July 15, 1952 J. G. EDELEN 2,602,939

BED RAIL AND POST RAIL CONNECTION

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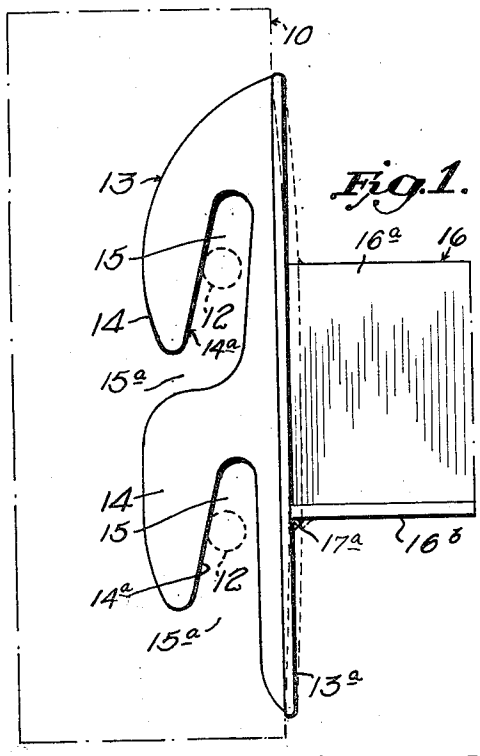


Fig. 1.

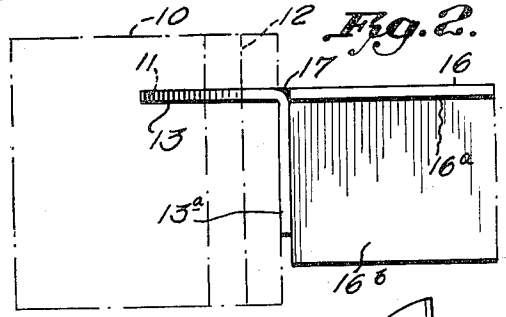


Fig. 2.

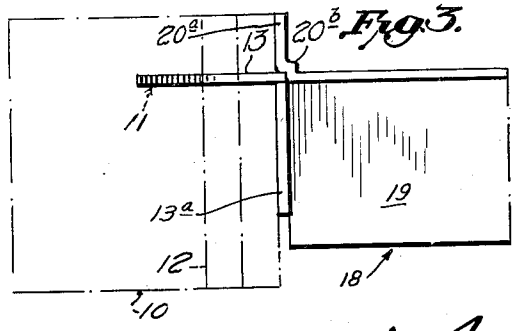


Fig. 3.

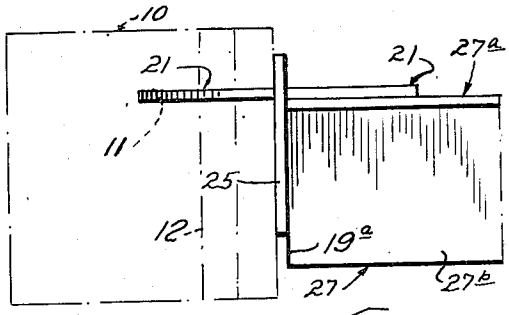


Fig. 4.

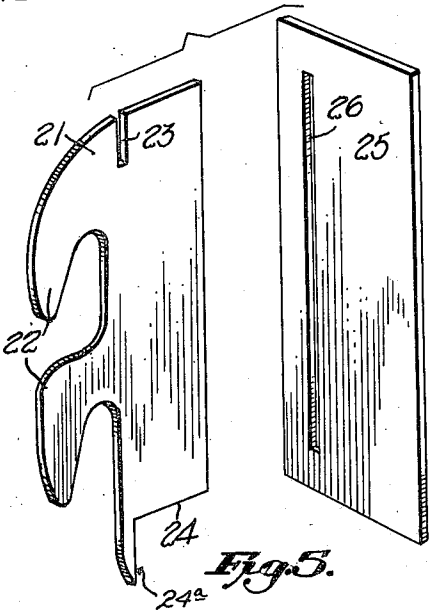


Fig. 5.

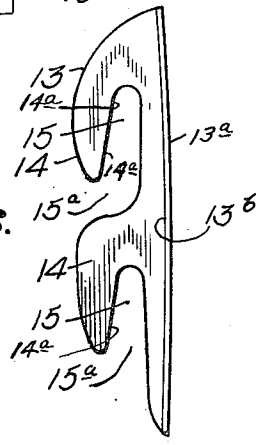


Fig. 6.

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BED RAIL AND POST RAIL CONNECTION

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4 Claims. (Cl. 5—296)

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My invention relates to improvements in bed rails and post and rail connections for bedsteads generally but has particular reference to metal bed-spring supporting rails in association with wooden head and foot sections.

Briefly and generally stated the invention has for one of its primary objects to provide a bed rail and post connection incorporating a rail terminal so formed as to be available for use in securing together the head and foot pieces of all wooden bedsteads presently on the market; and which will automatically compensate for or take up any looseness that may occur between the post and rail due to shrinkage of the bed post or loosening of the keeper pins which span the rail end receiving slot of the post.

Another important object is to provide a novel hook-incorporating bed rail terminal having a bed post-abutment flange which also serves as a means for attaching the terminal to the rail.

Additionally, the invention contemplates a novel hook-incorporating terminal for a preferably metal bed rail which provides a right angularly disposed post-abutment flange extending from both sides of the hook providing portion; and which said flange may be formed from a portion of the rail, or otherwise.

A further object of the invention is to provide a new and improved al metal bed rail having novel and highly efficient bed post-securing terminals which are strong and durable; include one, or a minimum number of parts, so as to be cheap to manufacture; and provide a post abutting portion which may be welded to the end of the rail.

The invention also resides in certain novel features of structure, combination and arrangement of the various parts to be hereinafter described and claimed, reference being had to the accompanying drawings illustrating several embodiments of the invention. It is to be understood, however, that the invention is not limited to the disclosures presented as it will be obvious to those skilled in the art that other mechanical expressions of my inventive concept may be evolved without departing from the spirit and scope of the subject matter claimed hereinafter.

In the drawings, wherein the same reference characters have been used to designate the same parts in all views,

Fig. 1 is a side elevational view illustrating one end of a bed rail and the associated post of the head or foot piece of a bed;

Fig. 2 is a top plan view thereof;

Fig. 3 is a perspective view of a portion of a

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bed rail illustrating a modified form of post securing terminal;

Fig. 4 is a top plan view illustrating a further modification of the rail and post connection;

Fig. 5 is a group perspective view of the separated bed post-engaging parts which are incorporated in the Fig. 4 modification, the bed rail being deleted and

Fig. 6 is a side elevational view of the rail terminal of Fig. 1 detached and showing the slight lineal concave of the post-abutment flange.

Referring to the drawings by reference characters, and turning first to the form of invention shown in Figs. 1 and 2, numeral 10 designates a wooden bed post, although, of course, it is to be understood that same may be of metal. This bed post 10 has the usual slot 11 in its rear surface for receiving the hook providing terminal flange 13 of the bed rail 16.

The slot 11 is spanned by the vertically spaced pins 12 which are adapted to be received in the slots 15 which are formed in the flange 13 and whose forward edges are defined by the upwardly and rearwardly slanting inner edges 14a of the hook bills 14.

The slots 15, as shown in Fig. 1, flare to greater width in the direction of their forwardly opening entrance ends 15a and it is to noted that said slots 15, except at their extreme inner ends, are of greater width than the diameter of pins 12.

As intimated earlier herein, the invention aims, among other things, to adapt the post connecting portion 13 of the rail 16 for all slot type incorporating bed posts which are presently on the market. Investigation has shown that the locations of the hook slot engaging pins 12 are somewhat different in the posts of different manufacturers, being usually different distances from the entrance end of the slot 11. I have, therefore, made the post engaging flange 13 longer than usual and I have also made the slots 15 much longer than usual and have given the forward edges 14a of said edges a rearward inclination resulting in the inner ends of said slots being in a vertical plane about a quarter of an inch or so nearer the base flange 13a of hook flange 13 than is the vertical plane which includes the entrance ends.

It is to be understood that it is not contemplated that the pins 12 shall ever be actually disposed in the rear ends of the slots 15 but shall, instead, bear against the forward edges 14a of said slots intermediate the ends thereof. This causes a camming action to result which draws the base flange 13a into snug engagement with the rear

surface of the post **10**. Therefore, it makes no difference if the pins **12** of a particular bed post are closer to the entrance end of the slot **11** than are the corresponding pins of another post.

If the pins **12** should bend slightly or wear, or for that matter, loosen, the hook flange **13** simply slides down a little further and snug engagement of the base flange **13***a* with the post is maintained.

Wooden posts have a tendency to shrink as the result of drying out with age and my post connection **13**, **13***a*, takes care of this by the progressive camming action of the slot walls **14***a* in engagement with pins **12**.

However, in order to accentuate the gripping of the Fig. 1 base flange **13***a* against the post **10**, I preferably make the post-engaging surface of said flange slightly concaved as at **13***b*, viewed in side elevation and better illustrated in Fig. 6. In this connection, I deem it preferable to select a degree of concavity which will dispose the intermediate point of flange **13***a* approximately the same distance from the plane of the adjacent post wall as is the transverse distance between the respective vertical planes which include the inner and outer ends of the slot walls **14***a*. As the post **10** shrinks and the hooks **14** work downwardly on the pins **12**, the base flange **13***a* tends to flatten out under pressure to increase binding engagement against the post and therefore assist the pins **12** and slot walls **14***a* in supporting the rail **16**.

I have illustrated the flanged post attaching ends of the rail **16** as welded at **17**, **17***a* to the end of the rail, the latter being illustrated as of L-section providing an outer vertical flange **16***a* and an inwardly extending bed spring supporting flange **16***b*.

It will be appreciated that the base flange **13***a* of the hook providing flange or member **13** serves not only as a bed post engaging abutment but also as a means for attachment to the bed rail itself.

Turning to the modification of the invention shown in Fig. 3, a hook providing element **13**, **13***a* is provided as before but the L-shaped bed rail **18** has its horizontal flange **19** cut away at the ends. The adjacent portion **20***a* of the vertical flange **20** is then bent laterally as shown, not only to provide a confining seat or off-set **20***b* for the inner end of the hook flange **13**, but also to furnish a bed post abutting portion **20***a* at the opposite side of the hook flange from the post engaging flange or base **13***a* thereof.

The form of invention illustrated in Figs. 4 and 5 is characterized by a hook providing plate **21** whose upper end rearwardly of the hooks **22** has a short vertical slot **23** while the corresponding lower end of said plate is cut away as indicated at **24** to provide the vertical shoulder **24***a*. The post abutting member in this form of the invention is a separate plate **25** having a closed lineal slot **26** adjacent one edge and of a width to receive the hook plate **21**. The parts **21**, **25** are assembled by passing the rear part of the hook plate **22** through the slot **26** and lodging the upper end of the plate **25** in the slot **23** of the hook plate **21**. The lower end of the post abutting plate **25** below the slot **26** makes flat engagement with the shoulder **24***a* at the lower end of the hook plate **21**. When the parts are assembled they may be secured by welding or otherwise, it being apparent that the plate **25** provides a post-abutting surface at opposite sides of the hook plate **21**, thus achieving the same result obtained by the Fig. 3 form of the invention, but without necessitating any special end formation of the bed rail.

It will be evident from an inspection of Fig. 4 that the front wall of slot **23** and the abutting lower shoulder portion **24***a* of the plate **21** serves to sustain the plate **25** against movement in the direction of the hooks **22**.

Attachment of the terminal **21**, **25** to the rail **27** may be effected by welding or otherwise, it being noted that the rear end of the hook plate **21** is adapted to make flat contact with the outer surface of the vertical rail flange **27***a* while the plate **25** lies contiguous with the ends of both the horizontal and vertical flanges **27***b*, **27***a* of said rail **27**.

From the foregoing it will be apparent that I have provided a very efficient but inexpensive bed rail and post securing terminal therefor. The form of invention illustrated in Figs. 1 and 2 involves but two parts, namely, the rail and the post engaging portion **13**, **13***a* which latter, of course, can be very readily turned out in quantity at small cost. The pin engaging slots of the Figs. 3 and 4 expressions of the invention, will be rearwardly cammed corresponding to **14***a* in Fig. 1. Thus, the same advantages are obtained in the Figs. 3 and 4 illustrations as are obtained in that disclosed in Fig. 1.

Having thus described my invention, what I claim is:

1. A bed rail and post engaging terminal, the rail comprising an L-section bar providing a horizontal flange and a vertical flange, the horizontal flange only being cut away inwardly of the end of the rail and the vertical flange being bent laterally to provide a bed post engaging surface, and hook providing extension means secured to the end of the rail, said extension means having a laterally extending post engaging surface in the same plane with the corresponding surface of the laterally bent vertical flange.

2. The combination set forth in claim 1, and the laterally bent post engaging portion of said vertical flange providing an off-set forming a seat for the end of said hook providing extension means.

3. In a bed rail, an elongated body portion of L-shaped cross section, and a terminal member for connection with the transverse slot-spanning pins of a bed post, said terminal member comprising a hooked pin-engaging portion and a base connected to said body portion and extending laterally thereof, the base providing a post-abutting surface extending a substantial distance above and below the top and bottom of said body portion and being of a width closely approximating the width of said body portion, the hooked pin-engaging portion having an upwardly extending pin-engaging cam surface which is inclined toward said base, the base of the terminal member abutting both angularly related portions of the adjacent rail end and being secured thereto, and said base being bent to present a longitudinally concaved surface to the post and being of material that will yield slightly under pressure.

4. In a bed rail, a body portion and a terminal member for connection with the transverse slot-spanning pins of a bed post and comprising an elongated angle form plate providing a hook-forming flange as an extension of the body portion and a base flange secured intermediate its ends to the rail and extending both above and below the top and bottom respectively and lat-

erally of said body portion, said hook-forming flange having an upwardly extending pin-receiving slot open at its outer end and having a pin-engaging edge inclined toward said base flange, whereby when the post pin and the terminal member slot are engaged the load on the rail will force the base flange against the post, and said base flange being bent to present a longitudinally concaved surface to the post and being of a material that will yield slightly under pressure.

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