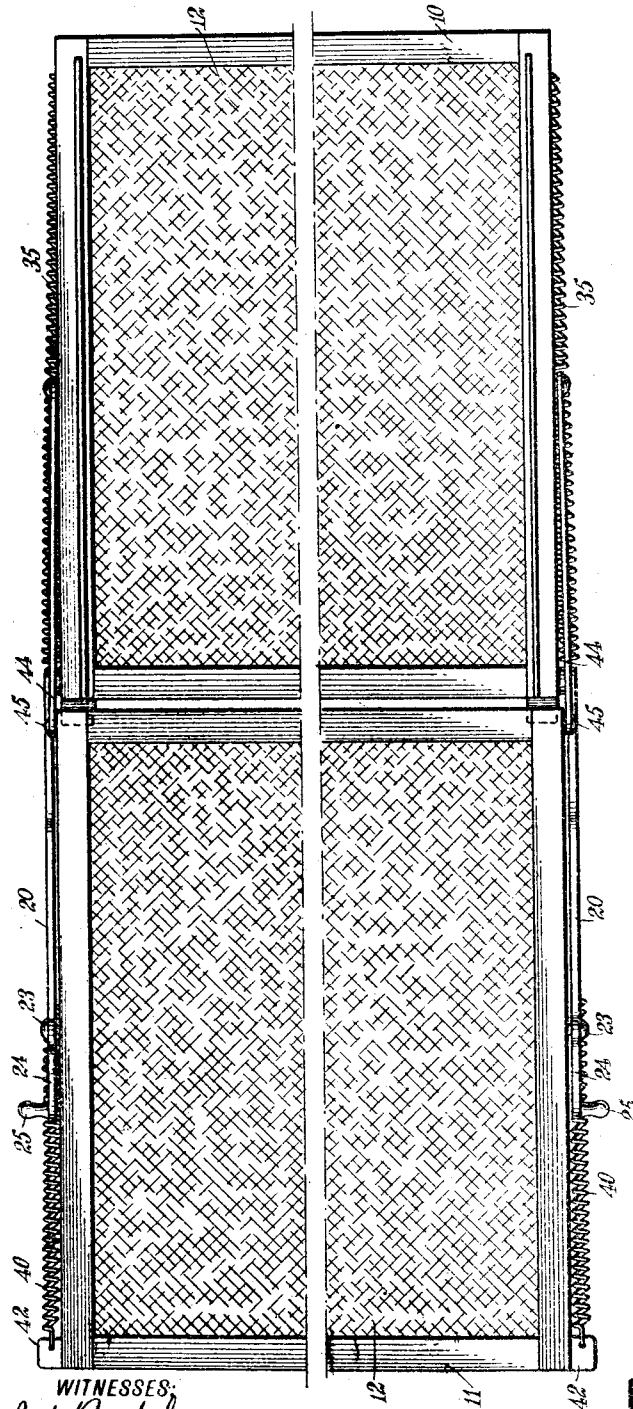


O. GASAU & O. MARKLEIN.
COUCH BED.
APPLICATION FILED MAR. 7, 1910.

1,107,665.

Patented Aug. 18, 1914.

3 SHEETS—SHEET 1.



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Fig. 1

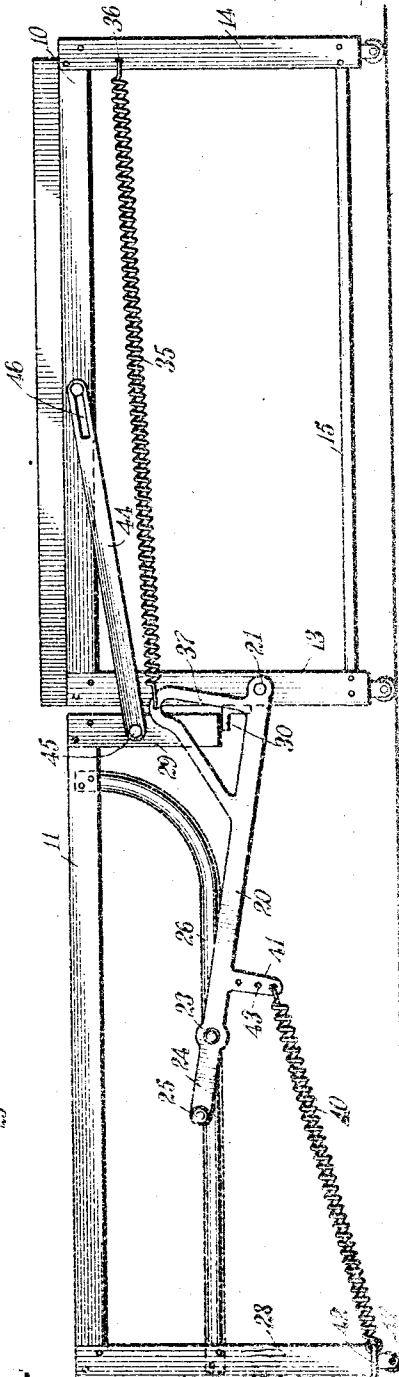


Fig. 2

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Fig. 3

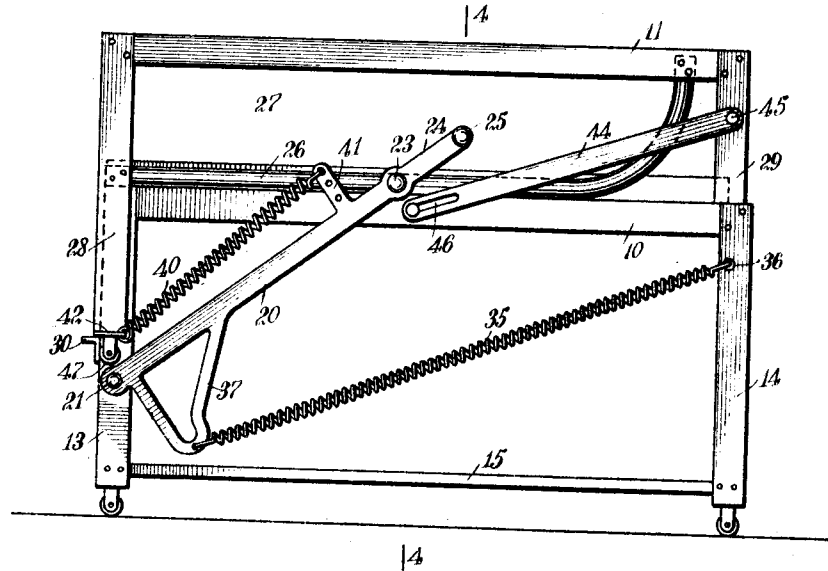
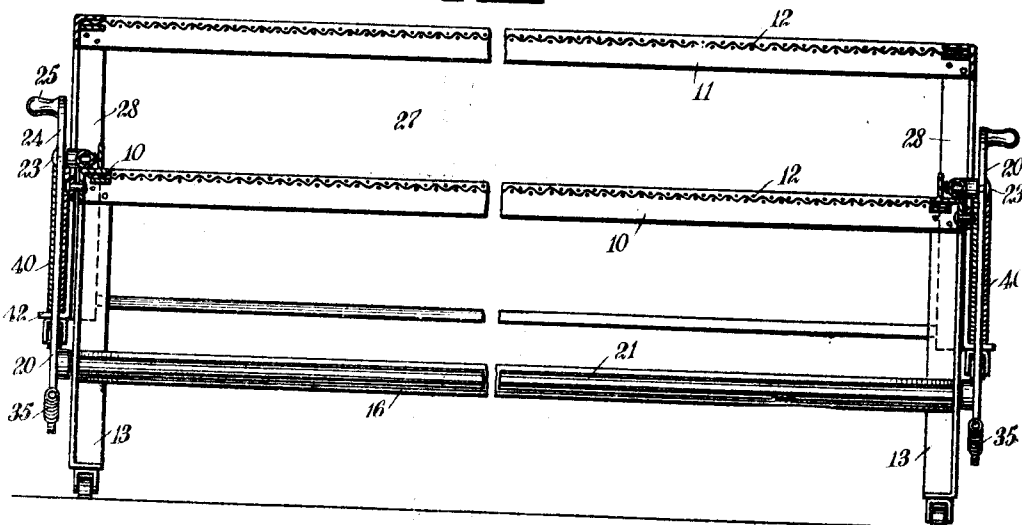


Fig. 4



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3 SHEETS—SHEET 3.

Fig. 5

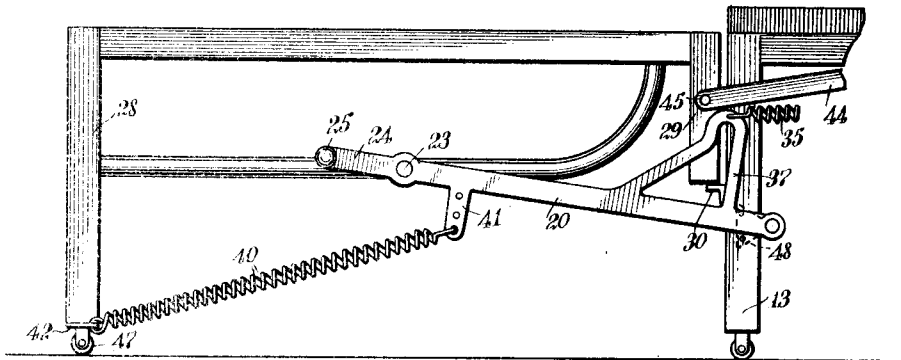


Fig. 6

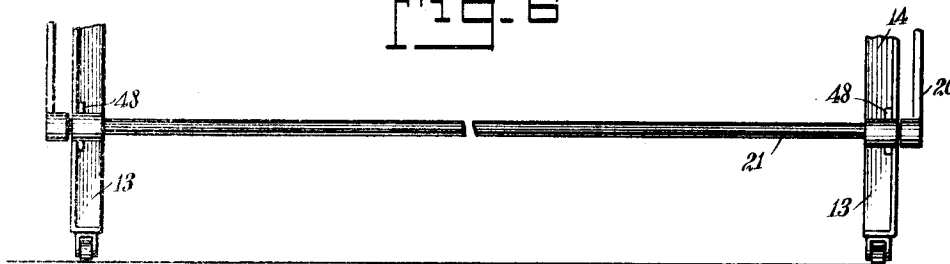
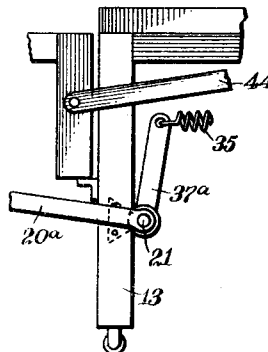


Fig. 7



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UNITED STATES PATENT OFFICE.

OTTO GASAU AND OTTO MARKLEIN, OF NEW YORK, N. Y.

COUCH-BED.

1,107,665.

Specification of Letters Patent. Patented Aug. 18, 1914.

Application filed March 7, 1910. Serial No. 547,657.

To all whom it may concern:

Be it known that we, OTTO GASAU and OTTO MARKLEIN, citizens of the United States, and residing in the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Couch-Bed, of which the following is a full, clear, and exact specification.

10 The invention is intended more particularly for embodiment in that form of couch beds in which a fixed section and a relatively movable section are adapted to be brought alongside each other to form a double bed, or in a position with one section above the other; and a main object of the invention is to provide an improved means for facilitating the shifting of the movable section from either one of its positions to the other.

15 We also have for our object to provide improvements in the detail construction; to improve the appearance of the bed; to provide an improved way of supporting the movable section above the fixed one; and to provide clear spaces beneath the fixed section and between the top frames of the respective sections for use as stowage compartments.

30 Other objects and advantages of the present construction will appear from the description of the specific example given to illustrate one embodiment of our invention.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

40 Figure 1 is a plan view of our improved bed with the sections in the open position, portions being broken away; Fig. 2 is a side or end elevation of the bed with the sections in the open position; Fig. 3 is an end view of the bed with the sections in the closed or folded position; Fig. 4 is a broken longitudinal sectional view, substantially on the line 4-4 of Fig. 3; Fig. 5 is a partial end elevation with the sections in the open position, the view being given to illustrate a slight modification in the way of supporting the shifting lever of the movable section; Fig. 6 is a broken front elevation of the form shown in Fig. 5; and Fig. 7 is a fragmentary side elevation illustrating a further modification.

55 The two bed sections are joined by a lever

fulcrumed on the fixed section, pivotally connected with the movable section and formed with a handle. The top frame 10 of the fixed section and the top frame 11 of the movable section are provided with wire fabric 12, or any other suitable form of mattress support, and the fixed section has two front legs 13 and two rear legs 14, preferably of angle iron. End bars 15 may connect the front and rear legs of the fixed section, as indicated in Figs. 3 and 4, and also preferably there is a bar 16 connecting the two front legs and formed of angle iron.

60 A shifting lever 20 is provided for the movable section, and is so arranged as to be capable of shifting the movable section in an arcuate path from a position above the fixed section to a position alongside the latter, or vice versa. The lever 20 has its fulcrum on the front legs of the fixed section at a point between the top and bottom of the said fixed section. We form the lever of such a shape and provide such an arrangement of springs in connection therewith, as to enable us to get the proper action of the lever and springs to facilitate the shifting of the movable section while fulcruming the lever on the leg of the fixed section. The advantage of locating the fulcrum of the lever on the leg of the fixed section as distinguished from the other parts of the section is, that a clearer entrance is provided at the ends for any articles to be stowed under the bed when the sections are folded.

90 In the form shown in Figs. 1, 2 and 4, there is a lever 20 at each end of the bed, and these levers are fulcrumed on a connecting bar 21, to which the levers are rigidly attached, this bar being mounted to rock in hearings in the legs, as indicated best in Figs. 2, 3 and 4. In the mentioned figures it will also be noticed that the connecting bar 21 of the levers is arranged behind the front angle bar 16 which connects the legs of the fixed section, so that the connecting bar 21 is not conspicuous. The levers are pivoted as at 23 on any suitable member of the movable section, and above the pivots 23 the levers are formed with handles 24, having knobs 25 or equivalent formations to facilitate the manipulation of the levers, and with them, the movable section. In the form shown, the pivots 23 of the levers are on end bars 26 of the movable section, these bars extending for the greater

portion of their length such a distance below the top frame 11 of the movable section as to cause said bars 26, when the movable section is above the fixed section, to rest on the top frame 10 of the fixed section, and thereby space the mattress supports 12 of the respective sections in a way to provide an open stowage compartment 27, as best illustrated in Figs. 3 and 4. The bars 26 do not, however, form part of our present invention.

It will be observed that the movable section has at one end legs 28 approximately of the height of the legs 14 of the fixed section, and at the opposite side there are short legs 29. In the open position of the bed the short legs 29 rest on angle brackets 30 on the fixed section, while in the closed position, the longer legs 28 of the movable section rest on the said brackets 30, the respective positions being indicated in Figs. 2 and 3. In the closed position of the bed, the short legs 29 may rest on the top frame 10 of the fixed section, so that the two legs of the movable section thus contact with some member or portion of the fixed section, to co-act with the bars 26 in sustaining the two sections when spaced apart so as to form the mentioned box-like stowage compartment 27; or if desired, the legs 28 and 29 may be relied upon alone to support the movable section in the closed position.

In connection with each lever 20, or with the one lever if but one is provided, we arrange a contractile spring 35. This spring connects at one end with a rear leg 14, preferably near the top thereof, as at 36, while the opposite end of the spring is connected with an arm 37 formed on the shifting lever. By comparing Figs. 2 and 3 it will be observed that the spring 35 is put under tension when the movable section is either in the closed or open position, and that in the respective positions the spring is swung past the center with respect to the fulcrum 21 or center of movement of the lever. This arrangement is found to be very effective in minimizing the power required to be exerted by the operator in shifting the movable section from one position to the other, since in both positions of the lever, the spring 35 exerts a lifting pull in an upward direction, as will be apparent. We preferably provide also another arrangement of springs in connection with the shifting lever, and prefer to employ the two forms of springs, since in this way lighter springs will suffice. Thus the additional springs indicated by the numeral 40, and best seen in Figs. 2 and 3, connect the shifting lever with the movable section, which is a new arrangement. One end of the spring 40 is shown as connected with an arm 41 preferably extending from that side of the lever 20 opposite the side hav-

ing the arm 37 to which the other spring 35 is connected. The opposite end of the spring 40 is connected preferably with a laterally projected flange member 42 extending from the lower end of a leg 28 of the movable section. The action of both springs in either position of the movable bed section is to aid in throwing the movable section, the action of the spring 40 being more pronounced in the open position of the bed, since in this position said spring is placed under greater tension. It will be seen in Fig. 2, that when the movable section is to be shifted from the open position, the spring 40 tends to draw the lower ends of the legs 28 inward as the movable section is raised at the inner end, and at the same time rocked on the pivot 23, so moving the movable section as to permit the legs 29 to clear the top of the fixed section. We furthermore provide a novel arrangement of connecting links between the bed sections; thus a link 44 is provided at each end. It pivotally connects at one end, as at 45, with the short leg 29 of the movable section, and extends therefrom to the top frame 10 of the fixed section or equivalent point of support. One end of the link, preferably the one connected with the fixed section, is slotted as at 46, to permit the link to swing beyond its center of movement in the raising and lowering of the movable section.

The angle iron legs 28 are adapted to overlap the rear legs 14 of the fixed section when the bed is closed, as clearly shown in Fig. 3, and to permit this, the casters 47 on the long legs 28 of the movable section are secured to the outwardly projecting flange members 42. In this way the casters and the springs 40 are outside the plane of the legs of the fixed section.

In the form shown in Figs. 5 and 6 the rear legs 14 of the fixed section are provided with extensions preferably in the form of separately secured brackets 48, and the said brackets form bearings for the previously described bar 21 that connects the shifting levers 20. In all other respects the construction is the same as described in connection with the other figures.

In the form shown in Fig. 7, the construction is similar to Figs. 5 and 6, except that the shifting lever 20^a has no arm 37. The arm to which the spring 35 is secured is designated 37^a and is secured to the bar 21 at a point inward from the leg 13.

Having thus described our invention, we claim as new and desire to secure by Letters Patent,—

1. A bed comprising sections, of which one is movable from a position alongside the other to a position above the other, a shifting lever fulcrumed on the relatively fixed section and pivotally connected with the movable section, and springs, one end

of each of which connects with said lever, the opposite ends of the springs being connected respectively with the fixed and the movable sections.

5 2. A bed comprising sections, of which one is movable from a position alongside the other to a position above the other, members forming a link connection between the respective sections, and springs connected with said members and extending therefrom to a connection with the fixed bed section and the movable bed section respectively.

3. In a bed, comprising a fixed and a relatively movable section, means for linking one section to the other, and a spring extending from said connecting means to a connection with the movable section.

4. In a bed, comprising a fixed and a relatively movable section, means for linking one section to the other, and a spring extending from said connecting means to a connection with the legs of the movable section.

5. In a bed comprising a fixed and a relatively movable section, means establishing a link connection between the said sections at the ends, and springs extending from said means to outwardly projecting members on the front legs of the movable section.

6. The combination with a bed comprising a fixed section and a movable section shiftable from a position alongside the fixed section to a position above the same, of a member pivotally connected at its lower end with the fixed section and pivotally connected

with the movable section, said member having a projecting arm, and a spring connected with said arm and with the fixed section, the arm serving to swing the adjacent end of the said spring from a position above the fulcrum to a position below the said fulcrum when the movable section is shifted from one position to the other, the spring in both its positions exerting a lifting action on the said member and on the movable section.

7. In a bed, relatively fixed and movable sections, the movable section being shiftable from a position alongside the fixed section to a position above the same, connections between said sections including a link pivotally connected with the fixed section near the top thereof and pivotally connected with the movable section near the top, one of said ends of the link being slidable on its pivotal connection, the said link when the movable section is in the lowered position having its point of connection with the movable section lower than the connection of the link with the fixed section, a second link connecting the sections, and a spring connected with said second link and with the fixed section.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

OTTO GASAU.
OTTO MARKLEIN.

Witnesses:

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J. L. McAULIFFE.