C. R. BALL.

BED.

APPLICATION FILED MAR. 1, 1919.

1,337,580.

Patented Apr. 20, 1920.

2 SHEETS—SHEET 1.

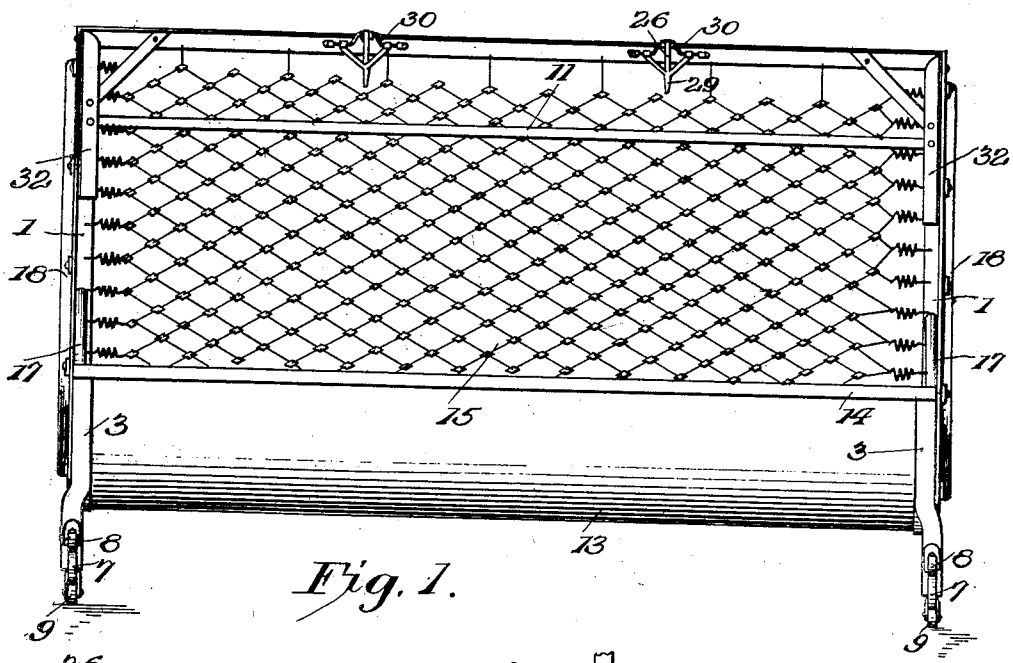



Fig. 1.

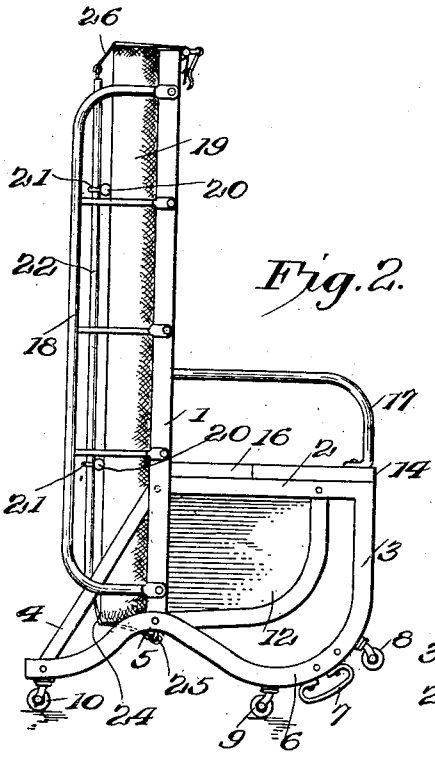



Fig. 2.

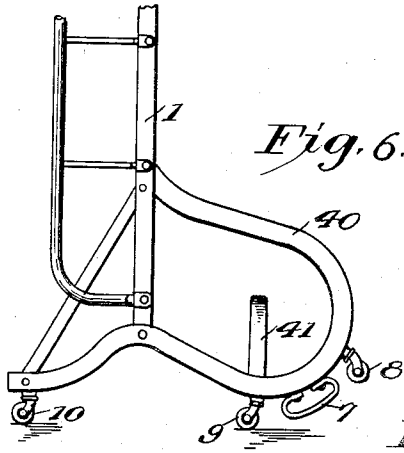



Fig. 6.

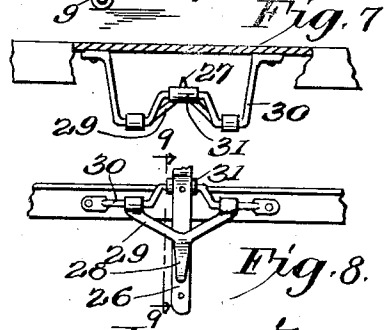



Fig. 7.

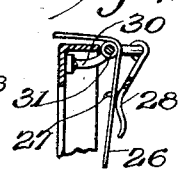



Fig. 9.

Fig. 8.

Inventor:
C. R. Ball.
Attys: Lacey & Lacey.

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2 SHEETS—SHEET 2.

Fig. 4.

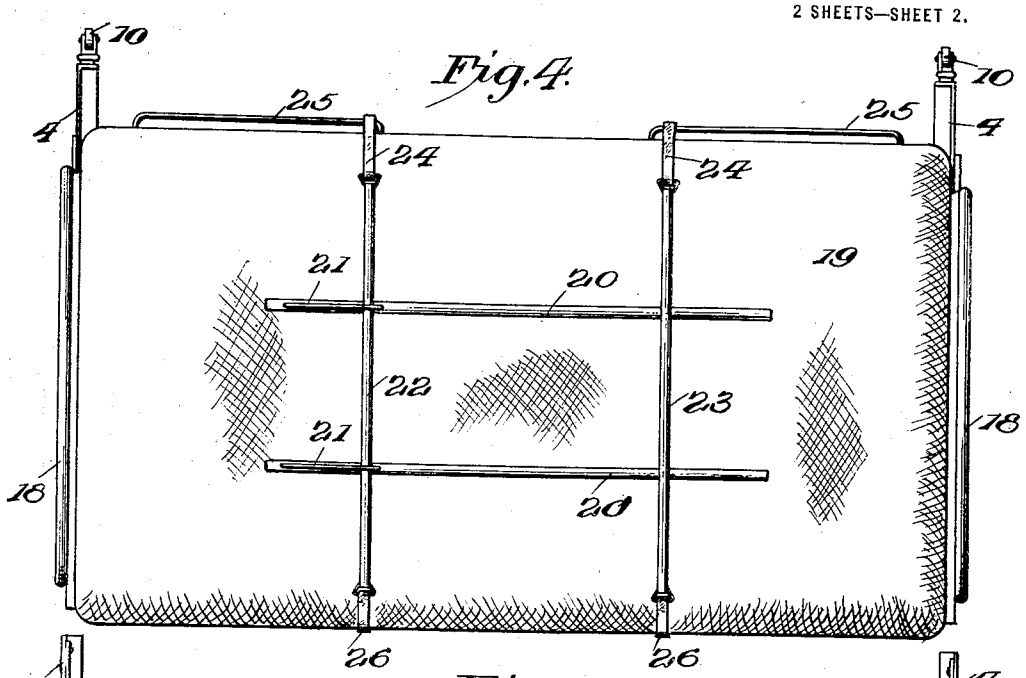



Fig. 5.

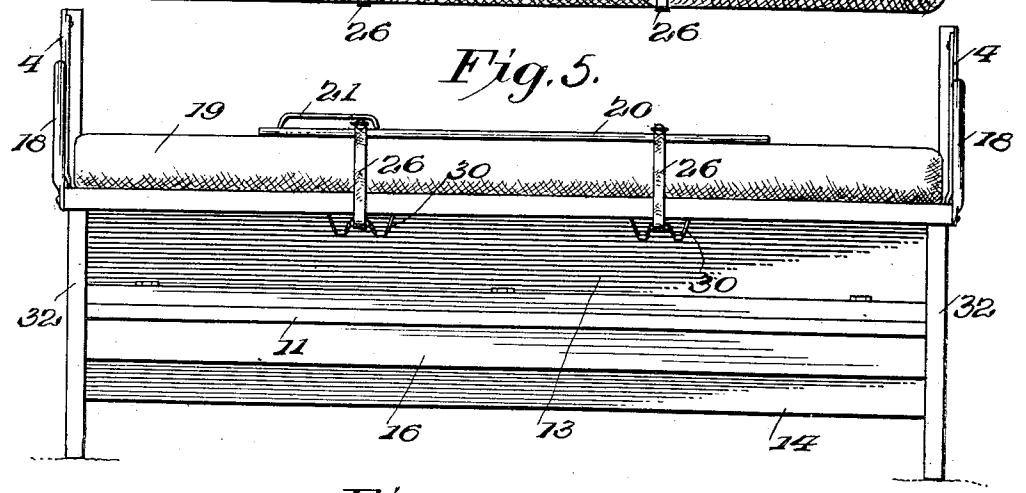
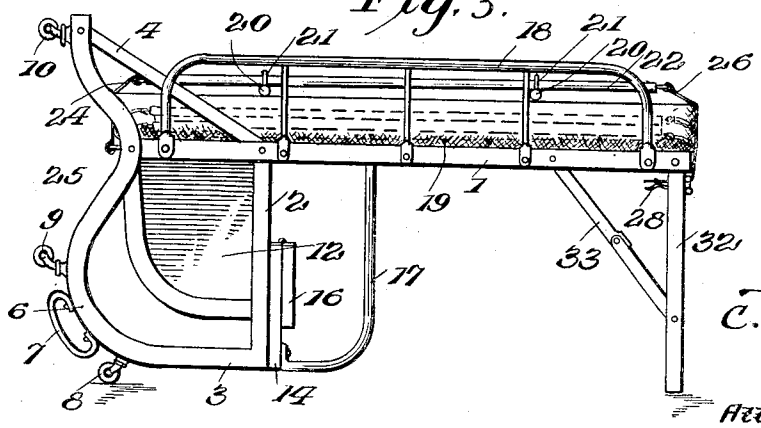



Fig. 3.




Inventor:
C. R. Ball.

Attys: Lacey & Lacey.

# UNITED STATES PATENT OFFICE.

CLARENCE R. BALL, OF WASHINGTON, DISTRICT OF COLUMBIA.

## BED.

1,337,580. Specification of Letters Patent. Patented Apr. 20, 1920.

Application filed March 1, 1919. Serial No. 280,126.

*To all whom it may concern:*

Be it known that I, CLARENCE R. BALL, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Beds, of which the following is a specification.

The object of this invention is to provide a bed which may be readily moved from place to place and through doorways and may be so disposed when not in use as to occupy a minimum amount of floor space. A secondary object of the invention is to provide means whereby the mattress and bed clothing may be held in proper relative position upon the mattress frame or spring bed bottom when the bed is disposed in a vertical position. Other incidental objects of the invention will appear in the course of the following description.

The invention is fully illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a bed constructed in accordance with my present invention;

Fig. 2 is an end elevation of the same showing the bed as it is arranged when not in use;

Fig. 3 is an end elevation showing the bed arranged for use;

Fig. 4 is a plan view of the bed as it appears when ready to be turned or rocked into a vertical position;

Fig. 5 is a front elevation of the bed disposed as shown in Fig. 4;

Fig. 6 is a partial end view of a slightly different embodiment of the invention, and

Figs. 7, 8 and 9 are detail views of a fastening device employed in connection with the means for retaining the bed clothing in position upon the spring, Fig. 7 being a plan view with parts in section, Fig. 8 a front elevation, and Fig. 9 a detail section on the line 9—9 of Fig. 8.

In carrying out my invention, I employ end frames each consisting of a bar 1 which is also the end bar of the mattress frame and to which near one end thereof is secured a bar 2 projecting at a right angle therefrom. An ogee shaped bar 3 extends from the free end of the bar 2 and is secured to the adjacent extremity of the end bar 1, projecting beyond the said bar and having its extremity connected with the said bar by an inclined brace 4. It will be readily noted upon reference to Figs. 2, 3 and 6 of the drawings, that this ogee shaped bar is arched or turned inwardly from its main portion to be secured to the extremity of the end bar 1, as shown at 5, and between the said arched portion 5 and the straight portion 3 which projects from the end of the straight bar 2 is a convex portion 6 upon the lower edge of which is secured a rocker 7. A caster 8 is secured to the ogee bar or frame 3 in advance or above the rocker 7 and a similar caster 9 is secured to said bar or frame in rear of or below the said rocker while a third caster 10 is carried by the bar or frame 3 at the inner or rear extremity of the same, as clearly shown. Plates 12 may be secured to the end frames so as to constitute the ends of a box 13 extending between the frames and capable of use to receive the bed clothing, if so desired, or other articles. The cover 14 of this box may be utilized as a seat when the bed is disposed in an upright position, as shown in Figs. 1 and 2, and in order that the spring bed bottom 15, which may form one side of the box, may yield to the weight of an occupant of the bed without causing discomfort to him the cover 14 is preferably constructed in two sections, the inner section 16 being hinged to the outer section, as shown most clearly in Fig. 3, so that when the bed is disposed for use, as shown in said Fig. 3, the hinged member of the cover may be swung downwardly and thereby provide an open space immediately below the spring bed bottom. To further reinforce the structure and to also add to the sightliness of the same, arm rests 17 are secured to the cover 14 at the outer corners of the same and to the end bars 1 of the mattress frame, as clearly shown.

The spring bottom 15 may be of any well-known or desired construction and the end frames 18 of the bed may also be of any approved design. The mattress and bed clothing, indicated at 19, are placed upon the spring in the usual manner and to support the bed clothing and the mattress when the bed is disposed in a vertical position, I employ retaining devices consisting of light but rigid bars or rods 20 which are adapted to be placed upon the bed covering longitudinally of the same and are each provided near one end with loops 21 through which

a presser rod or holding bar 22 is inserted. A second presser rod or holding bar 23 is placed over the bars or rods 20 near the opposite ends thereof and both presser rods or bars carry at their rear ends the straps or flexible loops 24 which extend over the rear edge of the bed clothing and are engaged slidably on long loops or bails 25 disposed longitudinally on the rear side of the bed spring frame. It will be readily understood that by slipping the straps 24 to the outer ends of the bails 25 they may be slipped down around the corners of the bed clothing and the rods 22 and 23 respectively connected therewith may be then disposed between the ends of the bed clothing and the end frames of the bed so that they will be out of the way while the bed is in use. The rods 20 being connected to the rod 22 by the bails 21 will, of course, follow the movement of said rod or bar 22 and the bails or loops 21 should be long enough to permit the said bars or rods 20 to be swung relative to the presser bar 22 so that all three bars may be disposed below the surface of the bed clothing and the mattress, and between the end of the mattress and the frame of the bed. This housed position of the parts is indicated in dotted lines in Fig. 3. To the front end of each bar or rod 22 or 23, I secure a retaining strap 26 which passes over the front edge of the mattress and is engaged by a tooth or hook 27 on the inner side of a lever 28 which is forked at one end, as shown at 29, to be fulcrumed upon a W-shaped bracket 30 secured to the front bar of the spring frame. The strap 26 passes over the central arched portion of the W-shaped bracket, which may be equipped with a roller 31 to reduce friction, and will, therefore, be disposed between the said bracket and the fastening lever so that when the lever is swung downward to the position shown in Fig. 9 the strap will be placed under tension and will, therefore, hold the rod or bar 22 or 23 close to the bed clothing. When the bed is tilted to an upright position, as shown in Fig. 2, the harness consisting of the members 22 and 23 and the attached straps will prevent collapse of the clothing and the mattress so that it will not be necessary to rearrange the same when the bed is lowered for use.

To the front side bar of the bed spring frame or to the end bars at the corners of the frame, I pivot the legs 32 whereby to support the outer portion of the bed when it is lowered for use and any form of brace such as the well-known folding brace, shown at 33, may be provided to prevent collapse of said legs when the device is in use. A brace 11 disposed longitudinally of the bed may be secured to and extend between the legs.

The box or seat 13 may be of any desired or preferred construction and it may be omitted entirely without involving any departure from the principles of my invention. In Fig. 6, I have illustrated a form of the invention in which the box is omitted, it being noted that the end frame is carried from the rocker portion directly to the end bar of the bed frame in a curved line, as shown at 40, and to prevent spreading of the end frames, a brace 41 is secured to and extended between the same.

When my device is in use it will be supported by the casters 8 and the legs 32. When it is desired to raise the bed out of the way or to move it through a doorway, the mattress and bed clothing are secured against dropping or collapse by the use of the rods 22 and 23 and the parts coöperating therewith as above described, after which the braces 33 are folded so as to permit the legs 32 to fold in against the bed spring frame. The outer side of the bed is then raised so that the casters 8 will serve as pivots to permit the transition from a horizontal position toward a vertical position to be easily accomplished. The end frames or that portion of the same in rear of the casters 8 will obviously swing downwardly and if the weight of the bed was transferred from the casters 8 directly to the casters 9, the latter would be apt to be broken and, moreover, the bed would tend to slip or roll prematurely and might fall and injure the operator. To avoid such results, I provide the rockers 7 which receive the weight of the bed as the same is taken from the casters 8 and upon which the bed will rock to a vertical position without any tendency to roll so that the weight will be gradually transferred to the casters 9 and 10 and the strain upon the operator will be relieved. After the bed is brought to an upright position the weight will be carried by the casters 9 and 10, as shown in Fig. 2, and the bed may be then moved close to a wall or through a doorway and will occupy very little floor space. Any form of drapery may be disposed over the bed spring so as to cover the same and give the article an attractive appearance as a seat. When the bed is to be used, the rockers 7 will serve to effect a gradual transference of the weight from the casters 9 to the casters 8 and the front legs 32 which may be permitted to unfold or swing to operative position as the bed is lowered. To release the mattress retaining harness, it is necessary merely to swing the locking levers 28 upwardly and forwardly so that the tension of the straps 26 will be released and said straps may be quickly disengaged from the levers.

Having thus described the invention, what is claimed as new is:

1. A bed including a bed bottom, end

frames each comprising an ogee shaped bar secured at one end to an end bar of the bed bottom and extending therefrom in a plane at a right angle to the plane of the bed bottom and then returning to the bed bottom and secured to the adjacent extremity of the end bar of the same and extending beyond said extremity, a brace connecting the free extremity of said ogee shaped bar to the bed bottom, a caster at the free extremity of said ogee shaped bar, a caster carried by said bar to coöperate with the first-named caster in supporting the bed in a raised position, said casters being disposed at opposite sides of the plane of the bed bottom, another caster carried by the ogee shaped bar to aid in supporting the bed in lowered position, and a foldable support at the free side of the bed to coöperate with the last-named caster.

2. A bed provided with fixed end rocker supports at one side, a box secured rigidly to and extending between the end rocker supports, the bed bottom forming one side of the box, and a cover for said box consisting of hingedly connected sections, the front section being fixed on the box and the rear section being free of the box whereby to rest on the box and form a seat when the bed is not in use or depend in advance of the front section when the bed is in use to permit the bed bottom to yield to a sleeper.

In testimony whereof I affix my signature.

CLARENCE R. BALL. [L. S.]