J. K. PENNINGTON.

DOUBLE ACTING WALL BED.

APPLICATION FILED JULY 6, 1911.

1,006,123.

Patented Oct. 17, 1911.

Fig. 1.

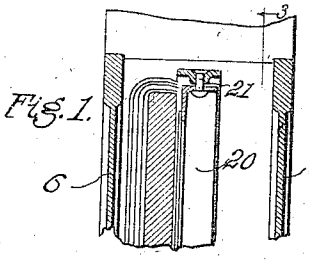
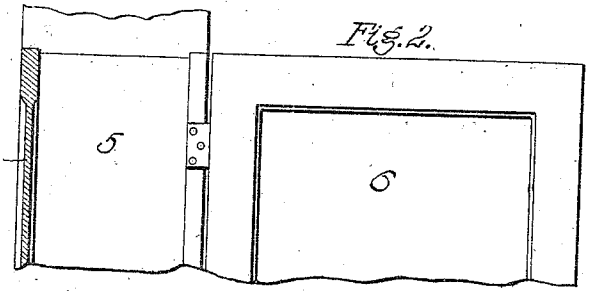


Fig. 2.



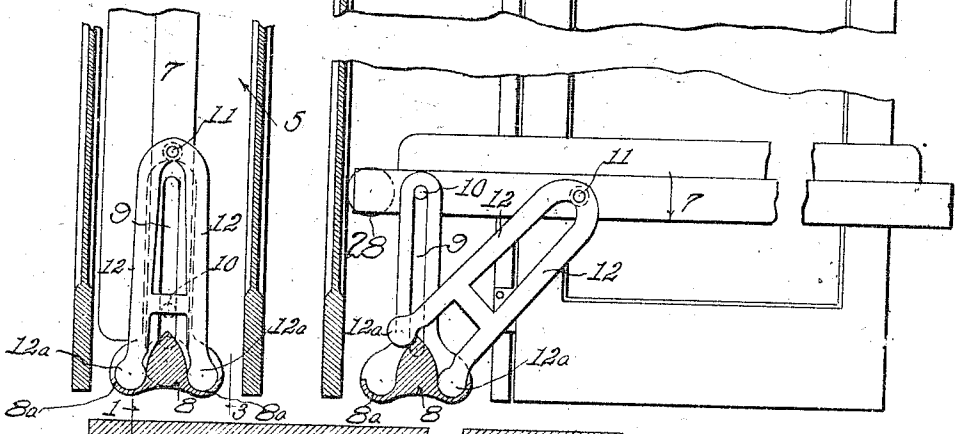


Fig. 3.

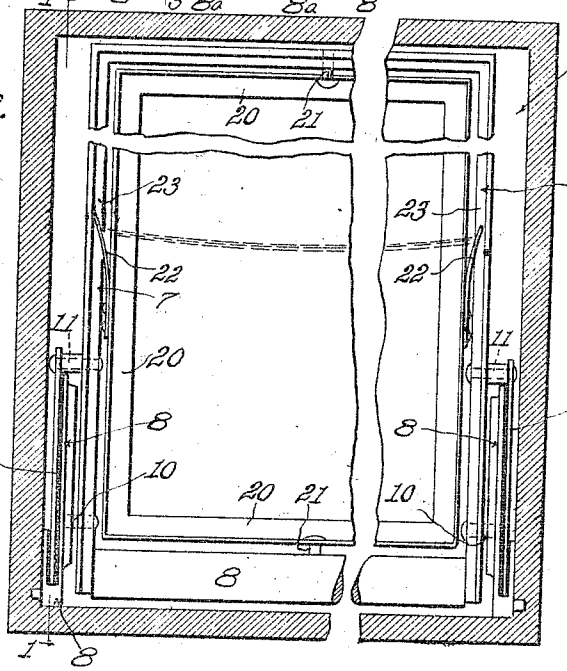
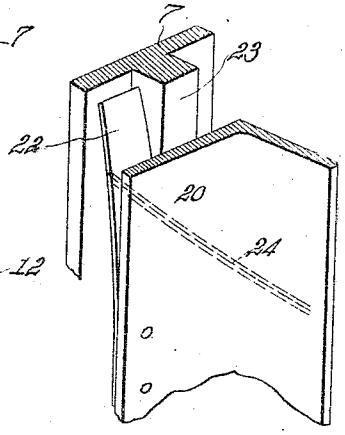


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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DOUBLE-ACTING WALL-BED.

1,006,123. Specification of Letters Patent. **Patented Oct. 17, 1911.**

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To all whom it may concern:

Be it known that I, JOHN K. PENNINGTON, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles, State of California, have invented new and useful Improvements in Double-Acting Wall-Beds, of which the following is a specification.

This invention relates to a wall bed adapted to normally be stored in a vertical position within a wall recess or within a cabinet and adapted to swing downwardly into the room or space on either side of the wall.

Heretofore, so far as I am aware, wall beds have been constructed in wall recesses to swing downwardly and into a room in a certain fixed position. My bed is so constructed that it may be swung downwardly into one room or into a room on the opposite side of the wall in which the bed is normally contained. Thus, I have provided a bed which may be used either in a bedroom or in a sleeping porch or other room which is adjacent the bedroom. This provision is effected by first providing a bed frame which will swing downwardly in opposite directions, so as to swing into either room on opposite sides of the wall recess. A special form of mechanism is provided for lowering the bed frame into either room and the bed frame is lowered in such manner that its opposite faces will be up depending upon which room it is turned into. This necessitates a special arrangement of the spring frame and mattress so as to place them on the upper side of the bed. The spring frame is pivoted on a vertical axis at pivots at the ends of the bed frame so that it may be swung about this vertical axis when the bed frame is standing vertically in the wall, thus to reverse the position of the mattress and bed clothes. This operation is very easily and quickly effected; but it is not anticipated that it will be done very frequently.

In the accompanying drawings: Figure 1 is a vertical section taken on line 1—1 of Fig. 3 and illustrating my improved bed in vertical position within its wall recess. Fig. 2 is a similar vertical section illustrating the bed lowered to one side. Fig. 3 is a section taken on line 3—3 of Fig. 1. Fig. 4 is an enlarged detail perspective illustrating the means of locking the spring frame to the bed frame.

In the drawings 5 designates a wall recess having doors 6 which may be opened on either side of the recess and which will permit the bed to be thrown down in either direction and on opposite sides of the wall. These doors 6 may be made and operated in any desired manner, depending upon the construction and placement of the recess. The recess and doors do not enter vitally into my present invention.

The bed itself comprises a bed frame 7 which is adapted to normally rest in the upright position shown in Fig. 1 and which is provided with a counter weight 28 on its lower or head end adapted to facilitate the movement of the bed and to render unnecessary any great physical exertion in changing it from one position to another. Mounted on either side of the lower part of bed frame 7 and against the side walls of the recess 5 are stationary guide members 8 provided with vertical slotted ways 9 in which pins 10 are adapted to vertically reciprocate. These pins 10 are rigidly mounted on the bed frame near its lower end and are thereby adapted to guide that portion of the bed frame in a vertical movement. Some distance removed from pins 10 are arranged pivots 11 to which are attached supporting members 12 of the configuration best shown in Figs. 1 and 2. Supporting members 12 are provided with ends 12^a of circular configuration which fit into sockets 8^a in members 8 in the manner illustrated in Fig. 1. It will be seen that members 12 are supported from both sockets when they are in their vertical positions and are, therefore, in a state of stable equilibrium; and the weight of the bed exerted downwardly on these supporting members 12 through pivots 11 prevents the members 12 from being moved from the position of Fig. 1 to the position of Fig. 2 without some physical exertion. Pins 10 sliding in guides 9 guide the head portion of the bed frame in a vertical movement while pivots 11 move outwardly on a circumference centered around one of lugs 12^a.

When the bed is in the position shown in Fig. 2, pins 10 will be at the upper ends of guides 9 and members 12 will be in the position shown so that the bed is supported on pivots 11 and the head end of the bed is prevented from rising by the pins 10. Counterweight 8 is so arranged that the moment of the bed around pivots 11 tends to rotate slightly in the direction indicated by the arrow in Fig. 2. A slight upward

pull on the outer or foot end of the bed will suffice to throw the bed up toward its position shown in Fig. 1. In the position shown in Fig. 2 the total rotary moment of the bed about pivots 11 is in the direction indicated; but the proportions are so fixed and counterweight 28 is so placed that, when the bed has been lifted slightly on its outer end, the total rotary moment is in the opposite direction; so that, after slight movement by hand, the bed will itself pass to the position of Fig. 1. If it is desired to lower the bed on the side opposite that illustrated in Fig. 2, it is only necessary to pull on the upper end of the bed frame in the opposite direction (to the left in Fig. 1) and the bed will be thrown to a position corresponding and opposite to the position shown in Fig. 2.

I have shown a spring frame 20 mounted within bed frame 7 and this spring frame is mounted on two pivots 21 which form a vertical axis for the spring frame to allow it to be turned when the bed is in the position of Fig. 1. Spring frame 20 carries the ordinary springs on which the mattress and bed clothes are mounted and secured in any desired manner. A pair of spring clips 22, or any equivalent fastening means, are mounted on the sides of spring frame 20 and are adapted to engage beneath a rib 23 on the bed frame to prevent the turning of the spring frame except when desired. A small chain or cord 24 connects the two clips 22 and provides means for their being drawn inwardly simultaneously so as to allow the spring frame to be rotated on its vertical axis. If the bed is desired to be lowered to the left in Figs. 1 and 2, then the spring frame must be rotated so that the springs and the mattress are on the right-hand side of the bed in Fig. 1. Then, when the bed is lowered, the springs and mattress will be on the upper side of the bed. This provides for lowering the bed out of the recess in either direction. The recess may be built into a wall separating two rooms in either of which the bed may then be used. The most typical instance of this character is the use of the bed in a bedroom and in a sleeping porch or balcony; and my construction provides for sleeping in the room or balcony just as weather conditions permit.

My invention is seen to consist; first, of such supporting means for a bed that the bed may be lowered out of a wall recess in either of two opposite directions; and, second, the combination of this supporting mechanism with a spring frame so hung as to be reversible to always turn the springs and mattress upwardly when the bed is lowered in either direction. The supporting means comprises in reality a double acting hinge of such nature that the bed is supported when lowered to either of its positions and also of such nature that, when the bed is in its upright position, the supporting means or hinge is arranged vertically and alongside the bed so as to minimize the horizontal space occupied. And in this vertical position the bed is supported in a condition of stable equilibrium ready to be moved in either direction as is desired.

Having described my invention, I claim:

1. A wall bed, comprising a bed frame, a support for the lower end of the bed frame and comprising a member having a vertical guide slot therein, a lug on the bed frame adapted to follow in said slot, an oscillating member having its oscillating end pivotally attached to the bed frame, and a spring frame pivotally mounted on the bed frame to be turned to face in either direction thereon.

2. A wall bed, comprising a bed frame adapted to normally stand in a vertical position, a pair of guide members having vertical slots therein and arranged one on each side of the lower end of the bed frame, lugs on the bed frame and projecting into the vertical slots to move vertically therein, and oscillating members pivoted to the bed frame on opposite sides and at points above the lugs thereon.

3. A wall bed, comprising a bed frame adapted to normally stand in a vertical position, a pair of guide members with vertical guide slots therein and arranged one on each side of the bed frame, lugs on the bed frame adapted to engage in said slots and move vertically therein, a pair of oscillating supporting members mounted one on each side of the bed frame and pivotally connected to the bed frame at points above the lugs thereon, each oscillating supporting member comprising a bifurcated member having bearing surfaces on each of its divided ends, said bearing surfaces being spaced from each other, and stationary bearing sockets in which the bearing surfaces of the oscillating supporting members are adapted to enter and rest.

4. A wall bed, comprising a bed frame, a pivotal support for the bed frame near its lower end, said pivotal support allowing the bed frame to be moved outwardly and downwardly in opposite directions, and a spring frame reversibly mounted on the bed frame.

In witness that I claim the foregoing I have hereunto subscribed my name this 30th day of June 1911.

JOHN K. PENNINGTON.

Witnesses:
JAMES T. BARKELEW,
JAS. H. BALLAGH.