J. A. BARKER.

INCLINED BED.

APPLICATION FILED JAN. 18, 1908.

907,950.

Patented Dec. 29, 1908.

2 SHEETS—SHEET 1.

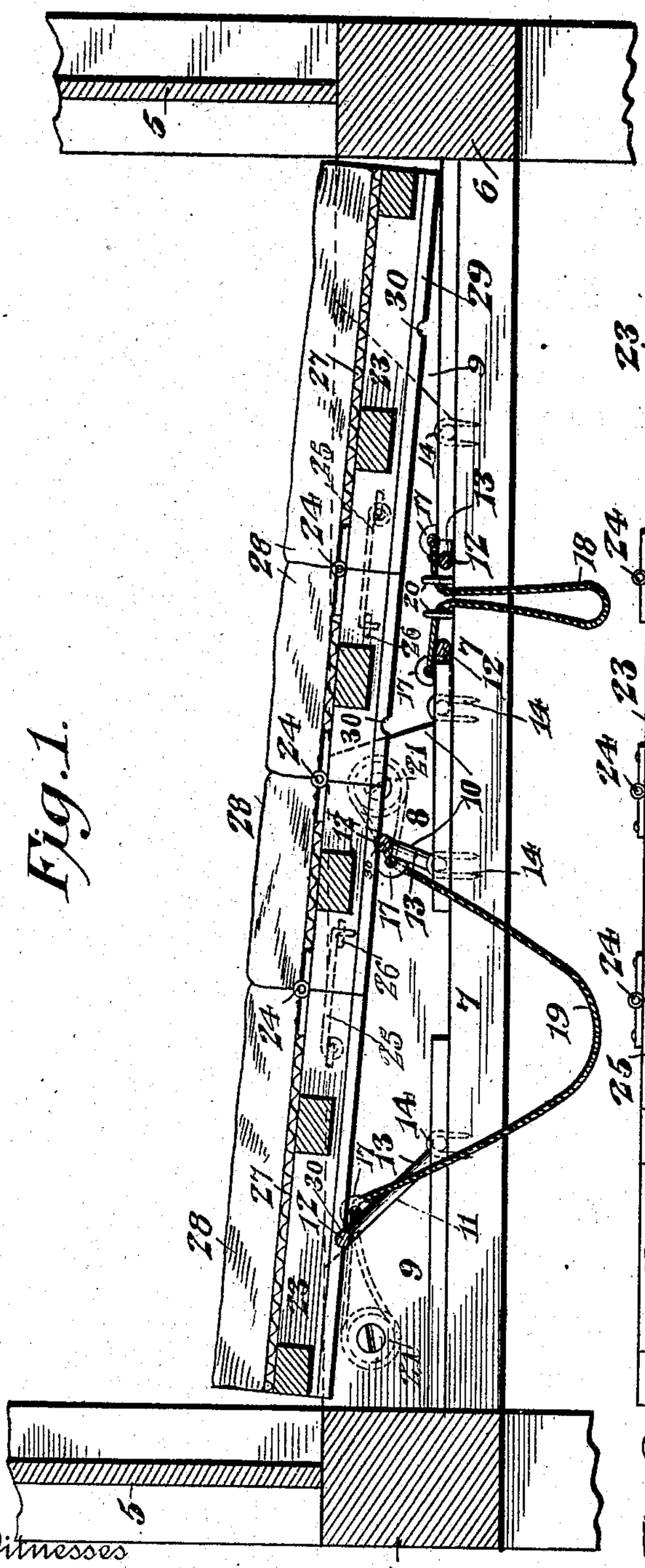

Fig. 1.

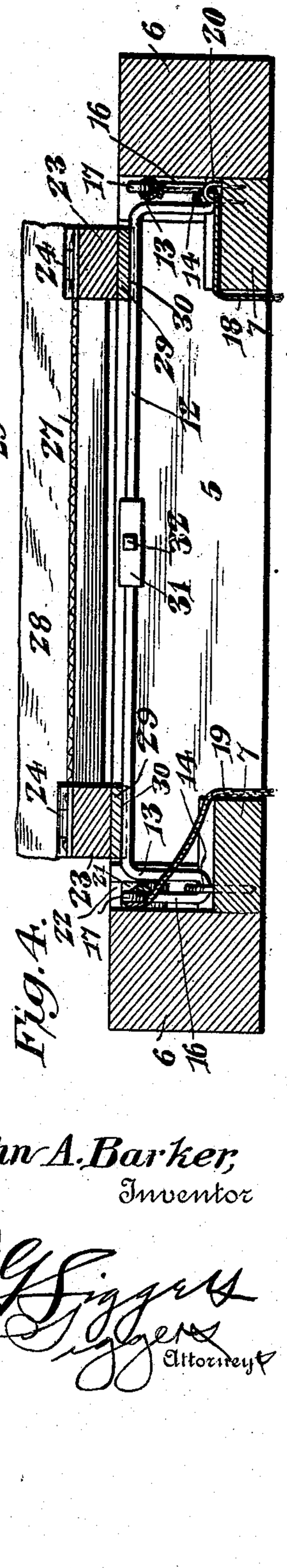

Fig. 4.

Witnesses

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Fig. 3.

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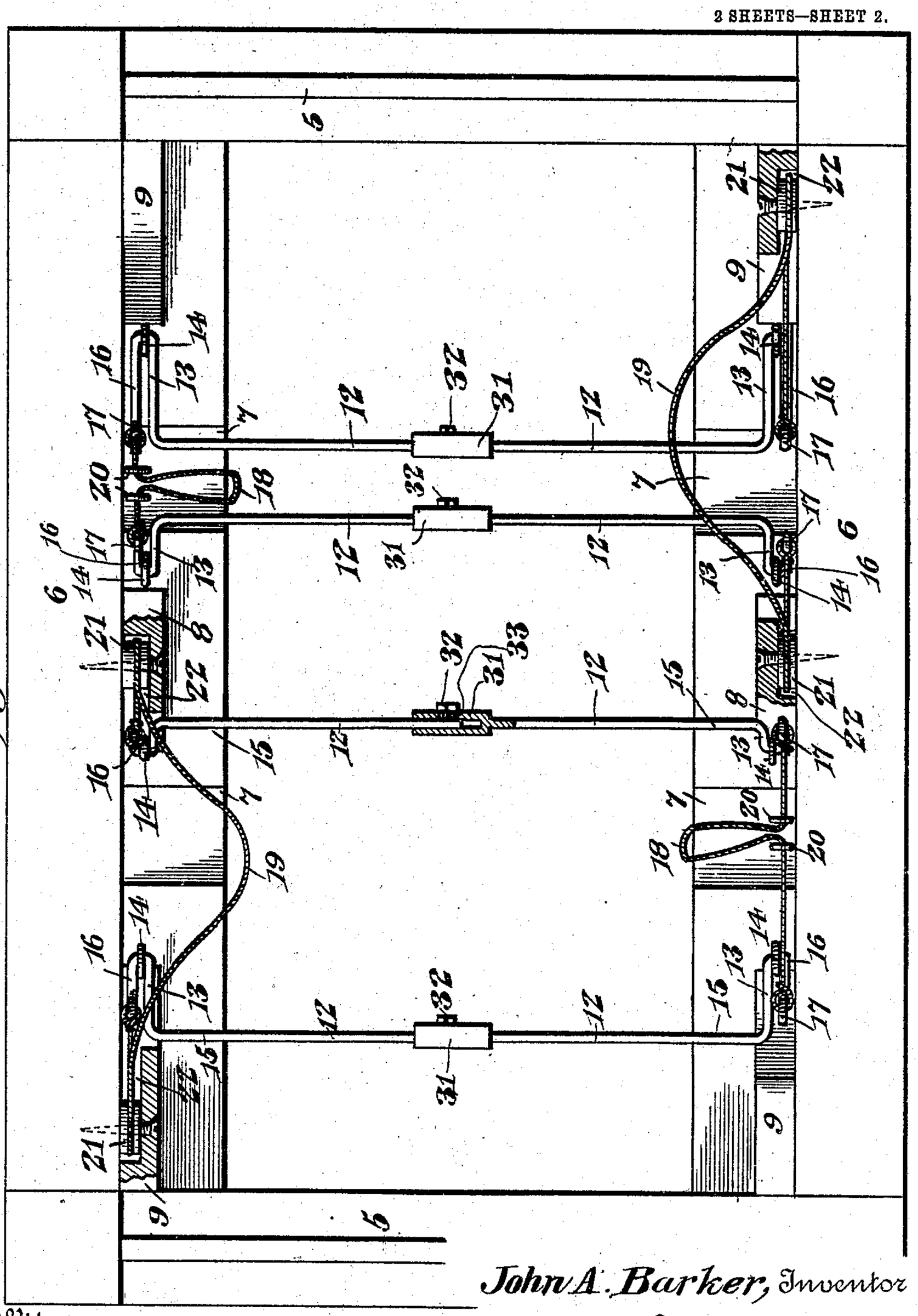
2 SHEETS—SHEET 2.

Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

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INCLINED BED.

No. 907,950. Specification of Letters Patent. Patented Dec. 29, 1908.

Application filed January 18, 1908. Serial No. 411,536.

To all whom it may concern:

Be it known that I, JOHN A. BARKER, a citizen of the United States, residing at Laurel Hill, in the county of Augusta and State of Virginia, have invented certain new and useful Improvements in Inclined Beds, of which the following is a specification.

The principal object of the present invention is to provide novel, simple and effective means, whereby the mattress and springs can be located in different positions with respect to the horizontal in order to provide comfortable positions for sleepers, invalids and injured persons.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a longitudinal sectional view through the bedstead showing the springs and mattress supported in one position. Fig. 2 is a plan view of the bedstead, with the spring, mattress and supporting frame removed, portions moreover being illustrated in section. Fig. 3 is a side elevation of the bedstead supporting frame. Fig. 4 is a cross sectional view through the structure.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

In the embodiment illustrated, the bed, which may be of any desired configuration and of any suitable material, namely wood or metal, is provided with a suitable head and a foot, designated 5. These members are connected by the usual side rails 6. Said rails have inwardly extending ribs or flanges 7 along their lower margins. Upstanding projections 8 and 9 are mounted on the flanges, and are preferably in the form of blocks. The central block or projection 8 has its opposite edges 10 convergently disposed, while the end blocks or projections 9 have their inner edges disposed at opposite inclinations, as illustrated at 11. These edges constitute stop shoulders, as hereinafter described. Supports are employed, in the form of yokes 12, which bridge the space between the side rails, and have offset end portions 13 journaled, as shown at 14 on the inwardly extending flanges or ribs 7. As illustrated more particularly in Fig. 1, the supports are of different widths those at the ends of the bed being wider than those at the center. These various supports are capable of swinging between horizontal positions, in which case they rest on the flanges 7, and elevated positions, wherein they rest against the inclined edges 10 and 11, forming stop shoulders.

The means for operating the supports are preferably, as follows. They are formed with terminal outstanding or offset arms 16 having eyes 17 at their free ends. Cables 18 and 19 are fastened in the eyes. In the embodiment shown, the cable 18 at one end of each set passes through suitable guides that are in the form of eyes 20 though any suitable devices may be employed. The cable 19 at the opposite end extends around pulleys 21 located in sockets 22 formed in the projections. With this arrangement, it will be evident that if one of the cables, as 19, is drawn, the supports connected thereto, will be swung upwardly, and if the opposite cable 18 is drawn, said supports will be swung from their elevated to their depressed positions. Moreover when elevated, they are located at an inclination, and rest against the inclined shoulders so that a superposed weight thereon will maintain them against the shoulders and consequently in elevated position. It will of course be understood that these cables may be readily duplicated, so that the supports can be raised or lowered from either or both sides of the bed. It will also be seen that by drawing upon one end or the other of the cable, the supports can be raised or lowered independently one of the other, and that by pulling on the cable as a whole, the supports can be simultaneously turned upward or downward so as to raise or lower the bed. Thus an independent movement is secured for each separate section of the bed as well as a simultaneous movement for any two sections, which is often times extremely desirable where beds have to be adjusted with the patient thereon, and where it is necessary that certain two sections of the mattress shall not be dislocated in raising.

Associated with the structure above described is a bed bottom supporting frame comprising in the present embodiment, sections 23 hinged together, as shown at 24, each of the sections coöperating with one of the supports. Hooks 25, pivoted on certain of the sections, detachably engage in eyes 26 carried by the other sections, so that when these hooks are engaged in the eyes, the sections will be maintained in alinement, as illustrated in Fig. 1. A suitable spring 27, formed in sections, is carried by the

frame, and a mattress 28 comprising a series of sections corresponding in width to the sections of the frame, is mounted on the springs. In practice, the longitudinal side bars of the frame are preferably provided with metal shoes 29 having sockets 30 to receive the cross bars of the supports. While said cross bars may each be of one piece, they are preferably composed of sections, as shown in Fig. 2. One of the sections has a terminal sleeve 31, in which the end of the other section slidably engages. A suitable set screw 32 passing through a slot 33 in the sleeve, serves to hold the parts against relative movement, and yet permits their adjustment, as will be evident.

The operation of the structure may be briefly outlined as follows. If it is desired that the mattress shall be horizontal, the various supports are located in their depressed positions. I have found it, however, exceedingly comfortable to have the mattress disposed at an inclination with the end at the head of the bed elevated. In the present structure, this can be readily accomplished by raising the head end of the frame by hand and moving the two supports, as illustrated in Fig. 1 to elevated positions. The sections of the frame being secured, as shown, it will be evident that the spring and mattress will be disposed at such inclination. If a bed is to be adjusted between horizontal and inclined positions only, the frame may be made rigid and not of hinged sections. It will, however, be evident that with the present construction, a variety of positions can be obtained. For instance, the foot portion of the mattress can be left stationary and the head portion elevated to different positions. The foot portion can also be elevated if desired, and by varying the arrangement comfortable positions can be secured for patients and injured persons. In certain of these positions, an additional section of mattress is employed.

From the foregoing it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus fully described my invention what I claim as new, and desire to secure by Letters Patent, is:—

1. In a bed, the combination with a bedstead, of a bed bottom supporting frame comprising hingedly connected sections, and separate devices interposed between the bedstead and the different sections for supporting the latter in angular relation and also for supporting said sections in alinement and the entire frame in flat condition and at an inclination to the bedstead, said devices directly engaging the bedstead and the frame sections.

2. In a bed, the combination with a bedstead, of a bed bottom supporting frame comprising hingedly connected sections, separate devices interposed between the bedstead and the different sections for supporting the latter in angular relation and also for supporting said sections in alinement and the entire frame in flat condition and at an inclination to the bedstead, said devices directly engaging the bedstead and the frame sections, and means detachably connecting the different sections to maintain them in alinement when disposed at said inclination.

3. In a bed, the combination with a bedstead, of a supporting device pivotally mounted on the bedstead and having a swinging movement thereon to elevated and depressed positions on opposite sides of a vertical plane, a stop carried by the bedstead and located in the path of movement of the device on the side of such vertical plane opposite to that in which the device is located when in depressed position, said stop supporting the device in elevated position and at an inclination to the perpendicular, means for swinging the supporting device from its depressed position against the stop, and a bottom member that detachably engages the supporting device.

4. In a bed, the combination with a bedstead having an inclined shoulder, of a supporting device including a cross bar having a side arm that is pivotally mounted on the bedstead and movable to elevated and depressed positions on opposite sides of a vertical plane passing through the pivot axis of the device, said arm when elevated being located at an inclination and resting longitudinally against the inclined shoulder, means for operating the supporting device, and a bottom member that rests on the supporting device when the latter is elevated.

5. In a bed, the combination with a bedstead having spaced side rails, of upstanding projections on the inner sides of the side rails having convergently disposed opposite edges, oppositely swinging supports pivotally mounted on the side rails and including side arms that swing to depressed positions between and elevated positions against said edges, and a bed bottom supporting frame mounted on the supports.

6. In a bed, the combination with a bedstead having a side rail and spaced projections carried by the inner side thereof, of oppositely swinging supports pivoted to the side rail between the projections and located between said projections when depressed, said supports respectively resting against the projections when swung to elevated posi-

tions, and a bed bottom supporting frame that rests upon the support when elevated.

7. In a bed, the combination with a bedstead, and a bed bottom supporting frame associated therewith, of supports extending across the bedstead and pivotally mounted at their lower ends thereon and engaging beneath said supporting frame, and a cable connected to and connecting the supports for simultaneously or independently turning said supports on their pivots to simultaneously or independently raise or lower them.

8. In a bed, the combination with a bedstead, and a bed bottom supporting frame associated therewith, of oppositely swinging supports pivotally mounted on the frame to swing upwardly and away from each other and downwardly and toward each other, and a cable connected to the supports and connecting the supports for independently or simultaneously turning said supports upon their pivots to simultaneously or independently move them in opposite directions to raise or lower them.

9. In a bed, the combination with a bedstead, and a bed bottom supporting frame associated therewith, of supports extending entirely across the bed, pivotally mounted on the bedstead and engaging beneath said frame, said supports having turning movement in opposite directions to raise or lower the same, a cable passing through pulleys above the pivotal point of said supports and then engaging with said supports for raising the same, and a cable passing through eyes on the frame and then attached to the supports for drawing the same downward.

10. In a bed, the combination with a bedstead having spaced side rails and an upward projection constituting a stop shoulder, of a support pivotally mounted on the side rails and movable to an elevated position against the stop shoulder, a pulley journaled on the projection above the pivotal point of said support, and a cable passing about the pulley and engaging with the support to lift the same against the stop shoulder, an eye mounted on the side rail, and a cable passing through the eye and to the support for drawing the support downward to its lowered position.

11. In a bed, the combination with a bedstead having spaced side rails, said rails being provided with inwardly extending flanges and projections located above the flanges and having inclined edges constituting shoulders, pulleys journaled in certain of the projections, supports of different widths pivotally mounted on the flanges and swinging between depressed and elevated positions, the latter position being assumed by the supports when they rest against the stop shoulders, arms carried by the supports, cables connected to the arms, certain of said cables passing around the pulleys, a bed bottom supporting frame comprising sections hinged together and resting upon the supports, and means for securing certain of the sections in alinement and against relative swinging movement.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN A. BARKER.

Witnesses:
W. H. LANDES,
HARRY H. BLEASE.