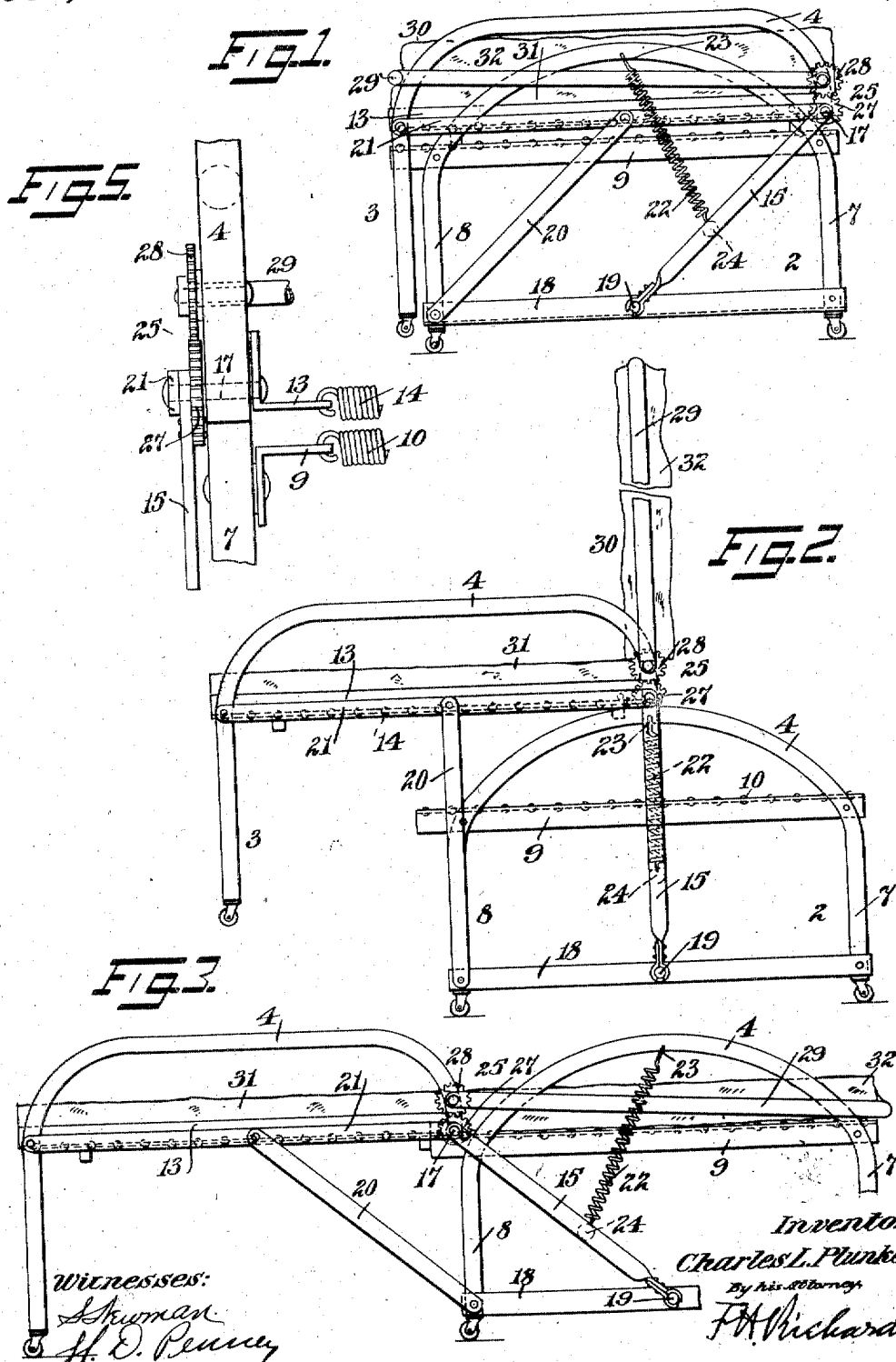


984,601.



Witnesses:

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H. D. Penney

Inventor:
Charles L. Plunkett
By his attorney
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COUCH BED.
APPLICATION FILED DEC. 2, 1908.

Patented Feb. 21, 1911.

984,601.

3 SHEETS—SHEET 2.

FIG. 4.

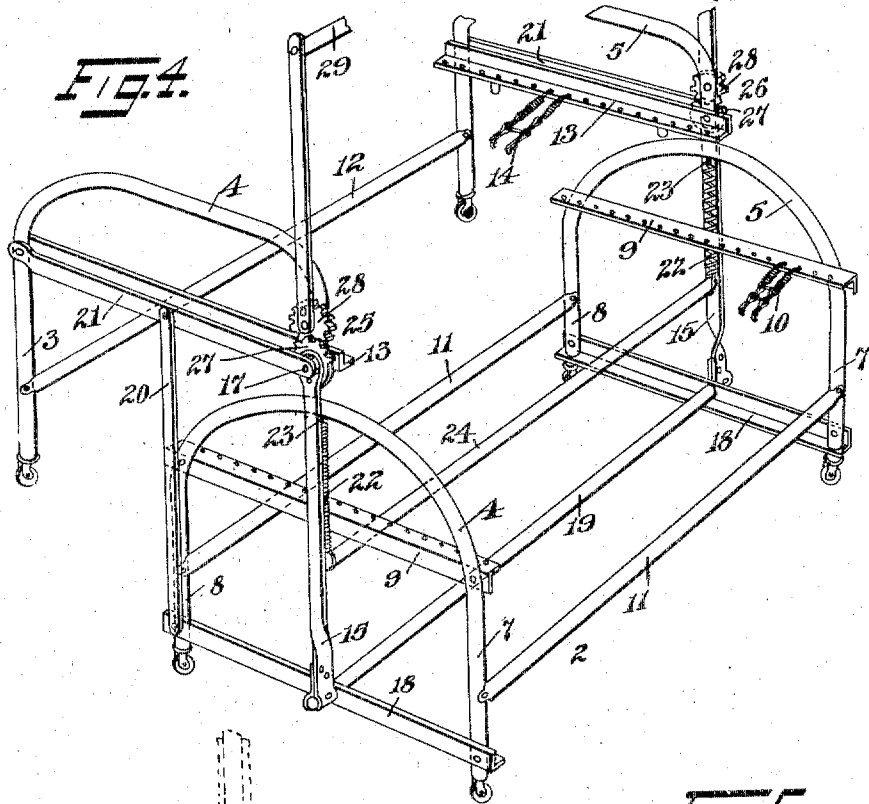
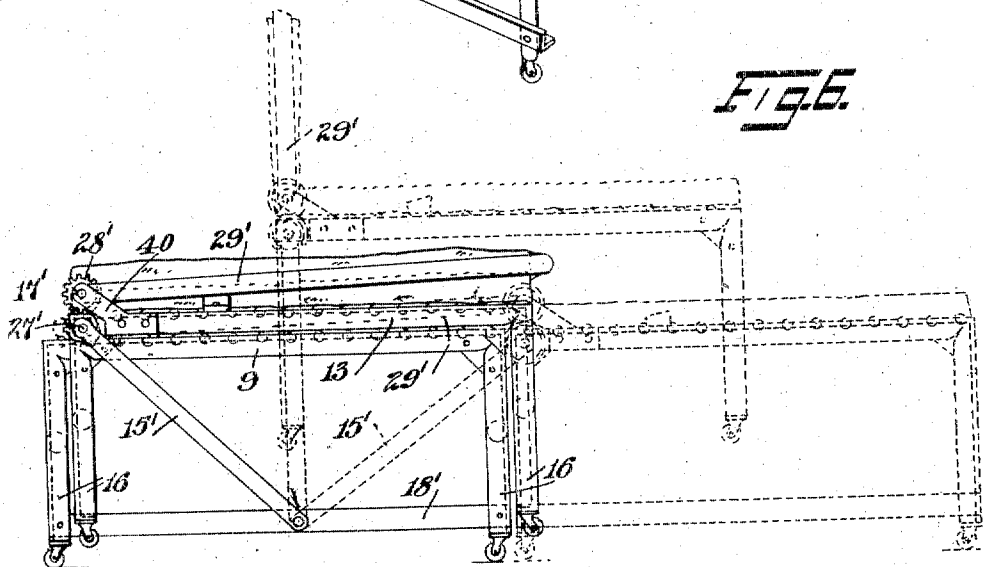


FIG. 5.



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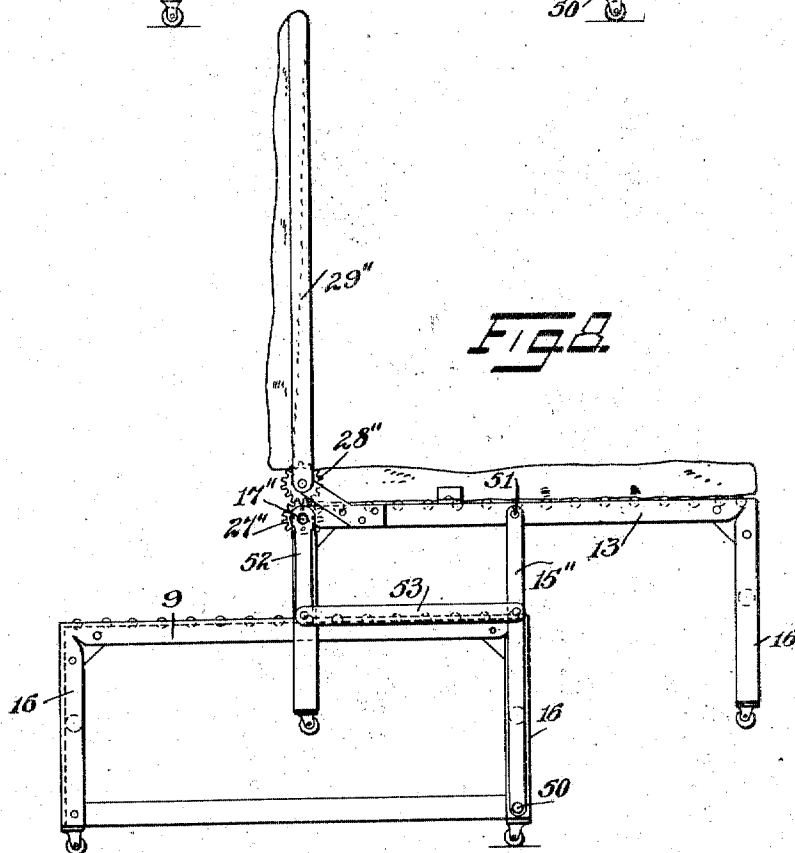
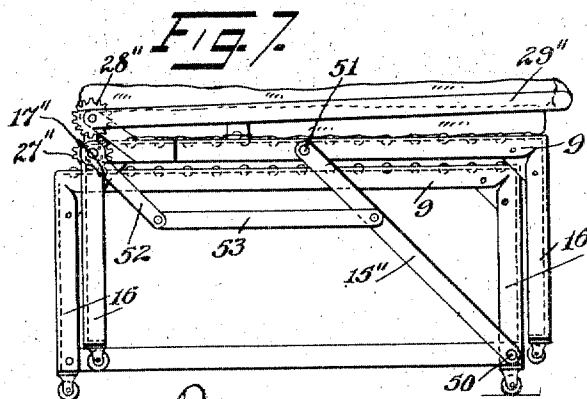
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APPLICATION FILED DEC. 2, 1908.

Patented Feb. 21, 1911.
3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

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COUCH-BED.

984,601.

Specification of Letters Patent.

Patented Feb. 21, 1911.

Application filed December 2, 1908. Serial No. 465,632.

To all whom it may concern:

Be it known that I, CHARLES L. PLUNKETT, a citizen of the United States, residing in New York, borough of Manhattan, in the county of New York and State of New York, have invented certain new and useful Improvements in Couch-Beds, of which the following is a specification.

This invention relates to couch beds, and more particularly to that class of couch beds in which one section is movable with relation to the other to form either a double or a single bed or couch, the object of the present invention being to provide an improved means for shifting, as by swinging, one of said sections relatively to the other, and also to provide means whereby, on the swinging of one of said sections, the mattress, usually of a book form, will be opened or closed.

A further object of the invention is the provision of an extremely simple and inexpensive means which in operation will swing one of a pair of nesting sections so as to form either a single or a double bed and will also simultaneously with the swinging of the said section, swing open or close the mattress.

A further object of the invention is the provision, in connection with a telescoping or nesting couch bed in which one section swings with relation to the other, of a folding mattress one part of which also swings with relation to the other, whereby as the swinging section of the couch bed is drawn into position to form a double bed the folding mattress will be simultaneously opened to rest upon both sections forming the bed.

A further object of the invention is the provision of an improved couch bed of the character described in which while one section of the bed swings in one direction the folding portion of the mattress for the bed will swing in the opposite direction through the medium of means which may be utilized for this purpose, the construction, however, being preferably such that on manipulating the swinging section of the bed the folding mattress will automatically open and close.

In the drawings accompanying and forming part of this specification, Figure 1 is an end view of this improved couch bed closed; Fig. 2 is an end view of the same partly open; Fig. 3 is an end view of the same

entirely open; Fig. 4 is a perspective view of this improved bed with the folding mattress removed, parts thereof being broken away, as is also the case with Figs. 2 and 3; Fig. 5 is an enlarged detail view of the bed manipulating means; Fig. 6 is an end view of a modified form of the bed, this view showing the bed closed, and in dotted lines partly open and entirely open; Fig. 7 is an end view of a somewhat different form of means for controlling the swinging section of the bed; and Fig. 8 is also an end view illustrating the bed shown in Fig. 7 partly open.

Similar characters of reference indicate corresponding parts throughout the different figures of the drawings.

The present improvement, in the embodiment shown in the drawings, comprises a pair of bed sections 2 and 3, each of which may comprise a complete bed, that is to say, each of which may have its full complement of legs, four in number, or one section, as for instance the swinging section, may have but two legs, whereby the bed is a six-legged structure, one bed section, however, nesting or telescoping with the other so as to rest upon such other and adapted to swing toward and from the same. For the purposes of description one section will be designated as the main section 2 and the other as the swinging section 3, the two sections being connected together in such a manner that the swinging section will swing toward and from the other, resting upon the main section to form a couch and in position at the side of the main section with its feet resting upon the floor to form a double bed, the two metallic fabrics of the sections being level, or substantially so, when the structure is in the form of a double bed.

Each of the sections comprises a pair of end frames 4 and 5. In the form shown these end frames are made of pipe, although this is not essential. Each end frame 4 or 5 of the main section is bent to form a pair of legs 7 and 8 provided with casters in the usual manner. To each end frame is secured an angle iron metallic fabric supporting bar 9, and stretched therebetween is some suitable form of metallic fabric 10. In the present instance the end frames are bent or carried above the metallic fabric supporting bars 9 so as to form a short head and foot portion. The end frames of the

main section are connected by a pair of side bars 11.

The swinging section 3' is formed in a similar manner to the main section, except that it may be provided with only two legs at the outer side if preferred, in which case the said outer legs or supports will be connected by a side bar 12. In the form shown in Figs. 1 to 5 the metallic fabric supporting bars 13 of the swinging section, between which the metallic fabric 14 is stretched, are connected at their inner ends by means of a pivot 17 to a lever or bar 15, the lower end of which is pivotally connected centrally of the end frame of the main section to a pair of end cross bars 18, while in Figs. 6 to 8 the metallic fabric supporting bars are connected to legs or supports 16. This pivotal connection of the bar 15 is obtained in the present instance by connecting the said levers or bars 15 to a rod 19 which extends from end to end of the main section and is journaled in the cross bars 18. For insuring parallel motion of the swinging section of the bed when the same is moved toward and from the main section, the end frames of the swinging section are connected by a link 20 with the end frames of the main section, this being accomplished in the present instance by pivoting such links 20 to the cross bars 18 of the main section and to cross bars 21 of the swinging section, the inner end of each bar 21 being carried on the pivot 17. For facilitating the movement of the swinging section a pair of springs 22 are provided, each being connected to the end frames of the main section as at 23, and to a longitudinally extending bar 24 secured to the levers 15.

In practice the bed so far described could be opened and closed by grasping the swinging section at its outer side and pulling it open, and pushing it toward the main section to close it. This is comparatively easy of accomplishment when the swinging section is not weighted down by the mattress, but is more difficult to do when the mattress is in position. In order, therefore, to swing the swinging section open and closed I have provided means which will readily do this, and have also utilized this means to shift the folding mattress. This means, in the present instance, comprises two pairs of gears 25 and 26, one of each pair, as 27, being fixedly secured to each lever 15, which, as hereinbefore stated, is pivoted to the end frames between the cross bars 13 and 21 of the swinging section, the gears 27 thus being mounted upon the pivots 17, but fixed against movement independently of the levers 15, and for this purpose they are shown mounted between the metallic fabric supporting cross bars 13 and the upper ends of the levers 15, being fixed in position against rotation. It is unnecessary to provide these

gears with a full complement of teeth. The other gear of each pair, as 28, is pivotally secured to the end frame of the swinging section in position to mesh with the gear 27, and to these gears 28 are connected the lower ends of a swinging frame or bar 29 which extends from end to end of the swinging section and therefore moves above the plane of the metallic fabrics and the folding mattress on the bed. On swinging this bar from the position shown in Fig. 1 to the position shown in Fig. 2, and from thence to the position shown in Fig. 3, the gears 28 of each pair will move over the teeth of the gears 27 of each pair and so cause the swinging section to swing outwardly from its position on top of the main section and rest upon the floor in the position shown in Fig. 3, with the metallic fabrics thereof level, thus forming a double bed.

Carried by the bed is a folding or book mattress 30, one part of which, as 31, is secured to the top of the swinging section, while the outer edge of the other part, as 32, is secured to the swinging frame 29, whereby, as this swinging frame or bar 29 is shifted from the position shown in Fig. 1 to the position shown in Figs. 2 and 3, the folding mattress will be opened so that the swinging part thereof will be carried into position to rest upon the main section of the bed, which section, in the form shown, is stationary. When the movement of the swinging bar 29 is reversed the half 32 of the mattress will be swung back into position to rest upon the top of the other half 31 of the mattress as the swinging section 3 of the bed is swung into position on top of the main section 4. Thus it will be seen that by this improved means not only is the swinging section of the bed swung away from or toward the main section to telescope or nest therewith, but the folding mattress will be opened or closed so as to form either a double bed or a couch, the swinging section of the bed, in the present instance, moving in one direction while the folding mattress swings in the opposite direction, that is to say, the swinging section and the mattress swing toward each other when the bed is being closed or collapsed and away from each other when it is being opened to form a double bed, while such mattress in its closed position rests upon the swinging section.

In the form of bed shown in Figs. 1 to 5 the swinging section maintains a parallel position during all of its movements by reason of the links 20. These links 20, however, may be dispensed with, and in the form of bed shown in Fig. 6 each link 15' connecting the two sections together is shown extending from a point midway of the cross bars 18', to which it is pivoted, to the rear end of the end frame of the swinging section, to which

it is likewise pivoted, at which point the gears 27' and 28' are located in a similar manner to that shown and described in connection with Figs. 1 to 5, the gear 27' being 5 carried upon the pivot 17' and fixedly secured to the link 15'. In this case, however, the gears 28' are carried by brackets 40 secured to the end frames of the swinging section. To the gears 28' the swinging frame 10 29' is secured, the operation of the bed being otherwise the same as in the form shown in Figs. 1 to 5.

In the form shown in Figs. 7 and 8 the links 15'' connecting the swinging and main 15 sections are pivoted at their lower ends, as at 50, to the inner or front end of the main section, while their upper ends are pivoted, as at 51, midway of the end frames of the swinging section, the intermeshing gears 27'' 20 and 28'', however, being located in the same position as they are shown in Figs. 5 and 6, the gear 27'' being carried upon the pivot 17'' and fixedly secured to a link 52 which is connected by a link 53 with the link 15'', 25 whereby movement imparted by the swinging frame 29'' will, when the couch is to be opened to form a double bed, shift the link 52 forward and through the medium of the link 53 shift the link 15'' to move forward 30 the swinging section and, of course, simultaneously open the folding mattress in the same manner as this is done in the constructions shown in the other figures.

In the form of couch bed shown in Figs. 35 6, 7 and 8 the swinging section is provided with four legs or supports, thus forming an eight-legged structure.

In the present improvement it will be observed that the movable section of the couch 40 bed is a swinging one instead of a sliding one, and that it swings toward or from the main section, resting upon such main section so that the metallic fabric or other yielding mattress supporting means rests upon the 45 metallic fabric or other yielding mattress supporting means of the main section instead of sliding between a side bar and the metallic fabric of such main section as in the ordinary sliding couch bed now well known to 50 the trade, such swinging section swinging in the arc of a circle to its extended or closed positions, telescoping or nesting, however, with the main section when the bed is transformed into a couch, the bed having its two 55 metallic fabrics level or substantially so when it is transformed into a double bed. The means herein shown for swinging the swinging section into open or closed position enables it to be manipulated much more easily 60 than is possible when the swinging section is opened or closed by grasping it and pulling it forward or pushing it back, especially when it carries a mattress, as must be the case in practice, although by the provision 65 of the means for opening and closing the

swinging section the folding mattress can be opened and closed by grasping the swinging section at the front thereof and moving it backward and forward, as this will thus swing the frame 29 from one position to the 70 other, although the simpler and preferable means of accomplishing this is by manipulating the swinging frame 29.

I claim as my invention:

1. In a couch bed, the combination of a 75 pair of bed sections, each having a yielding mattress supporting means connected thereto, one lying flatwise over the other when the structure is in the form of a couch thereby to form the seat of the couch, one section 80 pivotally connected to the other for swinging movement relatively thereto to form either a couch or a double bed, and a swinging bar connected with said sections and in position to be grasped and manipulated by 85 the user for swinging said swinging section.

2. In a couch bed, the combination of a pair of bed sections, each having a yielding mattress supporting means connected thereto, one lying flatwise over the other when 90 the structure is in the form of a couch thereby to form the seat of the couch, one section pivotally linked to the other for swinging movement relatively thereto to form either 95 a couch or a double bed, a swinging bar connected with said sections and in position to be grasped and manipulated by the user for swinging said swinging section, and a mattress carried by said bed and having a part 100 thereof also connected with said swinging bar and adapted to be swung to one position or another on the swinging of said swinging section.

3. In a couch bed, the combination of a pair of bed sections, one movable relatively 105 to the other to form a couch or a double bed, each having a yielding mattress supporting means connected thereto and lying flatwise one over the other when the structure is in the form of a couch to form the seat of the 110 couch, and means including gearing carried by said means and by said movable section for shifting the movable section alongside of its companion section to form a double 115 bed or for shifting said section into position to form a couch.

4. In a couch bed, the combination of a pair of bed sections, one movable relatively 120 to the other to form a couch or a double bed, each having a yielding mattress supporting means connected thereto and lying flatwise one over the other when the structure is in the form of a couch to form the seat of the 125 couch, means including gearing carried by said means and by said movable section for shifting the movable section alongside of its companion section to form a double bed or for shifting said section into position to 130 form a couch, and a mattress carried by said couch bed and having a part thereof con-

nected with said means whereby said mattress will also be opened or closed simultaneously with the shifting of said movable section.

5 5. In a couch bed, the combination of a pair of bed sections, each having a yielding mattress supporting means connected there-
to, one lying flatwise over the other when the
structure is in the form of a couch thereby
10 to form the seat of the couch, one section
connected to the other for swinging move-
ment relatively thereto to form either a
couch or a double bed, a swinging bar con-
15 nected with said sections and in position to
be grasped and manipulated by the user for
swinging said swinging section, a mattress
carried by said bed and having one part
thereof connected with said swinging bar
20 and adapted to be swung to one position or
another on the swinging of said swinging
section, and gearing carried by said swing-
ing section and by said swinging bar and
constituting the means of connection there-
25 between for effecting the swinging move-
ment of such swinging section.

6. In a couch bed, the combination of a pair of bed sections, each having a yielding mattress supporting means connected there-
to, the yielding mattress supporting means
30 of one section lying flatwise over that of the
other section to form a seat when the struc-
ture is in the form of a couch, one section
movable relatively to the other to rest along-
side thereof to form a double bed, and means
35 connected to said sections and shiftable in a
direction opposite to the direction of move-
ment of said movable section thereby to shift
the same to form either a double bed or a
couch.

40 7. In a couch bed, the combination of a pair of bed sections, each having a yielding mattress supporting means connected there-
to, the yielding mattress supporting means
of one section lying flatwise over that of the
45 other section to form a seat when the struc-
ture is in the form of a couch, one section
movable relatively to the other to rest along-
side thereof to form a double bed, and means
connected to said sections and shiftable in a
50 direction opposite to the direction of move-
ment of said movable section thereby to shift
the same to form either a double bed or a
couch, said means including gearing and a
swinging bar connected with a part of said
55 gearing and in position to be manipulated
by the user.

8. In a couch bed, the combination of a pair of nesting bed sections, each having a yielding mattress supporting means con-
60 nected thereto, one section movable relatively
to the other, a folding mattress therefor,
and means connected to said mattress and
to said structure and effective to shift the
mattress in one direction as the movable
65 section is shifted in the opposite direction.

9. In a couch bed, the combination of a pair of nesting bed sections, one a stationary section and the other a movable section, each having yielding mattress supporting means, that of the movable section resting hori-
70 zontally over the top of the stationary sec-
tion, a sectional mattress for said bed, both
sections thereof supported by and above the
movable section when the structure is in the
form of a couch, and means for shifting the
75 movable section from a position on top of
said stationary section to a position along-
side thereof and also operative to open and
close the sectional mattress, said means shift-
80 able in a direction opposite to the direction
of movement of said movable section when
the same is shifted to a position alongside
of said stationary section.

10. In a couch bed, the combination of a pair of nesting bed sections, one a stationary
85 section and the other a movable section, each
having yielding mattress supporting means,
that of the movable section resting hori-
zontally over the top of the stationary sec-
tion, and means connected with said sections
90 and in position to be actuated by the user
for shifting the movable section from a po-
sition on top of said stationary section to a
position alongside thereof and vice versa,
said means shiftable in a direction opposite
95 to the direction of movement of said mov-
able section when the same is shifted to a
position alongside of the stationary section.

11. In a couch bed, the combination of a pair of nesting bed sections, each having a
100 yielding mattress supporting means con-
nected thereto, a link or links connecting
said sections, one section swinging relatively
to the other, a folding mattress therefor, and
means connected to said mattress and to said
105 sections and effective to swing a part of said
mattress in one direction as the swinging
section is swung in the opposite direction.

12. In a couch bed, the combination of a pair of bed sections, each having a yielding
110 mattress supporting means connected there-
to, one section movable relatively to the
other, a folding mattress therefor, and
means connected to said sections and to said
mattress and operative to shift the movable
115 section in one direction and a part of said
mattress in the opposite direction.

13. In a couch bed, the combination of a pair of nesting bed sections, each having a
metallic fabric connected thereto and one
120 movable relatively to the other, a folding
mattress carried by the movable section, and
means connected to said structure and to
said mattress and operative to shift one
part of said mattress on to the non movable
125 section of the bed as the movable section
thereof is shifted.

14. In a couch bed, the combination of a pair of nesting bed sections, each having a
metallic fabric connected thereto and one
130

connected to and swinging relatively to the other section, a folding mattress carried by the swinging section, and means connected to said sections and to said mattress and operative to swing the swinging section in one direction and a part of said mattress in the opposite direction and on to the non swinging section of the bed.

15. In a couch bed, the combination of a pair of bed sections, one movable and the other stationary, a yielding mattress supporting means for each of said sections, pivotal means between the bed sections whereby the movable section is adapted to be lifted to occupy a position on top of the stationary section or to be lowered to occupy a position at the side of said stationary section to bring its mattress supporting means in the same plane with the mattress supporting means of the stationary section, a folding mattress carried by the movable section, and means connected to said structure and operative on the shifting of the movable section to open said mattress and carry a part thereof on top of the yielding mattress supporting means of the stationary section.

16. In a couch bed, the combination of a pair of nesting sections, one a stationary section and the other a swinging section, the swinging section resting on top of the stationary section to form a couch, a link or links connecting said sections together at each end whereby the swinging section is shiftable from the top of the stationary section to a position alongside of it, a gear carried by one of the links at each end of said sections, a meshing gear pivotally connected to the swinging section at each end there-

of, and a swinging bar connected to said last mentioned gears and effective to open and close the bed.

17. In a couch bed, the combination of a pair of nesting sections, one a stationary and the other a swinging section, the swinging section resting on top of the stationary section to form a couch, a link or links connecting said sections together at each end whereby the swinging section is shiftable from the top of the stationary section to a position alongside of it, a gear carried by one of the links at each end of said sections, a meshing gear pivotally connected to the swinging section at each end thereof, a folding mattress carried by said bed, and a swinging bar connected to said last mentioned gears and to which said mattress is connected and effective to open and close the bed and simultaneously open and close the mattress.

18. In a couch bed, the combination of a pair of bed sections comprising a stationary section and a movable section; the latter shiftable from a position on top of the stationary section to a position alongside thereof, means for shifting said movable section, and a folding mattress carried on top of the movable section and one half thereof connected to said means and shiftable by said means in a direction opposite to the direction of movement of the movable section on the shifting of said section.

Signed at 9 to 15 Murray St., New York, N. Y. November 28, 1908.

CHARLES L. PLUNKETT.

Witnesses:

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F. E. BOYCE.