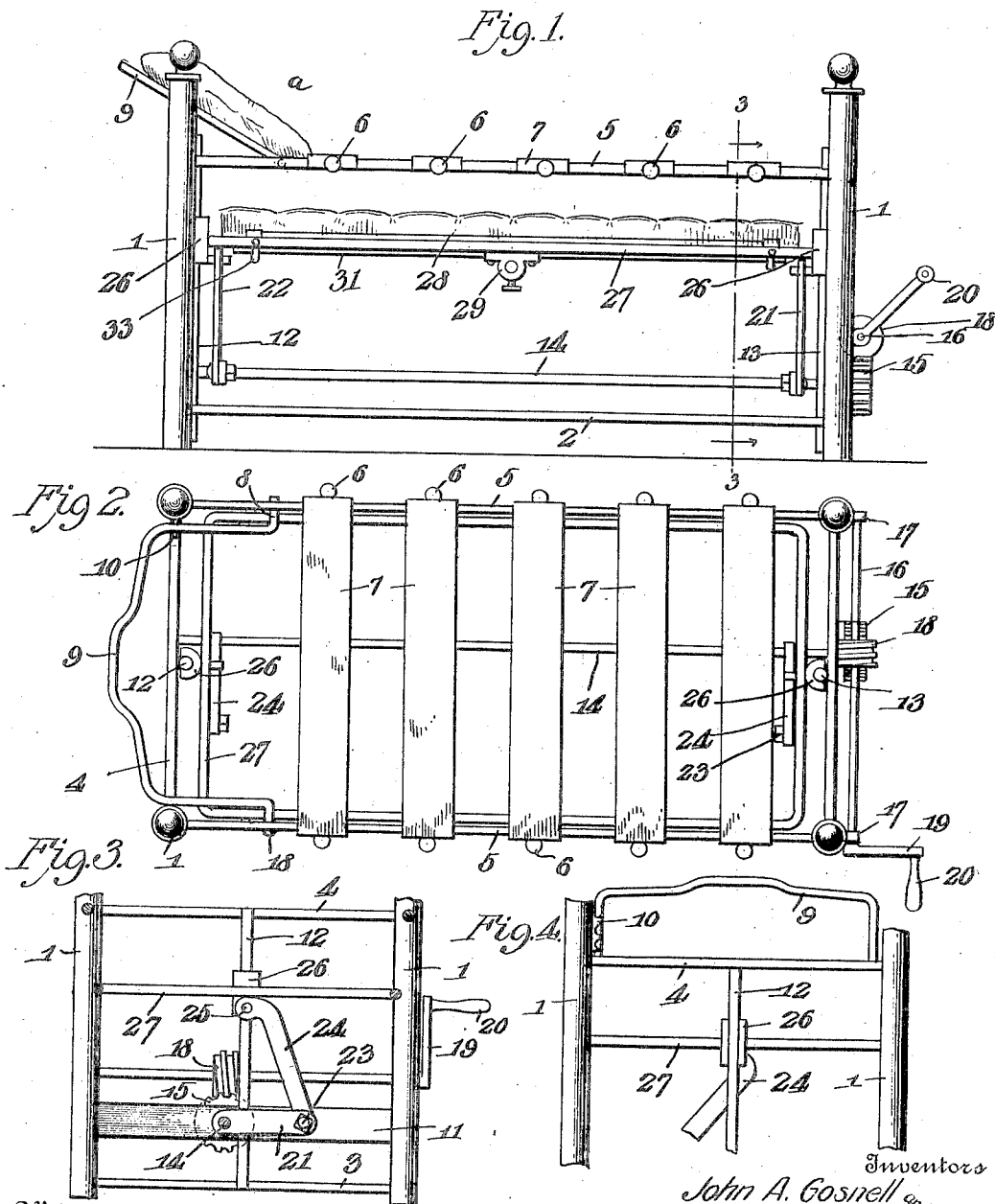


J. A. GOSNELL & J. OLSON.
INVALID BED.
APPLICATION FILED NOV. 17, 1909.

1,089,208.

Patented Mar. 3, 1914.

2 SHEETS—SHEET 1.



Witnesses

N. B. Galt
W. B. Bump

Inventors
John A. Gosnell and
John Olson,

By *Victor J. Evans*
Attorney

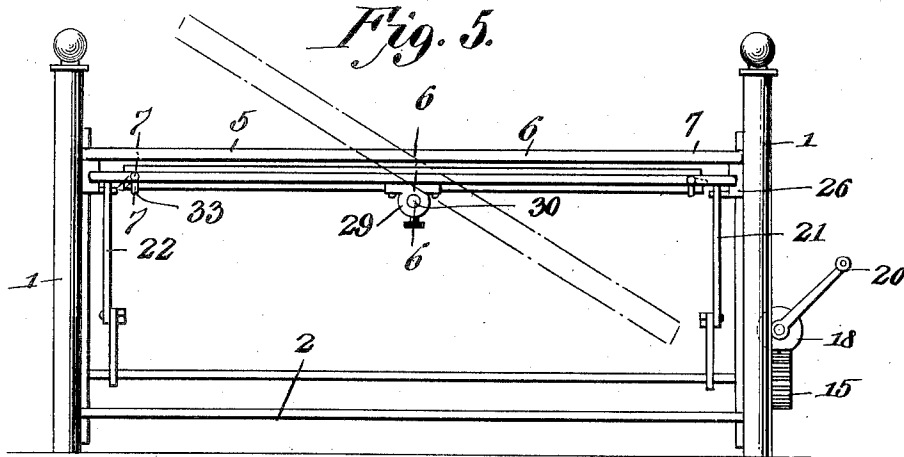
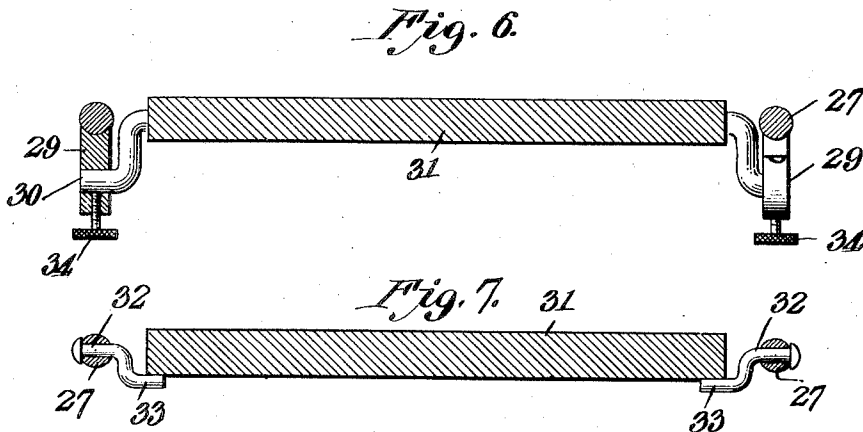
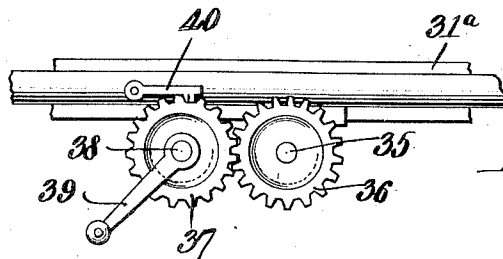
J. A. GOSNELL & J. OLSON.
INVALID BED.

APPLICATION FILED NOV. 17, 1909.

1,089,208.

Patented Mar. 3, 1914.

2 SHEETS—SHEET 2.



Witnesses

R. G. Galt.
James A. Welch

Inventors
John A. Gosnell, and
John Olson
By *Victor J. Evans*
Attorney

UNITED STATES PATENT OFFICE.

JOHN A. GOSNELL AND JOHN OLSON, OF BRADLEY, ILLINOIS.

INVALID-BED.

1,089,208.

Specification of Letters Patent.

Patented Mar. 3, 1914.

Application filed November 17, 1909. Serial No. 528,512.

To all whom it may concern:

Be it known that we, JOHN A. GOSNELL and JOHN OLSON, citizens of the United States of America, residing at Bradley, in the county of Kankakee and State of Illinois, have invented new and useful Improvements in Invalid-Beds, of which the following is a specification.

This invention relates to invalid beds, and one of the principal objects of the same is to provide a bed in which the mattress can be conveniently removed and replaced by an operating table, means being employed for supporting the patient during adjustment of the mattress or operating table-carrying frame.

Another object of the invention is to provide a combined operating table and bed in which the mattress and spring-supporting device can be raised and lowered by means of a crank and worm mechanism at the foot of the bed and in which a pillow support is provided having means for holding it in adjusted position.

The above mentioned and other objects are attained by the construction, combination and arrangement of parts, as disclosed on the drawings, set forth in this specification, and particularly pointed out in the appended claims.

In the drawings, forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views:—Figure 1 is a side elevation of our improved invalid bed. Fig. 2 is a plan view of the same. Fig. 3 is a vertical section taken on the line 3—3 of Fig. 1, looking in the direction indicated by the arrows. Fig. 4 is an end view of the head portion of the bed showing the manner of adjusting the pillow support. Fig. 5 is a view similar to Fig. 1 showing the bed in use as an operating table. Fig. 6 is a section taken on the line 6—6 of Fig. 5. Fig. 7 is a section taken on the line 7—7 of Fig. 5. Fig. 8 is a detail side elevation of a slightly modified form of our invention.

Referring to the drawings, the numeral 1 designates the corner posts of the bed. Connected to the corner posts are the side rails 2 near the lower end thereof, and at the head and foot cross bars 3 and 4 are provided. Side rails 5 are secured to the corner posts at points near the upper ends thereof, and connected to the outer sides of said rails are

knobs or buttons 6 to which are detachably connected supporting straps or bands 7, buttonholes preferably being employed at the ends of the straps for receiving the said knobs. The bands 7 serve as means for supporting a patient during the time of removing the mattress and substituting therefor the operating table or vice versa. A pillow rest is pivotally mounted upon the rails 5, said rest comprising outwardly bent end portions 8 which pass through openings in the side rails 5 and a body portion 9 of yoke form. Connected to one of the corner posts 1 is a rack bar 10 designed for the purpose of engaging one of the side arms of the yoke for holding the pillow support in its adjusted position.

A flat metal brace bar 11 is connected to the foot corner post, and a similar bar is connected to the front corner post. An upright 12 is connected to the last named bar and to the cross bars 3 and 4. A similar upright 13 is connected to the foot of the bed. A shaft 14 is mounted in the bars 11, said shaft extending lengthwise of the bed at a point near the lower ends of the corner posts and disposed preferably at one side of the center of the bed. Mounted on said shaft at one end is a worm gear 15. A shaft 16 mounted in brackets 17 extends across the foot of the bed and is provided with a worm 18 to engage the worm gear 15. A crank 19 is fitted to the end of the shaft 16 and is provided with an operating handle 20. Connected to the shaft 14 is an arm or link 21. At the opposite end of the shaft 14 is a similar link 22. Connected to the link 21 by means of a bolt or pivot 23 is a lever 24, said lever being pivoted at 25 to a curved slide 26 mounted to slide upon the upright 12. At the opposite end of the shaft 14 the link 22 is connected to a similar arm or lever pivotally attached to a slide 26 mounted to slide on the upright 13. Supported upon the slides 26 is a mattress and spring-supporting frame 27 and adapted to be supported on the frame is a mattress and a spring 28.

The side rails of the mattress-supporting frame 27 are provided with alining bearings 29 in which the angular offset trunnions of the spring frame 31 are mounted to rotate. By means of the angular offset trunnions the spring frame 31 occupies a position normally above the bearings 29 and may occupy a position below said bearings,

so that the angular trunnions provide means whereby the elevation of the spring frame may be varied. The frame 27 is provided at its ends with pivoted supports 32 upon
 5 which are formed fingers 33 which are adapted to be actuated to lie immediately beneath the side edges of the frame 31 to hold it against pivotal movement. These fingers are located near the ends of the frame 31 so
 10 that they can be moved upwardly against the ends of the frame when it is desired to obtain angular adjustment of the frame. The bearings 29 are provided with set screws 34 which are adapted to be engaged with the
 15 trunnions 30 to hold the frame 31 in its adjusted position. The construction is such that the mattress of the bed can be removed and an operating table substituted therefor. At the time of such removal of the mattress
 20 the patient to be operated upon can be conveniently supported by the straps 7. After the operating table has been substituted for the mattress the apparatus may be actuated to move the operating table immediately be-
 25 neath the supporting straps, after which the straps can be disengaged from the side rails 5 to permit the patient to be positioned immediately on the table. By pivotally supporting the frame 31 it is obvious that the
 30 operating table can be held at any angle. In the modified form of our invention shown in Fig. 8, the trunnion 35 of the frame 31^a is provided with a pinion 36 which meshes with a pinion 37. The shaft 38 upon
 35 which the pinion 37 is supported has secured thereto an operating handle 39 whereby the pinion 37 can be revolved and motion imparted to the pinion 36. A pivoted dog 40 is operatively connected with the pinion 37
 40 to hold it in its adjusted position.

We claim:—

1. An invalid bed comprising head and foot posts, rails connecting said posts, vertical guide rods disposed at each end of the bed between said head posts and said foot
 45 posts, a vertical adjustable frame slidably mounted upon said guide rods, bearings depending from the sides of the adjustable frame, a mattress support disposed within said adjustable frame, angular offset trun-
 50 nions provided upon said mattress support and journaled in said bearings, an adjusting screw threaded in said bearings and adapted to engage said trunnions, and means to raise and lower said adjustable frame. 55

2. An invalid bed comprising a head and foot posts, rails connecting said posts, a bar connecting the head posts, a bar connecting the foot posts, a shaft having its ends supported upon said bars, a guide rod vertically
 60 disposed between said head posts and, also, between said foot posts, slides movable upon said guide rods, a frame supported by said slides and movable therewith, a worm carrying shaft transversely mounted upon one
 65 end of the bed, a worm gear mounted upon said first mentioned shaft and meshing with said worm, angular levers pivoted at one end to said slides, a lever arm rigid with first mentioned shaft and connected to the free
 70 end of the angular levers, and means to impart motion to the transverse shaft whereby said frame may be raised and lowered.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN A. GOSNELL.
 JOHN OLSON.

Witnesses:

W. H. DYER,
 H. J. RICHER.