

L. W. WARD.

BED.

APPLICATION FILED DEC. 23, 1921.

1,428,462.

Patented Sept. 5, 1922.

3 SHEETS—SHEET 1.

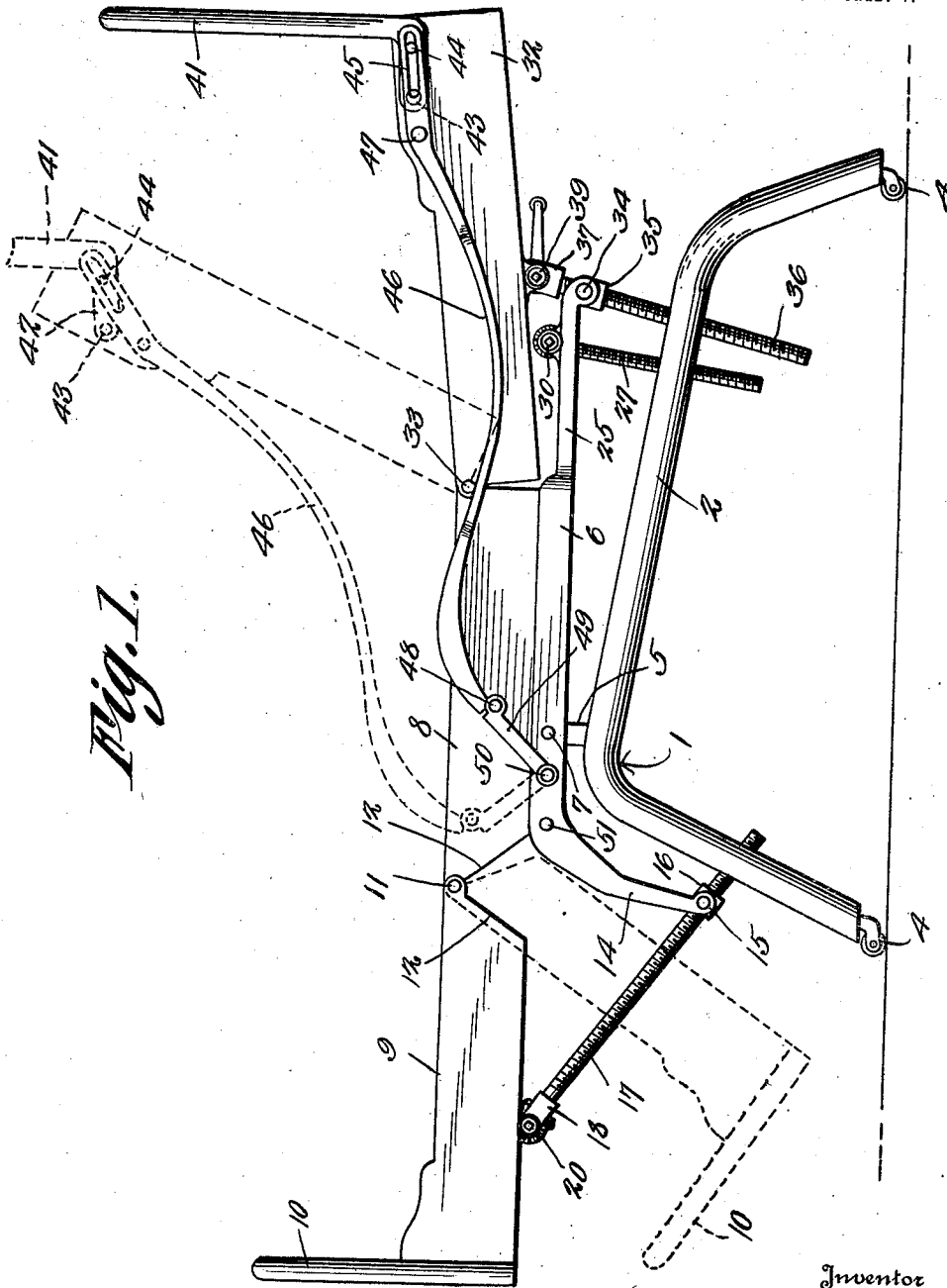


Fig. 1.

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By

Castro & Co.

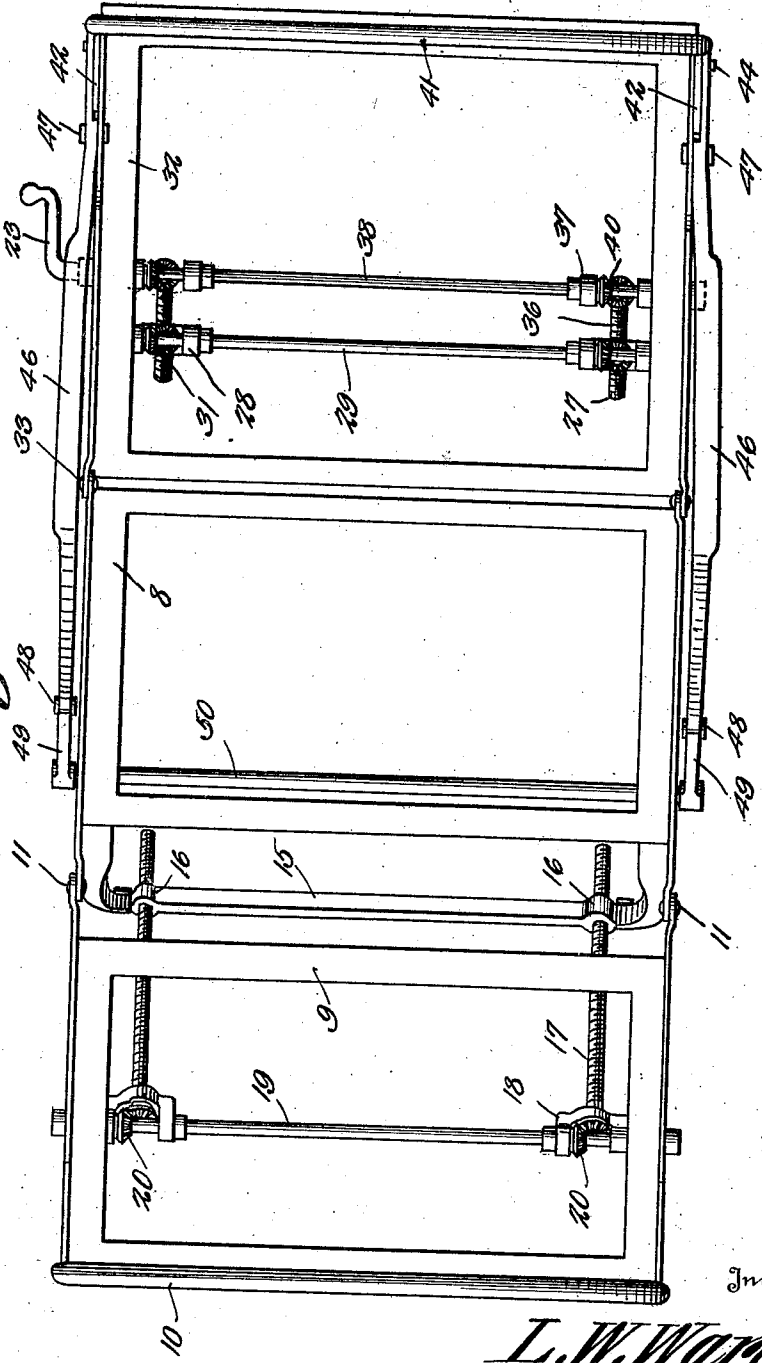
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3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

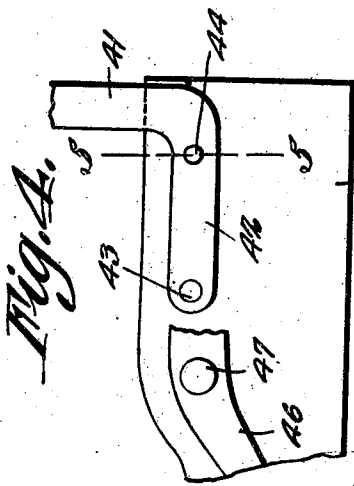


Fig. 4.

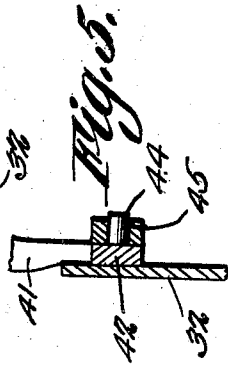


Fig. 5.

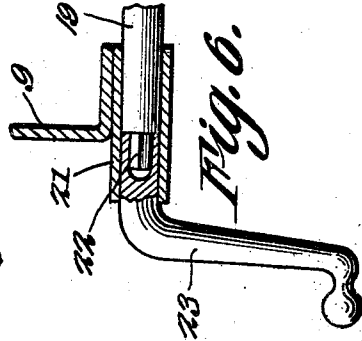


Fig. 6.

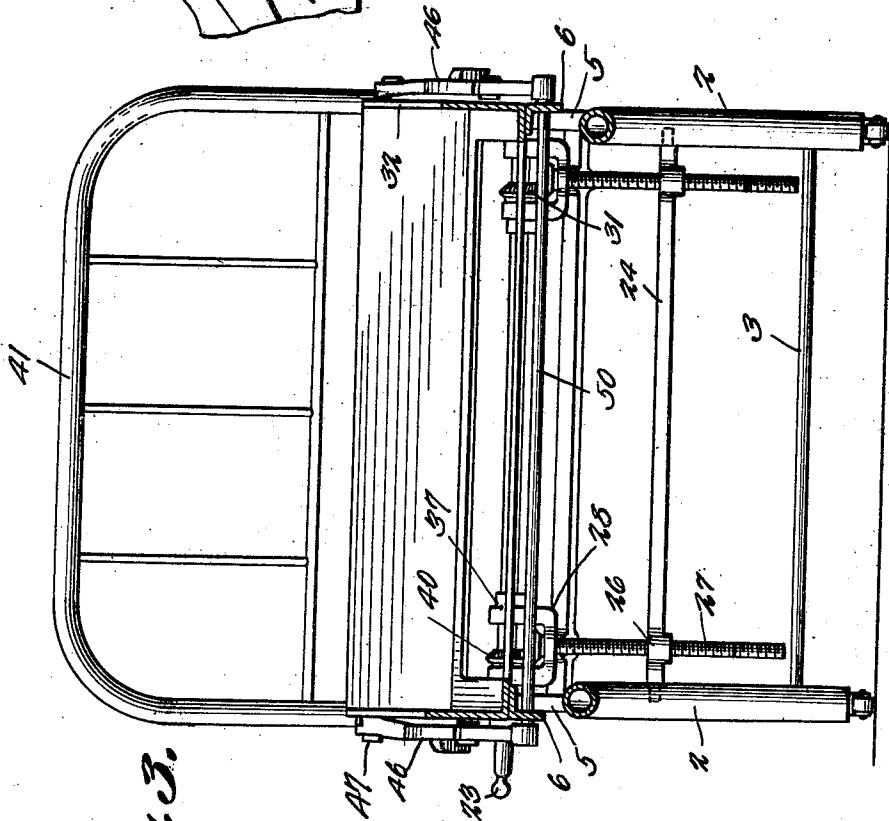


Fig. 3.

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UNITED STATES PATENT OFFICE.

LLOYD W. WARD, OF SPRINGFIELD, MISSOURI, ASSIGNOR OF ONE-QUARTER TO OSKER
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BED.

Application filed December 23, 1921. Serial No. 524,456.

To all whom it may concern:

Be it known that I, LLOYD W. WARD, a citizen of the United States, residing at Springfield, in the county of Greene and State of Missouri, have invented a new and useful Bed, of which the following is a specification.

The device forming the subject matter of this application is a bed, and the invention aims to provide novel means for producing relative movement between the constituent parts of the bed, to the end that an invalid may be handled without difficulty, it being possible to convert the bed into a chair at the will of an operator.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that, within the scope of what is claimed, changes in the precise embodiment of the invention shown can be made without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 shows in side elevation, a device constructed in accordance with the invention; Figure 2 is a top plan; Figure 3 is a transverse section; Figure 4 is a fragmental side elevation wherein parts are broken away; Figure 5 is a section on the line 5—5 of Figure 4; and Figure 6 is a sectional detail illustrating the crank in operative relation to one of the shafts.

In carrying out the invention, there is provided a base 1 which may be made up of a pair of inverted U-shaped side pieces 2 connected adjacent to their lower ends by braces 3. Castors 4 are mounted on the lower ends of the side pieces 2. The side pieces 2 carry upwardly projecting standards 5 whereon side bars 6 are pivoted, intermediate their ends as shown at 7, each side bar having a depending arm 14 at one end, and an extension 25 at the other end.

A central bed section 8 is secured to the side bars 6 and may be considered as a part of the side bars. The side bars 6 are connected, adjacent to the arms 14, by a rod 51. An end section 9 is provided and

has a fixed upstanding foot 10, the end section 9 being pivoted to the section 8 as shown at 11, the adjacent ends of the sections 8 and 9 being beveled off or cut away as shown at 12, so that the end section 9 may be folded downwardly.

A support 15 is mounted to rock in the lower ends of the arms 14 of the side bars 6 and has enlargements, whereinto screws 17 are threaded, the screws being mounted to rotate in yokes 18 carried for swinging movement on an operating shaft 19, the screws being operatively connected with the shaft by beveled pinions 20, the shaft 19 being journaled in bearings 21 on the side portions of the end section 9. The shaft 19 is squared as shown at 22, to receive a crank 23. A support 24 is mounted to rock in the side pieces 2 and has enlargements 26 whereinto screws 27 are threaded, the screws being journaled in yokes 28 mounted to swing on a shaft 29 journaled on the extensions 25 of the side bars 6, the shaft being squared as at 30 to receive the crank 23. Beveled pinions 31 connect the screws 27 operatively with the shaft 29.

An end section 32 is pivoted at 33 to the central section 8. A support 34 is mounted to rock in the ends of the extensions 25 of the side bars 6. The support 34 has enlargements 35, into which screws 36 are threaded, the screws being journaled in yokes 37 mounted to swing on a shaft 38 journaled on the end section 2, the shaft being squared as at 39 to cooperate with the crank 23. Beveled pinions 40 form connection between the shaft 38 and the screws 36.

The numeral 41 marks a head piece, including forwardly extended arms 42, shown in Figure 4. The arms 42 are pivoted at 43 to the end section 32. The arms 42 are supplied with outstanding projections 44 received slidably in slots 45 formed in levers 46 which are fulcrumed intermediate their ends, as at 47 on the end section 32. The inner ends of the levers 46 are pivoted at 48 to arms 49 mounted on the ends of a shaft 50, the shaft 50 being journaled in the side bars 6.

In practical operation, when the shaft 19 is rotated, motion will be transmitted to the screw 17, and the end section 9 may be raised and lowered. From the shaft 29 motion may be transmitted to the screws 27,

and in this way, the central bed section 8 may be tilted on its pivotal mounting 7. From the shaft 33, motion may be transmitted to the screws 36, and, thus, the end section 32 may be adjusted vertically with respect to the central section 8.

When relative movement between the end section 32 and the central section 8 takes place, the levers 46 are tilted on their fulcrum 47, the levers cooperating with the pivotally mounted head piece 41, to maintain the head piece always in an approximately vertical position, so that the head piece does not overhang the occupant of the bed, when the end section 32 is raised to the dotted line position of Figure 1, the head piece always being out of the way.

When the end section 9 is in a depending position, and when the end section 32 is in an upstanding position, as shown in Figure 1, the device is disposed in the form of a chair, the levers 46 serving as arms for the chair.

The general construction of the device is such that an invalid may be raised and lowered and be disposed either in a sitting position or a recumbent position, without difficulty. The device forming the subject

matter of this application embodies, in a single structure, all of the advantages of a bed, a chair and an operating table.

Having thus described the invention, what is claimed is:

In a device of the class described, a base; a central section mounted to swing on the base; end sections pivoted to the central section; shafts journaled on the end sections; supports mounted to rock on the central section; screws threaded in the supports; beveled pinions connecting the shafts with the screws; a shaft journaled on the central section; a support mounted to rock on the base; a screw threaded into the last specified support; a beveled pinion forming an operative connection between the last specified screw and the last specified shaft; and means for rotating the shafts.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

LLOYD W. WARD.

Witnesses:

L. M. SAWYER,
J. W. FAIRBANKS.