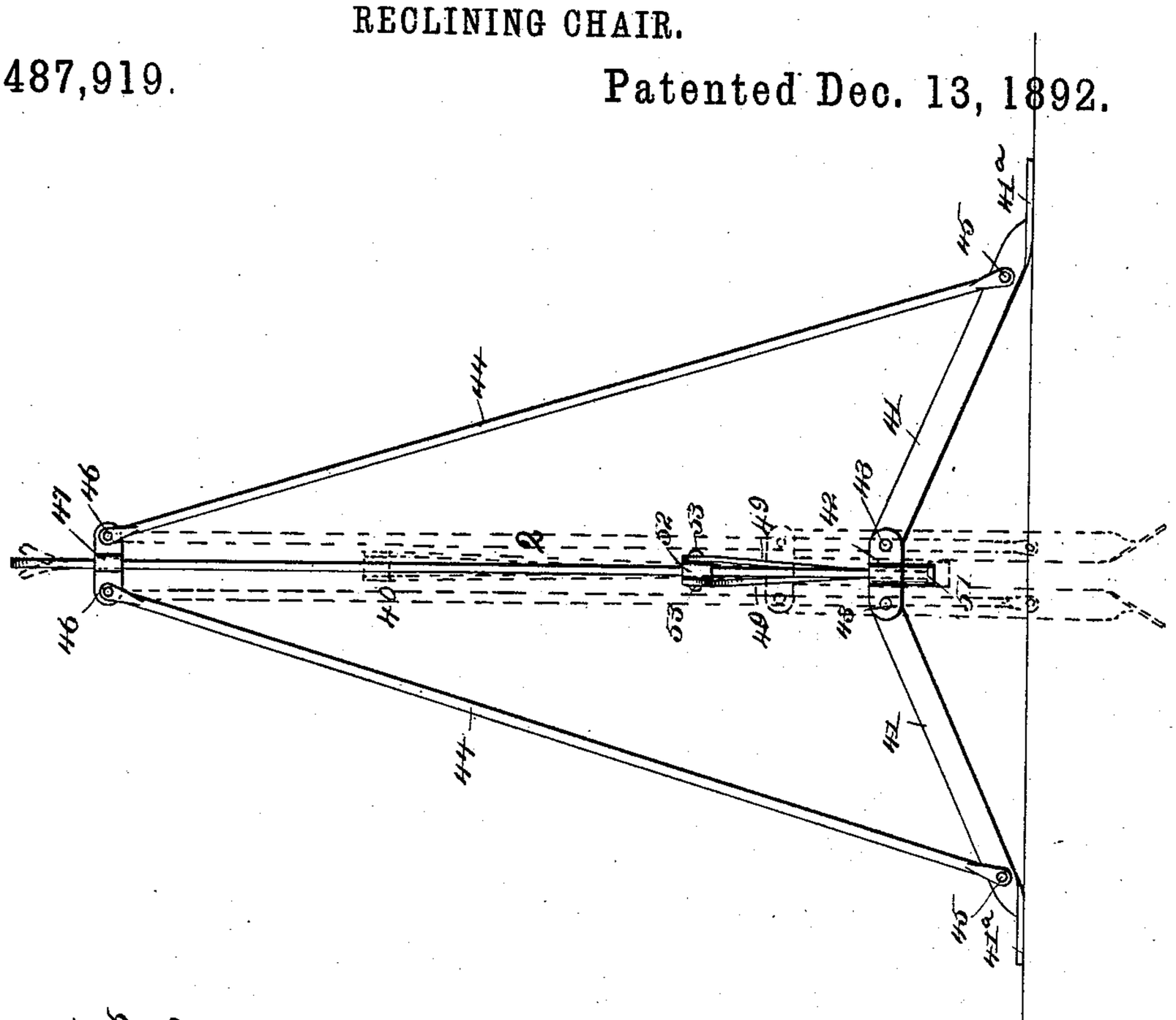
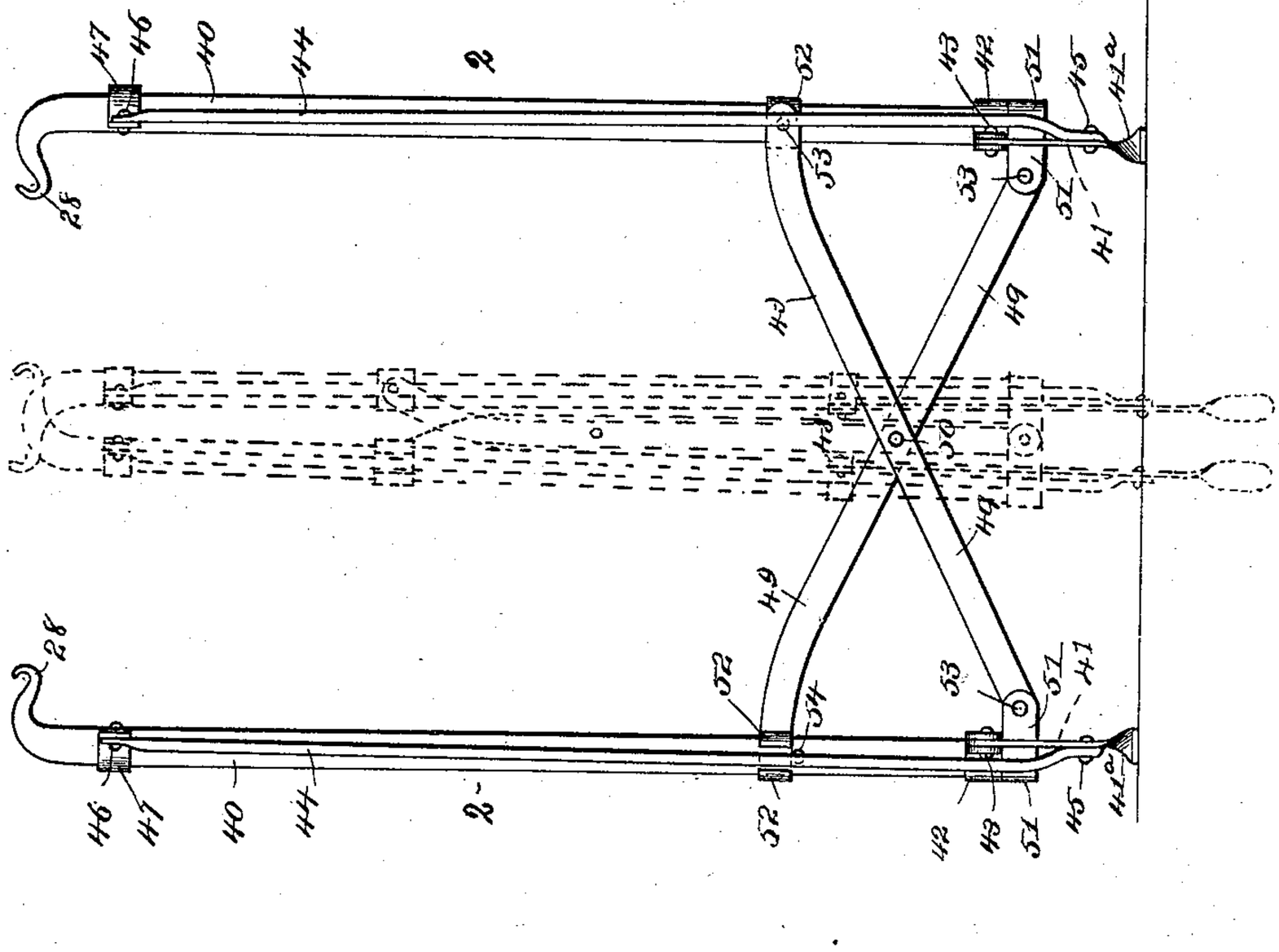


Fig. 5.



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UNITED STATES PATENT OFFICE.

EMMET I. GALLOWAY, OF LA GRANGE, INDIANA, ASSIGNOR OF ONE-HALF TO ALBERT F. SKEER, JR., OF SAME PLACE.

RECLINING-CHAIR.

SPECIFICATION forming part of Letters Patent No. 487,919, dated December 13, 1892.

Application filed April 20, 1892. Serial No. 429,932. (No model.)

To all whom it may concern:

Be it known that I, EMMET I. GALLOWAY, a citizen of the United States, residing at La Grange, in the county of La Grange and State of Indiana, have invented certain new and useful Improvements in Reclining-Chairs, of which the following is a specification.

My invention relates to reclining-chairs mounted to swing upon a suitable support and adapted to be extended to a straight line in an approximately-horizontal position or elevated into an upright sitting position at the will of the occupant, the construction of the chair and support being such as to adapt them to fold into compact and convenient form and render them conveniently portable.

The chair comprises three frames hinged together end to end and constituting the back, the seat, and the leg-rest, said back and leg-rest being provided with projections extending at angles on their under sides and connected by a pair of bars parallel to the seat-frame. The proportions of the extensions and bars are such as to retain the back and leg-rest parallel, and consequently to cause them to move simultaneously in the operation of extending and folding or bringing the chair to an upright position, the extensions on the respective parts facilitating the movement thereof by providing for the connecting-bars a constant leverage on the parts to be moved. Joints in the rods adapt them to be extended for changing the relative positions of the back and leg-rest, as for bringing the leg-rest to a horizontal position, while maintaining the back in approximate upright position. The chair is hung by means of a pair of links or rods on each side, which engage at their upper ends in double hooks attached to the support from which the chair is swung. These rods have their respective lower ends attached near the forward end of the seat-frame and at points in the back-frame above the hinge. The result of this manner of attaching is that when the weight of the occupant is brought to bear on the webbing at a point between the places of attachment of the hanger-rods the back will be elevated and the leg-rest depressed and the chair will assume an upright position. The foot-rest attached to the lower end of the leg-rest consists of a bar extending across the bottom of the chair and having rearward projections provided with lugs, which engage behind the chair-frame, said bar being supported upon the chair-frame by means of racks or ratchet-plates, to which it is pivoted, and pins upon the chair-frame adapted to engage in the respective notches of said rack. The support upon which the chair is pendently mounted consists of a pair of uprights having bases formed by pairs of feet having at their inner ends sliding connections with the lower part of the uprights and at their outer ends connections through links with the upper parts of the same, so that the feet may fold into positions alongside the uprights by bringing their outer ends together while their inner ends slide upward. The support is further provided with a spacing and bracing frame consisting of a pair of crossed bars whose pairs of upper and lower ends are connected with the uprights, one pair having fixed connection, while the other pair has sliding connection. Preferably the lower ends of the bars are pivoted to fixed sleeves on the uprights, while the upper ends of the same have limited sliding connection with said uprights. The uprights may thus be brought together or spread to the proper distance at will, while the bracing and spacing effect of the frame is in no wise impaired. Pressure brought upon the upper ends of the uprights when the support is in use will securely lock both the bases and the spacing-frame and cause the support to assume a rigid position.

The novel features of construction are hereinafter fully described and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a perspective view of a chair embodying my invention. Fig. 2 is a side elevation of the chair proper detached and folded. Fig. 3 is a side elevation, the rear side of the support being omitted and illustrating an additional feature, the extension-joint in the side bars and the utility of the same in dotted lines. Fig. 4 is a detail per-

spective view of the extension-joint. Figs. 5 and 6 represent in front and side elevation the support or frame upon which the chair is mounted.

1 represents the chair, and 2 the support therefor. The chair comprises the back 3, the seat 4, and the leg-rest 5, hinged together end to end at 6 and 7.

8 and 9 represent extensions which project at angles from the rear sides of the back and leg-rest, respectively, and 10 represents the side bars, approximately parallel with the seat-frame and connecting the extensions 8 9 together, so as to cause the back and leg-rest to move simultaneously. The extensions 8 9 are made of such length and at such angles to the back and leg-rest that the side bars, their points of attachment, and the chair-joints never come into the same line, whatever position the chair may assume in use, so that said side bars have a constant leverage on the parts which they control, and said side bars therefore never lose their efficiency.

The back-frame, seat-frame, and leg-rest frame each consist of a pair of longitudinal side pieces 11 and suitable rounds 12. At the joints 6 7, between the seat and the back and leg rest, the hinges are made by passing pins 12[a] through overlapped ends of the side pieces, and at each of these points a single round is used for the two parts. Between the seat and back the round is located between the extensions 8 on the back. 13 represents the webbing, which is stretched from the bottom round of the leg-rest to the top round of the back, passing over the intermediate round at joint 7 and being held in by a loop 14, through which is passed the round between extensions 8. The webbing thus affords the only medium of supporting the occupant on the frame, and round between extensions 8 being removed from the main stretch of webbing the comfort of the occupant is not impaired by contact therewith.

The foot-rest consists of the bar 14, having at each end a rearward extension 15, and lug 16, engaging behind the chair-frame. The foot-rest 14 is supported at each side by a ratchet-plate 17, pivoted at 18 to the lower corner of extension 15 and provided with rearwardly-extending teeth 19 and a lug 20. The teeth 19 engage a pin 21 on the chair-frame, while the lug 20 engages behind the chair-frame. I have shown but one side of the chair; but it will be understood that on both sides the arrangement is the same. The teeth 19 are in front of the pins 21, while the lugs 16 20 are behind the chair-frame. The parts are therefore securely held in place. The distance from pivot 18 to lugs 16 is such that upon turning the foot-rest upward sufficient space is left between the lug 16 and the rear of the frame to permit the ratchet-plates to be disengaged from the pins 21 and the foot-rest to be shifted.

The chair is hung by means of the rods 22, attached at points 23 to the seat near the forward part of the seat, and the rods 24, attached at the points 25 to the back above the joint between the seat and the back. With this arrangement of the suspending-rods it will readily be seen that when a predominance of weight is brought to bear between the points 23 and 25 the rods will tend to draw said points together, and thereby straighten up the back. In this movement the back operates through the medium of extensions 8, side bars 10, and extensions 9 to depress the leg-rest. The rods 22 and 24 are engaged at their upper ends by double hooks 26, having eyes 27 for engagement with hooks 28, formed on the uprights of the chair-support, and these hooks 26 are connected with the rods 22 24 through the medium of closed eyes 29 and open eyes 30. The object in making one eye open and the other eye closed is to permit one rod to be detached, so that the ends may be separated when the chair is folded. This means for suspension permits the chair to hang pendently and allows it to be readily detached from its support at any time.

To provide for changing the relation between the back and leg-rest, I construct the side bar 10 with extension-joints 31, as shown in Figs. 3 and 4. This joint, as shown particularly in Fig. 4, consists of the overlapped portions of the bar 32 33, held in longitudinally-sliding relation by means of collars or sleeves 34 35, one of which may be secured to each.

To control the longitudinal relative movement of the overlapped portions 32 33, the sleeve 35 is provided with a dog 36, which is held by said sleeve fixedly upon the part 32 and whose end engages notches 37 in the part 33. The dog is provided with a spring 38, which holds it to its work. By raising the dog the part 33 may be moved relatively to the part 32, after which the dog is dropped into one of the notches and the parts are retained in their new relation. By moving the part 33 outward or to the right hand in Fig. 3 it is obvious that the leg-rest 5 may be brought into the positions shown by dotted lines without changing either the position of the back or the position of the part 32 of the side bar and its dog. The chair will thus support the legs and back in the position suggested by the illustration, and when desired the dog may be again released and the leg-rest allowed to drop into its normal position relative to the back. The use of this extension-joint does not in any way impair ordinary use of the chair, as described with reference to Fig. 1. The dog is preferably made to extend across both overlapped parts and a notch 37[a], formed in the stationary part, as shown in Fig. 4, so that the dog drops when said notch registers with one of those in the movable part.

In folding the chair into the position shown in Fig. 2 it will be seen that the foot-rest turns up against the leg-rest, the seat 4 and leg-rest

5 assume positions nearly parallel with the back 3, and the suspending-rods 22 24, being separated at their upper ends, likewise lie alongside the back 3. In this position the chair is in convenient shape for movement from place to place. In assuming this position the extension-joint 31 may be shifted, if necessary, to assist in the operation; but it will be found that the extensions 8 and 9 and the side bar 10 may be so proportioned that the chair will fold into the position shown without difficulty and without any necessity for adjustment of the extension-joint. The parts may be brought even closer together than indicated in Fig. 2. They are shown slightly separated here for perspicuity.

The support consists of a pair of uprights 40, having bases composed of legs 41, having feet 41ª, extending front and rear and having sliding connection with the lower portion of the uprights through the medium of sleeves 42, to which the inner ends of the legs 41 are pivoted at 43. The legs likewise have connection through brace-rods 44, pivoted at 45 to the outer ends of the legs and also at 46 to sleeves 47 on the upper parts of the uprights. The sleeves 47 are fixed so that when the outer ends of the legs 41 are brought together the sleeve 42 slides upward upon said uprights, or when the sleeve 42 is moved upward upon the upright the outer end of the legs will be drawn in by the rods 44. The uprights are provided at their upper ends with inwardly-projecting doubly-curved hooks 28 for the reception of the double hooks 26, hereinbefore referred to. The uprights are further provided with the spacing and bracing frame 48, which consists in a pair of bars 49, crossed and pivoted at their intersection 50, their ends being connected with the uprights through the medium of sleeves 51 and 52. The pair of lower sleeves are fixed, preferably, though not necessarily, to the bottoms of the uprights, while the upper sleeves 52 are mounted to slide upon said uprights. The connection of each end of the rods with its sleeve is through the medium of pivots 53.

54 represents a stop on one of the uprights for the purpose of limiting the downward movement of the sleeve which impinges upon it, and consequently of the opposite sleeve. It will be understood that with the arrangement as explained any movement which causes the sleeves 52 to slide upward upon the uprights will result in bringing the uprights together and any reverse movement of the sleeves will tend to separate the uprights. The separation of the uprights is limited by the stop 54, which arrests the downward movement of the sleeves 52. The folded position of the support is illustrated by dotted lines in Figs. 5 and 6, the former showing the uprights brought together, the hooks 28 being crossed, as shown, while Fig. 6 shows the legs folded alongside the upright, as above explained.

From the foregoing description it will be seen that my chair is of light construction, easy of manipulation, and readily folded for transportation. When in use pressure upon the hooks 28 of the uprights tends to keep both the legs 41 and the spacing and bracing bar 48 in normal positions.

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

1. The combination of a support, the seat-frame, the back-frame pivoted to the seat-frame, having extensions projecting at angles from its rear side, the leg-frame pivoted to the seat-frame, having extensions projecting at angles from its rear side, the overlapping side bars approximately parallel with the seat-frame, connecting the extensions of the back-frame with the extensions of the leg-frame and each side bar consisting of a bar 32, a sleeve 34, a sleeve 35, provided with a dog 36, and a bar 33, formed with notches 37 for the engagement of the dog, and means by which the back-frame and the seat-frame are suspended from the support, substantially as described.

2. The combination of a support, the seat-frame, the back-frame pivoted to the seat-frame, the suspension-rods connected with the back-frame, the suspension-rods connected with the seat-frame, and the double hooks 26, having upper eyes 27, connected with the supports, closed eyes 29, connected with the suspension rods of the seat-frame, and open eyes 30, connected with the suspension-rods of the back-frame, substantially as described.

3. The combination, with the chair, of the foot-bar extending across the chair and having the lugs engaging behind the chair-frame, the ratchet-plates pivoted to the foot-bar and having lugs engaging behind the chair-frame, and the pins on the chair-frame between the ratchet and the lugs, substantially as and for the purpose set forth.

4. The combination, with a chair, of a foot-bar extending across the chair and having lugs on its upper side engaging behind the chair-frame and the ratchet-plates pivoted to the lower side of the foot-bar and having lugs at their upper ends engaging behind the chair-frame and having on their rear sides teeth engaging pins on the chair-frame, all substantially as explained.

5. A chair-support consisting of the uprights 40, having doubly-curved hooks 28, the legs 41, having feet 41ª, the sleeves 42, to which the legs are hinged, sliding on the uprights, the crossed bars 49, pivoted at their intersection, provided at their upper ends with sleeves 52, sliding on the uprights, and the sleeves 51, to which the lower ends of the crossed bars are hinged, located on the uprights beneath the leg-sleeves, substantially as described.

6. A chair-support consisting of the uprights 40, having doubly-curved hooks 28, the

legs 41, having feet 41ª, the sleeves 42, to which the legs are hinged, sliding on the uprights, the crossed bars 49, pivoted at their intersection, provided at their upper ends with sleeves 52, sliding on the uprights, the sleeves 51, to which the lower ends of the crossed bars are hinged, located on the uprights beneath the leg-sleeves, the brace-rods 44, hinged to the legs, and the sleeves 47, to which the brace-rods are hinged, sliding on the uprights, substantially as described.

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