

D. FRANK.
FOLDING CRIB, BED, OR THE LIKE.
APPLICATION FILED AUG. 22, 1904.

3 SHEETS—SHEET 1.

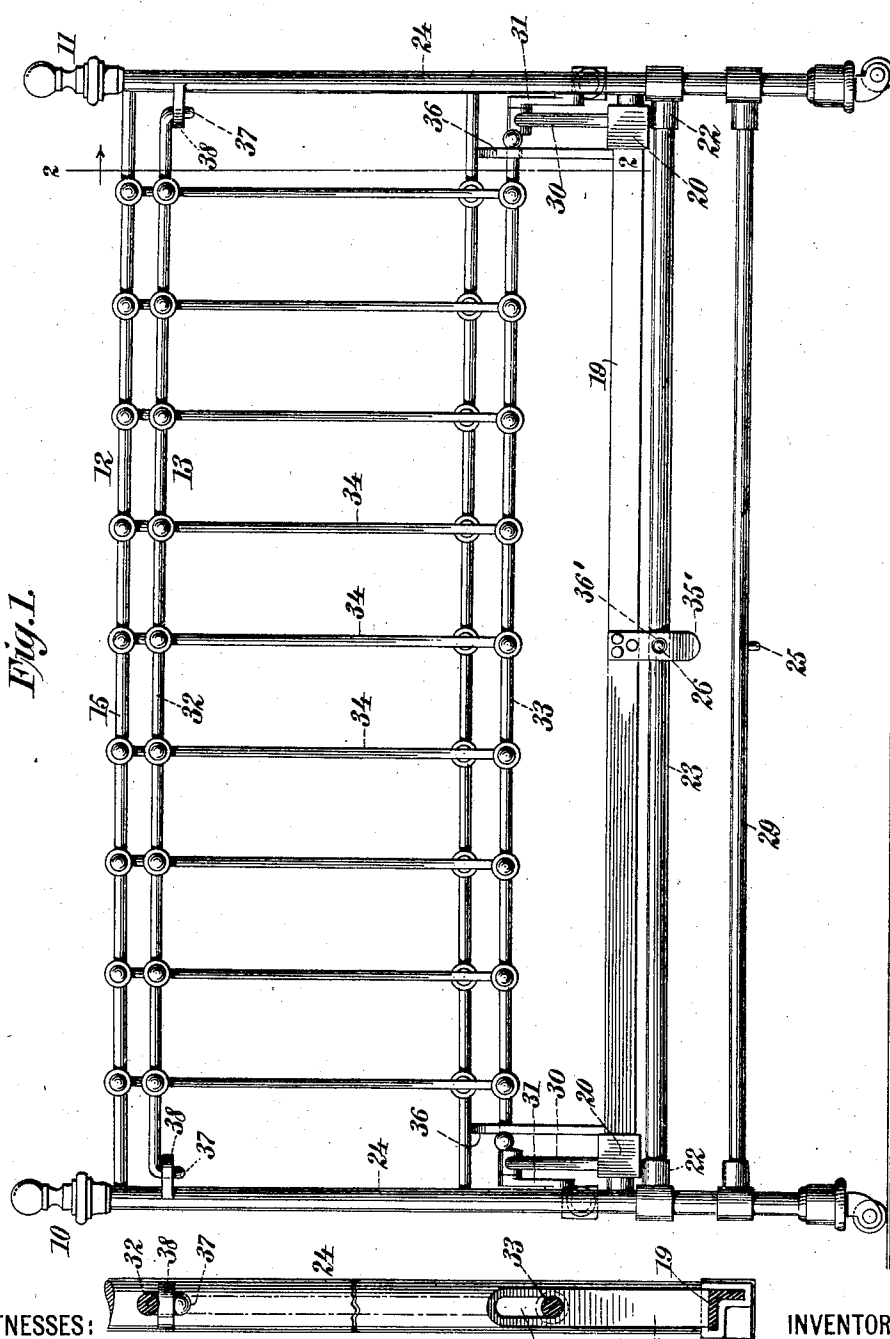


Fig. 1.

WITNESSES:

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Arthur Marion

Fig. 2.

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No. 788,529.

PATENTED MAY 2, 1905.

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3 SHEETS—SHEET 2.

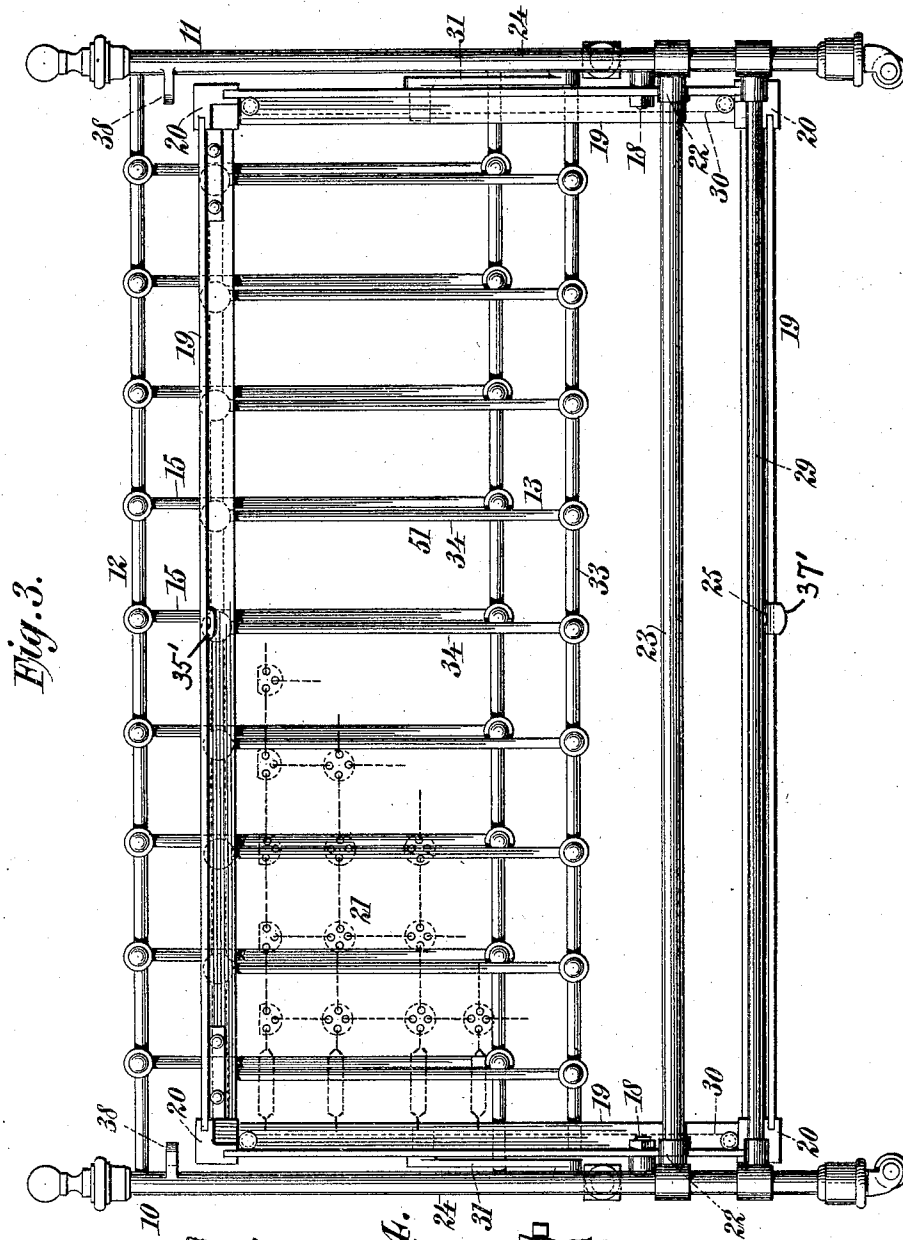


Fig. 3.

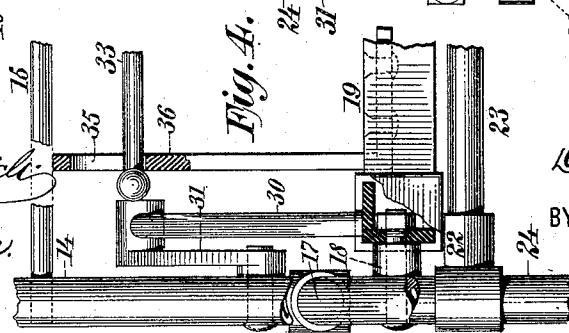


Fig. 4.

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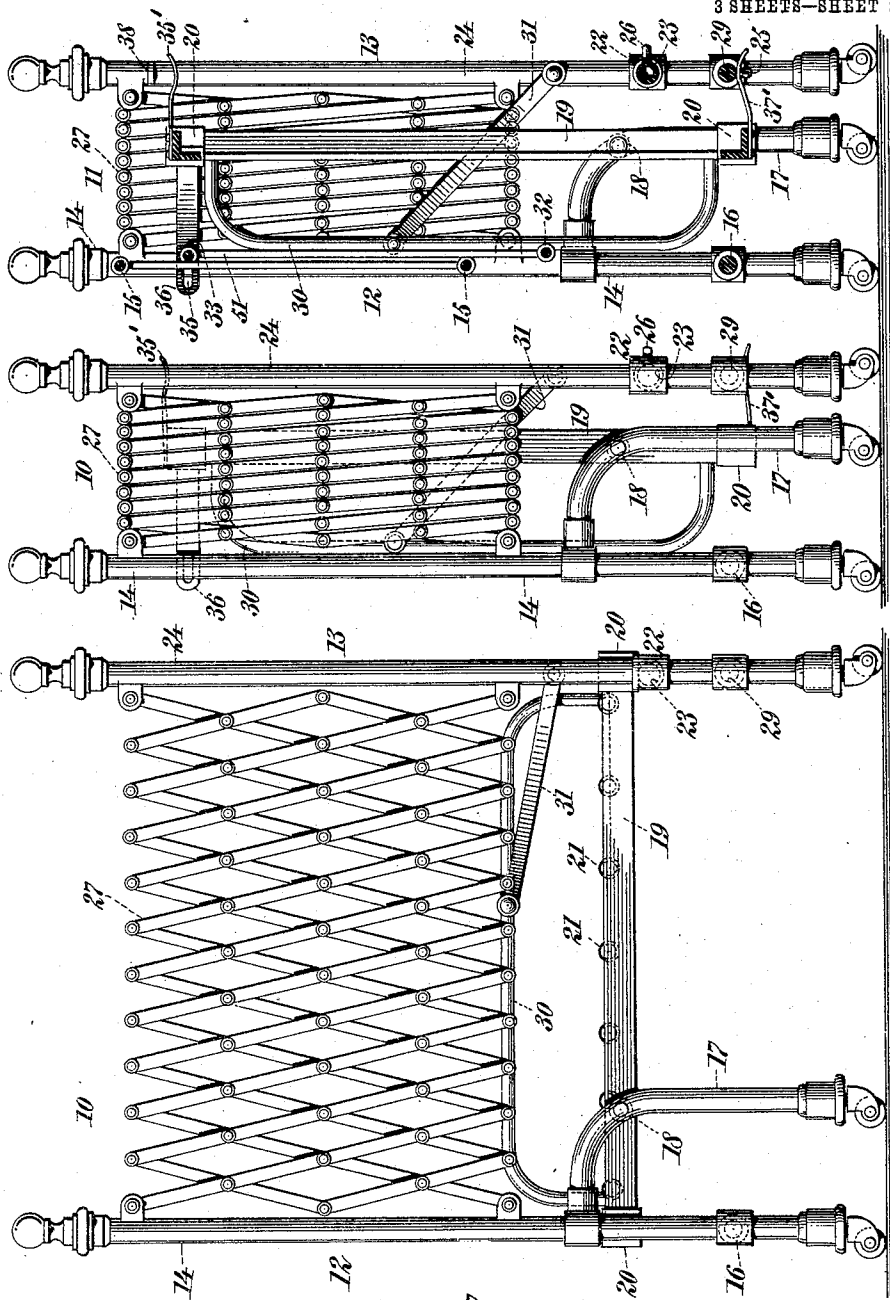
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3 SHEETS—SHEET 3.

Fig. 7.

Fig. 6.

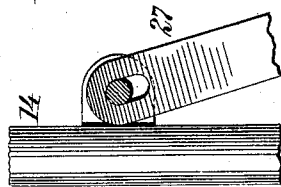
Fig. 5.



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Fig. 8.



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UNITED STATES PATENT OFFICE.

DAVID FRANK, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF TO
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FOLDING CRIB, BED, OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 788,529, dated May 2, 1905.

Application filed August 22, 1904. Serial No. 221,628.

To all whom it may concern:

Be it known that I, DAVID FRANK, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Folding Cribs, Beds, or the Like, of which the following is a specification.

The invention relates to improvements in folding cribs, beds, and the like; and it consists in the novel features, arrangements, and combinations of parts hereinafter described, and particularly pointed out in the claims.

I present my invention in this application as embodied in a child's crib comprising a hinged frame to receive the mattress, head and foot frames consisting of corner-posts connected together by collapsible lazy-tongs, and the side frames, one of which is rigid and the other of which is hinged to the mattress-frame, so as to be folded downwardly upon the mattress when it is desired to collapse the bed, the mattress-frame being adapted to be turned upwardly upon its hinges into parallel relation with the rigid side of the crib and being connected by suitable lever mechanism with the corner-posts at the movable side of the crib, whereby upon the turning upward of said mattress-frame said corner-posts are caused to move inwardly toward the corner-posts at the stationary side of the crib, and whereby also when the mattress-frame is again restored to its horizontal position the said corner-posts at the movable side of the crib are caused to recede from the corner-posts at the stationary side thereof and regain their former position.

The object of the invention is to produce a highly desirable, durable, convenient, efficient, and easily-operated folding crib or bed in which the parts thereof may be adequately supported when the crib or bed is in condition for use and which may be collapsed or folded to occupy the minimum space when the same is not in use.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a crib con-

structed in accordance with and embodying the invention, the view having been taken from the movable side of the crib. Fig. 2 is a detached sectional view, partly broken away, of a portion of the movable side of the crib, the section having been taken on the dotted line 2 2 of Fig. 1 and being presented to illustrate more clearly the means for securing the hinged portion of the movable side of the crib and allowing said portion to have a limited vertical movement when securing it at its upper end edges to the corner-posts at the movable side of the crib. Fig. 3 is a side elevation of the crib, taken from the movable side thereof when the crib is in its folded condition, a portion of the spring-support for the mattress being indicated by dotted lines and the remaining portion thereof being omitted, so as not to confuse the illustration. Fig. 4 is an enlarged side elevation, partly broken away and in section, of the left-hand end of the crib looking at the movable side thereof with the mattress-frame in its lower horizontal position, this figure being presented to more clearly illustrate a portion of the lever mechanism for operating the lazy-tongs levers when the mattress-frame is raised or lowered upon its hinges. Fig. 5 is an end view of the crib in its open position. Fig. 6 is a like view of same, showing the parts of the crib in their folded position. Fig. 7 is a central vertical transverse section of the crib with its parts in their folded position, and Fig. 8 is a detached view of a portion of one of the corner-posts of the crib and illustrates more particularly the means provided for allowing the end of the lazy-tongs levers connected therewith a limited amount of freedom of movement on its securing-pin during the folding and unfolding of the crib.

In the drawings, 10 11 respectively designate the head and foot frames of the crib, and 12 13 respectively the stationary and movable sides of the crib, the said head and foot frames 10 11 being identical in form and construction, either being capable of being employed as the head or foot of the crib.

At the stationary side 12 of the crib are provided the corner-posts 14 14, which are identical in construction and connected

above the mattress-support by the ornamental frame of rods 15, while below the said support the rods 14 are connected by a longitudinal rod 16, (indicated by dotted lines in Figs. 5 and 6 and by sectional lines in Fig. 7.) The corner-posts 14 at their lower portions are provided with rigid legs 17, (clearly illustrated in Figs. 5, 6, and 7,) which curve inwardly from the posts 14 and then extend outwardly to a point on a level with the lower ends of said posts. The auxiliary legs 17 aid in firmly supporting the crib at all times and especially when the crib is in its folded position. (Shown in Figs. 6 and 7.) The main purpose, however, in providing the legs 17 is to afford pivotal supports 18 for the mattress-frame 19, this frame 19 being of suitable rectangular outline and preferably formed of angle-iron rails connected together at their ends by castings 20 and carrying the usual spring-support 21 for the mattress, as shown. The frame 19 when in its vertical position is supported upon the pivots 18, as shown in Figs. 6 and 7, and when in its horizontal position is supported at the stationary side of the crib upon the said pivots and at the movable side of the crib upon the chills 22, by means of which the horizontal rod 23 is rigidly secured to the corner-posts 24 at the movable side of the crib, as shown in Figs. 1, 4, and 5.

The corner-posts 24 at the movable side of the crib correspond with the corner-posts 14 at the stationary side of the crib, but are not provided with any legs corresponding with the legs 17, connected with the corner-posts 14. The corner-posts 24 below the frame 19 are connected together by the longitudinal rod 23, above referred to, and also by the longitudinal rod 29, which is provided, as shown in Fig. 1, with a depending stud 25, whose purpose will be hereinafter explained. The stud 25 on the rod 29 is in vertical alinement with a similar stud 26, projecting horizontally outwardly from the rod 23, which will also be referred to hereinafter.

The corner-posts 14 24 at the head and foot of the crib are connected together by a series of lazy-tongs levers 27 of familiar type, which levers with said corner-posts constitute the head and foot frames of the crib.

The mattress-frame 19 being hinged on the pivots 18 may be given a horizontal position, as shown in Fig. 5, or turned upwardly into a vertical position adjacent to the stationary side of the crib, as shown in Figs. 6 and 7, and in accordance with my present invention I utilize the movement of the frame 19 from its horizontal to its vertical position and from its vertical back to its horizontal position for causing the movable side of the crib to approach the stationary side thereof, as shown in Fig. 6, and for effecting at the proper time the travel of the movable side of the crib from the stationary side

thereof the corner-posts at the movable side of the crib automatically traveling outwardly from the stationary side thereof when the mattress-frame 19 is lowered to its horizontal position. The means connecting the mattress-frame 19 with the corner-posts 24 at the movable side of the crib comprise at each end of the crib an elevated rod 30, rigidly connected at its ends to the mattress-frame, and a link 31, pivotally connected with the rod 30 and also with the corner-post. When the mattress-frame 19 is turned upwardly upon its pivots 18, the rods 30 first elevate the inner ends of the links 31 and then pull inwardly on said links, said links at such time and during their inward movement caused by the rods 30 drawing the corner-posts 24 in a direct line toward the corner-posts 14 and closing the lazy-tongs 27, the parts being in the position shown in Fig. 6 when the mattress-frame 19 has attained its vertical position.

I regard the means employed for connecting the hinged mattress-frame with the corner-posts at the movable side of the crib as highly advantageous in view of the simplicity, durability, and efficiency of the same, said means comprising simply a rod 30 at each end of the mattress-frame and a link 31 at each end of the crib, these links being pivotally connected to the rods 30 and corner-posts 24. The rods 30 also serve the further purpose of forming end frames for confining the mattress (not shown) upon the frame 19 and of keeping the ends of the mattress from contact with the lower ends of the lazy-tongs levers 27.

The movable side of the crib may consist simply of the corner-posts 24 and rods 23 29; but preferably the movable side of the crib will also be equipped with an ornamental frame or set of rods 51, corresponding in outline with the rod-frame 15, hereinbefore referred to, at the stationary side of the crib. The frame 51 comprises the upper rod 32, lower longitudinal rod 33, and vertical rods 34, connecting said rods 32 33. The ends of the rod 33 are mounted in a hinged manner within vertical slots 35, formed in the rigid posts 36, extending upwardly from the side of the frame 19, the slots being more clearly illustrated in Figs. 2 and 7. The upper rod 32 of the frame 51 has its ends bent downwardly to form hooks 37, adapted to enter vertically-apertured ears 38, extending inwardly from the corner-posts 24. The frame 51 when in the position in which it is shown in Fig. 1 is held rigidly in parallel relation to the stationary frame 15 by means of the hooks 37 and ears 38, and when it is desired to fold the crib into the condition in which it is shown in Figs. 6 and 7 the attendant will first directly elevate the frame 51, so as to relieve the hooks 37 from the ears 38 and then turn the frame 51 inwardly and downwardly

until the ends of the rod 32 rest upon the rods 30, hereinbefore referred to, and thereupon the attendant will take hold of the outer side of the frame 19 and turn the latter upwardly to the position in which it is shown in Fig. 7, the frame 51 at such time passing into close relation to the frame 15, and the mattress, if any be in the crib, being confined between the spring-support 21 and the aforesaid frame 51. The fact that the ends of the rod 33 are confined within slots 35, formed at the upper ends of the standards 36, enables the said frame to be given a vertical movement sufficient to relieve the hooks 37 from the ears 38 and also sufficient at the proper time to restore said hooks to said ears. When it is desired to again restore the crib from the condition in which it is shown in Fig. 7 to that shown in Fig. 5, the attendant will take hold of the then upper end of the frame 19 and pull it outwardly and downwardly until it returns to its horizontal position, and thereupon the attendant will turn the frame 51 upwardly upon its hinged ends until said frame has about reached a vertical position, whereupon said frame will be slightly lifted in a vertical direction to a sufficient extent to enable the hooks 37 to move directly over the apertures in the ears 38, whereupon the said frame 51 will be allowed to descend, so that the hooks may enter said apertures and said frame 51 thereby become locked in its vertical position, the entire crib being then restored to the condition in which it is illustrated in Figs. 1 and 5. If it should be so desired, the hinged frame 51 may when freed from the ears 38 be turned outwardly and downwardly, so as to leave one side of the crib entirely open.

I provide means for locking the mattress-frame 19 in its horizontal position and also means for locking the same in its vertical position, and these means for locking the frame 19 in its horizontal position comprise a spring-plate 35', having an aperture 36' adapted to snap upon the stud 26, carried by the rod 23, as shown in Fig. 1, the spring 35' during the downward movement of the frame 19 to its horizontal position closely engaging the outer end of the stud 26, and, finally, when the frame 19 has reached its full horizontal position carrying the aperture 36' upon the said stud 26. To free the spring 35' from the stud 26 preparatory to turning the frame 19 upwardly into a vertical position, it is simply necessary to lightly press the lower end of said spring outwardly and at the same time give an upward movement to the frame 19, so as to carry the aperture 36' of said spring upwardly from the outer end of said stud.

The means for locking the frame 19 in its vertical position comprise a spring 37', Figs. 6 and 7, having an aperture to pass upon and engage the stud 25 on the rod 29. The spring 37' corresponds with the spring 35', but is

fastened to the opposite side of the frame 19, so that when the frame 19 is turned upwardly into its vertical position the said spring 37' will pass against and move its aperture upon the said stud 25, as shown in Fig. 7, thereby locking the entire crib in its folded or collapsed condition. When it is desired to free the spring 37' from the stud 25, the attendant will press the then outer end of the spring 37' downwardly from the stud 25 and at the same time draw the then upper end of the frame 19 outwardly on the arc of a circle, thus starting said frame 19 toward its horizontal position and moving the aperture of the spring 37' from the stud 25.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The folding bed comprising head and foot frames, and a stationary side, said head and foot frames comprising corner-posts connected, at each end of the bed, by foldable levers, combined with a hinged mattress-frame, pivotal supports therefor adjacent to the stationary side of the bed, the hinged side frame 51 secured at the outer edge of said mattress-frame and adapted to be turned downwardly over the same when it is desired to fold the bed, means for detachably locking said frame 51 in its vertical position, and lever mechanism connecting said mattress-frame with the movable side of the bed, whereby when said mattress-frame is turned upwardly upon its pivotal supports said movable side of the bed will be caused to approach the stationary side thereof and whereby when said mattress-frame is turned downwardly to its horizontal position said movable side of the bed will be caused to recede from the stationary side thereof; substantially as set forth.

2. The folding bed comprising head and foot frames, and a stationary side, said head and foot frames comprising corner-posts connected, at each end of the bed, by foldable levers, combined with a hinged mattress-frame, pivotal supports therefor adjacent to the stationary side of the bed, the hinged side frame 51 secured at the outer edge of said mattress-frame and adapted to be turned downwardly over the same when it is desired to fold the bed, the slotted standards in which the lower edge of said frame 51 is hinged, the apertured ears carried by the movable corner-posts, the hooks carried by the said frame 51 to enter said apertured ears for detachably locking said frame 51 in vertical position, and lever mechanism connecting said mattress-frame with the movable side of the bed, whereby when said mattress-frame is turned upwardly upon its pivotal supports said movable side of the bed will be caused to approach the stationary side thereof and whereby when said mattress-frame is turned downwardly to its horizontal position said movable side of the bed

will be caused to recede from the stationary side thereof; substantially as set forth.

3. The folding bed comprising head and foot frames, and a stationary side, said head and foot frames comprising corner-posts connected, at each end of the bed, by foldable levers, combined with a hinged mattress-frame, pivotal supports therefor adjacent to the stationary side of the bed, the hinged side frame 51 secured at the outer edge of said mattress-frame and adapted to be turned downwardly over the same when it is desired to fold the bed, means for detachably locking said frame 51 in its vertical position, and lever mechanism connecting said mattress-frame with the movable side of the bed, whereby when said mattress-frame is turned upwardly upon its pivotal supports said movable side of the bed will be caused to approach the stationary side thereof and whereby when said mattress-frame is turned downwardly to its horizontal position said movable side of the bed will be caused to recede from the stationary side thereof, said lever mechanism comprising fixed rods carried by said mattress-frame, and links pivoted to said fixed rods and to said movable side of the bed; substantially as set forth.

4. The folding bed comprising head and foot frames, and a stationary side, said head and foot frames comprising corner-posts connected, at each end of the bed, by foldable levers, combined with a hinged mattress-frame, pivotal supports therefor adjacent to the stationary side of the bed, the auxiliary legs extending inwardly and downwardly from the stationary corner-posts and sustaining said pivotal supports, the hinged side frame 51 secured at the outer edge of said mattress-frame and adapted to be turned downwardly over the same when it is desired to fold the bed, means for detachably locking said frame 51 in its vertical position, and lever mechanism connecting said mattress-frame with the movable side of the bed, whereby when said mattress-frame is turned upwardly upon its pivotal supports said mov-

able side of the bed will be caused to approach the stationary side thereof and whereby when said mattress-frame is turned downwardly to its horizontal position said movable side of the bed will be caused to recede from the stationary side thereof, said lever mechanism comprising fixed rods carried by said mattress-frame, and links pivoted to said fixed rods and to said movable side of the bed; substantially as set forth.

5. The folding bed comprising head and foot frames, and a stationary side, said head and foot frames comprising corner-posts connected, at each end of the bed, by foldable levers, combined with a hinged mattress-frame, pivotal supports therefor adjacent to the stationary side of the bed, the auxiliary legs extending inwardly and downwardly from the stationary corner-posts and sustaining said pivotal supports, the hinged side frame 51 secured at the outer edge of said mattress-frame and adapted to be turned downwardly over the same when it is desired to fold the bed, the slotted standards in which the lower edge of said frame 51 is hinged, the apertured ears carried by the movable corner-posts, the hooks carried by the said frame 51 to enter said apertured ears for detachably locking said frame 51 in vertical position, and lever mechanism connecting said mattress-frame with the movable side of the bed, whereby when said mattress-frame is turned upwardly upon its pivotal supports said movable side of the bed will be caused to approach the stationary side thereof and whereby when said mattress-frame is turned downwardly to its horizontal position said movable side of the bed will be caused to recede from the stationary side thereof; substantially as set forth.

Signed at Brooklyn, in the county of Kings and State of New York, this 17th day of August, A. D. 1904.

DAVID FRANK.

Witnesses:

LOUIS B. FUNK,
EDWIN S. REED.