Dec. 17, 1935. M. C. KRUSE 2,024,170

COMBINATION CHAIR AND COT

Filed Sept. 20, 1934 2 Sheets-Sheet 1

Fig. 1

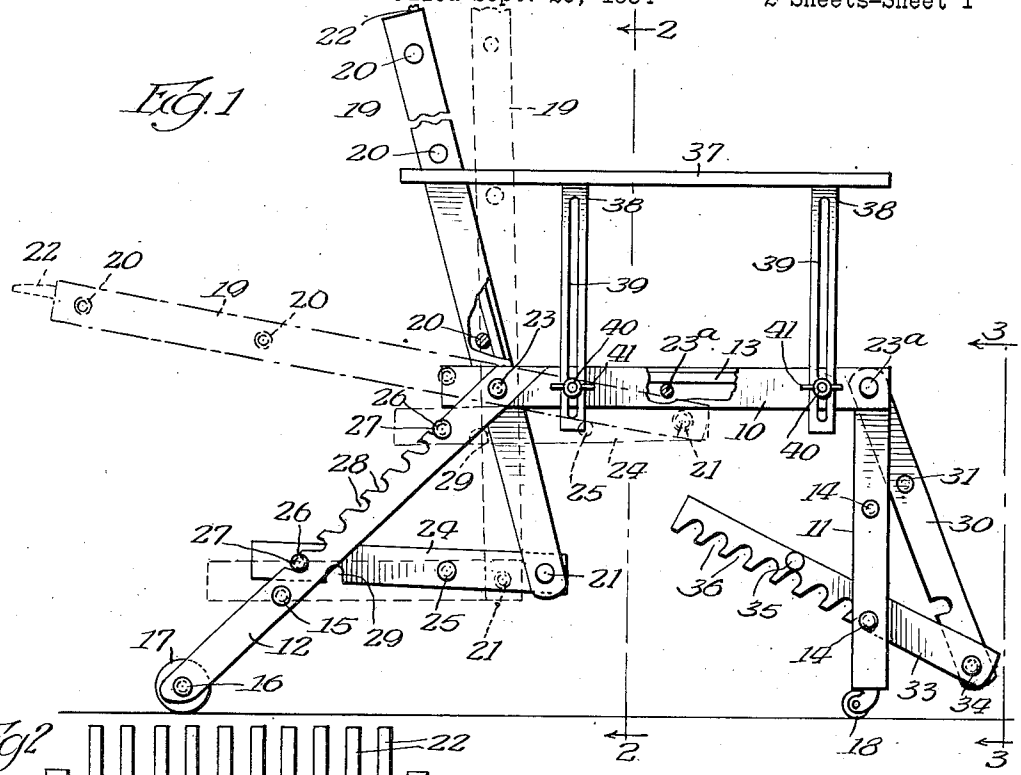


Fig. 2

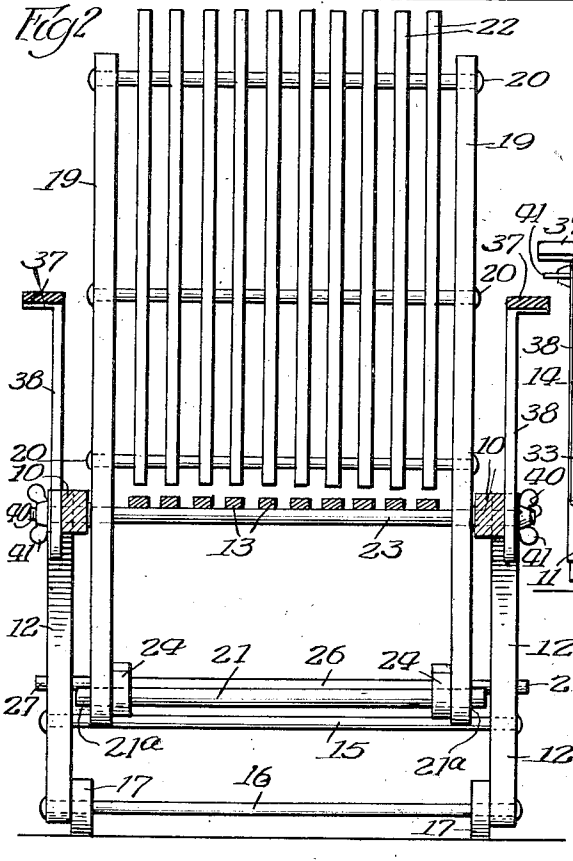
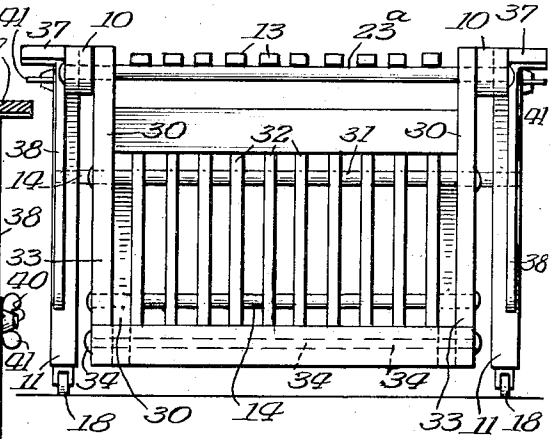


Fig. 3



Inventor
Martin C. Kruse
By J. Rochum & Bro. Atty.

Dec. 17, 1935. M. C. KRUSE 2,024,170

COMBINATION CHAIR AND COT

Filed Sept. 20, 1934 2 Sheets-Sheet 2

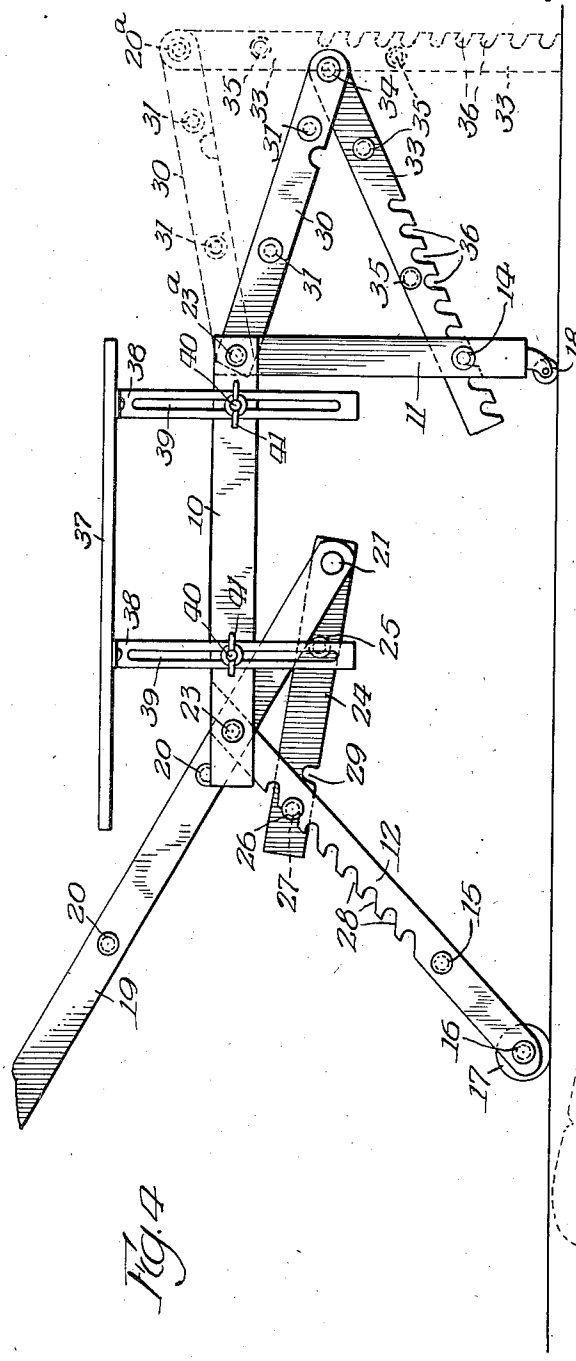


FIG. 4

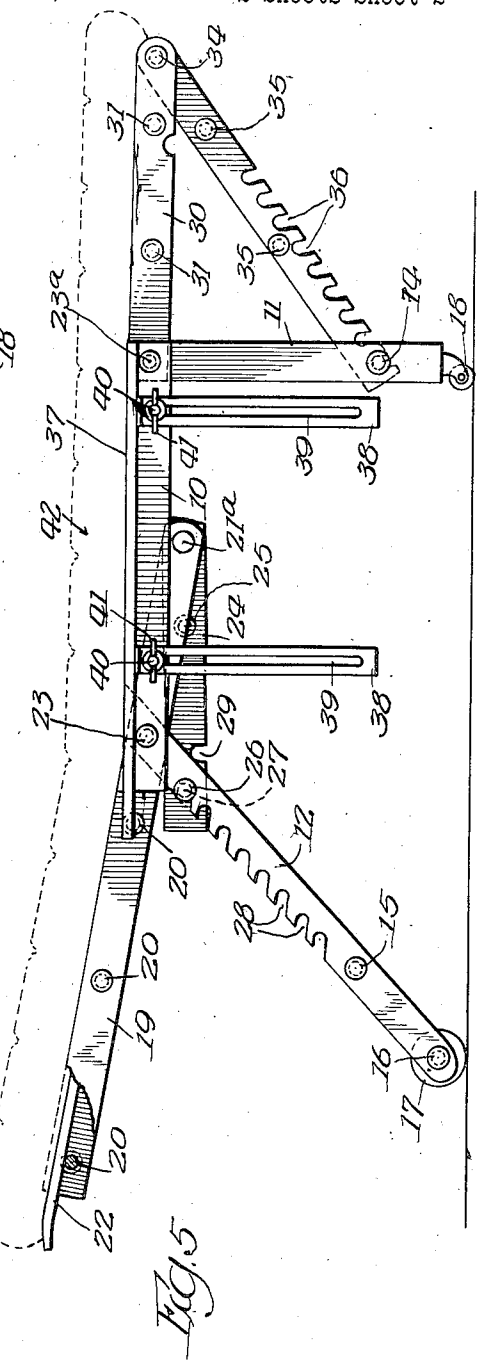


FIG. 5

Inventor:
Martin C. Kruse
By J. Joachim Atty.

Patented Dec. 17, 1935 2,024,170

UNITED STATES PATENT OFFICE

2,024,170

COMBINATION CHAIR AND COT

Martin C. Kruse, Chicago, Ill.

Application September 20, 1934, Serial No. 744,841

5 Claims. (Cl. 155—45)

This invention relates to improvements in combination chair and cot, and one of the objects of the same is to provide an improved structure of this character which may be readily converted into an adjustable reclining chair or a cot, according to the needs, desire, or requirement of the occupant.

A further object is to provide an improved structure of this character having adjustable arm rests for use when the structure is shaped to form a chair and which arm rests may be readily adjusted or lowered to be out of the way so as not to interfere with placing a patient into or removing or lifting him from the chair, and which arm rests may also be so positioned that when the structure is converted into a cot the tops of the arm rests will co-operate with the chair seat to form an extension to increase the width of the chair seat to assist in supporting the overhanging parts of a mattress or cushion placed upon the seat.

A further object is to provide an improved structure of this character having independently adjustable back and foot sections and means individual to such sections for permitting independent adjustment with respect to the seat section, and for maintaining the parts in their respective adjusted positions.

A further object is to provide an improved device of this character which will be of a simple, comparatively cheap, compact and rigid structure, effective and efficient in operation and which may be readily transported.

To the attainment of these ends and the accomplishment of other new and useful objects as will appear, the invention consists in the features of novelty in substantially the construction, combination and arrangement of the several parts hereinafter more fully described and claimed and shown in the accompanying drawings illustrating this invention and in which

Figure 1 is a side elevation, partly broken away, showing in full lines the parts in one position and in dotted lines some of the parts in another position, of a device of this character constructed in accordance with the principles of this invention.

Figure 2 is a vertical sectional view taken on line 2—2, Figure 1.

Figure 3 is a view taken on line 3—3, Figure 1.

Figure 4 is a view similar to Figure 1, showing the parts in other positions.

Figure 5 is a side elevation showing the parts in a position to convert the structure into a couch with a mattress in position on the couch.

Referring more particularly to the drawings, the structure consists essentially of a seat section 10 having downwardly extending substantially vertical legs 11 at the front thereof and inclined rearwardly and downwardly projecting legs 12 at the rear end of the seat section. The section thus formed may be of any desired or suitable construction, but is preferably provided with a bottom formed of slats 13 whereby some degree of resiliently may be imparted to the seat.

The legs are preferably arranged in pairs and the front pair of legs are preferably connected by means of cross bars 14, while the rear legs are connected by means of cross bars 15—16. Rollers 17 may be mounted upon the cross bars 16 for supporting the rear legs while rollers or casters 18 may be secured to the front legs 11, so that the device may be readily rolled upon the floor.

The numeral 19 designates generally a back section formed in any suitable manner, preferably by means of uprights connected by cross bars 20—21 and slats 22 constructed of any suitable material and of any desired width may be provided to constitute a back rest, and which slats may be secured in position in any desired or suitable manner. The back section thus formed is pivotally supported intermediate its ends as at 23 by means of a bar or rod which passes across the seat frame and has bearing in the frame at its ends, so that the back section 19 may be swung about the rod 23 as a pivot. The bar or rod 23 constitutes with similar bars or rods 23a a rest or support for the slats 13 forming the chair seat. The pivot 23 may be arranged at any point intermediate the ends of the back frame, but is preferably spaced for a substantial distance from the lower end of the side members of the back frame 19.

The lower ends of the side members of the back frame may be connected by means of the cross bar 21, and pivotally mounted by one end preferably upon said bar 21, are rearwardly projecting arms or members 24 which may be of any desired length, and one of the members is arranged adjacent each of the side members 19 of the back frame. These members 24 are connected together preferably by cross bars or rods 25—26, the latter being arranged preferably adjacent the free end of the arms or members 24.

The extremities of the cross bar 26 project for a substantial distance beyond the members 24 and also beyond the rear legs 12, and these extremities are adapted to enter seats or recesses 28 on the rear faces of the respective legs 12 so that when the back section 19 is swung about its

pivot 23 to any of the positions shown in dotted lines in Figure 1, or any other position, the extremities 27 of the bar or rod 26 will selectively enter the seats 28 to hold the back section in its adjusted position.

The members 24 are arranged above the cross bar or rod 15 and a notch or recess 29 is provided in the lower face of each of the members 24 so as to receive the cross bar or rod 15 when the extremities 27 of the rod or bar 26 pass out of the lowermost seat or recess 28 and thereby lock the back section 19 in a substantially vertical position with respect to the seat.

It will thus be manifest that by adjusting the members 24 about their pivots 21 so as to move the extremities 27 of the bar or rod 26 out of the seats or recesses 28, the back section 19 may be swung to the desired position about its pivot 23 and will be maintained in this position by the ends of the rod 26 entering the seats 28.

The front or foot section 30 is preferably formed by a frame comprising side members connected by means of cross bars or rods 31 and slats 32 are mounted in the frame and rest upon the cross bars 31. The frame thus formed is pivotally connected to the front end of the seat section 10 by means of the cross bar or rod 23^a at the forward end of the seat frame passing through the ends of the side bars of the foot rest frame 30, and the frame thus formed is pivotally mounted by its extremity so as to extend downwardly and is disposed in front of the cross bars 14 connecting the front legs 11. Arms or members 33 are pivotally connected by one end as at 34 to the lower ends of the side bars of the foot rest or frame 30 and project rearwardly for any desired distance. The members 33 are connected together by means of the cross bar or rod 34, and an additional cross bar or rod 35. One of these members 33 is preferably arranged adjacent or in proximity to each of the legs 11, and the lower edges of the members 33 are shaped to form downwardly opening notches or recesses 36 which, when the foot frame is swung about the pivot 23, may be selectively positioned so as to receive the cross bar or rod 14 and thereby hold the foot rest or frame in its adjusted position.

If desired, and when the foot rest or frame is raised to the dotted line position shown in Figure 4, the members 33 may be caused to rest upon the floor so as to hold the foot rest or frame 30 in a higher position than it would be possible when the outermost notch 36 is in the position to receive the cross bar or rod 14.

With this construction it will be manifest that the back and foot sections may be swung to any desired position with respect to the seat section to produce a reclining chair and either the back or the foot sections may be adjusted independently with respect to each other. The back and foot sections may also be adjusted to the position shown in Figure 5, with respect to the seat section 10 and when in that position the same will form a cot, the back section 19 being braced to receive a great portion of the weight of the body, by reason of the ends 21^a of the cross bar or rod 21 which project beyond the outer face of the side members of the back frame 19 contacting with the lower edges of the side members of the seat section 10, at the same time that the ends 27 of the cross bar or rod 26 are seated in the uppermost seat or recess 28 in the rear legs 12, thereby forming a brace or lock for the back section 19, as shown more clearly in Figure 5 of the drawings.

Any suitable arms may be provided for the chair and the arms may be secured in position for adjustment in vertical planes with respect to the seat section in any desired or suitable manner. A simple and efficient construction comprises arm rests 37 having downwardly extending supports 38 provided with slots 39 extending lengthwise thereof.

One of these arms may be provided on each side of the seat section and the arms thus formed may be adjustably secured in position in any suitable manner such as by means of a bolt or screw 40 secured to the seat section and extending through the respective slots 39, thumb nuts 41 being adjustably mounted on the ends of the bolts for clamping the arms in their adjusted position.

The arm rests 37 may be of any desired width and when the parts of the structure are so arranged as to form a chair, the arm rests 37 may be adjusted to the desired and comfortable position for the occupant.

When, however, it is desired to convert the structure into a cot, the arm rests 37 may be lowered to the positions shown in Figures 3 and 5, and in which position the upper surfaces thereof will be substantially flush with the upper surface of the bottom of the seat section 10, thereby forming lateral extensions of the seat section to increase the width thereof so that when a mattress or cushion 42 is placed upon the cot, the arm rests 37 forming lateral extensions to the seat section will assist in supporting the overhanging edges of the mattress or cushion.

By reason of the arm rests 37 being separate from the back section as well as from the foot section, and when the parts of the device are arranged to form a chair having an upright or a reclining back, one or the other of the arm rests 37 may be lowered so that it will be moved out of the way and thereby not interfere with the placing of a patient into or removing him from the chair, as the chair may be moved close to the side of the bed of the patient and the patient readily lifted from the bed and placed into the chair.

Furthermore, by mounting the structure upon casters or rollers, the same may be utilized as a wheel chair.

With this improved construction it will be manifest that the device may be readily converted from a chair to a cot and vice versa, and at the same time the angle of inclination of the back and foot sections may be readily altered without inconvenience to the occupant, and the arm rests may also be adjusted to any desired height so that the same will be comfortable for the occupant, regardless of the position of the back section with respect to the seat section.

While the preferred form of the invention has been herein shown and described, it is to be understood that various changes may be made in the details of construction and in the combination and arrangement of the several parts, within the scope of the claims, without departing from the spirit of this invention.

What is claimed as new is:

1. A combination adjustable reclining chair and cot, comprising a seat frame, downwardly and rearwardly projecting legs and upright front legs secured to the frame, a back frame pivoted intermediate its ends to the seat frame, locking members pivotally connected to the back frame below the seat, projections carried by the locking members and extending laterally therefrom, said projections movable over the face of the rear legs

as the back section is swung about its pivot to selectively engage notches in the rear legs, and lateral projections carried by the back frame and adapted to engage beneath the seat frame and co-operating with the first said projections in one of said notches, to form a brace for the back section in one of the positions of the latter with respect to the seat frame.

2. A combination adjustable reclining chair and cot, comprising a seat frame, downwardly and rearwardly projecting legs and upright front legs secured to the frame, a back frame pivoted intermediate its ends to the seat frame, locking members pivotally connected to the back frame below the seat, projections carried by the locking members and extending laterally therefrom, said projections movable over the face of the rear legs as the back section is swung about its pivot to selectively engage notches in the rear legs, lateral projections carried by the back frame and adapted to engage beneath the seat frame and co-operating with the first said projections in one of said notches, to form a brace for the back section in one of the positions of the latter with respect to the seat frame, and vertically adjustable arm rests mounted upon the seat frame and adapted to be lowered to form lateral extensions to the seat frame, to assist in supporting portions of a mattress extending beyond the sides of the seat frame.

3. A combination adjustable reclining chair and cot, comprising a seat frame, downwardly and rearwardly projecting legs and upright front legs secured to the frame, a back frame pivoted intermediate its ends to the seat frame, locking members pivotally connected to the back frame below the seat, projections carried by the locking members and extending laterally therefrom, said projections movable over the face of the rear legs as the back section is swung about its pivot to selectively engage notches in the rear legs, lateral projections carried by the back frame and adapted to engage beneath the seat frame and co-operating with the first said projections in one of said notches, to form a brace for the back section in one of the positions of the latter with respect to the seat frame, a foot section connected to the seat frame, for movement on a horizontal pivot, and interengaging means between the foot section and the front leg frame for independently adjusting said foot frame and for maintaining the same in its adjusted position.

4. A combination adjustable reclining chair and cot, comprising a seat frame, downwardly and rearwardly projecting legs and upright front legs secured to the frame, a back frame pivoted intermediate its ends to the seat frame, locking members pivotally connected to the back frame below the seat, projections carried by the locking members and extending laterally therefrom, said projections movable over the face of the rear legs as the back section is swung about its pivot to selectively engage notches in the rear legs, lateral projections carried by the back frame and adapted to engage beneath the seat frame and co-operating wth the first said projections in one of said notches, to form a brace for the back section in one of the positions of the latter with respect to the seat frame, a foot section connected to the seat frame, for movement on a horizontal pivot, and interengaging means between the foot section and the front leg frame for independently adjusting said foot frame and for maintaining the same in its adjusted position, one of the said interengaging means being adapted to engage and rest upon the floor for supporting the foot frame in one of its adjusted positions.

5. A combination adjustable reclining chair and cot, comprising a seat frame, downwardly and rearwardly projecting legs and upright front legs secured to the frame, a back frame pivoted intermediate its ends to the said frame, locking members pivotally connected to the back frame below the seat, projections carried by the locking members and extending laterally therefrom, said projections movable over the face of the rear legs as the back section is swung about its pivot to selectively engage notches in the rear legs, lateral projections carried by the back frame and adapted to engage beneath the seat frame and co-operating with the first said projections in one of the notches, to form a brace for the back section in one of the positions of the latter with respect to the seat frame, and arm rests mounted upon the seat frame for vertical adjustment, said arm rests being independent of the back and extending from one side of and over the pivot of the back seat frame and for a substantial distance to the other side of the last said pivot.

MARTIN C. KRUSE.