

March 13, 1956

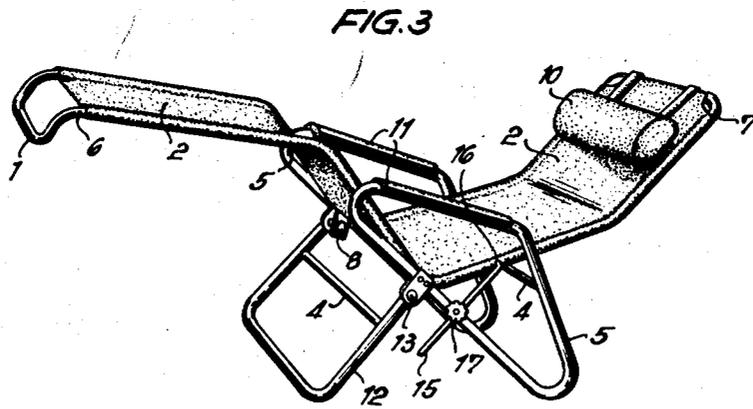
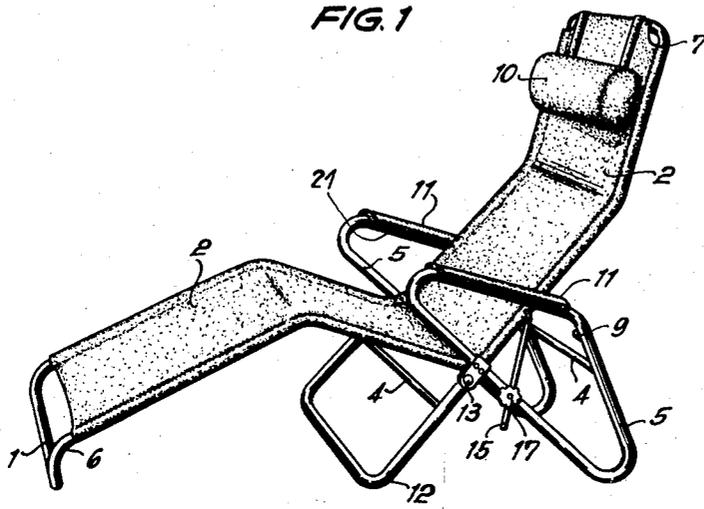
F. E. DRABERT

2,738,001

RECLINING CHAIR FOR INVALIDS

Filed March 2, 1954

4 Sheets-Sheet 1



INVENTOR  
Fritz E. Drabert  
by *Arnold & Mott*  
Attorney

March 13, 1956

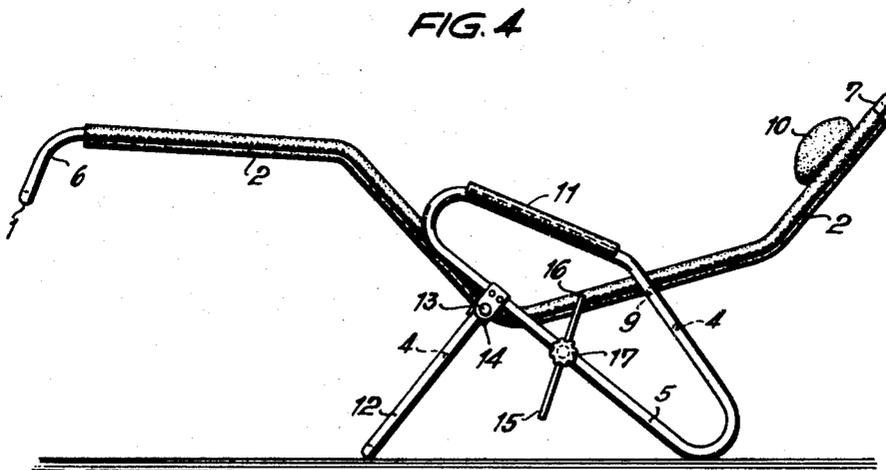
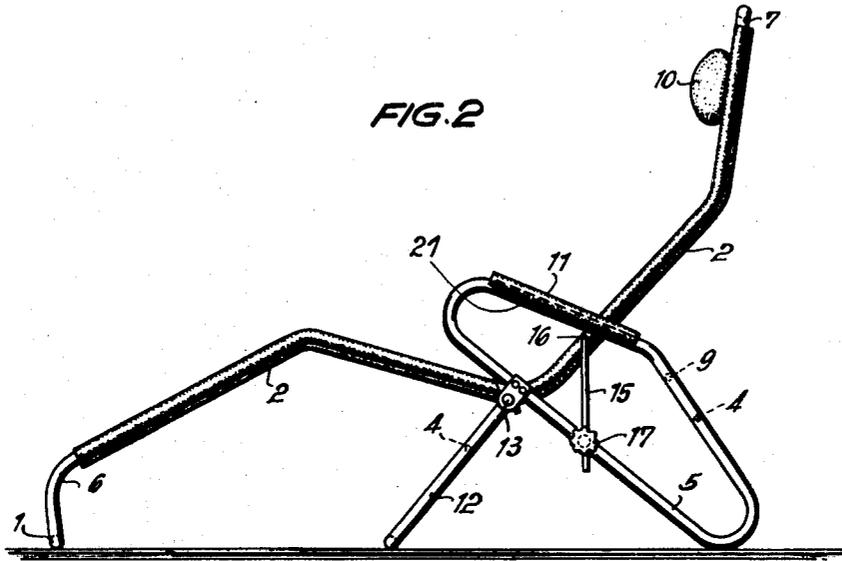
F. E. DRABERT

2,738,001

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Filed March 2, 1954

4 Sheets-Sheet 2



INVENTOR

Fritz E. Drabert  
Armand E. Mattern  
Attorney

March 13, 1956

F. E. DRABERT

2,738,001

RECLINING CHAIR FOR INVALIDS

Filed March 2, 1954

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FIG. 5

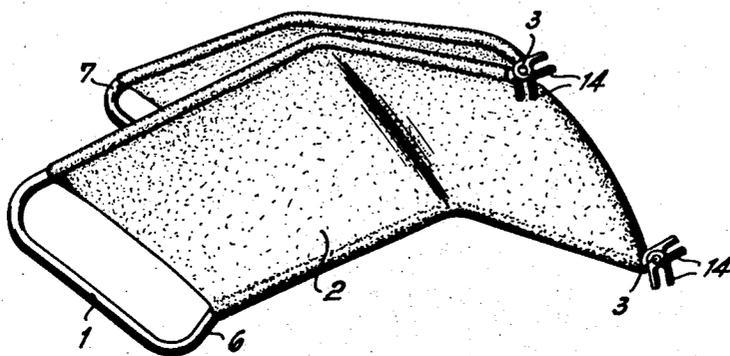
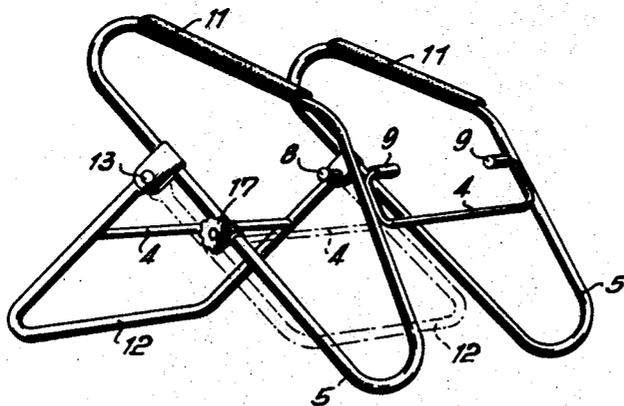


FIG. 6



INVENTOR  
Fritz E. Drabert  
By August E. Mylton  
Attorney

March 13, 1956

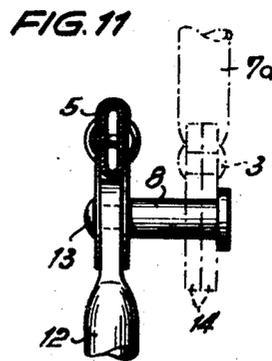
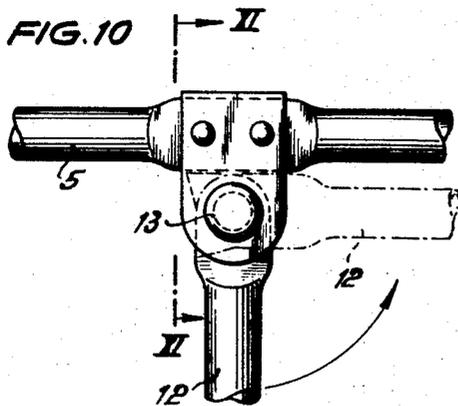
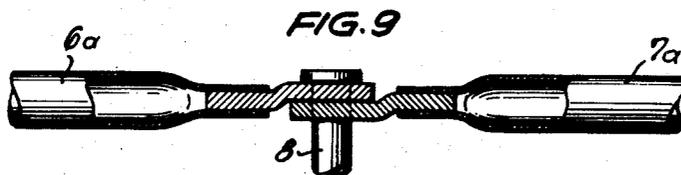
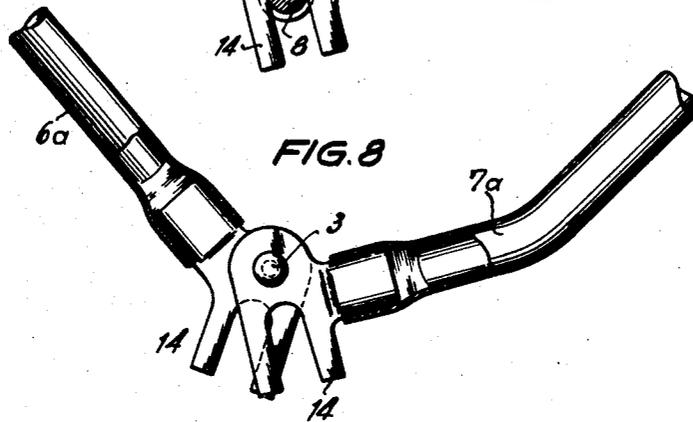
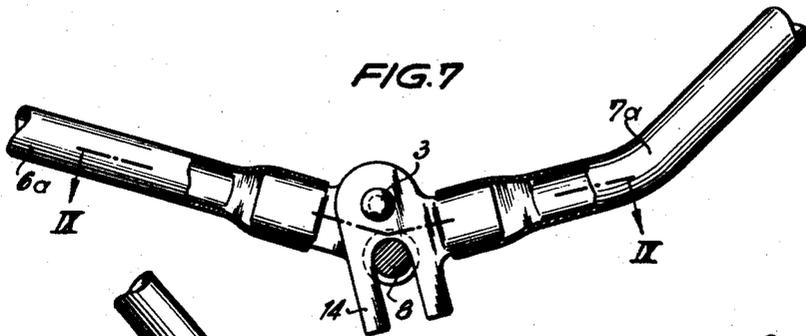
F. E. DRABERT

2,738,001

RECLINING CHAIR FOR INVALIDS

Filed March 2, 1954

4 Sheets-Sheet 4



INVENTOR  
Fritz E. Drabert  
by *Amman & Motters*  
Attorney

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2,738,001

**RECLINING CHAIR FOR INVALIDS**

Fritz E. Drabert, Minden, Westphalia, Germany

Application March 2, 1954, Serial No. 413,667

Claims priority, application Germany March 2, 1953

4 Claims. (Cl. 155—117)

The present invention relates to a reclining chair of 15 metal tube for invalids and convalescents.

The chair is of the type comprising an adjustable seat and back-rest supported on a frame.

It is the object of the present invention to provide means for adjusting the seat and back frames by the user of the chair without his moving out of the same. The chair should be easily accessible for the patient to lie down therein, and a shift in the center of gravity should be sufficient to change the chair over from lying to sitting position and vice versa, no mechanism having to be operated for such change-over.

In the chair according to the present invention, the frames of the seat and the back-rest are disposed at an obtuse angle with respect to each other, and the mounting is so arranged in the apex of the angle that, according to the desire of the patient, the chair may take up a sitting or prone position without further adjusting mechanism.

While metal chairs, in which the frames of the seat and the back-rest are at an obtuse angle, which may be adjusted, are known, in these chairs the adjustment has to be made beforehand; there is no possibility of adjusting the chair from sitting to lying position or vice versa while the chair is in use; thus, while there is a possibility of adjustment, there is not one of change-over during use, as in the present case.

Since, in the novel chair, no mechanism for the adjustment or change-over has to be provided, in order to change the relative position between seat and back-rest frames, this chair can be built in a much simpler manner as compared to the known pieces of furniture of this type.

The foot end of the chair is so designed as to rest on the ground in the sitting position. This provides a very stable construction and simplifies lying down.

It is a further feature of the invention that the chair is provided with an arm-rest supported by the frame, which arm-rest is so arranged that it will be usable in any position of the chair. If, for instance, a patient desires to change from lying to sitting position, say for taking some food, he can assist himself by bearing down on the arm-rests. He may also use the arm-rest as assistance when he wants to change the chair from lying to seating position and vice versa.

It is finally an element of the invention that the frame for the seat and the frame for the back-rest are connected to each other to fold up, when the said frames are detached from the supporting frame, whereas they are not foldable while mounted upon the supporting frame. The invention makes it possible to fold the chair together when out of use to not more than about one yard in length; while in operating position, it will be long enough to support a grown-up person of any stature.

In the following, the invention will be described in a preferred embodiment by way of example, with reference to the accompanying drawings, but it should be under-

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stood that these are given by way of illustration only, and not of limitation, and that many modifications may be made in the details without departing from the spirit of the invention.

5 In the drawings:

Fig. 1 is a perspective view of the novel reclining chair in sitting position;

Fig. 2 shows the same in side view;

10 Fig. 3 is an illustration of the same chair in lying position;

Fig. 4 shows the same chair in side view;

Fig. 5 is a perspective showing of the folded seat- and back-rest frames;

Fig. 6 is a perspective view of the supporting frame;

Figs. 7 and 8 represent, in elevation on a larger scale, the connection of the frame tubes in two different positions;

Fig. 9 is a plan view along line 9—9 of Fig. 7;

20 Fig. 10 is a detail of the supporting frame in side view, and

Fig. 11 is a section along line 11—11 of Fig. 10.

With reference to the drawings, the chair comprises two frames, generally designated by 6 and 7, and formed by tubular steel members 6a and 7a. Frame 6 forms the seat portion, frame 7 the back-rest portion of the reclining chair. The tubular members 6a and 7a are permanently connected to each other by a pivot 3.

Furthermore, a closed tubular structure 5, at each side of the chair, serves as a supporting frame for the seat frame 6 and the back-rest frame 7. A leg member 12 is tiltably mounted on frame 5 on a pivot 13. Both the leg member 12 and the rear portions of the two supporting frames 5 are connected by reinforcing cross pieces 4. In mounted position, the leg member 12 rests on the ground, thereby stabilizing the chair.

Each half of the supporting frame 5 carries a pin member 8 for mounting the frames 6 and 7 thereon. For that purpose, the tubes 6a and 7a are provided at their ends with forked members 14 which project beyond points 3, at which the tubes are pivotally connected to each other.

Figs. 7 and 8 show the construction more clearly. The forked members 14 engage with pins 8 while the chair is in use. As soon as the forked members 14 are removed from pins 8, frames 6 and 7 become freely rotatable on their point of connection 3. In the position of the tubular members 6a and 7a of the two frames 6 and 7, shown in Fig. 7, these frames form an obtuse angle and the members 14 overlie each other. If the frames 6 and 7 are attached to pins 8 in this position, the frames are no longer foldable. Pins 8 on supporting frame 5 thus serve a double purpose. They are the mounting members for the seat and back frames and they also form a lock preventing the folding up of said frame.

In mounted position, the frames for seat and back-rest form an obtuse angle with respect to each other, in whose apex the pin 8 is in engagement with forks 14 for supporting the frames. Due to conditions of equilibrium, the patient reclining on the chair can bring about a change-over from lying to sitting position or vice versa by simply shifting the weight of the body.

A web 2 of canvas or plastic is mounted on frames 6 and 7.

The supporting frame 5 is so designed that its upper parts form two arm-rests 21, which can be used in any position of the chair. The arm-rests are covered by a piece of plastic 11 or a piece of other upholstering material, which may be padded for the convenience of the patient. At the upper part of the back-rest, a head cushion 10 is provided.

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Abutments 9 are arranged on frame 5 for limiting the reclining position of the back-rest.

As mentioned before, the frames of the seat and the back-rest can be folded up as soon as the engagement between the forked ends 14 and the pins 8 comes to an end. Fig. 5 shows the two frames in completely folded position.

The leg member 12 can then be folded back on the supporting frame 5, as shown in broken line at 12' in Fig. 6.

Fig. 10 likewise shows the leg member 12 in heavy line in position of use, and in broken line when folded back.

In Fig. 11, it is shown how the two forked ends 14 of frame members 6a and 7a in overlying position are mounted on pin 8 and held together with member 12 by a bolt 13.

The design of the new chair is preferably so chosen that while in seating position, the foot end of frame 6 will rest on the floor; it will be raised in the lying position so that patients with circulatory disturbances may have their leg at a higher level than their body.

If it is desirable that the seat and back-rest frames 6 and 7 should be locked in any desired position, a rod 15 may be provided which is attached to frame 7 at 16 (Fig. 3). A knurled knob 17 is provided for screwing the rod to supporting frame 5.

What I claim is:

1. A foldable reclining chair, comprising a seat frame, a back-rest frame, and a supporting frame for said first-mentioned frames, members on said supporting frame for attachment of said first-mentioned frames, said seat frame and said back-rest frame forming with each other, in mounted position, an obtuse angle, means on the seat and back-rest frames at the apex of said angle for mounting said frames on the attachment members of the supporting frames in a state of equilibrium wherein said chair is movable from reclining to seating position and vice versa by a mere shift of the body weight of a person using said chair.

2. A foldable reclining chair, comprising a seat frame, a back-rest frame, and a supporting frame for said first-mentioned frames, said supporting frame consisting of two halves, each forming a closed structure at one side of the chair, a reinforcing cross-piece connecting said halves at the rear thereof, and a leg member tiltably mounted on each half of the supporting frame at the front thereof, members on said supporting frame for attachment of said first-mentioned frames, said seat frame and said back-rest frame forming with each other, in

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mounted position, an obtuse angle, means on the seat and back-rest frames at the apex of said angle for mounting said seat and back-rest frames on the attachment members of the supporting frames in a state of equilibrium wherein said chair is movable from reclining to seating position and vice versa by a mere shift of the body weight of a person using said chair.

3. A foldable reclining chair of tubular steel, comprising a seat frame, a back-rest frame, and a supporting frame for said first-mentioned frames, said supporting frame consisting of two halves, each forming a closed structure at one side of the chair, the upper part of said two halves of said supporting frame forming arm-rests of said chair in every position thereof, members on said supporting frame for attachment of said first-mentioned frames, said seat frame and said back-rest frame forming with each other, in mounted position, an obtuse angle, means on the seat and back-rest frames at the apex of said angle for mounting said seat and back-rest frames on the attachment members of the supporting frames in a state of equilibrium wherein said chair is movable from reclining to seating position and vice versa by a mere shift of the body weight of a person using said chair.

4. A foldable frame for a reclining chair, as claimed in claim 1, to be alternatively mounted on said supporting frame of said chair or be folded up, said foldable frame comprising a seat portion and a back-rest portion, a pivot for rotatably connecting said seat and back-rest portions at the respective inner ends thereof, and two projecting forked elements, one at each inner end of each frame portion, for engagement with elements on said supporting frame when mounting said chair, said element on the supporting frame consisting in two connecting pins entering the forked elements when the chair is being mounted; the forked elements being so designed that the pins are spaced from the folding point between said seat and back-rest so that the pins within the forks lock the seat and back-rest frames against folding, but allow folding as soon as these frames together with the forks have been removed from the connecting pins.

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