Aug. 22, 1950 J. ALEXANDER 2,519,729

ADJUSTABLE BED SPRING AND MATTRESS

Filed Nov. 19, 1945 2 Sheets-Sheet 1

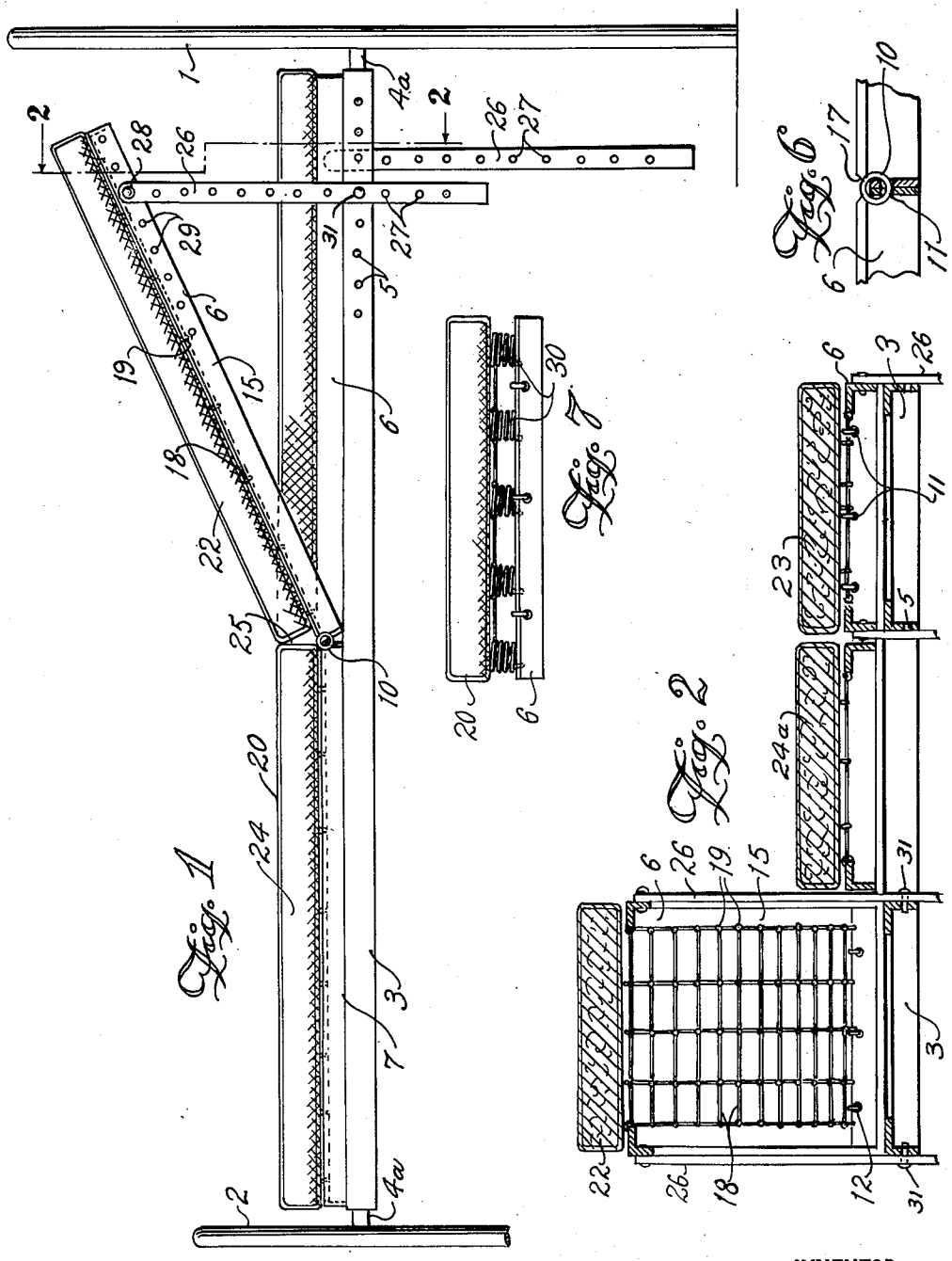


Fig. 1

Fig. 6

Fig. 7

Fig. 2

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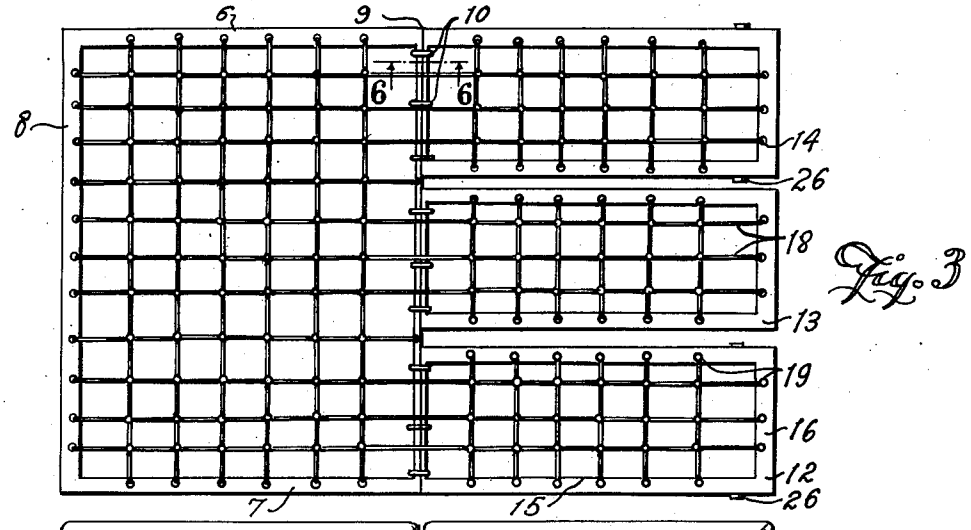


Fig. 3

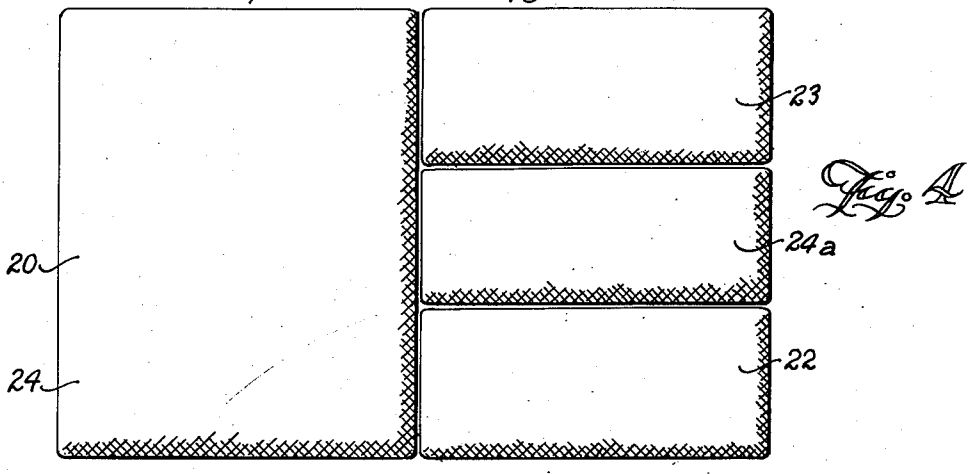


Fig. 4

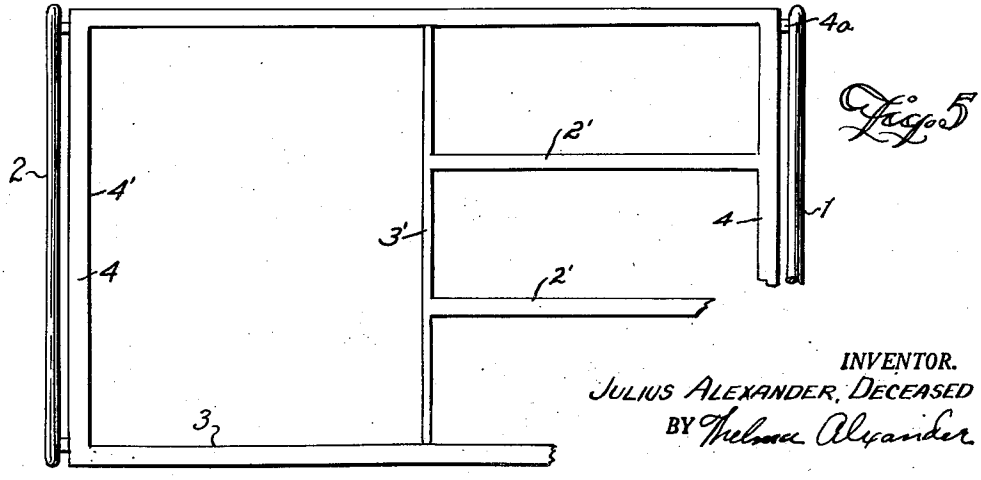


Fig. 5

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UNITED STATES PATENT OFFICE

2,519,729

ADJUSTABLE BED SPRING AND MATTRESS

Julius Alexander, deceased, late of Dallas, Tex., by Thelma Alexander, administratrix, Dallas, Tex.

Application November 19, 1945, Serial No. 629,619

1 Claim. (Cl. 5—68)

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This invention relates to new and useful improvements in hospital beds.

One object of the invention is to provide an improved hospital bed which will be simple and relatively inexpensive to construct, as well as, one having a minimum number of movable parts and which will be easy and simple to manipulate.

A further object of the invention is to provide an improved hospital bed wherein an ordinary metal bedstead may be used.

Another object of the invention is to provide an improved reversible bed spring and sectional mattresses therefor which render said spring readily adaptable to a standard bed.

Still another object of the invention is to provide an improved bed spring including a main or body section and a plurality of auxiliary arm or leg sections hinged to the body section, each of which sections is a complete unit, distinct and separate from the side rails of the bedstead, whereby the bedstead remains rigid, stable and intact, when one or more of the auxiliary arm or leg sections, as the case may be, are elevated.

A construction designed to carry out the invention will be hereinafter described together with other features of the invention.

The invention will be more readily understood from a reading of the following specification and by reference to the accompanying drawings, wherein an example of the invention is shown, and wherein:

Fig. 1 is a side elevation of a bed constructed in accordance with the invention, one of the auxiliary sections being elevated.

Fig. 2 is a transverse, sectional view taken on the line 2—2 of Fig. 1,

Fig. 3 is a plan view of the bed spring,

Fig. 4 is a plan view of the mattresses,

Fig. 5 is a plan view of the bedstead, the spring and mattresses being omitted,

Fig. 6 is a sectional view of one of the spring section joints, and

Fig. 7 is an end view of a modified form of the invention having coil springs.

In the drawings, the numeral 1 designates the head and 2, the foot of a standard metal bedstead which has the usual side rails 3, detachably connected thereto in any suitable manner, as at 4a. In constructing the bedstead, end cross bars 4, angular in cross-section, are welded or otherwise secured to the side rails to form a rectangular frame 4' (Fig. 5). The top flanges of the frame are directed inwardly and the side rails are connected centrally by a cross bar 3' from which spaced longitudinal bars 2' extend to foot bar

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4. The upper surfaces of the rails and bars lie flush. The bars 2' and 3' form parts of the frame.

The frame, head and foot are rigidly secured together and form a stable bedstead. An ordinary bed spring (not shown) may be used on the frame and a single mattress (not shown) could be used. There are no levers, ratchets or gears and the structure is simple and compact.

In accordance with the invention, a sectional bed spring, indicated generally by the numeral 6, is mounted on the frame 4'. This spring includes a main or body, frame or section 7 and three auxiliary sections 12, 13 and 14, respectively. These frames or sections are substantially rectangular and are formed of bars angular in cross-section so as to rest on the side rails 3, end bars 4, cross bar 3' and longitudinal bars 2'.

The inner cross bar 9 of the body section 7 rests on a portion of the cross bar 3' and has spaced rings 10. The inner ends of the auxiliary sections 12, 13 and 14 also rest on the bar 3'. These rings engage apertures 11 in the adjacent ends of the auxiliary sections, whereby the latter are freely hinged to the body section and each auxiliary section may freely swing upwardly. The end rail 8 of the body section rests on the end bar 4, adjacent the head 2. The rings of the center leg section 13 may be omitted and this section fastened to the body section, if desired. The spring frames are provided with the usual cross-wire structures, indicated by the numerals 18 and 19.

A sectional mattress, indicated generally by the numeral 20, is employed and includes a body mattress 24 resting on the body section 7 and three smaller mattresses 22, 24a and 23, respectively, resting on the auxiliary sections 12, 13 and 14, respectively. The mattresses abut or are slightly spaced from each other. It is obvious that any one of the auxiliary sections of the bed spring may be readily swung upwardly, thus elevating its mattress.

The auxiliary sections are spaced so that props or arms 26 may be used to support the sections in elevated positions. The arms are omitted from the central leg section 13. The side members 15 of the auxiliary sections 12 and 14 have spaced apertures 29 extending in rows from their free ends; while the side rails 3 and bars 2' have similar spaced apertures 5. Each arm carries a headed stud 28 at its upper end which may be interchangeably engaged in the apertures 29. The arms are each provided with spaced holes 27 for receiving a fastening pin or

support means 31 which may be inserted in one of the apertures 5.

When it is desired to elevate either or both of the auxiliary sections 12 and 14, the operator grasps the cross foot member 16 and swings the section upwardly, the studs 28 having been inserted in selected holes 29. The arms 26 will swing to vertical positions and the pins 31 may be inserted in the particular apertures 5 to give the desired inclination to the smaller mattresses 22 or 23. By reason of the various apertures and holes, a large number of angles of inclination are available.

To aid in swinging the auxiliary sections, the inner ends of said sections and the inner cross member 9 of the frame section 7 are bevelled, as shown at 17 in Fig. 6. The mattresses 24, 22, 24a and 23 may be of the inner spring or ordinary type or coil springs 30 on the spring frame 6 and may be employed, as shown in Fig. 7.

Simplicity and ready and easy operation are the dominating features of the invention. By removing the arms 26 a bedstead is had on which an ordinary single mattress may be used, with either the spring 6 or a standard one-piece bed spring.

The foregoing description of the invention is explanatory thereof and various changes in the size, shape and materials, as well as in the details of the illustrated construction may be made, within the scope of the appended claim, without departing from the spirit of the invention.

What is claimed is:

In a hospital bed, a bedstead, an adjustable bed spring therefor, comprising a substantially rectangular frame section adapted to cover one-half of the body supporting area of said bedstead at one end, a series of three auxiliary frame sections hingedly connected in relative parallelism to one edge of said rectangular frame section and adapted to cover the remaining half of the body supporting area of said bedstead, an arm pivotally attached to each side of the outermost of said auxiliary frame sections adjacent the free ends thereof, each arm having longitudinally spaced apertures therein, a mattress individual to each of said frame sections, and means selectively receivable in the apertures of said arms for attaching said arms to said bedstead to hold selective auxiliary frame sections in angular adjusted positions.

THELMA ALEXANDER,
Administratrix of Estate of Julius Alexander, Deceased.

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