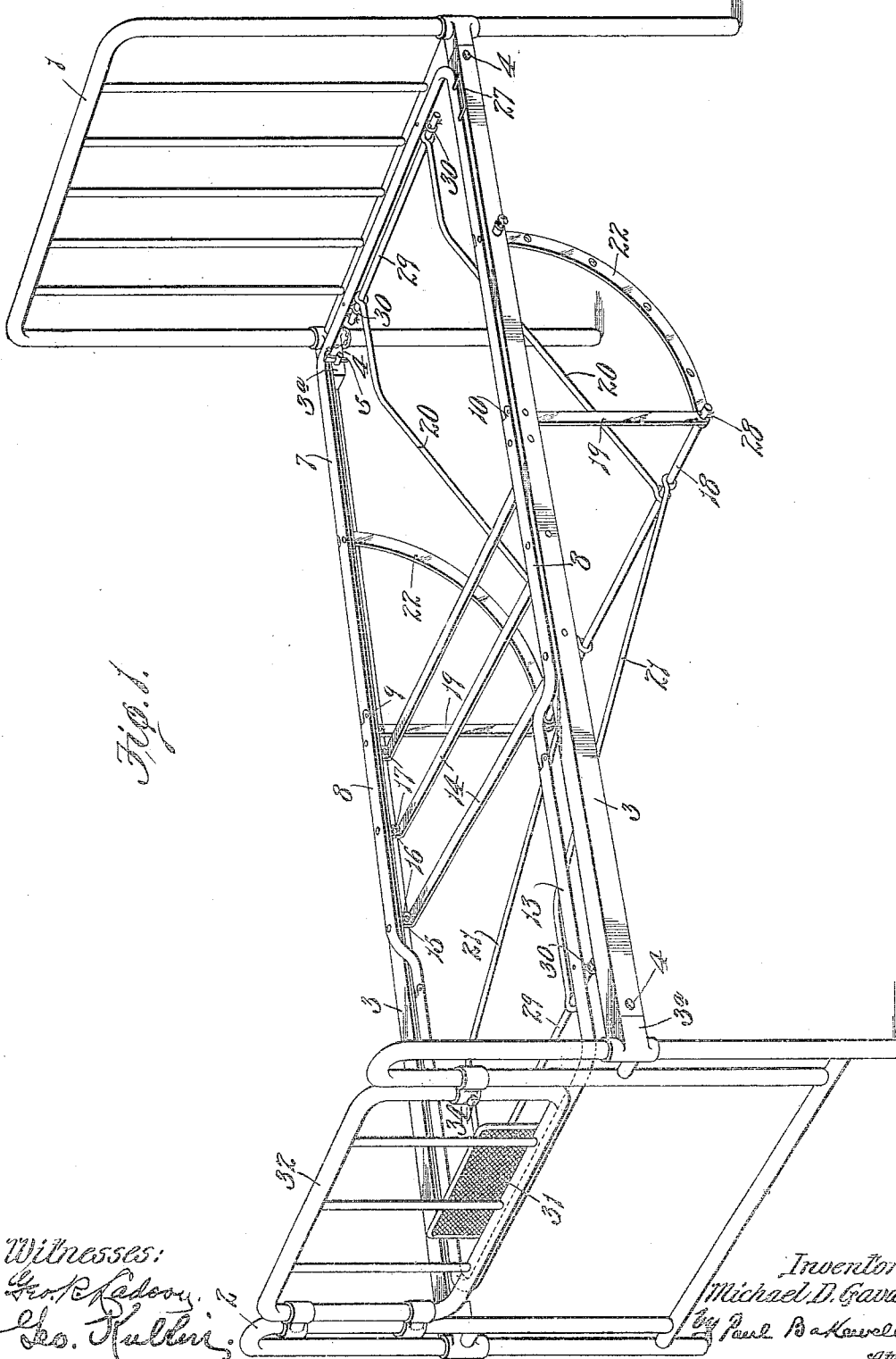


M. D. GAVAN.
 CONVERTIBLE BED.
 APPLICATION FILED SEPT. 3, 1909.

953,687.

Patented Apr. 5, 1910.

2 SHEETS—SHEET 1.



Witnesses:
 Geo. R. Gadsden,
 Geo. H. Hulbert.

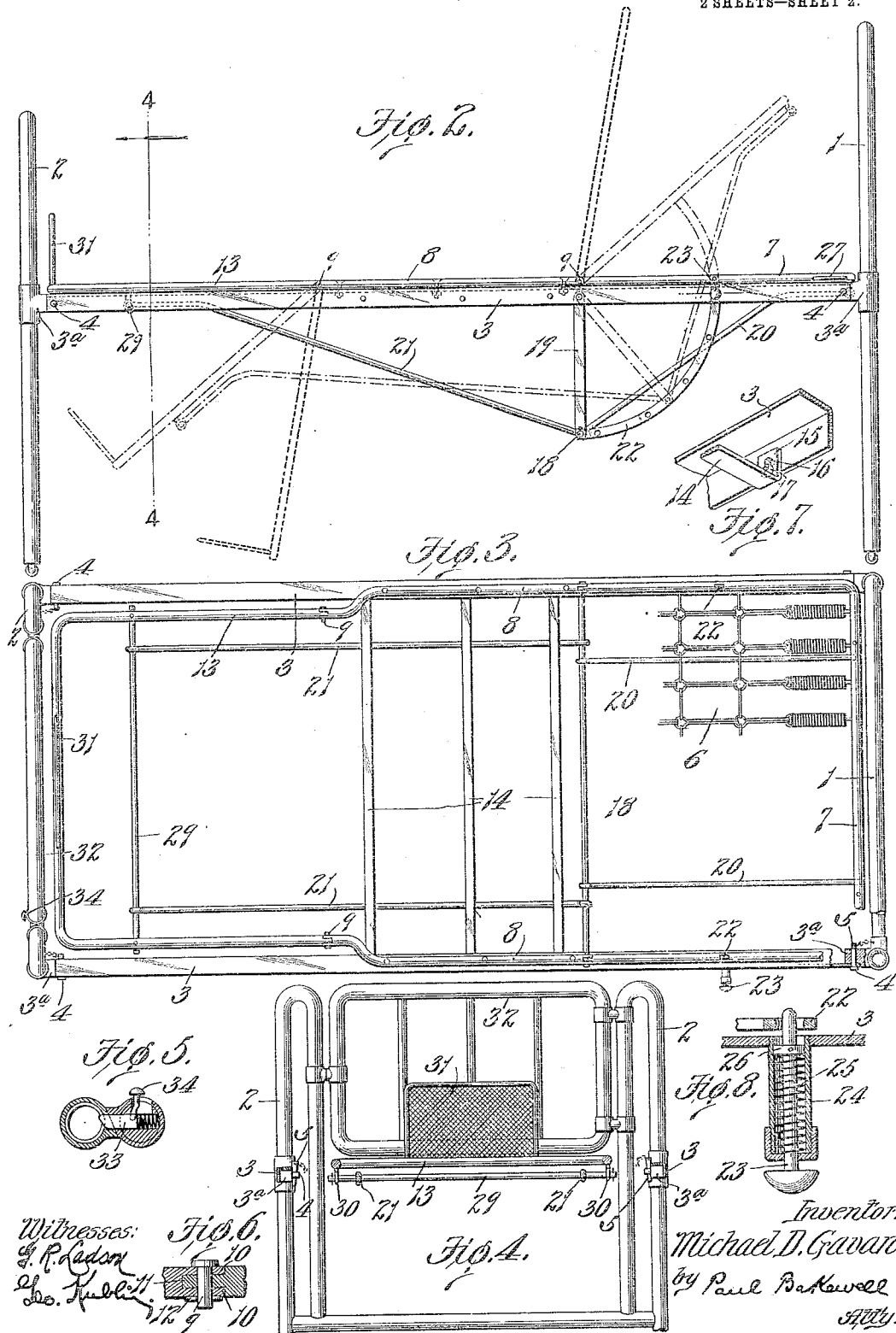
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2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

MICHAEL D. GAVAN, OF ST. LOUIS, MISSOURI.

CONVERTIBLE BED.

953,687.

Specification of Letters Patent.

Patented Apr. 5, 1910.

Application filed September 3, 1909. Serial No. 516,083.

To all whom it may concern:

Be it known that I, MICHAEL D. GAVAN, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Convertible Beds, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

10 This invention relates to convertible beds.

The main object of my invention is to provide a bed of improved construction that can be converted into a chair without removing the occupant.

15 Another object is to provide a bed of the character described which is so constructed that the foot piece or portion of the bed bottom will move automatically into an inclined or vertical position when the head portion is raised; and still another object is to provide a convertible bed which is so constructed that it can be taken apart easily and shipped in knock-down form.

25 Other objects and desirable features of my invention will be hereinafter pointed out.

Figure 1 of the drawings is a perspective view of my improved bed; Fig. 2 is a side elevational view of the same; Fig. 3 is a top plan view of said bed; Fig. 4 is a vertical sectional view taken on the line 4—4 of Fig. 2; Fig. 5 is a detail sectional view of the catch for locking the gate in the end frame of the bed; Fig. 6 is a detail view illustrating the connection between the intermediate portion of the spring frame and the head and foot portions thereof; Fig. 7 is a detail perspective view illustrating the connection between the transverse supports at the center of the bed and the side rails; and Fig. 8 is a detail sectional view of the device for locking the movable portions of the spring frame.

Referring to Fig. 1 of the drawings, which illustrates the preferred form of my invention, 1 designates the end frame at the head of the bed, and 2 designates the end frame at the foot of the bed, said end frames being connected together by means of side rails 3. These side rails can be connected to the end frames in various ways, but I prefer to connect the side rails to laterally projecting brackets 3^a on the end frames by means of pins 4 that pass transversely through said side rails and brackets, as shown in Fig. 3,

said pins being retained in position by means 55 of tapered keys 5 that pass through slots in the pins and thus draw the heads on the pins tightly against the side rails. The brackets 3^a are preferably provided with reduced portions which the angle-shaped side rails 60 embrace closely, and these reduced portions form shoulders against which the ends of the side rails abut. A construction of this character can be manufactured cheaply, and it can be taken apart easily by removing the 65 keys 5 and then withdrawing the pins 4. Moreover, it is strong and rigid, for the side rails are positively locked and cannot move in any direction until after the pins 4 have been removed.

70 The bottom of the bed that forms a support for the mattress consists of a frame to which springs or a woven wire fabric 6 of any preferred type is connected. This frame comprises a head portion that is adapted to 75 be raised into an inclined or upright position, and a foot portion that is adapted to be moved downwardly into an inclined or vertical position. In the construction herein shown the head portion of the spring 80 frame consists of a bar, rod or tube 7 that is bent into an approximately U-shape and arranged with its cross piece extending parallel to the head end frame 1 and its sides or legs projecting inwardly toward the center 85 of the bed, as shown in Fig. 1. This head portion 7 is pivotally connected at its inner end to pieces 8 which are preferably detachably connected to the side rails 3, the pivotal connection between said parts consisting of pins 9 that pass through ears 10 on one of said parts which embrace a tongue 11 on the other part, as shown in Fig. 6. The pins 9 are retained in position by means 95 of cotter pins 12 so as to enable the spring frame to be taken apart easily.

The foot portion of the spring frame 13 is of practically the same construction as the head portion 7 just described, and said foot portion is pivotally connected to the bars 8 100 by removable fastening devices. The pieces 8 which form the central or intermediate portion of the spring frame are bent inwardly adjacent the point where the foot portion 13 of the frame is connected thereto, 105 and said foot portion is made narrow enough to swing downwardly between the side rails of the bed, as shown in broken lines in Fig. 2.

While I prefer to connect the foot portion and head portion of the frame to pieces 8 that are detachably connected to the side rails, I do not wish it to be understood that my broad idea is limited to this specific construction for the same results could be accomplished in numerous other ways without departing from the spirit of my invention. I prefer the construction herein shown, however, because the entire spring frame or bottom portion of the bed can be removed from the side rails and folded up compactly for shipment.

If desired, one or more bars 14 can be arranged adjacent the center of the bed so as to form a support for that portion of the springs or woven wire fabric which constitutes the seat of the chair, said bars extending from side rail to side rail and having up-turned ends 15 provided with slots 16 for receiving projections 17 on the side rails, as shown in Fig. 7, thus enabling said bars to be removed easily.

Means are provided for causing the foot portion 13 of the spring frame to swing downwardly automatically when the head portion is raised, and in the bed herein shown said means consists of a swinging bar 18 supported by links 19 and connected by rods 20 and 21 to the head portion and the foot portion of the frame, respectively, the links 19 being pivotally connected at their ends to the side rails 3. Segmental-shaped bars 22 which are rigidly connected to the head portion 7 are provided with openings through which the swinging bar 18 passes, and a spring-pressed plunger 23 is mounted in one of the side rails for engaging openings or notches in the adjacent bar 22, so as to lock the head portion and foot portion in the positions to which they have been moved. The plunger 23 is arranged inside a housing 24 that is connected to the side rail, and a coiled expansion spring 25 is interposed between the end wall of said housing and a collar 26 on the plunger, as shown in Fig. 8, so as to force the plunger toward the bar 22 which it locks.

When it is desired to convert the bed into a chair the plunger 23 is moved outwardly to withdraw the end thereof from the opening in the bar 22, and the handle 27 on the head portion 7 is grasped and moved upwardly so as to arrange the head portion and foot portion in an inclined or vertical position, as shown in broken lines in Fig. 2, the plunger snapping back into operative position as soon as it is released.

The swinging bar 18 is retained in position by means of cotter keys 28 that pass through holes in the end thereof, and the rods 20 and 21 are provided at one end with eyes through which the bar 18 passes, and at their opposite ends with eyes through

which rods 29 on the head portion 7 and foot portion 13 pass, said rods being supported by eyes or loops 30, and retained in position by means of cotter keys so as to enable all of said parts to be taken apart easily.

The foot portion of the spring frame is preferably provided with a foot rest 31 on which the occupant of the bed can place his feet, and the end frame 2 at the foot of the bed is provided with a gate 32 that can be opened in case the occupant desires to leave the chair, said gate being retained in its closed position by means of a spring-actuated bolt or latch 33 provided with a handle 34, as shown in Fig. 5.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A bed provided with a swinging head portion and a swinging foot portion that form part of the bottom of the bed, pivotally mounted links connected to the side rails of the bed, a transversely extending bar supported by said links, means for connecting said bar to the head portion and foot portion, segmental-shaped bars connected to the head portion and to said transversely extending bar, and a device carried by one of the side rails of the bed and cooperating with one of said segmental-shaped bars for locking said swinging portions in their adjusted positions.

2. A bed provided with a swinging head portion and a swinging foot portion that form part of the bottom of the bed, pivotally mounted links depending from the side rails of the bed, a transversely extending bar carried by said links, a connection between said bar and said swinging foot portion, segmental-shaped members connected to said bar and to said head portion, and locking devices on the side rails that engage said segmental-shaped members.

3. A bed provided with side rails and having an adjustable head portion and an adjustable foot portion that form part of the bottom of the bed, said portions being adapted to be moved into an inclined or vertical position so as to convert the bed into a chair, and a support arranged adjacent the center of the bed and consisting of transversely extending bars having up-turned ends that are provided with elongated slots which receive projections on the side rails of the bed.

4. A bed provided with side rails, a spring frame consisting of a head portion, a foot portion, and an intermediate portion that are pivotally connected together, means for connecting said intermediate portion to the side rails, swinging links depending from the side rails, a bar connecting said links together, means for connecting said head portion and foot portion to said bar, a seg-

mental-shaped bar connected to said head
portion and to the bar which joins the links
together, and a spring-pressed plunger
mounted on one of the side rails and co-
5 operating with one of said segmental-shaped
bars to lock said head portion and foot por-
tion in their adjusted positions.

In testimony whereof I hereunto affix my
signature in the presence of two witnesses,
this thirty-first day of August, 1909.

MICHAEL D. GAVAN.

Witnesses:

DAVID HENNESSY,
GEORGE BAKEWELL.