A. C. KRUEGER.

WALL BED.

APPLICATION FILED MAR. 11, 1912.

1,045,987.

Patented Dec. 3, 1912.

2 SHEETS—SHEET 1.

Fig. 2.

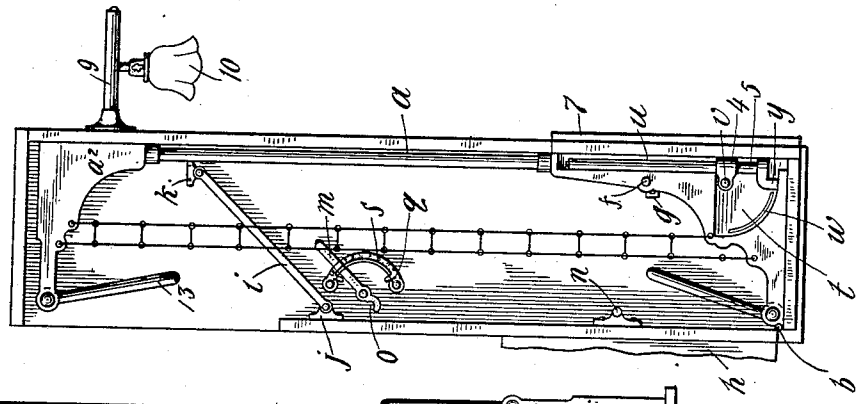

Fig. 5.

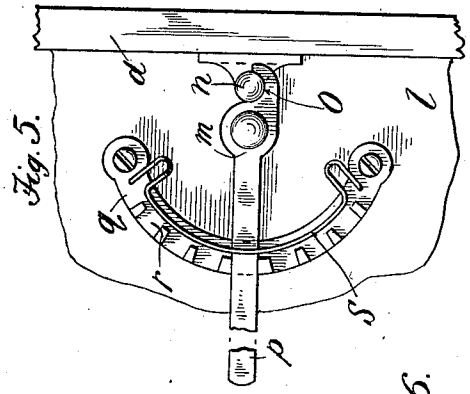

Fig. 6.

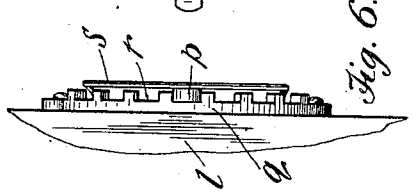

Fig. 1.

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2 SHEETS—SHEET 2.

Fig. 4.

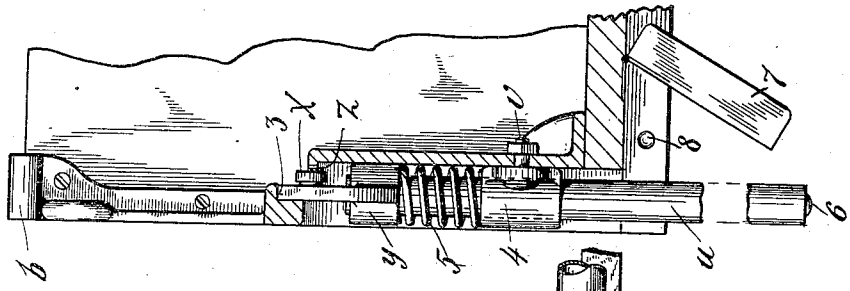

Fig. 8.

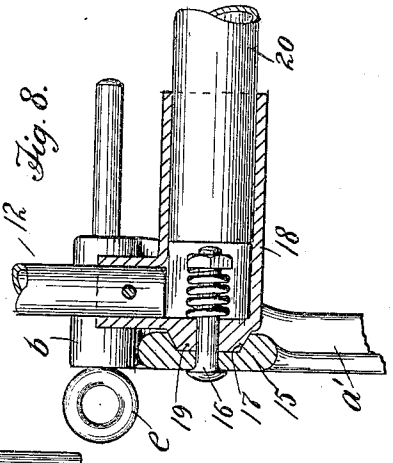

Fig. 3.

Fig. 7.

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WALL-BED.

1,045,987. Specification of Letters Patent. Patented Dec. 3, 1912.

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To all whom it may concern:

Be it known that I, AUGUST C. KRUEGER, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Wall-Beds, of which the following is a specification.

My invention relates to a disappearing bed and has for its object to provide a bed of this type of improved and sanitary construction.

A further object is to provide means whereby the bed may be readily disconnected from its casing, so as to enable the user to remove the bed from said casing in order to conveniently clean all parts and with a view of enabling the user to place the bed in any position in the room. Thus, in extremely hot weather or in case of sickness, the bed may be placed near the windows of the room, or the bed may be kept permanently placed in the room and the bed casing used for a closet or the like.

The objects and features of my invention are readily understood by perusing the following description, reference being had to the annexed drawings, in which:

Figure 1 is a side elevation showing my bed open and disconnected from its casing, parts of said casing being removed for the sake of clearness, Fig. 2 illustrates the bed folded into its casing, Fig. 3 is an enlarged side elevation of parts of my device, illustrating its operation, Fig. 4 is an end view of the mechanism shown in Fig. 3, and is drawn partly in section on lines A—A of Fig. 3, Figs. 5 and 6 show on a large scale other details of construction, and Figs. 7 and 8 illustrate other details of construction more fully explained below.

The bed frame *a* is made with hinge-knuckles *b* registering with hinge-knuckles *c* of back-panel *d*. A suitable hinge pin *e* is adapted for insertion in said hinge-knuckles and thereby to pivotally fix the bed frame on said back-panel. Rigidly fixed on the bed-frame are studs *f* adapted to seat in open sockets *g* of jambs 1 of the bed casing. By comparing Figs. 1 and 2 it is readily seen how the bed frame swings on said studs in opening and closing.

The back panel *d* is made with a receptacle *h*, in which the usual counterweights are placed, and is near the top mounted to swing in the casing in the usual manner by means of braces *i*, journaled in brackets *j*, *k* of the back-panel and casing jamb respectively.

When the bed is removed from the casing it becomes necessary to support and retain the back-panel in its elevated position, in order to maintain the parts in alinement for re-attachment, and this I accomplish by mounting levers *m* on the jambs 1, said levers coöperating with studs *n* of said panel to lock the back-panel in place, as best shown in Figs. 5 and 6. The short end of lever *m* is made with a socket *o*, in which said stud *n* rests, and the opposite end of said lever terminates in a handle *p*. A segmental piece *q* is mounted on the jamb and made with grooves *r*, in which said handle is adapted to lodge. A suitable spring *s* is secured to said segmental piece and serves to retain the handle in position in any one of said notches.

When the bed is removed from its casing, it is necessary to support its inner or head-end, and the mechanism employed for this purpose is most clearly illustrated in Figs. 3 and 4. The head-piece of the bed-frame is made with a segmental chamber *t*, in which a disappearing leg *u* is journaled on a central stud *v*. A concentric rib *w* projects into said chamber and the upper end of leg *u* is provided with an anti-friction roller *x*, adapted to ride on said rib in swinging said leg into operative position. The head-piece *y* of the leg, on which said roller is hung, projects through a slot *z*, and the side wall of said slot is made with pockets 2, 3 adapted for seating the end of said head-piece. The leg *u* is slidably mounted in swing-bracket 4, and a stiff coil-spring 5 is interposed between said bracket and said head piece.

To swing the disappearing leg from the folded position shown in Fig. 3 to its open position as shown in Fig. 4, the leg is pulled by the hand against the tension of spring 5 until the end of head-piece *y* leaves pocket 2. The leg is then caused to swing on stud *v*, allowing roller *x* to run along the inner face of rib *w*, until pocket 3 is reached, into which head-piece *y* is drawn by spring 5, and the leg is firmly locked in operating position. The bottom of the leg is preferably provided with a suitable roller or caster 6.

In order to give my device a more pleasing appearance when the bed is closed as shown in Fig. 2, a hinged cover 7 is provided, adapted to inclose the leg mechanism,

and to swing clear of the leg, when the latter is projected. Said cover is locked in closed position in any suitable manner as by spring held ball and socket mechanism 8 of Figs. 3 and 4.

The foot-end of the bed is made with fixed legs 9, which conveniently may be wired to deliver current to lamps 10, in any well known manner.

On the head and foot brackets a', a^2 of the bed are hinged a swinging head and foot rest 12, 13, and the joints 14 of said rests are so constructed as to permit the latter to remain in any position they are set. Said rests may thus conveniently serve to clamp the bedding in place, when the bed is folded.

Referring to Figs. 7 and 8, said brackets are made with enlargements 15, perforated to receive a spring held bolt 16, and with an inner counter bore 17, the bottom of which is corrugated as shown in Fig. 7. The hinge-portions of said rests 12, 13 comprise an elbow casting 18, made with a circular boss 19, seating in said counter bore 17, and the face of said boss is correspondingly corrugated. It is readily seen that the spring of bolt 16, in swinging the rest, tends to keep said counter bore faced in engagement. The upper portion of said rests are rigidly fixed in elbow 18, while the lower cross member 20 is fixed at one end and slidably fitted at the other, as shown in Fig. 8, thereby permitting said rests to yield against the tension of the springs of bolts 16.

Aside from the difference in the mounting of cross member 20, said cross member having one end fixed and the other slidably fitted, my device is entirely symmetrical, that is to say, the parts used on one side are exactly the same as those on the other side, only reversed.

I claim:

1. In a wall bed, the combination with a bed frame and a casing; of means for detachably mounting said bed frame in said casing for swinging motion; a weighted back-panel mounted to swing in said casing and detachably journaled on said bed frame; means for locking said back-panel in an elevated position; and a folding leg mechanism on said frame, whereby a pair of legs are caused to project for supporting the inner end of the bed frame when detached.

2. In a wall bed, the combination with a bed frame and a casing; of means for detachably mounting said bed frame in said casing for swinging motion; a weighted back-panel mounted to swing in said casing and detachably journaled on said bed frame; means for locking said back-panel in an elevated position, said means comprising a pair of fixed studs of said panel, a pair of levers pivoted in said casing and provided at one end with a receptacle for said studs, a pair of grooved plates fixed in the casing for registrations with the opposite ends of said levers, and a pair of springs for holding said levers in place; and a folding leg mechanism on said frame, whereby a pair of legs are caused to project for supporting the inner end of the bed frame when detached.

3. In a wall bed, the combination with a bed frame and a casing; of means for detachably mounting said bed frame in said casing for swinging motion; a weighted back-panel mounted to swing in said casing and detachably journaled on said bed frame; means for locking said back-panel in an elevated position; a pair of head-brackets on said bed frame; a pair of legs mounted for swinging motion in said head-brackets; and means for locking said legs in folded or open position.

4. In a wall bed, the combination with a bed frame and a casing; of means for detachably mounting said bed frame in said casing for swinging motion; a weighted back-panel mounted to swing in said casing and detachably journaled on said bed frame; means for locking said back-panel in an elevated position; a pair of head-brackets on said bed frame; a segmental chamber in each bracket; a pair of legs mounted for swinging motion on a central stud of said chamber; and means for locking said legs in folded or open position.

5. In a wall bed, the combination with a bed frame and a casing; of means for detachably mounting said bed frame in said casing for swinging motion; a weighted back-panel mounted to swing in said casing and detachably journaled on said bed frame; means for locking said back-panel in an elevated position; a pair of head-brackets on said bed frame; a segmental chamber in each bracket, said chamber provided with a segmental rib, a peripheral slot and a pair of pockets in the wall of said slot; a leg slidably mounted for swinging motion on a central stud of said chamber, and provided with a roller adapted to run on said rib in swinging, and a projection adapted to seat in either of said pockets; and a coil spring on said leg and adapted to normally retain said projection in engagement with one of said pockets.

6. In a wall bed, the combination with a bed frame and a casing; of means for detachably mounting said bed frame in said casing for swinging motion; a weighted back-panel mounted to swing in said casing and detachably journaled on said bed frame; means for locking said back-panel in an elevated position; a pair of head-brackets on said bed frame; a segmental chamber in each bracket, said chamber provided with a seg-

mental rib, a peripheral slot and a pair of pockets in the wall of said slot; a leg slidably mounted for swinging motion on a central stud of said chamber, and provided with a roller adapted to run on said rib in swinging, and a projection adapted to seat in either of said pockets; and a coil spring on said leg and adapted to normally retain said projection in engagement with one of said pockets; and a hinged plate for covering said leg mechanism when folded.

7. In a wall bed, the combination with a bed frame and a casing; of means for detachably mounting said bed frame in said casing for swinging motion; a weighted back-panel mounted to swing in said casing and detachably journaled on said bed frame; means for locking said back-panel in an elevated position, said means comprising a pair of fixed studs of said panel, a pair of levers pivoted in said casing and provided at one end with a receptacle for said studs, a grooved plate fixed in the casing for registration with the opposite end of each lever, and a spring for holding said lever in place; a pair of head-brackets on said bed frame; a segmental chamber in each bracket, said chamber provided with a segmental rib, a peripheral slot and a pair of pockets in the wall of said slot; a leg slidably mounted for swinging motion on a central stud of said chamber, and provided with a roller adapted to run on said rib in swinging, and a projection adapted to seat in either of said pockets; a coil spring on said leg and adapted to normally retain said projection in engagement with one of said pockets; and a hinged plate for covering said leg mechanism when folded.

In testimony whereof, I have hereunto affixed my signature in the presence of two witnesses.

AUGUST C. KRUEGER.

Witnesses:
IRENE MOORE,
C. W. HILLS.