

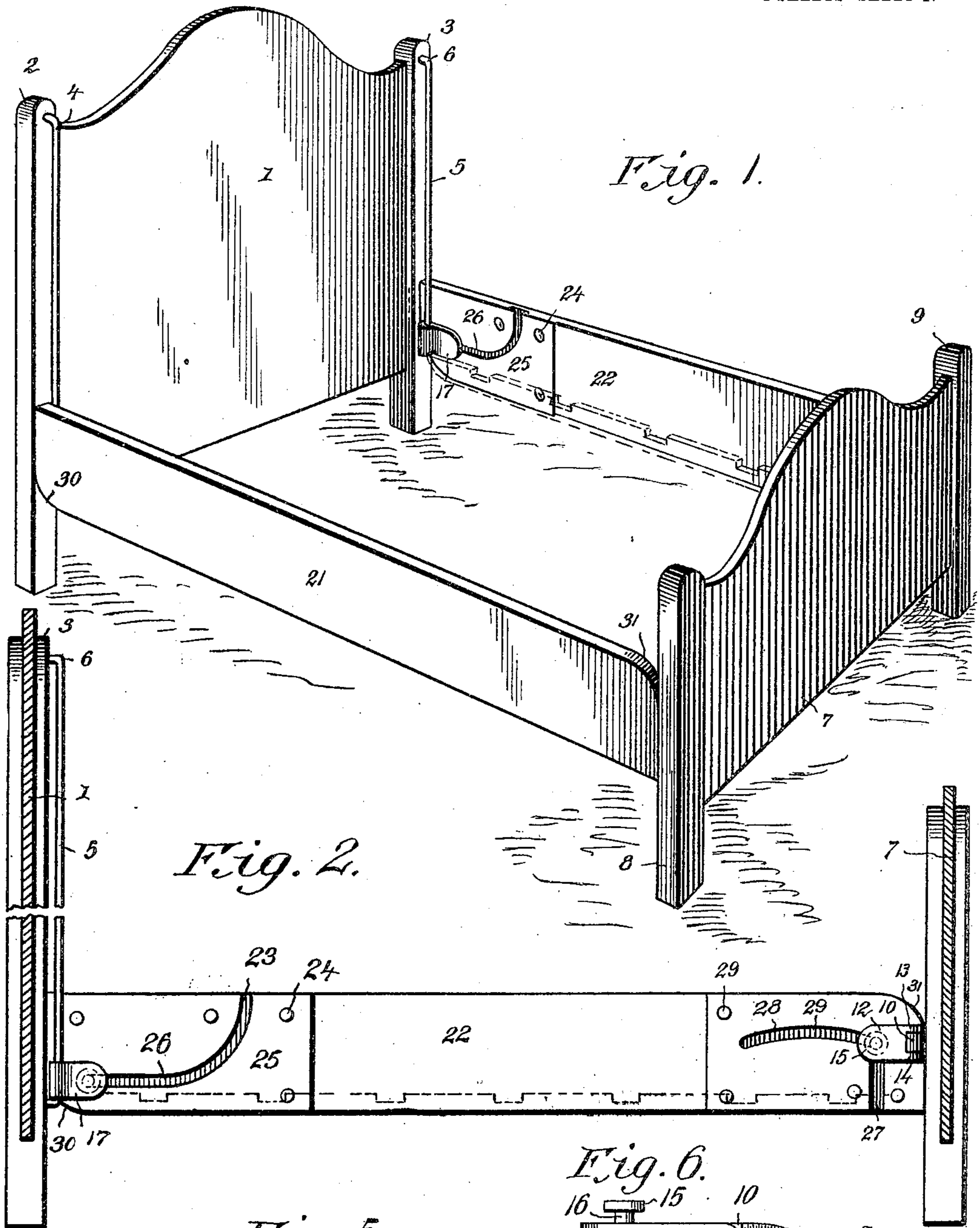
No. 822,328.

PATENTED JUNE 5, 1906.

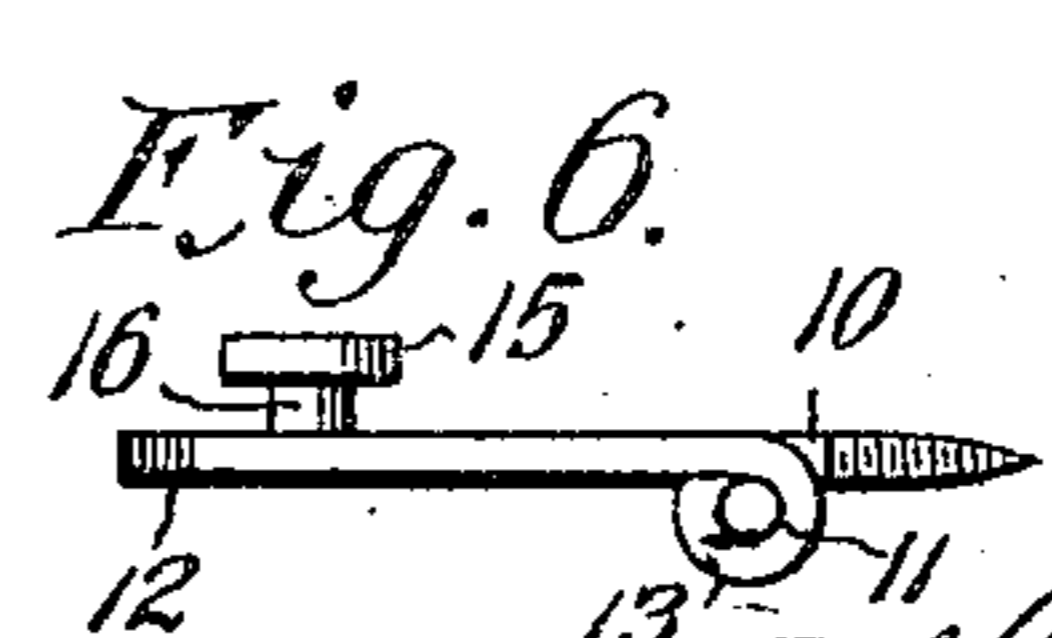
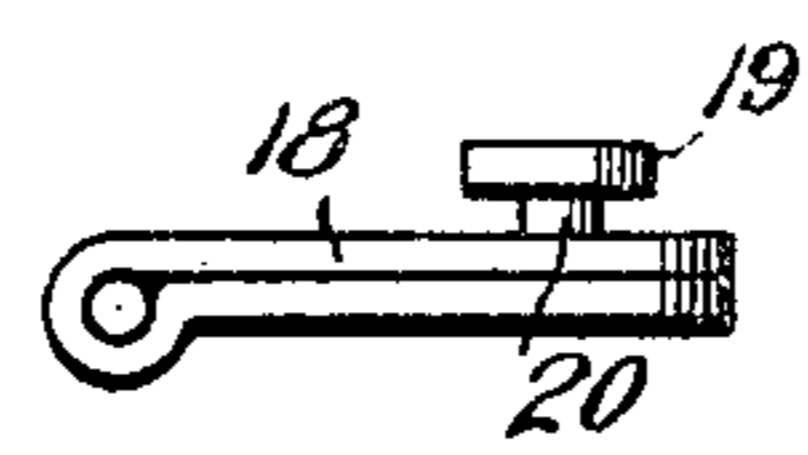
A. W. WELCH.  
FOLDING BED.

APPLICATION FILED APR. 29, 1905.

2 SHEETS—SHEET 1.



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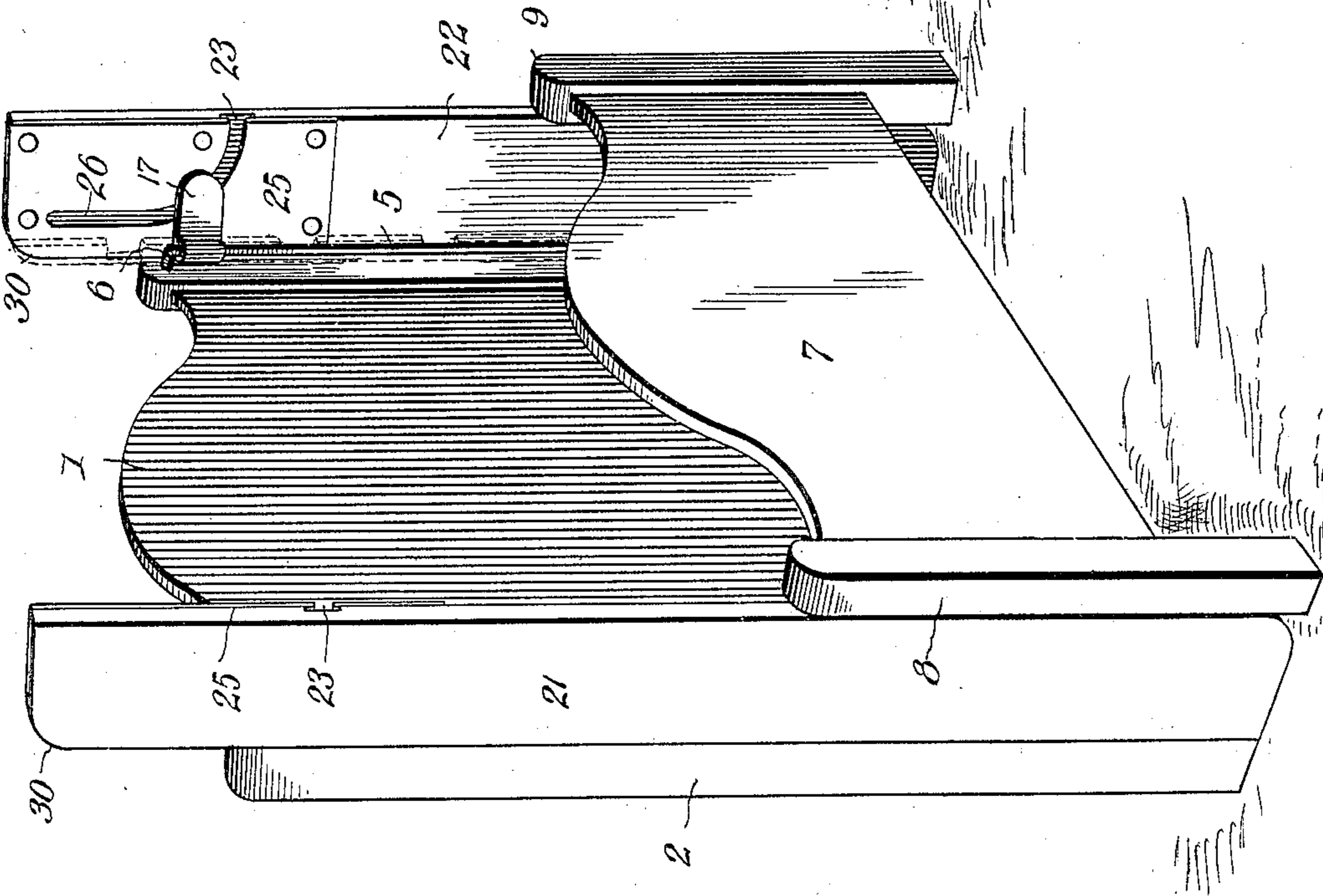
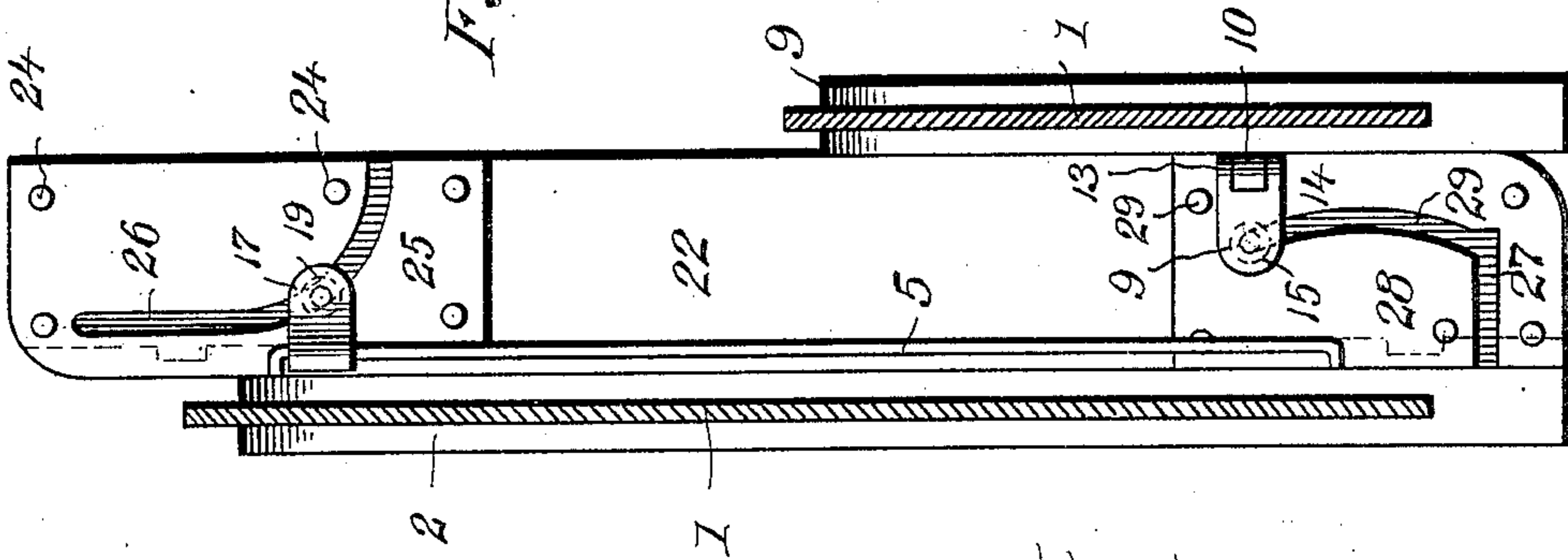
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2 SHEETS—SHEET 2.

*Fig. 4.*



*Fig. 3.*

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# UNITED STATES PATENT OFFICE.

ALPHA W. WELCH, OF ALBION, MICHIGAN.

## FOLDING BED.

No. 822,328.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed April 29, 1905. Serial No. 258,062.

*To all whom it may concern:*

Be it known that I, ALPHA W. WELCH, a citizen of the United States; residing in the city of Albion, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Folding Beds, of which the following is a specification.

This invention relates to folding bedsteads.

One object of the invention is to provide a folding bedstead of such character that the side rails may be readily detached from the head and foot boards.

Another object of the invention resides in the provision of a folding bedstead embodying such characteristics that when it is desired to fold the bedstead the under faces of the side rails may be disposed flush with the inner face of the headboard, with the inner face of the footboard resting against the upper faces of the side rails.

A still further object of the invention is to provide a folding bedstead of such type that corresponding ends of the side rails may be connected with the headboard through a sliding and also a swinging connection, with the opposite ends of the side rails connected to the footboard in a similar manner, whereby the side rails may have a sliding movement with respect to the headboard and the head and foot boards have a swinging movement with respect to the side rails.

It is still further designed to provide connections of such character that they may be readily associated with any ordinary type of unfoldable bedstead, whereby the latter may be converted readily into bedsteads of a folding variety.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the present invention.

In the drawings, Figure 1 is a perspective view of a folding bedstead embodying my improvements. Fig. 2 is a longitudinal sectional view through the bedstead illustrated in Fig. 1. Fig. 3 is a perspective view of the bedstead in its folded position. Fig. 4 is a

vertical sectional view through the bedstead in its folded position. Fig. 5 is a detail view of one of the hinge members for coupling the side rails to the headboard, and Fig. 6 is a detail view of the hinge connection between the side rails and the footboard.

Referring now more particularly to the accompanying drawings, the reference character 1 designates a headboard having the usual side posts 2 and 3, secured to the inner faces of which latter are guide-rails 4 and 5, respectively, the said guide-rails having their extremities 6 bent at an angle to the body portion thereof, whereby they may be driven into the posts 2 and 3 with their body portion in spaced relation to the inner faces of the said posts.

The reference character 7 designates the footboard, having end posts 8 and 9, to the inner faces of each of which latter is secured a leaf 10 of a hinge, provided with a vertical perforation 11, there being another hinge-leaf 12, provided with spaced ears 13 and 14, provided with alining perforations for alinement with the aforesaid perforation of the first-named hinge-leaf, in which position the perforations of the two leaf receive a pin- tle or the like 14. The leaves 12 of each of these hinges is provided with a lateral projection upon its outer face, which projections include a head 15 and a neck portion 16.

Slidably mounted upon each of the guide-rails 4 and 5 is a hinge member 17, which in the present instance consists of a plate bent back upon itself and provided at one end with a vertical perforation 18, designed to embrace the corresponding guide-rail. However, in practice the said hinge member 17 may be formed of a single piece of material. At any rate the outer face of each hinge member 17 is provided with a projection, including a head 19 and a shank or neck portion 20, as clearly shown in the accompanying drawings.

The reference characters 21 and 22 designate side rails, one end of each of which is provided with a curved groove 23, which groove is formed upon the inner faces of the rails. Secured, by means of rivets, screws, bolts, or other suitable elements 24 to the inner faces of each of the rails 21 and 22, is a plate 25, provided with a curved slot 26, corresponding to the curvature of the aforesaid grooves 23 and which are designed to aline with the latter. It will be observed that the

slots 26 are of smaller cross-sectional diameter than the groove 23. The heads 19 of the aforesaid projections of the hinged members 17 are designed for sliding engagement in the grooves 23 of the side rails, the neck portions 20 of the said projection working along the edges of the slot 26, the head 19 being of such cross-sectional diameter as to work within the aforesaid grooves, the slot 26 being narrower than the groove 23, preventing accidental disengagement of the side rails from the hinged members 17, or vice versa.

Reference to the accompanying drawings will disclose that the groove 23 and the slot 26 enter from the top of the rails and terminate short of the bottoms or the ends thereof. However, while a groove 27 is provided in the opposite end of each rail the same leads thereinto from the bottom thereof, with its substantially horizontal portion leading toward the grooves in the opposite ends of the rails. The grooves 27 are covered by metallic or other suitable plates 28, each having a slot 29 for registration with the corresponding grooves, whereby the heads 15 of the first-named hinged connection may slide within the grooves in the rear of the plates 28 to prevent accidental disengagement of the footboard from the rails or the latter from the former, the said plate 28 being secured to the inner faces of the rails over the last-named grooves through the instrumentality of suitable pins, screws, bolts, or the like 29. It will be observed that the under face of each rail at its upper end is curved, as indicated by the reference character 30, while the upper edges of the lower ends of the rails are curved, as indicated by the reference character 31.

The inner face of each rail 21 and 22 is supplied with the usual slat-supporting rest 32, having the usual notches 33 for the reception of the slats 34.

As clearly shown in Figs. 1 and 2, especially the latter, the bedstead when it is in its usual position for use has the head 19 of the hinged member 17 arranged at the extreme end of the slot 26, while the head 15 of the hinged member 12 is arranged at the intersection of the straight portion 27 of the slot with the curved portion 29 thereof. However, the weight of the bedstead itself by reason of the lower end of the rails contacting with the inner face of the footboards firmly hold the rails and footboard in proper position. Of course when weight is brought to bear upon the bedstead it is obvious that the connection of the headboard with the rails will be even more substantial.

From the foregoing the position of my improved bedstead for use will be readily understood, and in order that the manner of folding the bed may be fully appreciated I will state that by reason of the curved ends

30 of the lower edges of the rails the latter can be readily turned in a downward position before or after the hinge members 17 have been slid to the top of the guard-rails and the upper edges of the rails brought into flush engagement with the inner face of the headboard, this operation permitting the hinged members of the footboard to be slid in their slots and the closed extremity of the curved portion of the latter, the hinge connections through their construction and association with the said slots permitting the head and foot boards to have a swinging as well as a sliding movement.

In order to detach the side rails 21 and 22 from the headboard, one means may reside in first disengaging one or both of the said rails from the footboard and then swinging the lower or foot end of one or both rails inward in a horizontal plane, so that the upper end of the rails may be slid by the corresponding posts 2 and 3, thereby enabling the headed projection of the corresponding hinge connection to be slipped out of the open end of the corresponding slot.

It will thus be seen that my invention consists of few parts and that consequently it is of a comparatively inexpensive nature and that the connections are such that they may be readily applied to any form of stationary bedstead now in use. As a matter of fact, the connections may be applied to many of the folding devices of bedsteads on the market.

What is claimed is—

1. A bedstead comprising head and foot boards, the headboard having guide-rails, side rails between the head and foot boards, each side rail having a slot formed in each end, and a hinge connection between the corresponding slots of the side rails and the footboard and the corresponding slots and the aforesaid guide-rails.

2. A bedstead comprising head and foot boards, the headboard having guide-rails, side rails between the head and foot boards, each side rail having a slot at each end, and a hinge pivotally and slidably connected with each of the aforesaid guide-rails and each provided with a headed projection for engagement in the corresponding slot of the corresponding side rail, and a hinge connection between the footboard and the corresponding slot of the corresponding side rail.

3. A folding bedstead comprising a head and foot board, and side rails detachably connected to the head and foot boards, connections between the rails and said boards permitting of a vertical and lateral swinging movement of the rails with respect to the headboard.

4. A bedstead comprising head and foot boards, the headboard having guide-rails, side rails between the head and foot boards, and hinge connections between the side rails and guide-rails of the headboard and the side

rails and the footboard whereby the rails may have vertical and lateral swinging movement with respect to the headboard and whereby the rails may be swung vertically and moved in their vertical position with their hinge connection upon the said guide-rails.

5 5. A bedstead comprising head and foot boards, the headboard having guide-rails connected thereto, side rails, the inner faces of the side rails at each end being provided with curved slots and connections between the side rails, the guide-rails and the footboard whereby a sliding and swinging movement of the rails and the footboard is permitted.

15 6. A bedstead including a headboard having guide-rails secured thereto, a footboard, side rails between the said boards, a connection between the side rails and the guide-rails of the headboard to permit of a shifting

of the side rails to present the under faces of the latter to the inner face of the headboard.

7. A bedstead including a headboard having guide-rails secured thereto, a footboard, side rails between the said boards, a connection between the side rails and the guide-rails of the headboard to permit of a shifting of the side rails to present the under faces of the latter to the inner face of the headboard, and a connection between the side rails and footboard to permit swinging of the latter to present the inner face of the footboard to the top edges of the side rails.

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

ALPHA W. WELCH.

Witnesses:

A. F. COOPER,  
F. W. PEABODY.