

J. A. KEMMLER.

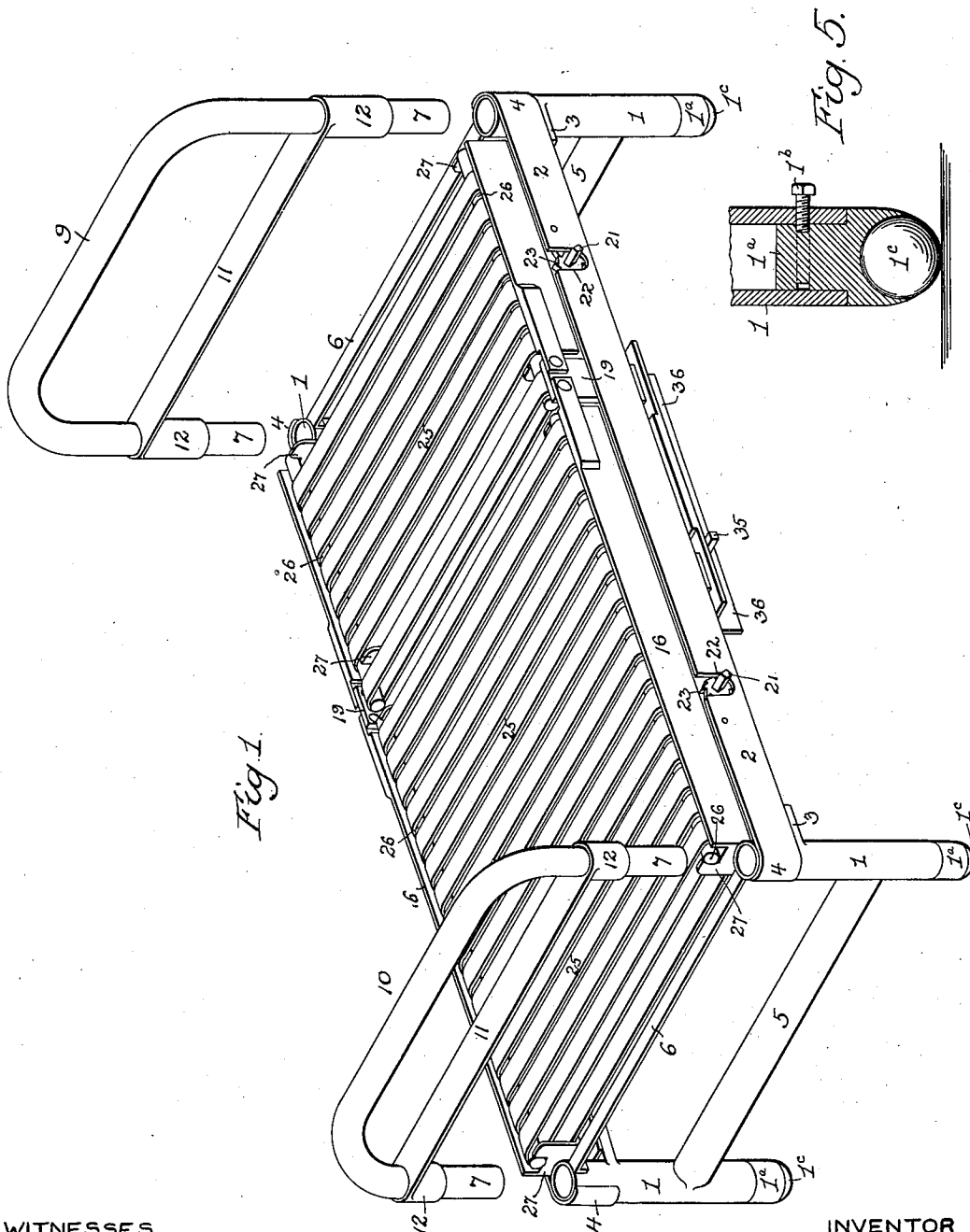
BEDSTEAD.

APPLICATION FILED OCT. 8, 1910.

1,018,195.

Patented Feb. 20, 1912.

2 SHEETS—SHEET 1.



WITNESSES

Harry L. Smith
Hamilton D. Turner

INVENTOR

JOHN A. KEMMLER
BY HIS ATTORNEY

Harry Smith

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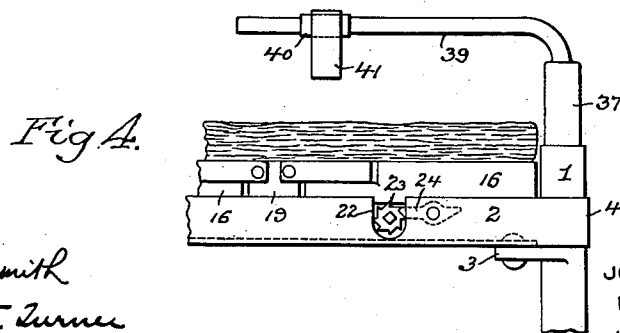
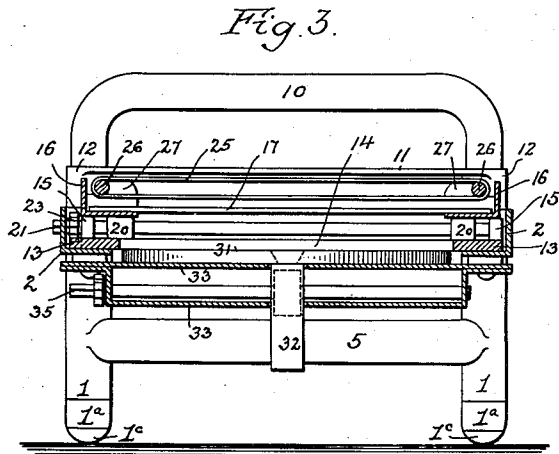
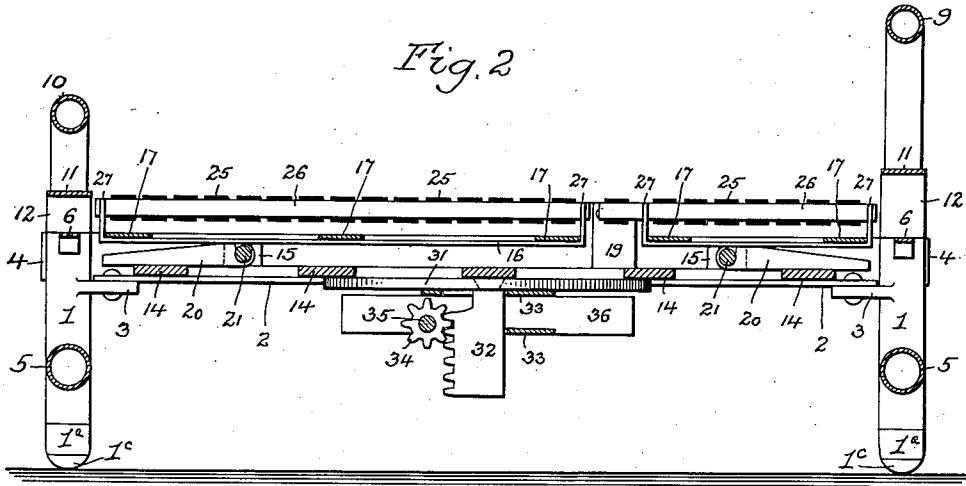
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UNITED STATES PATENT OFFICE.

JOHN A. KEMMLER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO
OTTO KLOPFER, OF PHILADELPHIA, PENNSYLVANIA.

BEDSTEAD.

1,018,195.

Specification of Letters Patent.

Patented Feb. 20, 1912.

Application filed October 8, 1910. Serial No. 585,986.

To all whom it may concern:

Be it known that I, JOHN A. KEMMLER, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Bedsteads, of which the following is a specification.

My invention consists of a bed which, while capable of general use, is especially adapted for the use of invalids.

My improved bed has detachable head and foot pieces which can be removed in order to reduce the size of the bed frame for storage or other purposes, or for permitting swinging movement of the mattress support.

The bed also has a pivoted mattress support which permits raising and lowering of the head or foot portions of the mattress, or both, and the bed is provided with a turntable which can be raised and lowered and which permits swinging of the mattress support to any desired position required for the comfort of the occupant of the bed, or to facilitate access to all portions of the bed by an attendant or attendants.

The spring structure of the bed comprises a great number of independent elastic units, so that any portion of the mattress can readily yield to pressure without affecting any other portion of the same. The bed is also provided with means for supporting, in an elevated position, the arm or leg of a patient when effective treatment requires such support.

In the accompanying drawings—Figure 1 is a perspective view of a bed constructed in accordance with my invention, the mattress being removed and the head and foot pieces of the bed being also shown detached from the fixed frame; Fig. 2 is a longitudinal section of the bed; Fig. 3 is a transverse section of the same; Fig. 4 is a side elevation of part of the bed illustrating the elevated arm or leg support, and Fig. 5 is an enlarged section of the lower portion of one of the corner posts of the bed frame.

The fixed frame of the bed comprises four corner posts 1, which are connected together by longitudinal side bars 2, the latter being preferably of angular cross section and having their lower webs secured by brackets 3 on the corner posts and their vertical webs bent around said corner posts, as shown at 4, so as to stiffen and strengthen the connection between the posts and the side bars. The corner posts are also connected by

transverse braces 5 and 6 whereby a rigid permanent framework for the bed is insured.

The corner posts are tubular, and, at the top, form sockets for the reception of studs 7 on the head and foot pieces 9 and 10 of the bed frame, so that the said head and foot pieces can be readily applied to or removed from the fixed frame when it is desired to reduce the size of the bed frame for storage or transportation or to swing the mattress-carrying structure of the bed as hereinafter set forth, or to transform the bed into a couch. The studs 7 may constitute the lower ends of the bent tubes of which the head and foot pieces are mainly composed, said head and foot pieces having, in addition to these bent tubes, transverse braces 11 provided at their opposite ends with sleeves 12 through which the bent tubes pass and to which they are suitably secured.

The lower portion of each corner post receives a bushing 1^a which has an annular groove for the reception of the inner end of a retaining screw 1^b, whereby the bushing is swiveled to the post and is prevented from dropping when the post is raised. (See Fig. 5.) The bushing 1^a has, in the bottom, a socket which receives and partially envelops a ball 1^c, which can turn in the socket so as to permit the bed to be readily moved in any direction.

Upon the horizontal flanges of the angular side bars 2 of the bed frame, rest longitudinal bars 13, which are connected by transverse bars 14, said longitudinal bars having lugs 15 upon which normally rest the side bars 16 of the mattress-supporting frame, said side bars being connected by transverse bars 17. The mattress frame is divided into head and foot sections, the side bars of each section being pivoted to upwardly projecting lugs 19 on the side bars 13 of the bottom frame, as shown in Fig. 1, so that either head or foot section can have an upward inclination imparted to it when it is desired to raise either the head or the feet, or both, of the occupant of the bed. Such raising movement is effected by arms 20 on shafts 21, as shown in Fig. 2, the arms acting on the undersides of the side bars 16 of the mattress-carrying frame, and the shafts being adapted to bearings in the lugs 15 on the bars 13, one end of each shaft pro-

jecting into or through a slot 22 in one of the side bars 2 of the fixed frame of the bed, and being constructed for the reception of a suitable crank whereby it may be turned so as to raise or lower the arms 20. If the shafts are shorter the slotting of the side bars 2 will not be necessary. Each shaft is provided with a ratchet wheel 23 with which engages a pawl 24 to prevent the descent of the arms 20 after they have been raised, the pawl being released from engagement with the ratchet wheel when it is desired to lower the arms. Other means of operating the arms 20; may, however, be adopted without departing from my invention.

The spring structure of the bed consists of a number of endless belts or bands 25, of rubber, spring steel or other elastic material, these endless belts or bands passing around shafts 26, one at each side of the mattress-carrying frame, and these shafts being free to turn in brackets 27 on the side frames 16, as shown in Fig. 2. An elastic support is thus provided for every portion of the mattress, and the latter is free to yield to pressure at any point without corresponding depression of any other portion of the mattress. The traveling endless belts also provide for the ready sliding of the mattress into position from either side of the bed, or the ready removal of the mattress from either side of the bed, which is a valuable feature in invalids' beds, where it is often necessary to move the patient with as little disturbance as possible, and this can be most readily accomplished by moving the mattress with the patient upon it.

Certain of the cross bars 14 of the lower frame of the bed rest normally upon a plate 31 which is pivotally mounted upon the upper end of a rack 32, the latter being vertically guided by means of transverse bars 33 which connect the opposite side bars of the fixed frame of the bed, as shown in Figs. 2 and 3. The rack 32 engages with a pinion 34 carried by a transverse shaft 35 which is adapted to bearings in plates 36 depending from the side bars 2, as shown in Fig. 3, one end of this shaft being constructed for the reception of a suitable crank handle whereby it may be turned so as to cause the pinion 34, by engagement with the rack 32, to raise or lower the plate 31 and the bed frame resting thereupon. If desired, a ratchet wheel and pawl similar to the wheel 23 and pawl 24, or other available means, may be used to prevent accidental descent of the rack after the same has been raised.

When the rack has been raised so that the

side bars 13 of the movable bed frame are above the side bars 2 of the fixed frame, the elevated frame can be turned to any desired position, the pivoted plate 31 serving as a turntable for this purpose. Without moving the fixed frame of the bed, therefore, the occupant of the bed may be moved into any position which comfort requires, or which may be most convenient for a physician, surgeon, nurse, or other attendant to make an examination of, or to wait upon, the patient, or perform an operation.

In order to permit of the swinging of the bed in the manner described, the head and foot sections 9 and 10 can be readily removed.

It frequently happens that it is desirable to support one or both of the arms or legs of the patient in a raised position, and for this purpose I remove the head or foot piece of the bed frame, or both of them, and apply to one or more of the corner posts a swinging post 37 which has, at its upper end, a bent arm 39 projecting over the bed and provided with a sliding sleeve 40, which carries a sling 41 upon which an arm or leg of the patient can be supported, the swinging adjustment of the arm 39 in connection with the longitudinal adjustment of the sleeve 40 permitting such a range of movement of the sling 41 over the bed as to meet all requirements.

I do not herein claim the construction of mattress support herein shown and described, as the same constitutes the subject of a separate application filed by me on the sixth day of December, 1911, Serial No. 664,228.

I claim:

1. The combination, in a bed, of fixed frame, a turntable mounted thereon so as to be vertically movable, and a bed frame resting upon said turntable so as to be free to swing when it is raised above the limits of the fixed frame.

2. The combination, in a bed, of a fixed frame, a vertically movable turntable carried thereby, and a bed frame mounted upon said turntable so as to be free to swing when it is raised above the limits of the fixed frame, the latter having removable head and foot pieces in order to permit such swinging movement.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

JOHN A. KEMMLER.

Witnesses:

CHAS. BENTLEY COLLINS,
KATE A. BEADLE.