

Sept. 18, 1956

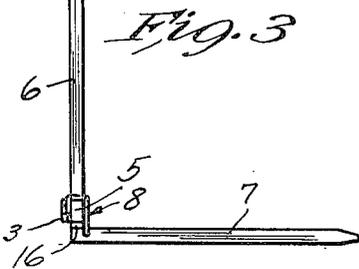
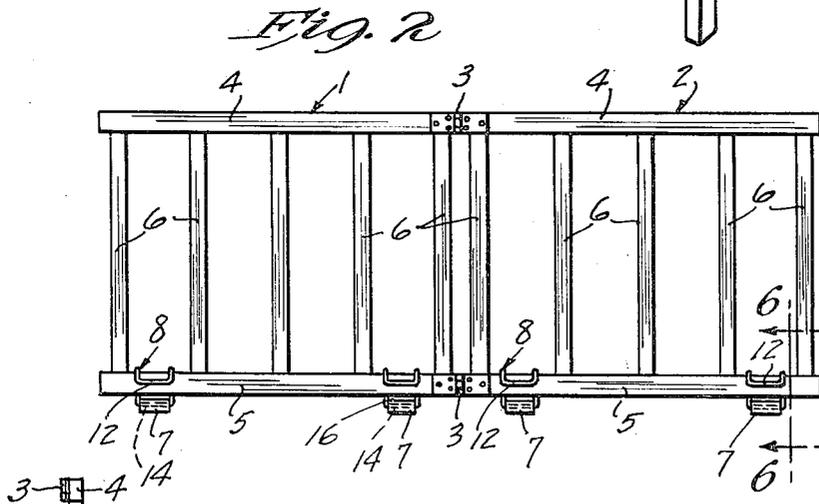
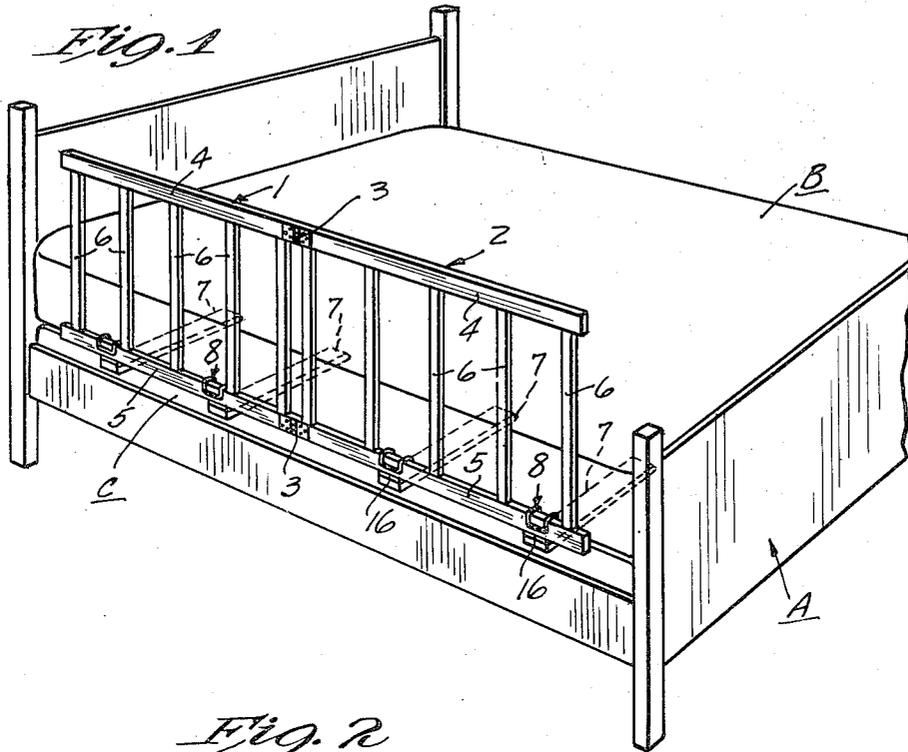
K. E. LUGER

2,763,014

FOLDING PORTABLE BED GUARD

Filed Aug. 7, 1953

2 Sheets-Sheet 1



INVENTOR.

*Kenneth E. Luger*

BY

*Merchant & Merchant*  
ATTORNEYS

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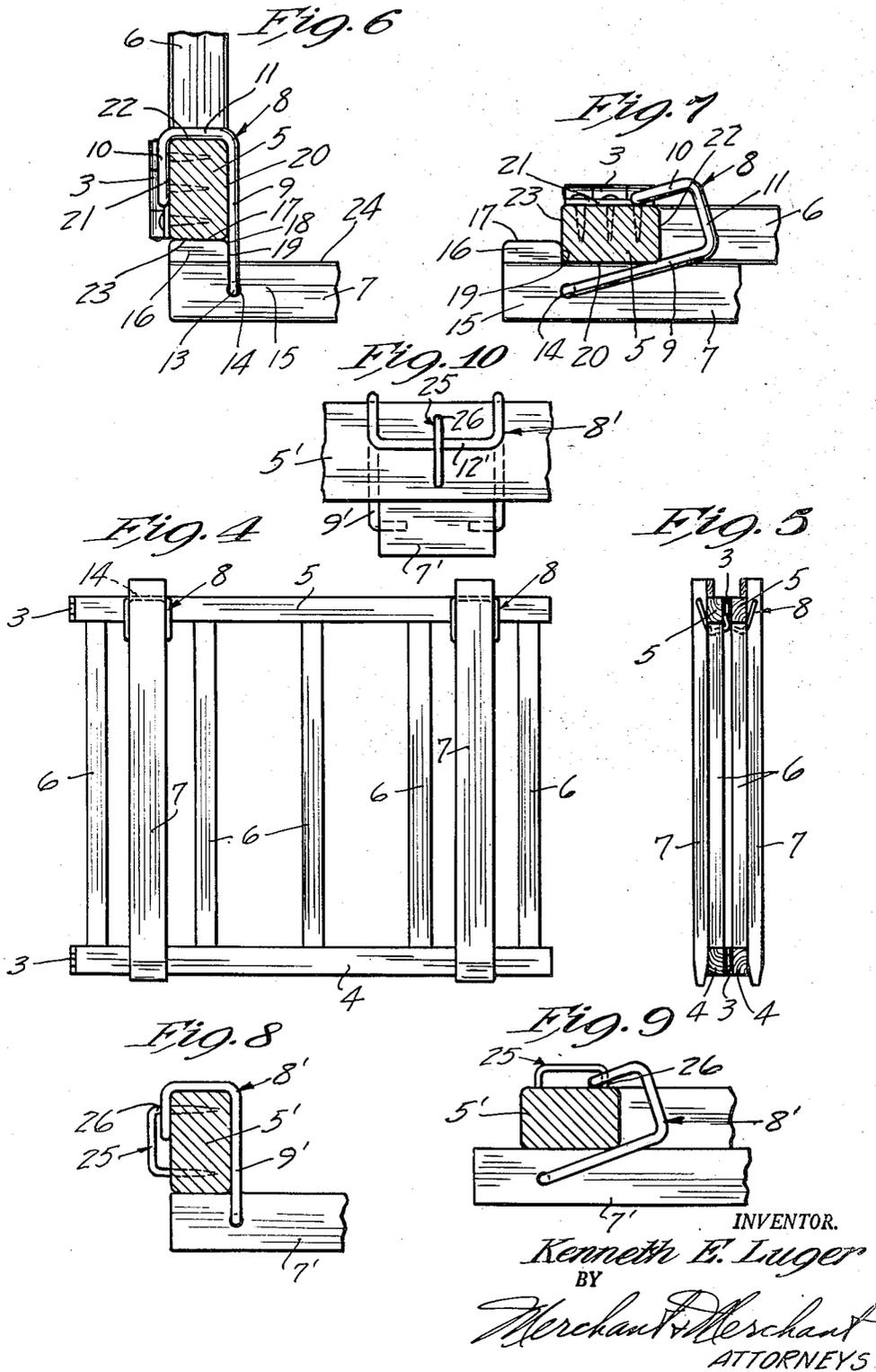
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Kenneth E. Luger

BY

Merchant & Merchant  
ATTORNEYS

1

2,763,014

**FOLDING PORTABLE BED GUARD**

Kenneth E. Luger, Minneapolis, Minn.

Application August 7, 1953, Serial No. 372,958

5 Claims. (Cl. 5—331)

My invention relates to safety gates or barriers, and more particularly to safety barriers for use in conjunction with conventional beds to prevent infants or invalided adults from rolling out of the free side of said bed while sleeping.

Such devices conventionally include a vertically disposed barrier or gate and supporting feet secured to the bottom portion of said gate for folding movements from an operative right angle position, for reception between a mattress and a bed spring, to a folded inoperative position in side-by-side substantially parallel relation to the barrier element. The primary object of my invention is the provision of means for connecting said supporting feet to said barrier whereby inward folding movements of the barrier in the direction of the supporting feet may be achieved through a minimum of effort and yet outward swinging movements beyond the normal operative position is positively precluded, so as to greatly increase the safety factor of the structure.

A still further object of my invention is the provision of a device of the class immediately above described which is inexpensive to produce, which has a minimum of working parts, and which is positive but automatic in its action.

The above and still further objects of my invention will become apparent from the following detailed specification, appended claims, and attached drawings.

Referring to the drawings, wherein like characters indicate like parts throughout the several views:

Fig. 1 is a perspective view of a conventional bed having my barrier secured thereto;

Fig. 2 is a view in side elevation of my novel structure as seen from left to right with respect to Fig. 1;

Fig. 3 is a view in end elevation of my novel structure;

Fig. 4 is a view in side elevation of my novel structure in its folded and collapsed position;

Fig. 5 is a view in end elevation of the structure of Fig. 4;

Fig. 6 is a fragmentary view partly in section and partly in elevation as seen from the line 6—6 of Fig. 2;

Fig. 7 is a view corresponding to Fig. 6 but showing the folded position of the parts thereof;

Fig. 8 is a view corresponding to Fig. 6 showing a modified form of my invention;

Fig. 9 is a view corresponding to Fig. 8 but showing the folded position of the parts; and

Fig. 10 is a fragmentary view in elevation as seen from left to right with respect to Fig. 8.

Referring more particularly to the structure of Figs. 1—7 inclusive of the drawings, the letter A indicates the bed in its entirety, B the mattress, and C the conventional spring supporting mattress B. Preferably and as shown, my barrier sections 1 and 2 are hingedly secured together as at 3. Sections 1 and 2 are identical and each includes upper rails 4, lower rails 5, and spaced vertical connecting members 6. Secured to the lower rails 5 in spaced relation to each other for generally pivotal or rocking movements from a right angle operative position, as

2

shown in Fig. 1, to a folded inoperative position, as shown particularly in Figs. 4 and 5, are a plurality of supporting feet 7. The particular means by which this is accomplished includes pairs of inverted generally U-shaped hook members, identified in their entirety by the numeral 8 and including relatively long inner legs 9 and relatively short outer legs 10 which are connected at their upper ends by members 11. Preferably, the hook members 8 are formed from single lengths of resilient wire stock, the depending ends of the relatively short outer legs 10 being connected by arms 12. The lower ends of the relatively long inner legs 9 are intumed, as at 13, for reception in aligned openings 14 on the opposite sides 15 of the supporting feet 7. Mounting blocks 16 are secured to the outer end portions of the supporting feet 7 and project upwardly therefrom. Mounting blocks 16 have relatively flat upper faces 17 with a somewhat rounded inner edge portion 18. The inner side surfaces 19 of the blocks 16 are flush with the relatively long inner legs 9 when said legs are moved to the vertical operative position of Fig. 6. It will also be noted that the relatively long legs 9, the relatively short legs 10, and the connecting members 11 of the hooks 8 snugly engage or grip the inner surface 20, the outer surface 21, and the upper surface 22 respectively of the bottom rails 5 when said hooks 8 are in the operative position of Fig. 1. In said position, it will be noted that the relatively flat undersurface 23 of the lower rails 5 rest upon the relatively flat surface 17 of the mounting blocks 16.

With the construction immediately above described, it should be obvious that outward swinging movements of the barrier sections 1 and 2, beyond the operative position of Fig. 6, is very positively checked—a highly important safety factor. On the other hand, when it becomes necessary or desirable to fold the supporting feet 7 against the barrier sections 1 and 2, this may be accomplished readily by merely rocking the supporting feet 7 with respect to the barrier sections 1 and 2, as shown in Fig. 7. During the folding operation the bottom rail 5 dismounts itself from the mounting block 16 and the relatively flat inner surface 20 comes to rest upon the upper surface 24 of the feet 7 with the relatively flat undersurface 23 of the rail 5 in contact with the inner side surface 19 of the mounting blocks 16. It will be noted that the overall height of the bottom rail 5 is greater than the distance between the cross-arms 12 connecting the free lower ends of the hooks 8 and the side 19 of the blocks 16. This feature positively prevents the bottom rail 5 from being entirely removed from the hooks 8 when the several members have been moved to their collapsed inoperative positions. This feature is clearly shown in Fig. 7.

In the modified form of the invention disclosed in Figs. 8—10 inclusive, the mounting blocks 16 are omitted, and vertically extending staples 25 are utilized to prevent complete removal of the bottom rails 5' from the hooks 8'. As there shown, the connecting or cross-arms 12' are straddled by staples 25, the upper legs 26 of which engage the cross-arms 12' and thereby positively limit outward movements of the bottom rails 5' with respect to the hooks 8' when several elements are in their folded inoperative position of Fig. 9.

In both the structures of Figs. 1—7 inclusive and 8—10 inclusive, the resilient hooks 8 and 8' flex temporarily sufficiently to enable the elements to be moved from operative to inoperative positions and vice-versa.

My invention has been thoroughly tested and found to be completely satisfactory for the accomplishment of the above objects, and while I have shown a preferred embodiment and one modified form of my invention, I wish it to be understood that same is capable of still further

3

modification without departure from the scope of the appended claims.

What I claim is:

1. A hinge connection for safety barriers for beds comprising a barrier section and a supporting foot adapted to be inserted between the mattress and the bed spring of a conventional bed, said barrier section having a horizontal rail, said hinge connection comprising an inverted generally U-shaped hook member having a relatively long inner leg and a relatively short outer leg, said inner leg being adapted to be pivotally secured to said foot in spaced relation to its outer end, said hook being adapted to snugly engage the outer sides and upper surface of said rail when said barrier is in upstanding operative position whereby to positively prevent outward rocking movements of said barrier with respect to said foot, and means for retaining said rail partially within said hook when said foot is moved to a folded position in side by side relationship with said barrier section.

2. The structure defined in claim 1 in which said hook is formed from flexible resilient material whereby to permit sufficient temporary distortion thereof to allow inward swinging movements of said section with respect to said foot when said foot is retracted from between said mattress and bed spring.

3. A hinge connection for safety barriers comprising a barrier section having a rail and a plurality of spaced supporting feet adapted to be inserted between the mattress and the bed spring of a conventional bed, said hinge connection adapted to connect the outer end portions of said feet to said rail for folding movements thereof from side by side folded relation thereof with said barrier section to laterally projecting operative positions with the outer ends thereof underlying and supporting the rail, said hinge connection including pairs of inverted generally U-shaped hook members formed from flexible resilient material each having a relatively long inner leg and a relatively short outer leg, inner legs of each pair being adapted to be pivotally secured to opposite sides of one of said feet in spaced relation to its outer end, said hooks

4

adapted to snugly engage the opposite sides and upper surface of said rail when in operative position whereby to positively prevent outward rocking movements of said barrier section with respect to said feet, arms joining the depending ends of said pairs of relatively short outer legs, and means adapted to permit limited sliding movements of said rail within said hook members to enable said supporting feet to be swung from operative to inoperative positions but adapted to positively prevent said rail from being removed from said hook members when in said folded inoperative position.

4. The structure defined in claim 1 in which said means adapted to retain said rail partially within said hook when said foot is in said folded position includes a mounting block adapted to be positioned on the outer end portion of said supporting foot and when so positioned adapted to receive and support said rail when said foot is swung to its operative position, the inner edge of said mounting block being adapted to be vertically aligned with the inner edge of said rail when said rail is in operative position whereby to cause said rail to dismount said block when said foot is moved to said folded position, the vertical distance between the inner edge of the mounting block and the lower end of the inner leg being less than the height of the rail with which said hinge is adapted to be used.

5. The structure defined in claim 1 in which said means retaining said rail partially within said hook when said foot is in said folded position includes an arm projecting horizontally outwardly from the lower end portion of said relatively short outer leg and a staple-like member secured to the outer side surface of said rail transversely thereof and loosely overlying said arm.

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