

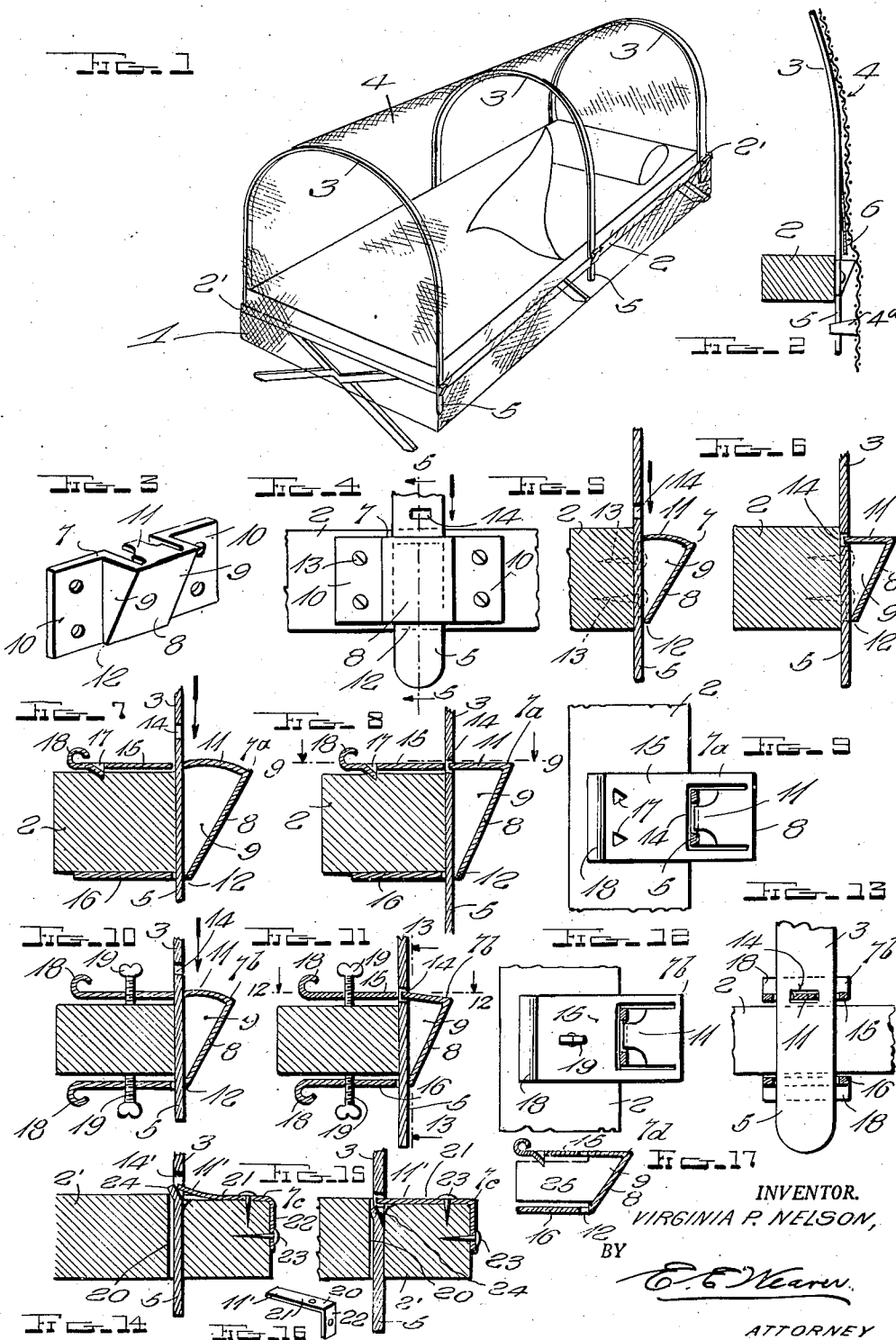
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V. P. NELSON

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CANOPY SUPPORT

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CANOPY SUPPORT

Virginia P. Nelson, New York, N. Y.

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8 Claims. (Cl. 135—5.1)

This invention relates to improvements in fastening means or attaching brackets for canopy supports and canopies, for use in attaching canopy supports and canopies to bed or cot frames. More particularly the invention relates to fastening means or brackets for attaching the lower ends or legs of such supports to the side or side and end rails of bed or cot frames, and which also serve as means to enable a mosquito net or other type of canopy to be fastened in position.

An object of the invention is to provide a simple, effective and inexpensive construction of fastening means or bracket for the purposes set forth which may be readily and conveniently applied to and removed from a bed or cot frame, and which, when in use, will firmly and securely hold the canopy support in position and against casual displacements.

Another object of the invention is to provide a bracket of this character which embodies means to detachably interlock with the canopy support to hold the same firmly in position and against casual displacement.

Still another object of the invention is to provide a bracket of this character which embodies a socket or holder to receive the lower end or leg of a canopy support and having means to interlock therewith, and which may be in the form of a clip to engage a cot or bed rail or be otherwise suitably constructed to be fastened thereto.

Still another object of the invention is to provide a bracket of this character which will allow the lower end or leg of the canopy support which is applied thereto to depend therefrom to receive a loop or other engaging element on the canopy whereby the canopy may be secured in position.

Still another object of the invention is to provide brackets which may be quickly applied for use and with which the legs of the canopy supports may be quickly engaged.

The invention consists of the novel features of construction, combination and arrangement of parts, herein after fully described and claimed, and as shown in the accompanying drawing, in which,

Figure 1 is a perspective view of a canopy support and canopy applied to a cot or bed frame and held in position by brackets of one form embodying the invention.

Figure 2 is a cross section through one of the side rails of the bed or cot frame, showing a portion of a canopy support and a portion of a canopy attached to the rail by one of the brackets.

Figure 3 is a perspective view of one of the brackets.

Figure 4 is a view in elevation looking toward a side rail and one of the brackets and showing the leg of a support being inserted down into a bracket for engagement therewith.

Figure 5 is a section on the line 5—5 of Figure 4.

Figure 6 is a view similar to Figure 5 showing the leg of the support fastened in position.

Figure 7 is a view similar to Figure 5 showing a modified form of bracket and the leg of a support being applied thereto for engagement therewith.

Figure 8 is a view similar to Figure 7 showing the leg of the support engaged and interlocked with the bracket.

Figure 9 is a sectional plan view on the line 9—9 of Figure 8.

Figures 10 and 11 are views similar to Figures 5 and 6 and Figures 7 and 8 respectively showing the leg of a support about to be engaged with and engaged with another modified form of bracket.

Figure 12 is a sectional plan view on line 12—12 of Figure 11.

Figure 13 is a sectional elevation on line 13—13 of Figure 12.

Figures 14 and 15 are views similar to Figures 5 and 6 of a structure in which the keeper socket is formed in an end rail and a fastener is mounted on the rail for securing the leg of the support in position.

Figure 16 is a perspective view of the fastener shown in Figures 14 and 15.

Figure 17 is a sectional view showing still another modified form of bracket of a type adapted for engagement with an end rail.

Referring now more particularly to Figures 1 to 6, inclusive, of the drawing, 1 designates the frame of a cot or other bedstead including the side rail 2 and end rails 2'; 3, a plurality of canopy supports, and 4, a canopy of suitable type and construction mounted on the supports so as to overlie and enclose the frame, and which may be in practice a mosquito netting or other kind of canopy. This canopy is preferably provided with holding loops 4^a near its edges.

Any number of the supports 3 may be used and spaced a desired distance apart and they may be of collapsible or non-collapsible type and made of rust-proof metal or other material. Each support, as shown, is of inverted U-form and has free ends or leg portions 5 suitably spaced for attachment to the opposite side rails or to

the ends of the end rails of the cot or bed frame. The canopy 4 may, if desired, be provided with transverse strengthening bands or tapes 6 at the points where it rests on or engages the supports.

Fastening means comprising a fastening member or keeper bracket 7 is employed to connect the leg portion 5 of each support with a bed rail 2 or 2' and disposing such portion of the support for attaching an adjacent portion of the canopy thereto. This fastening member or keeper bracket may be formed of a plurality of pieces of metal or material of the same or different kinds or formed as a unitary structure of metal or other suitable material or materials. In the construction shown in Figures 1 to 6, inclusive, a unitary form of keeper bracket is shown which comprises a body portion or keeper socket formed of an outer or front wall 8 and a pair of similar side walls 9, the latter being provided with laterally extending attaching flanges or wings 10. The socket so formed is open at top and bottom and at its inner or back portion between the flanges 10. The walls 9 and flanges 10 are straight and vertical, but the wall 8 slopes or inclines downwardly and inwardly and the walls 9 are triangularly shaped to form therewith a keeper socket of generally triangular form and which is of maximum area at its top and minimum area at its bottom. At its top this socket is provided with a spring holding or locking tongue 11 which is integral at one end with the wall 8 and free from connection with the walls 9 and has its free end projecting toward and terminating adjacent to but in advance of the open rear side of the socket. By the construction described the open bottom of the socket is in the form of a restricted slot 12.

Brackets of the type described are adapted to be applied to the side or side and end rails of the cot or bed frame to secure the supports 3 in position for attachment of the canopy 4. As shown, the wings or flanges 10 are designated to bear upon the outer sides of the side rails or ends of the end rails and are perforated for passage of suitable fasteners 13 to secure them in position with the open rear side of each socket facing the surface of the rail to which it is attached. When so applied a clearance space is left between such surface of the rail and the free end of the tongue sufficient to allow of the leg portion 5 of a support 3 being inserted downwardly into and through the socket. The brackets are arranged in aligned pairs at opposite sides of the bedstead so that each pair will be disposed to receive the legs 5 of a support 3 arranged transversely in canopy supporting position. Each leg 5 has formed therein a keeper slot 14 to receive the free end of the tongue 11 of the bracket in which it is inserted. As the leg 5 is being slipped down into the socket, as shown in Figures 4 and 5, the spring 5, as shown in Figure 5, will yield to allow it to pass until the slot 14 comes into registry with the tongue, when the tongue will spring into engagement with the slot, as shown in Figure 6, to lock the leg in place. The slot 14 is arranged at such a distance above the end of the leg that when the leg is thus fastened in place, a portion thereof will be received in the slot 12 and will depend to a certain extent and be exposed below the bottom of the socket to form a fastening member with which a loop or other fastening element on the adjacent portion of the canopy may be engaged to hold the canopy fastened down, as will be readily understood.

These loops or fastening elements may be arranged to allow them to be readily engaged from inside or outside the canopy to adapt the canopy to be opened or closed at either side to permit a person to readily enter or leave the canopied bed or to allow access by a nurse or attendant to a sick or wounded person occupying the bed.

When the leg of the support is applied to the bracket in the manner above described it will be securely held in position in the slot 12 and by the tongue 11 against lateral displacement and it will be locked by the tongue against upward or downward displacement. The construction, however, is such that under sufficient force the tongue will yield downwardly to permit ready and quick application of the leg to the bracket and will yield upward to permit removal of the leg from the bracket when it is desired to remove it. It will be evident also that the described construction of the supports and brackets adapts them to be readily and economically manufactured and the brackets applied for service in a rapid manner and without the use of special tools.

In Figures 7, 8 and 9 a modified form of bracket 7a is shown in which the construction of the keeper part of the bracket is the same as in the bracket shown in Figures 1 to 6, inclusive. In this modified construction of bracket 7a, however, the flanges 10 are omitted and in their place the keeper socket is provided with top and bottom wall extensions 15 and 16 forming spring jaws to engage the upper and lower surface of a side or end rail to hold the bracket in position.

To retain the bracket against outward displacement either of the jaws, or both of them if desired, may be provided with spring teeth or claws 17 to bite into the rail and prevent the bracket from slipping outward under all normal forces tending to displace it. The inner or free end of the upper jaw may be formed with a rolled portion 18 to stiffen the jaw and to avoid the presentation of a raw edge liable to cause injury to the bedding or canopy. This rolled portion is adapted to serve also as a finger grip for use in manipulating the upper jaw to allow the bracket to be more readily and conveniently applied and removed. If desired the lower jaw, particularly if formed with biting teeth or claws, may also be formed with such a rolled stiffening portion and finger grip. This construction of bracket provides a bracket which may be applied and secured in position without the use of the screws 13 or other auxiliary fastenings.

In Figures 10 to 13, inclusive, another modified form of bracket 7b is shown which is generally similar in construction to the bracket 7a but in which the teeth or claws 17 on the jaws 15 and 16 are omitted and the jaws are provided with threaded openings for the passage of clamping screws 19 whereby the bracket may be clamped to the rail 2 or 2'. In this construction a rolled edge 18 is shown as being provided on each jaw.

Figures 14 and 15 and 16 show a construction adapted for use in connection with an end rail 2' and in which a keeper is formed by a slot 20 extending through the rail 2' adjacent its end. This slot is adapted to receive the leg 5 of the support 3 and to permit the end of the leg to depend below the rail. The bracket 7c is here in the form of a fastener comprising a spring metal strip having a body portion 21 terminating at its outer end in a downwardly bent portion 22

and at its inner end in a tongue 11' to engage the slot 14' in the leg 5. The body portion of the fastener preferably fits or is countersunk in a recess in the upper face of the rail, while its portion 22 is arranged to bear against the end face of the rail, and said portions are secured to the rail by suitable fastenings 23. The operation of applying the leg of the fastener to and removing it from the rail will be readily understood by reference to Figures 14 and 15. If desired the leg 5 may be formed with a tongue 24 normally lying in its plane and adapted to be bent against the inner wall of the slot by pressure of the tongue 11' when the leg is applied to assist in stably supporting the leg in the keeper slot 20.

Figure 17 shows still another form of bracket 7d embodying my invention which is similar to that shown in Figures 7 to 9 inclusive, in which the keeper portion of the bracket is provided with top and bottom jaws 15 and 16. This bracket 17, however, is also provided with side jaws 25 (one of which is shown) which form with the jaws 15 and 16 a split box-like socket adapted to be slipped onto the end of the end rail 2' to hold the bracket in position thereon. The bracket 17 may be provided with holding teeth 17, clamping screws 19 or other means, if required, to adapt it to be held firmly in position on the rail.

As stated, the canopy when applied will be held in place by the supports 3 and may be secured at the lower edges of its sides and ends by loops or other means to the depending ends of the legs of the supports. By this means it will be held closely to the bedding so as to prevent the entrance of insects, while at the same time allowing a side portion of the canopy to be released to permit entrance and exit of a person to or from a bed or access to a sick or injured person lying on the bed. It will be noted that in all forms of the invention the construction is such as to allow the supports to be applied and removed in a simple and convenient manner and without loss of time and without the use of any special tool or tools.

It is to be understood, of course, that while the fastener or bracket constructions shown herein for purposes of exemplification are preferred, such changes in the form, construction, arrangement and proportions of the parts as fall within the scope of the appended claims may be made, without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described my invention, I claim:

1. In a canopy support for attachment to the rails of a bed device, a canopy supporting member having leg portions each having a slot therein, and brackets for attaching the same to the rails of the bed device, each bracket having means for attaching it to one of said rails and having a socket facing the rail and closed thereby to receive and hold a leg of said member and a tongue carried by the bracket and interlocking with the slot in the leg.

2. In a canopy support for attachment to the

rails of a bed device, a canopy having lower edge portions provided with loops, canopy supporting members having leg portions each having a slot therein, and brackets for attaching the same to said rails, each bracket having means of attachment to one of said rails and having a socket facing the rail and alined thereby to receive a leg of one of said members and permit a portion thereof to depend below the socket, and a tongue 10 to interlock with the slot in the leg, said depending portion of the leg being engageable by one of said loops.

3. In a canopy support, a canopy supporting member having a leg portion provided with a slot, 15 and a bracket for attaching the same to the rail of a bed device and having means to engage the rail and having a tongue to engage the slot in the leg.

4. In a canopy support, a canopy supporting 20 member having leg portions, each provided with an aperture, and brackets for attaching same to the rails of a bed device, each bracket comprising a body portion forming a socket to receive a leg of the member and a tongue carried by said 25 bracket to engage the aperture on the leg.

5. In a canopy support, canopy supporting members having leg portions respectively provided with retaining slots, fasteners for attaching the legs to rails of a bed device, each fastener com- 30 prising a slotted keeper opening against and secured to one of said rails, and a tongue on the keeper engaging the slot in one of said legs.

6. In a canopy support, canopy supporting means having leg portions respectively provided 35 with retaining slots, and fasteners for attaching the legs to rails of a bed device, each fastener comprising a slotted keeper opening against and secured to one of said rails, and a spring tongue on the keeper engaging the slot in one of said legs.

7. In a canopy support, a canopy supporting 40 member having leg portions each provided with a slot and a spring tongue normally lying in the plane of the slot, and fasteners for attaching the legs to rails of a bed device, each fastener comprising a slotted keeper opening against and 45 secured to one of said rails, and a spring tongue on the keeper engaging one of said slots and the tongue of the associated leg and displacing the latter named tongue from the plane of the slot and into engagement with a surface of the asso- 50 ciated rail.

8. In a canopy support, canopy supporting means having leg portions provided respectively 55 with slots and brackets for attaching the same to side rails of a bed frame, each bracket comprising a body portion having means to engage one of said rails and having a socket open towards the rail and closed thereby to receive one of said legs, said socket being of greater width at its top than 60 at its bottom and being formed at its bottom with a slot to receive and allow a portion of the leg to depend below the socket, and retaining means on said bracket engaging the slot in the associated 65 leg.

VIRGINIA P. NELSON.