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Patented July 30, 1901.

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BEDSTEAD.

(No Model.)

(Application filed May 29, 1900.)

2 Sheets—Sheet 1.

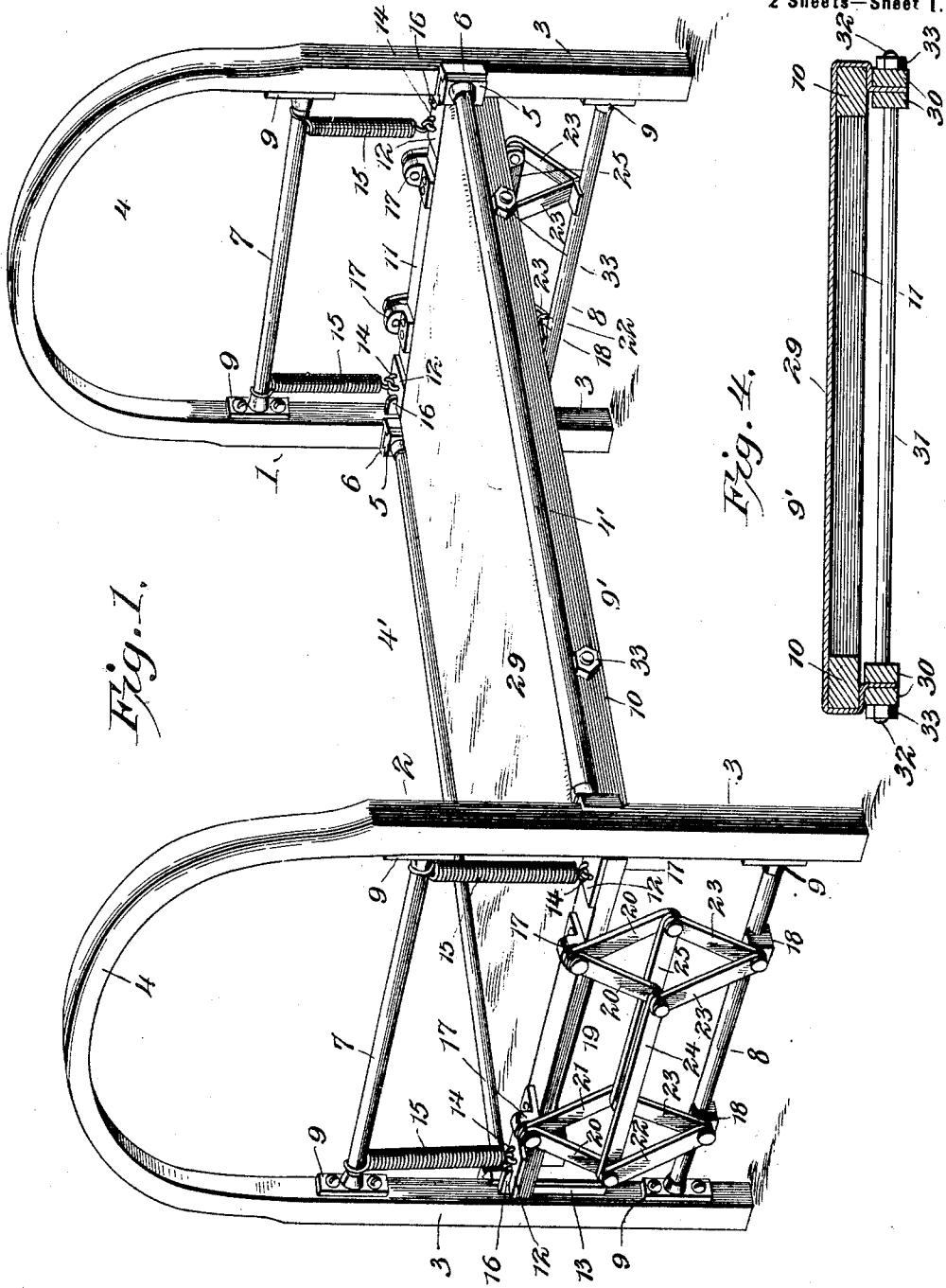


Fig. 1.

Fig. 4.

Witnesses

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BEDSTEAD.

SPECIFICATION forming part of Letters Patent No. 679,643, dated July 30, 1901.

Application filed May 29, 1900. Serial No. 18,423. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH B. SPENCER, residing at Cordele, in the county of Dooly, and ALEXANDER A. CAMERON, residing at
5 McRae, in the county of Telfair, State of Georgia, citizens of the United States, have invented a new and useful Bedstead, of which the following is a specification.

This invention relates to bedsteads, the objects in view being to provide a bedstead that is strong, durable, and rigid; that may be readily set up or taken to pieces and compactly arranged for shipment, storage, &c., and which will be vermin-proof, as there are
15 no crevices in which the vermin may hide or conceal; to provide for the suspension of the bed-bottom within the frame, whereby ease and comfort will result, and to employ equalizers for the movement of the bottom and to
20 overcome the unreliable tendencies of the suspending-springs, and, furthermore, to conveniently arrange the general structure of the bedstead and including opposite head and foot arches to serve as supports for nets
25 or inclosing canopies and dispense with the necessity of using a frame independent of the bedstead for this purpose.

With these and other objects in view the invention consists in certain features of construction and arrangement hereinafter more fully described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a bedstead embodying the features of the invention. Fig. 2 is an
35 end elevation of the bedstead, showing the bottom thereof in depressed condition and the change of position of the equalizer used in connection with each end of said bed-bottom. Fig. 3 is a bottom plan view of the bed-
40 bottom of the improved bedstead. Fig. 4 is a transverse vertical section of the bed-bottom.

Similar numerals of reference are employed to indicate corresponding parts in the several
45 views.

The numerals 1 and 2 designate opposite or alined head and foot frames, respectively, and of inverted-U shape, each frame consisting of posts 3, connected by an arch 4, the
50 arches of both frames being of an equal height. The frames 1 and 2 are separably

connected by longitudinally-extending side rods or bars 4', which in the present instance are round and tubular to lighten the same, and at the opposite extremities of each side
55 rod or bar are dovetailed seat-blocks 5, removably fitted in corresponding sockets 6, secured on the inner opposing faces of the opposite pairs of posts 3, the recessed portions of the sockets being reduced toward
60 their lower extremities and the portion of each seat-block 5 to fit therein being correspondingly shaped to prevent the said seat-blocks from moving downwardly beyond a
65 predetermined distance and to always hold the side bars or rods 4' at a fixed elevation when applied. The said side rods or bars 4' are removable by lifting the same in a vertical direction to disengage the seat-blocks 5 from the
70 sockets 6, and when these parts are connected a snug fitting is produced to avoid the formation of crevices and prevent vermin from securing a lodgment. Each of the frames 1 and 2 is supplied with a pair of parallel transversely-extending bars or suspending-rods 7
75 and 8, having their opposite extremities fixed by bracket-plates 9 to the inner opposing sides of the pairs of posts 3, the rods 7 being uppermost and at a distance from the lower rods 8 sufficient to accommodate mounting the bed-
80 bottom and operating mechanism in connection therewith properly within the limits of the bedstead and to derive the most efficient operation.

The bed-bottom 9' comprises side rails 10, 85 to which end rails 11 are firmly secured, and have staple-plates 12, fastened on the upper portion of the opposite ends of each, in which longitudinally-directed end slots are formed, as shown by dotted lines in Fig. 2, and also
90 in the extremities of the said end rails beneath to fit over guide-ribs 13 of a suitable length and secured to the inner opposing sides of each pair of posts 3. The construction of each end rail 11 of the bed-bottom 9' is similar
95 to the particulars just explained, and the staple-plates 12 each have an upstanding staple 14 for the reception of the lower terminal of a suspending-spring 15, the latter being arranged in pairs in each of the frames 1 and 2
100 and depending from the suspending-rods 7. The springs 15 will be of equal retractile ten-

sion, so as to hold the bed-bottom 9' in a true horizontal plane, and to prevent said bottom from riding or elevating above a predetermined point the guide-ribs 13 are formed with inwardly-projecting stop-heads 16, which contact with the upper adjacent surfaces of the staple-plates 12. The end rails 11 inside of the staple-plates 12 also have fulcrum-bearings 17 secured thereto, and in vertical alignment therewith are fulcrum-blocks 18 on the rods 8 below, and to the said fulcrum-bearings and fulcrum-blocks at each end of the bedstead an equalizer 19 is movably applied, both equalizers being similar in construction and operating to prevent a too-rapid descent or downward movement of the bed-bottom when a weight is brought to bear thereon, and also materially assist in causing the springs 15 to work with regularity and prevent them from becoming strained by sudden shocks to the tension thereof. The equalizers also prevent a too-sudden rise of the bed-bottom after depression and when relieved of a weight that may have been brought to bear thereon, and also to generally ease the movement of the bed-bottom and have opposite portions of both extremities rise and fall equally without any tendency toward binding or jamming.

Each of the equalizers consists of upper pairs of levers 20 and 21, having the upper extremities of each overlapped and movably attached to the fulcrum-bearings 17, and also comprises a lower pair of levers 22 and 23 in reversed position to each pair above and with their lower extremities overlapped and movably connected to the fulcrum-blocks 18. The lower ends of the levers 20 and 21 and the upper ends of the levers 22 and 23 are normally diverged a certain distance and movably attached to connecting-bars 24 and 25, the bars 25 connecting the two innermost levers of each set of levers on opposite sides, and the bar 24 unites or couples the outermost levers, and thereby produce what may be termed a "compound lazy-tong." When the ends of the bed-bottom are depressed, the inner ends of the levers 20 and 21 and 22 and 23 are diverged a greater distance, as shown by Fig. 2, and the connecting-bars 24 and 25 move outwardly in opposite directions in perfectly straight lines toward the opposite posts 3 of each of the frames 1 and 2, and when the bed-bottom rises the parts of each equalizer move in an opposite direction.

It will be seen that the bed-bottom is confined wholly within the frames 1 and 2 and the side bars 4' and all the parts are close within the plane of the outer portions of the frames 1 and 2, or nearly so, and thereby material projection is avoided to accommodate an easy disposal over the arches 4, posts 3, and the mechanism set forth of a net-canopy to protect the occupants of the bedstead from flies or other insects.

All the parts of the bed-bottom and the connections therefor are fully exposed, and

there are no crevices or cracks in which vermin can become concealed, and the many openings and hiding-places afforded by the usual spring bed-bottoms are entirely overcome and dispensed with and the desirable action of a spring bed-bottom is still preserved through the medium of the suspending-springs 15. It is also proposed to dispense with the use of a mattress, though such device can be used, if desired, and to replace a mattress an adjustable covering 29 for the bed-bottom is used and has its opposite extremities at the sides held between clamp-rails 30, arranged in pairs and connected by adjusting screw-rods or elongated bolt-rods 31 with opposite screw-threaded extremities 32 to receive nuts 33, bearing against the outer rail 30 of each pair of rails, and it will be seen by tightening the said nuts 33 or screwing the same inwardly over the rods 31 that the cover or covering 29 will be drawn taut over the side rails 10 of the bed-bottom and held in such adjusted position, or the said cover or covering may be slackened as much as desired. The covering 29 is removably secured at its opposite side edges to the outer faces of the inner rails 30, and by pushing the outer rails 30 against the side edges of the covering and the inner rails by adjusting the nuts 33 the covering edges are prevented from pulling loose and the entire covering adjusted as may be desired. This part of the bed-bottom structure affords means for keeping the bed in a cleanly condition, as the cover or covering 29 can be removed at any time and washed or be easily replaced by another when rendered unfit for further use by wear. Other advantages will appear from time to time for those using the device, and in view of the convenience in separating the parts thereof and the ease with which they can be assembled, as well as the means afforded for supporting canopies or other coverings in addition to the general features of construction for producing ease and comfort, will make the improved bedstead of efficient service in hospitals or like institutions and in large camps or on ship-board, as well as in private homes or for domestic use.

Changes in the form, proportions, dimensions, and minor details may be resorted to without departing from the principle of the invention.

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

1. In a bedstead, the combination with inverted-U-shaped frames at opposite ends, a bed-bottom freely movable and suspended at opposite extremities in the said frames and provided with end rails having terminal slots, springs connected to and operating to draw said bottom upwardly to normal position, and vertically-disposed guides on the inner sides of the opposite portions of the said frames to engage the slots in the rails of the bottom and having upper inturned heads to contact with

the upper portions of the end rails of the bottom to limit the vertical movement of the latter.

2. In a bedstead, the combination with opposite end frames, of a bed-bottom adapted to be suspended therein and having side and end rails, a covering therefor loosely applied over the side rails and the opposite side edges extended under the latter, clamping-rails disposed under the side rails and free to be adjusted, the said rails being in pairs at each side and having the side edge portions of the covering held vertically between the same and attached to the outer sides of the inner rails of each pair, the outer rails being closely disposed against the inner rails, said rails having wide sides arranged adjacent to each other and the upper and lower edges in the

same horizontal planes, rods extending transversely through both extremities of each rail of the pairs of clamping-rails on each side and the edges of the covering, said rods being horizontally disposed, and having screw-threaded terminals outside of the outer rail of each pair, the pairs of rails being transversely shiftable on the rods, and clamping-nuts adjustably fitted on the terminals of said rods.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JOSEPH B. SPENCER.

ALEXANDER A. CAMERON.

Witnesses:

W. S. MCDUFFIE,

J. W. CAMERON.