No. 844,362. PATENTED FEB. 19, 1907.

S. C. KAGARICE.

INVALID BED.

APPLICATION FILED OCT. 23, 1906.

2 SHEETS—SHEET 1.

Fig. 1

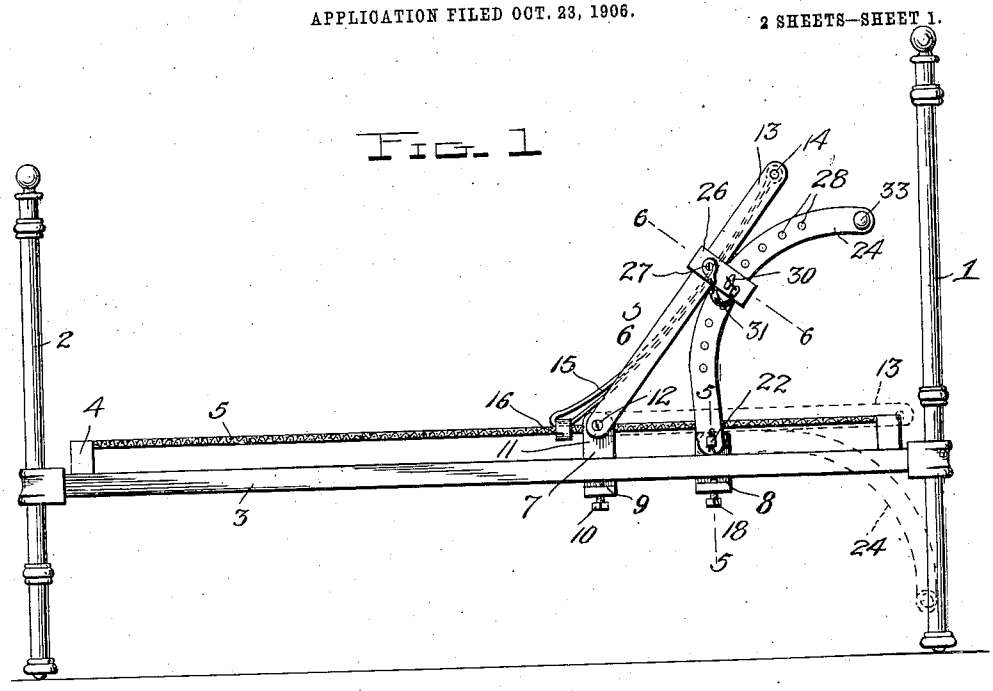
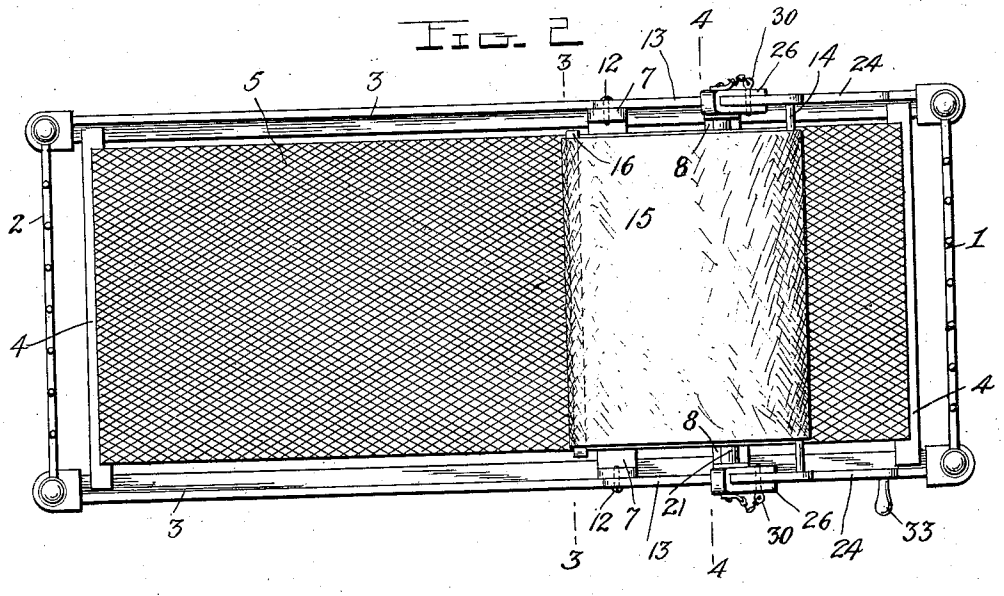


Fig. 2



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2 SHEETS—SHEET 2.

FIG. 3

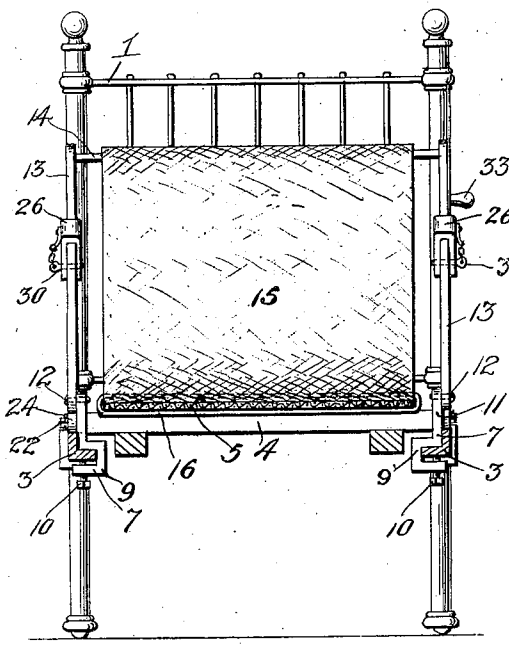


FIG. 4

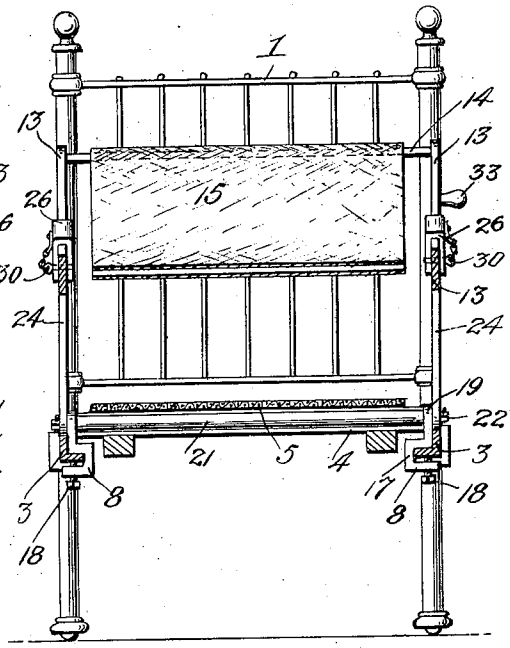


FIG. 5

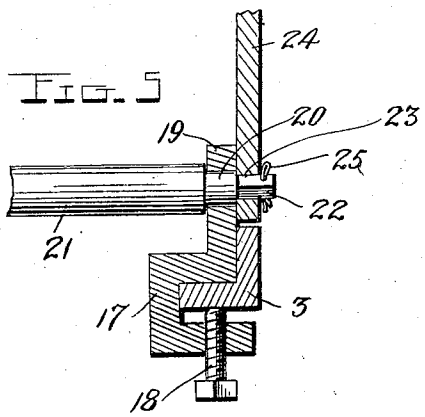
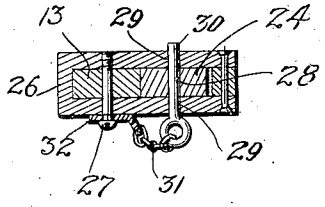


FIG. 6



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UNITED STATES PATENT OFFICE.

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INVALID-BED.

No. 844,362. Specification of Letters Patent. Patented Feb. 19, 1907.

Application filed October 23, 1906. Serial No. 340,174.

To all whom it may concern:

Be it known that I, SAMUEL C. KAGARICE, a citizen of the United States, residing at Sioux Falls, in the county of Minnehaha and State of South Dakota, have invented certain new and useful Improvements in Invalid-Beds, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in invalid-beds, and more particularly to an attachment for an ordinary bed, whereby it may be especially adapted for the use of invalids.

One object of the invention is to provide a simple and practical means whereby the upper end or head portion of a bed may be readily adjusted in any angular position for supporting the shoulders and head of the occupant of the bed.

Another object of the invention is to provide a device of this character which may be readily applied to beds of various kinds now in common use.

Further objects and advantages of the invention, as well as the structural features by means of which these objects are obtained, will be made clear by an examination of the following specification, taken in connection with the accompanying drawings, in which—

Figure 1 is a side elevation of one embodiment of my invention, the same being in the form of an attachment to an ordinary iron bedstead and showing it in an elevated position in full lines and in its lowered position in dotted lines. Fig. 2 is a top plan view of the same. Figs. 3 and 4 are vertical transverse sections taken, respectively, on the planes indicated by the lines 3 3 and 4 4 in Fig. 2; and Figs. 5 and 6 are detail sectional views taken, respectively, on the planes indicated by the lines 5 5 and 6 6 in Fig. 1.

Referring to the drawings by numerals, 1 denotes the head-piece, 2 the foot-piece, and 3 the angle-iron side rails of a well-known form of iron bed. The side rails 3 are engaged by and support the frame 4 of the usual woven-wire spring fabric 5. The above parts are old and well known and do not form any part of my invention.

The numeral 6 denotes an adjustable supporting device mounted upon the bed and adapted to support the back, shoulders, and head of the occupant thereof. While this device 6 is here shown in the form of an attachment, which may be readily applied to and removed from beds of various kinds, it will be understood that the same may form a permanent part of a bedstead. The device 6, as shown, comprises two pairs of clamps 7 8, adjustably mounted upon the angle metal side rails 3 of the bed. The clamps 7 have body portions 9, which engage the inwardly-extending flanges of the rails 3, upon which they are secured by set-screws 10, as clearly shown in Figs. 1 and 3 of the drawings. Projecting upwardly from the portions 9 of these clamps are ears 11, upon which are pivoted at 12 the lower ends of a pair of side bars 13, connected at their upper ends by a cross-rod 14. These parts form a vertically-swinging frame for a covering 15 of fabric or other suitable material. The covering 15 is preferably in the form of an endless band, the upper end of which passes over the rod 14 and is supported thereby, and the lower end of which passes through a loop or band 16, which extends transversely of the spring fabric 5 and surrounds the latter, as clearly shown in Fig. 3. The band 16 is adjustable upon the spring fabric 5, so that the covering 15 may be stretched as taut as desired for properly supporting the bed clothing.

The clamps 8 are somewhat similar to the clamps 7 and have body portions 17, which also engage the inwardly-extending flanges of the rails 3 and are adjustably secured thereon by set-screws 18. The upwardly-extending ears 19 upon the portions 17 of the clamps 8 are formed with cylindrical openings to receive reduced cylindrical journals 20, formed at the ends of a bar or rod 21. The latter extends transversely beneath the spring fabric and has its ends extended beyond the journals 20 and formed with reduced squared or polygonal-shaped portions 22 to fit in similarly-shaped apertures 23 in the lower ends of a pair of curved adjusting-braces 24. The braces 24 are retained upon the squared ends 22 of the rotatably-mounted rod or shaft 21 by split pins 25, as clearly shown in Fig. 5. These braces are of substantially segmental form and are adapted to be adjustably connected to the side bars 13 of the swinging supporting-frame to hold the latter at any angle. This adjustable connection is preferably effected by passing the adjacent bars 13 and braces 24 through sur-

rounding loops or bands 26. The latter are rigidly secured upon the side bars 13 by screws or similar fastenings 27, and the curved braces 24 are adapted to slide in the guide-bands 26 with their outer curved edges in contact with the edges of the bars 13. Each of the braces is formed at suitable intervals with transverse apertures 28, any one of which is adapted to aline with a pair of apertures 29, formed in the sides of the loop or band 26, so as to receive a removable locking-pin 30, as clearly shown in Fig. 6. By adjusting these pins in different apertures in the braces it will be seen that the supporting-frame may be held at any desired angle. To prevent the loss of the pins 30, the eyes upon their outer ends are connected by short chains or the like, 31, to attaching-plates 32, secured by the screws 27 upon the bands 26. Upon one or both of the braces 24 is provided a handle 33, by means of which the device may be readily raised and lowered when the pins 30 are removed from the apertures 28 29. Owing to the connection above described between the braces 24 and the rod or shaft 21, it will be seen that the braces will swing together and that when they are raised and lowered they will also swing the side bars 13.

From the foregoing description, taken in connection with the accompanying drawings, it is thought that the construction, operation, and advantages of my invention will be readily understood without a more extended explanation.

While I have shown and described the preferred embodiment of my invention, I wish it understood that I do not limit myself to the precise showing herein set forth, since various changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention as defined by the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. An attachment of the character described, comprising a vertically-swinging support for attachment to a bed, said support having side bars pivotally mounted at their lower ends, bearings for attachment to a bed, a transverse shaft rotatably mounted in said bearings and having at its ends polygonal-shaped portions, longitudinally-curved braces fixed upon the polygonal-shaped portions of said shaft so as to swing with the latter, said braces being formed with longitudinal series of transverse apertures, guide-loops surrounding the side bars of said support and fixed thereon, the rear portions of said loops being adapted to receive said braces and being formed with alining apertures with which the apertures in the braces register, and locking-pins passed through the alining apertures in said guide-loops and braces, substantially as shown and described.

2. An attachment of the character described, comprising two pairs of clamps for engagement with the side rails of a bed, side bars pivoted at their lower ends upon the clamps of one pair, a cross-bar connecting the upper ends of said side bars, a covering engaged with said cross-bar, means for attaching said covering to a bed, guides upon said side bars, a shaft rotatably mounted in the clamps of the other pair, longitudinally-curved braces fixed upon said shaft and engaged with said guides, and means for locking said braces in said guides.

3. An attachment of the character described, comprising two pairs of clamps for engagement with the side rails of a bed, side bars pivoted at their lower ends upon the clamps of one pair, a cross-bar connecting the upper ends of said side bars, a covering engaged with said cross-bar, means for attaching said covering to a bed, guide-loops surrounding said side bars and fixed thereto and having transversely-alining apertures, a shaft rotatably mounted in the clamps of the other pair and having polygonal-shaped outer ends, longitudinally-curved braces secured upon said polygonal-shaped ends of the shaft and formed with longitudinal series of apertures, said braces being slidable in said guide-loops, and locking-pins passed through the alining apertures in said guide-loops and said braces, substantially as shown and described.

4. An attachment of the character described, comprising two pairs of clamps, each having U-shaped portions to engage the side rails of a bed, bearings projecting upwardly from their upper portions and clamping-screws in their lower portions, a vertically-swinging support having side bars pivoted at their lower ends upon the upper bearing portions of the clamps of one pair, a transverse shaft rotatably mounted in the bearing portions of the clamps of the other pair and having polygonal-shaped outer ends, guides upon the side bars of said support, and longitudinally-curved braces slidably and adjustably mounted in said guides and having their lower ends fixed upon the polygonal ends of said shaft, substantially as shown and described.

5. The combination with a bed having side rails and a bottom, of a pair of clamps engaged with said side rails, a pair of side bars pivoted upon said clamps, a cross-rod connecting said side bars, a transversely-extending band surrounding said bed-bottom, a flexible covering engaged with said band and said cross-rod, guide-loops upon said side bars, a second pair of clamps engaged with said side rails, a transverse shaft rotatable in the last-mentioned clamps, longitudinally-curved braces fixed upon said shaft and slid-

ably engaged with said guide-loops, and means for locking said braces in said guide-loops.

6. An attachment of the character described comprising two pairs of clamps for engagement with the side rails of a bed, a swinging supporting-frame pivotally engaged with one pair of clamps and having side bars, guides upon said side bars, a shaft connecting the other pair of clamps and rotatable therein, curved braces fixed to said shaft and slidably engaged with said guides, and means for locking said braces in said guides.

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

SAMUEL C. KAGARICE.

Witnesses:
SAM H. WRIGHT,
M. E. ABBOTT.