Dec. 31, 1957 E. O. PRATT 2,817,855

ADJUSTABLE FENCE ATTACHMENT FOR BEDS

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FIG. 1.

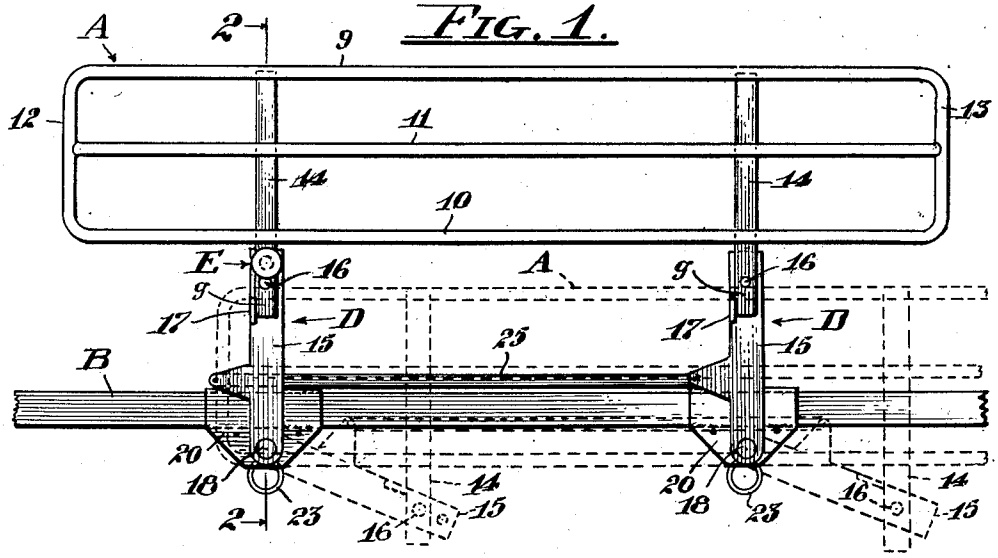

FIG. 2.

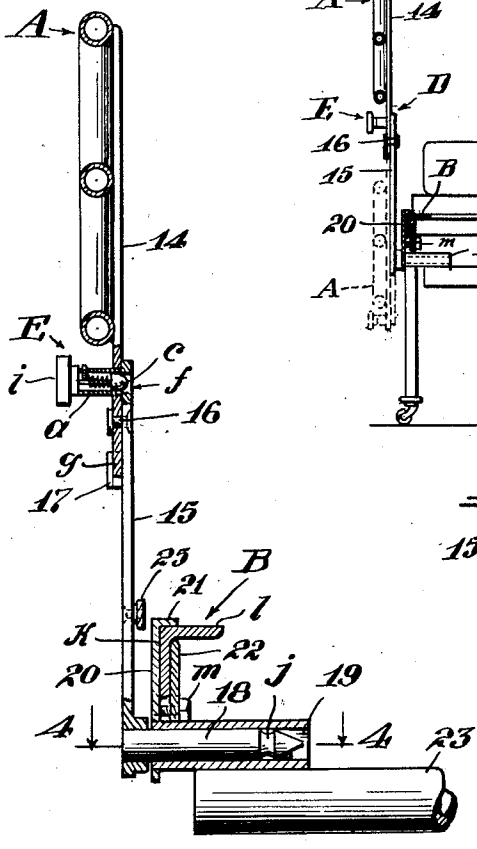

FIG. 3.

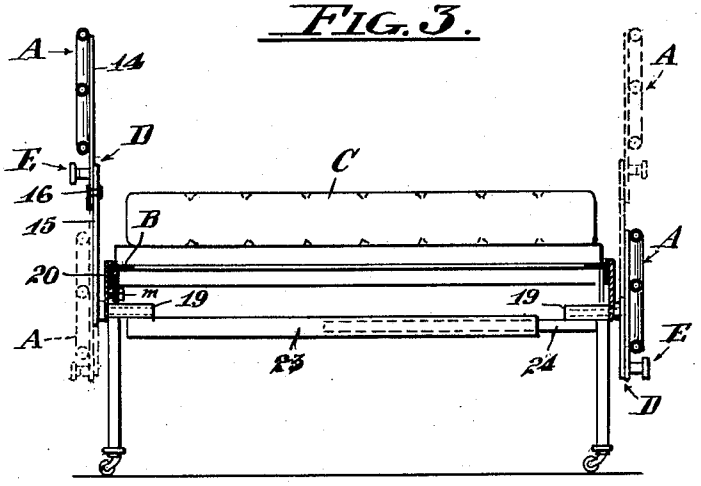

FIG. 4.

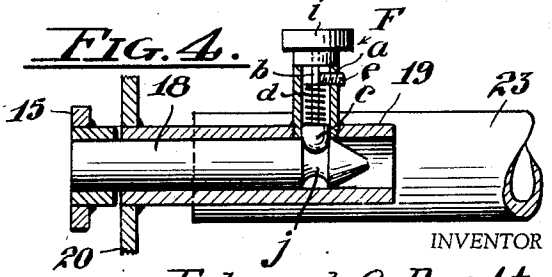

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FIG. 5.

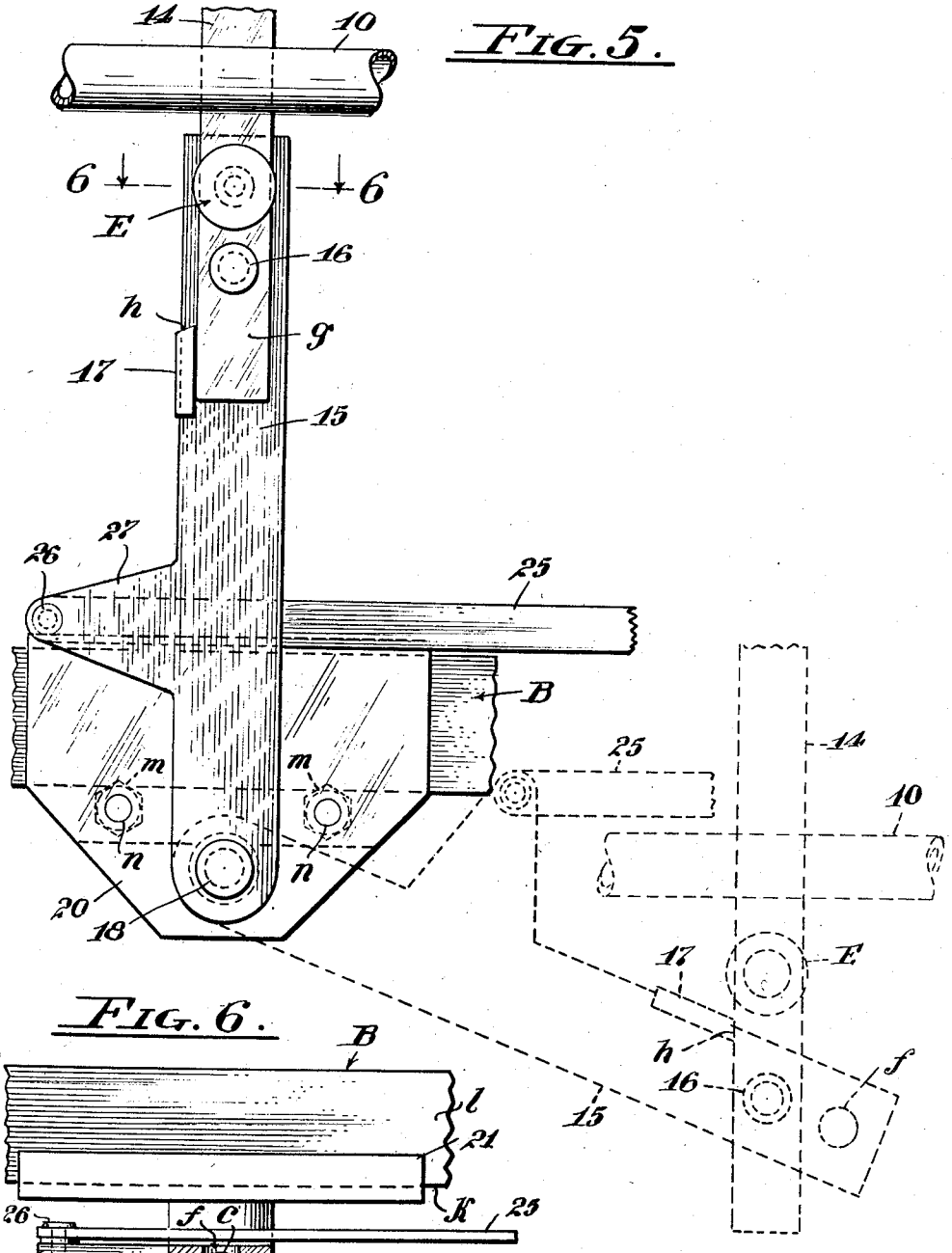

FIG. 6.

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FIG. 7.

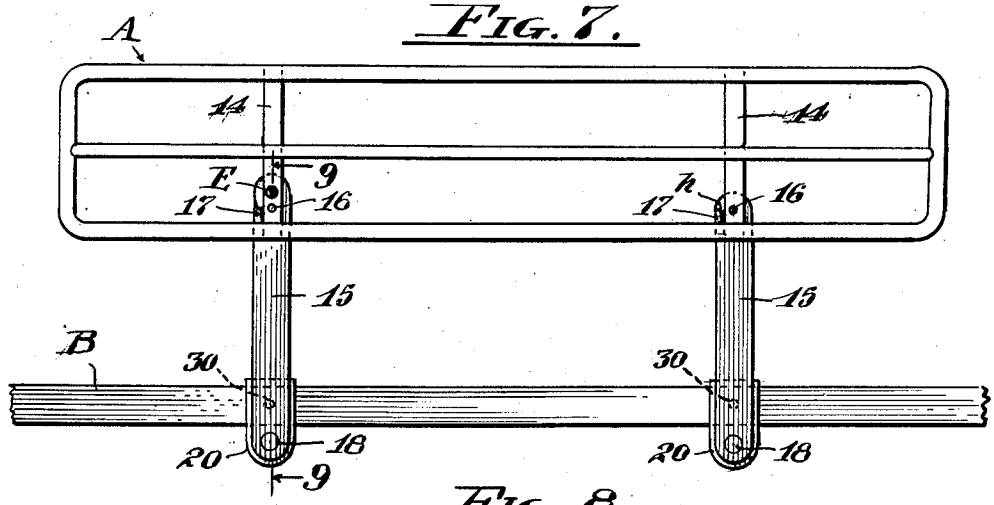


FIG. 8.

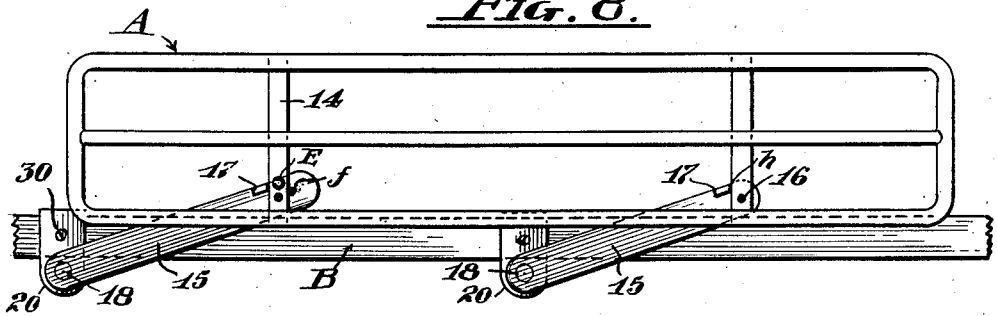


FIG. 9.

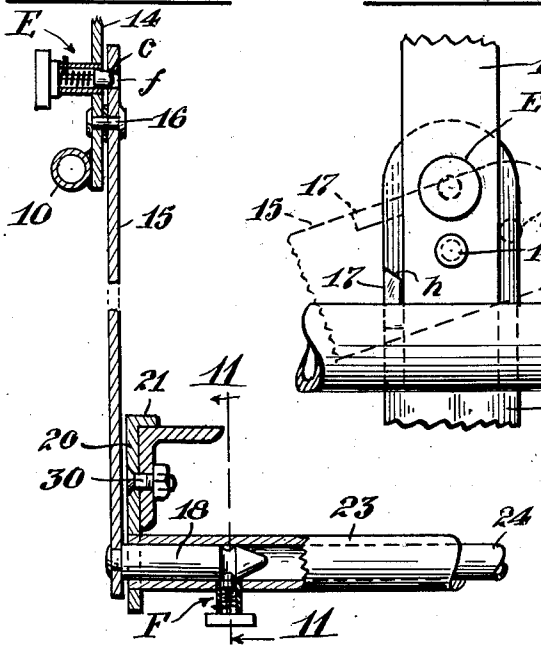
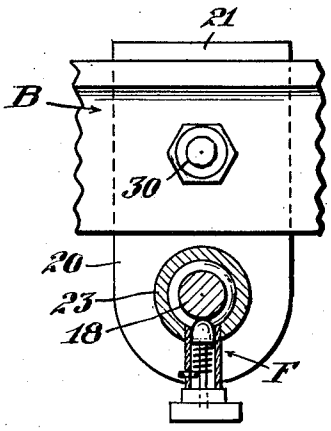


FIG. 10.

FIG. 11



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ADJUSTABLE FENCE ATTACHMENT FOR BEDS

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Application April 8, 1955, Serial No. 500,209

8 Claims. (Cl. 5—331)

This invention relates to a fence attachment for beds and has as its primary object the provision of a fence which when applied may readily be adjusted to dispose it in either an elevated operative position or in a lowered inoperative and out of the way position.

Another object is to provide a mounting for the fence whereby it may be swung on a vertical plane in its upright position to and from an upwardly extended or elevated operative position in which means are provided for releasably fastening the fence in such position.

Another object is to provide the fence mounting with an arrangement of stops or abutments for limiting both upward and downward movement of the fence.

A further object is to provide a bed rail attachment affording a support for the fence and its mounting on the side rails of a bed frame and which will permit ready removal and replacement of the mounting and fence without disturbing the bed rail attachment, and wherein the fence fastening means and the movement limiting abutments are embodied in the frame mounting apart from the bed rail attachment.

With the foregoing objects in view together with such other objects and advantages as may subsequently appear, the invention resides in the parts and in the combination, construction and arrangement of parts hereinafter described and claimed and illustrated by way of example in the accompanying drawings in which:

Fig. 1 is a view in front elevation of the bed fence and its mounting as applied to the side rail of a bed frame and showing the fence in its elevated position in full lines and in its lowered and out of the way position in dotted lines;

Fig. 2 is a view in vertical section partly in elevation taken on the line 2—2 of Fig. 1;

Fig. 3 is a view in cross section partly in elevation of a bed showing the invention as applied and illustrating in full lines the fence on one side of the bed in its elevated position and on the other side of the bed in its lowered position and depicting in dotted lines the alternate positions of the fence;

Fig. 4 is a detail in horizontal section and plan taken on the line 4—4 of Fig. 2 showing the manner of detachably supporting the fence mounting;

Fig. 5 is a view in elevation of a fragmentary portion of the fence with one of its mountings as applied to a bed frame side rail showing the parts in their elevated position in full lines and in their lowered position in dotted lines;

Fig. 6 is a detail in horizontal section and plan taken on the line 6—6 of Fig. 5;

Fig. 7 is a front view of a modified form of the invention showing the fence in its elevated position;

Fig. 8 is a view of the structure shown in Fig. 7 showing the fence in its lowered position;

Fig. 9 is a cross section taken on the line 9—9 of Fig. 7;

Fig. 10 is a detail in elevation of a fragmentary portion of the fence mounting; and

Fig. 11 is a detail in section taken on the line 11—11 of Fig. 9.

Referring to the drawings more specifically A indicates generally a bed fence which may be of any suitable construction, being here shown as fabricated of metal tubing and consisting of parallel top and bottom rails 9—10 and an intermediate rail 11, which rails are connected at their ends to members 12—13 preferably formed in continuation of the top and bottom rails 9—10.

The fence thus formed constitutes a light, rigid, elongated structure which in carrying out the invention is mounted to extend horizontally in longitudinal parallel relation to the slide rail B of a bed frame and disposed in either an elevated position to project above the top surface of a mattress C carried on the bed frame, or in a lowered position below the plane of the top surface of the mattress, as particularly shown in Fig. 3.

The mounting D—D of the fence shown in Figs. 1 to 6 inclusive embodies a pair of brackets 14—14 rigidly connected to the fence A and having end portions *g* projecting below the bottom rail 10, the brackets being here shown as comprising flat bars longitudinally extended transversely of the rails 9, 10 and 11 and affixed thereto as by welding. The fence mounting also embodies a pair of links 15—15 which are hingedly connected to the end portions *g* of the brackets 14—14 by pivots 16 for swinging movement in the direction of the length of the frame A.

The adjacent end portions of the brackets 14 and links 15 overlap each other on opposite sides of the pivot 16 when the links are disposed in longitudinal alignment with the projecting end portions *g* of the brackets, and as a means for releasably fastening the links in such alignment at least one of the brackets 14 is fitted with a latch E which embodies a tubular housing *a* mounted on and projecting from the front of the bracket 14 and extending perpendicular thereto. The latch E also embodies a reciprocal stem *b* the inner end of which is fitted with a domed detent *c* which normally projects beyond the inner face of the bracket 14 under the urge of a spring *d* bearing between the detent *c* and an abutment *e* in the form of a screw mounted in the wall of the housing A. The detent *c* is engageable with an aperture *f* formed in the link 15 at a point on the latter where it will register with the detent *c* when the bracket and link are in their longitudinal aligned position as particularly shown in Figs. 2 and 6. The outer end of the stem *b* is fitted with a head *i* constituting a finger hold adapted to be grasped and pulled to effect retraction of the detent *c* in opposition to the spring *d* when it is desired to move the detent *c* out of engagement with the aperture *f*.

As a means for limiting swinging movement of the links 15—15 on the pivots 16, each of the links 15 is provided with an outwardly projecting stop or abutment 17 arranged below the pivot 16 at one side of the bracket 14 such that one side of the abutment will serve to limit swinging movement of the link 15 to one direction when longitudinally aligned with the bracket 14.

The abutment 17 has an end face *h* also constituting a stop against which a marginal portion of the bracket 14 may abut to limit downward swinging movement of the links 15—15 and thereby determine the lowered position of the fence A.

Mounted on the lower end of each of the links 15—15 and projecting perpendicular to the inner face of the link is a trunnion 18 which is adapted to be inserted in the open outer end of a tubular socket 19 carried by the bed rail B, the trunnion 18 being slidably supported in the socket 19 to afford a detachable freely moveable pivotal mounting or support for the link 15. As a means for releasably retaining the trunnion 18 in the socket 19 the latter is equipped with a spring pressed detent F corresponding in construction to the detent E. The detent *c* of the detent F is engageable with a circumferential chan-

nel *j* formed on the trunnion **18** at a point on the latter where it will align with the latch *c* when the trunnion is in its innermost position in the socket **19**.

The socket **19** comprises a cylindrical tube the outer open end of which extends through and is affixed to a supporting plate **20** having an inturned flange **21** on its upper margin, the plate **20**, when mounted being positioned against the outer face of the vertical web *k* of the bed rail B with the flange **21** seating on the horizontal web *l* of the rail as particularly shown in Fig. 2. The socket supporting plate **20** is designed to be removably clamped on the rail B at any suitable point along the length thereof which is accomplished by a clamping plate **22** positioned against the inner face of the web *k* with the lower marginal portion thereof projecting below the lower margin of the web *k* and connected to the plate **20** by a pair of bolts *m* which are passed through the plate **22** from the inner side thereof and screwed into engagement with internally threaded holes *n* in the plate **20** so as to tightly clamp the plate **20—22** against the opposite sides of the web *k*. When the plates **20—22** are thus positioned the socket **19** on the plate **20** will extend beneath the side rail B transversely thereof.

As a means for facilitating the mounting of the pair of the sockets **19** on a pair of the side rails B—B so as to be positioned in axial alignment on opposite sides of a bed, the sockets are affixed at their inner end portions to tubes **23—24** in overlying relation thereto which tubes are telescoped with a sliding fit as indicated in Fig. 3 and are slidable relative to each other, the tubes **23—24** being thus interconnected to permit of their longitudinal adjustment to enable mounting of the socket members and tube assemblage on bed frame of various widths. The above recited mounting of the sockets is set forth in a co-pending application Serial No. 460,029, filed October 4, 1954, on a Guard Attachment for Beds.

The pair of sockets **19** mounted on a bed rail B are spaced apart on the rail a distance equal to the spacing between the axes of the pair of trunnions **18—18** which corresponds to the spacing between the axes of the pivots **16—16**. The axes of the trunnions **18** and pivots **16** are correspondingly spaced apart on each of the links **15**.

As a means for maintaining the links **15—15** in parallel relation to each other and whereby the fence A will be maintained horizontal during movement thereof, a tie rod **25** is pivotally connected at its ends by pivots **26** to the links **15—15**, with the axis of the pivot **26** of each link **15** being spaced from the axis of the trunnion **18** of such link a distance corresponding to the distance between the axis of the pivot and trunnion of the other link. In order to permit downward movement of the links **15—15** to a downwardly inclined position, the pivots **26** are connected to the outer end portions of extensions **27** projecting laterally from the rear edges of the links **15** as particularly shown in Fig. 5, whereby the tie rod **25** will extend on a plane above the trunnions **18** when the links **15** are in their lowermost downwardly inclined positions determined by the engagement by the brackets **14—14** with the abutments *h*.

In the application and operation of the invention, the sockets **19** are affixed to the bed rails B in the manner hereinbefore set forth, whereupon when it is desired to equip the bed with a fence A, the latter with the attached pair of links **15** depending therefrom is applied by inserting the trunnions **18** in the sockets where the detents *c* of the latches F on the sockets snap into engagement with the grooves *j* on the trunnions thereby securing the latter in place. The fence A will then be supported in its elevated position as shown in full lines in Fig. 1 and will be held in such position by the detent *c* of the latch E on one of the brackets **14** engaging the aperture *f* in the adjacent link **15**. When it is desired to lower the fence A, the latch E is disengaged from the link **15** whereupon the fence is shoved longitudinally in a direction wherein the lower end portion *g* of the brackets

14 will swing on the pivots **16** away from the stops **17**. This movement of the fence swings the links **15** on their trunnions **18** into a position inclined forwardly from the vertical. The weight of the fence A will then swing the links **15** downward until the ends *h* of the stops **17** are brought into abutting relation to the lower end portions of the brackets **14** as indicated in dotted lines in Fig. 5 thereby bringing the fence A to rest in its lowered position as shown in dotted lines in Fig. 1.

To restore the fence A to its elevated position it is lifted and swung rearwardly in the direction of its length, thereby swinging the links **15** upwardly to their vertical positions where they are brought to rest against the stops **17** and are secured in such positions by the latch E snapping into engagement with one of the links **15**.

During the movement of the fence in either direction the tie rod **25** will act to sustain the fence horizontally in parallel relation to the bed rail B.

In the modified form of the invention shown in Figs. 7 to 11 inclusive wherein the reference characters corresponding to those of the several views in the drawings indicate corresponding elements, the construction and assemblage is such that the tie rod **25** employed in the previously described construction may be dispensed with.

In the structure under consideration, the brackets **14—14** terminate at the bottom rail **10** of the fence A and the upper ends of the links **15—15** are pivotally connected to the lower end portions of the brackets above the rail **10** by pivots **16** and at least one of the links **15** is extended above the pivot **16** and is formed with an aperture *f* for the reception of the detent *c* of the latch E carried on the bracket **14**. In this distance the trunnion **18** is engageable in a socket formed by the outer end of the tube **23** which is connected directly to the plate **20** and opens therethrough and the plate **20** is fastened directly to the bed rail B by a bolt **30** as shown in Fig. 9.

In this case, downward swinging movement of the links **15—15** is limited by the ends *h* of the abutments **17** abutting the brackets **14** above the bottom rail **10** of the fence as the links approach the horizontal so that the links will come to rest in an upwardly inclined position as shown in Fig. 8 and as indicated in dotted lines in Fig. **10**, the abutments **17** being arranged to abut the brackets **14** on upward swinging movement of the links to limit such upward movement to an upright position of the links.

A feature of the assemblage above described is that the latch E when disengaged from the aperture *f* remains seated on the outer face of the link **15** when the latter is in its lowermost position so that on elevating the link to its upstanding position the latch will automatically reengage the aperture *f* to hold the fence in its uppermost position.

An important feature of the invention which is incident to both forms thereof herein set forth, is the embodiment in the structure of the fence and its mounting links of the fence fastening means E and the abutments **17** for limiting swinging movement of the fence, all apart from the bed rail attachment, which, together with the disengageable pivotal connection between the fence carrying links afforded by the trunnions thereon and the telescoping bearing socket on the rail attachment, permits ready intermounting of a single fence assembly on any one of a number of beds equipped with the bearing sockets. In this connection, a highly advantageous feature is that at least one of the rail supporting links may be rigidly interlocked with the frame when the latter is separated from a bed so as not to be free swinging thereby facilitating initial insertion of the trunnion on the rigid link in its socket by one person lifting the fence and effecting its operative connection with a bed rail.

While specific embodiments of the invention has been shown and described, the invention is not limited to the exact details of construction set forth, and the invention embraces such changes, modifications and equivalents

of the parts and their formation and arrangement as come within the purview of the appended claims.

I claim:

1. In a fence attachment for beds, an elongated rigid fence, a pair of brackets rigidly affixed to said fence, a pair of links pivotally connected to said brackets to depend therefrom, a trunnion on the outer end portion of each of said links, disengageable means pivotally supporting said trunnions for free turning movement on the side rail of a bed frame on which said links can be swung longitudinally of the rail to and from an upright position to raise and lower said fence, means for limiting swinging movement of said links in one direction to an upright position, releasable means carried by the fence engageable with at least one of the links to retain the links in an upright position, and means for limiting downward movement of said links.

2. In a fence attachment for beds, an elongated rigid fence, a pair of brackets affixed to said fence, a pair of links each having an upper end portion pivotally connected to said brackets, a trunnion on the outer end portion of each of said links, means for pivotally supporting said trunnions for free turning movement on the side rail of a bed frame, latch means on one of said brackets releasably engaging the adjacent links to fasten said links in an upright position, and stop means on said links cooperable with said brackets limiting movement of said links in one direction to their upright position.

3. The structure called for in claim 2 together with abutments on said links cooperable with said brackets limiting downward movement of links.

4. The structure called for in claim 2 together with lateral extensions on said links, and a tie rod extending in parallel relation to said bottom rail having its ends pivotally connected to the outer end portions of said extensions.

5. In a fence attachment for beds, an elongated rigid fence including a bottom rail, a pair of brackets affixed to said fence, a pair of links having upper end portions pivotally connected to said brackets adjacent said rail, a trunnion on the outer end portion of each of said links, means for pivotally supporting said trunnions on the side rail of a bed frame on which said links may be swung to and from an upright position, at least one of said links having its upper end portion formed with an aperture, a spring pressed detent on the bracket carrying said last named link arranged for releasable engagement with said aperture to hold said link against swinging movement, said aperture and detent being located for interengagement when the link is in its upright position, stop means for limiting movement of said links in one direction to an upright position supporting said fence in an elevated position, and means for limiting downward movement of said links to a position supporting said fence in a lowered position.

6. In a fence attachment for beds, a pair of sockets, means for mounting said sockets on a bed side rail, a pair of links, trunnions on said links mounted in said sockets and freely turnable therein and longitudinally withdrawable therefrom, a circumferetial channel on each of said trunnions, a retractable detent carried on each of said sockets engageable with the channel of the trunnion mounted therein, a fence, brackets fixed on said fence to which the outer ends of said links are pivotally connected and means on said links engageable with said brackets to limit up and down swinging movement of said links, and releasable means carried by the fence engageable with at least one of the links to retain the links in a fixed upright position.

7. In a fence attachment for beds, a rigid fence, a pair of brackets fixed on said fence, a pair of links having upper end portions pivotally connected to said brackets, a trunnion on the outer end portion of each of said links, means for pivotally supporting said trunnions on the side rail of a bed frame on which said links can be freely swung to and from an upright position, at least one of said links being formed with an aperture, a latch on the bracket carrying said last named link releasably engageable with said aperture to hold said link against swinging movement; said aperture and latch being located for interengagement when the link is in its upright position, means on said link cooperating with said bracket for limiting movement of said links in one direction to an upright position supporting said fence in an elevated position, said means on said link also cooperating with said bracket for limiting downward movement of said links to a position supporting said fence in a lowered position.

8. In a fence attachment for beds, a horizontally extending rigid fence, a pair of upright brackets fixed on said fence, a pair of links having end portions pivotally connected to said brackets; means detachably connecting the other end portions of said links to a bed side rail in pivotal engagement therewith; means on said links cooperating with said brackets limiting swinging movement of said links in either direction, and releasable means carried by the fence engageable with at least one of said links to retain the links in a fixed position relative to said fence.

References Cited in the file of this patent

UNITED STATES PATENTS

1,198,009	Cooper	Sept. 12, 1916
1,211,527	Berndt	Jan. 9, 1917
2,587,291	Des Rochers	Feb. 26, 1952