Nov. 10, 1942. C. M. BOYCE 2,301,511

MOSQUITO BAR SUPPORT

Filed Jan. 23, 1942

Fig. 1

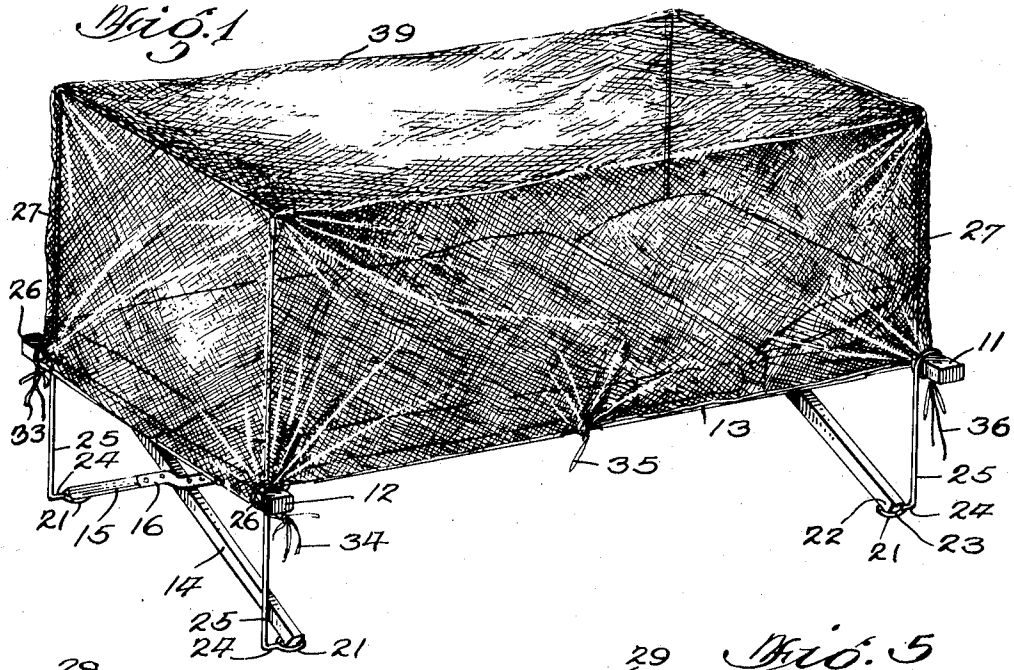


Fig. 2

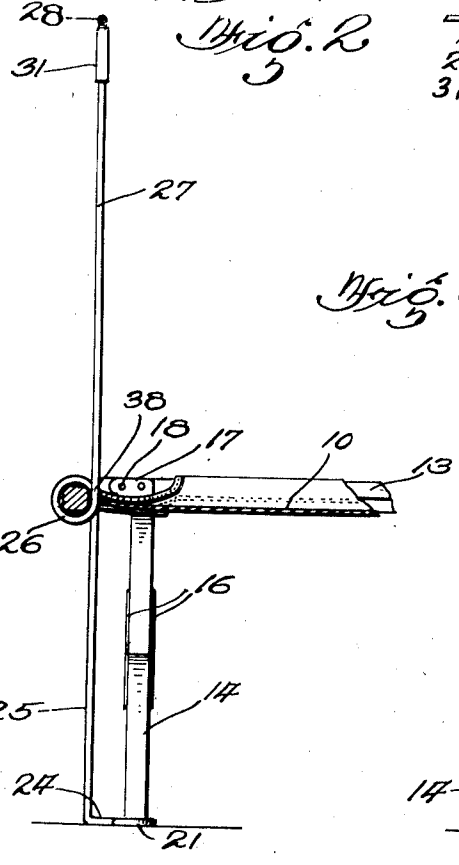


Fig. 3

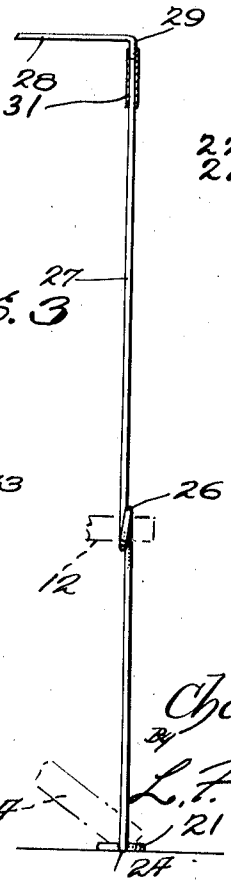


Fig. 5

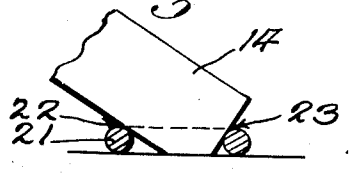


Fig. 4



Inventor.
Charles M. Boyce
By
L. F. Hammond
Attorney

Patented Nov. 10, 1942 2,301,511

UNITED STATES PATENT OFFICE

2,301,511

MOSQUITO BAR SUPPORT

Charles M. Boyce, Chicago, Ill.

Application January 23, 1942, Serial No. 427,937

5 Claims. (Cl. 5—362)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein, if patented, may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

The present invention relates to a mosquito-bar supporting frame adapted to be applied to the conventional type of army cot. In this connection it will be appreciated that it is of utmost importance to provide army field equipment of such design and construction that the soldiers may be protected from mosquitos and other insects while sleeping. It is also essential that any type of equipment provided for the purpose shall be of very small bulk and comparatively light weight, in order that it may be readily portable in the field, and so that the assembly of the equipment will create no new problems of transportation or maintenance.

It is, therefore, the primary object of the present invention to provide a mosquito-bar supporting frame of such design and construction as to be of extremely light-weight, easily portable and well adapted to be packed and shipped in packages of comparatively small bulk.

A further object of the invention is to provide a sectional mosquito-bar supporting frame arranged so that the individual sections may be easily fitted together into an assembled unit and may be instantly dismantled.

A further object of the invention is to provide a mosquito-bar supporting frame constituting two identical end frames, each adapted to be attached to one of the opposite ends of a standard conventional army type canvas cot so that mosquito-bar fabric may be draped between them to cover the cot.

A further object of the invention is to provide mosquito-bar supporting frame including end frame assemblies, wherein each end frame assembly includes two vertical supporting rods that are identical in construction, so that the necessity of selecting right and left hand matching parts is eliminated.

Further objects will appear from the following description, taken in connection with the drawing included in and forming a part of this specification, in which

Fig. 1 is a perspective view of a mosquito-bar supporting frame assembly as applied to a conventional army cot and showing the mosquito-bar fabric in place.

Fig. 2 is a fragmental side elevational view of one end of the cot showing one of the end frames associated therewith.

Fig. 3 is a fragmental end view of one of the end supporting frames partly in section and showing frame members of the cot in broken lines.

Fig. 4 is a plan view of one of the corner supporting rods.

Fig. 5 is a sectional view through one of the base loops.

The equipment disclosed in the present application is designed and arranged for convenient attachment to a conventional army type of folding canvas cot and, while it has been designed particularly to fulfill present military requirements, it is believed to be useful in civilian fields as well, and therefore should not be understood as being limited in its application.

The folding cot chosen for illustration in the drawing is of a conventional type widely used in the army and comprises, in general, a pair of wooden end frames 11 and 12 extending across the head and foot of the cot, respectively, and maintained in spaced relationship with respect to each other by longitudinal side frame members 13. The side frames are ordinarily of jointed construction so that they may be folded in a relatively small bundle to facilitate transportation. The supporting surface of the cot is formed of a thickness of canvas or similar fabric 10 stretched longitudinally between the end frames 11 and 12 and transversely between the side frames 13.

The entire cot structure is supported by identical leg structures at each end. In the form of the device illustrated, these include the crossed leg members 14 and 15 which are pivotally connected at their point of intersection by means of metal reinforcing plates 16. Each of the legs 14 and 15 has its upper end screwed to one of the side frames 13 by a metal reinforcement 17 and pivot 18 in a manner well understood in the art. Inasmuch as the construction and arrangement of all the portions of the cot thus described are conventional and well known in the art and do not, in themselves, form a pertinent part of the present invention, the structure will not be described in this application in any further detail.

The mosquito-bar supporting structure, wherein the novelty of the present invention resides, consists in general of two separate and cooperating end frames, each of sectional construction and each arranged to be individually attached to the cot at the opposite ends so that the mosquito-bar netting may be draped over and between the frames and tied in position, so that it will entirely surround the sleeping surface of the cot and protect the occupant against insects.

It may be pointed out that it is considered desirable that the supporting frames for the mosquito-bar be of such design and construction that they will snap into snug engagement with the frame members of the cot in order that the cot may be moved from place to place without disturbing the attached supporting frames. It will also be appreciated that it is highly desirable that the frame structures include no right or left-handed sections, so that the operation of attaching the supporting frames to the frame elements of the cot may be facilitated. These features and the objects of the invention heretofore described are easily and simply accomplished by the use of a mosquito-bar supporting frame of the design and construction herein disclosed. In the preferred construction, each of the end frames includes a vertical corner section having special structural features whereby it may be instantly attached to or detached from the frame elements of the cot and each of these corner sections extends upwardly to a point well above the top of the cot, where they are joined by a cross-bar.

Each of the vertical corner sections includes a base loop 21 which is adapted to assume a horizontal position flat against the surface of the floor. This base loop is of such dimensions that it will receive the lower end of one of the supporting legs 14 or 15, the arrangement being such that the leg of the cot will rest firmly on the floor surface within the base loop, but the inclined lower edge of the leg will contact the portion of the loop at the points 22 and 23 in order to hold the base loop in firm engagement with the floor surface. (See Fig. 5). An offset extension 24 extends flat along the floor from the base loop to the lower end of a riser portion 25 which extends upwardly to an upper supporting loop or ring 26. The upper supporting loop 26 is of such dimensions as to fit snugly around the end of one of the end frames 11 or 12 of the cot, so that the upper loop 26 and the base loop 21 will cooperate to securely anchor the corner section in position with respect to the frame members of the cot.

It will be noted, of course, that the base loop is spaced slightly away from the lower end of the riser portion 25 in order that the riser may assume a vertical position, and for this reason an offset extension 24 is provided to join the base loop and the riser. This offset extension 24 enables the riser portion to be positioned in an exact vertical alignment and also serves to lend a certain degree of resiliency to the lower portion of the corner section. It is considered desirable to maintain a snug fit between the supporting frame and the frame members of the cot. To this end the cot and frame are flexed to a certain degree as they are assembled so that their natural resiliency will tend to keep them fitted tightly to each other and this action is facilitated by the formation of the offset extension 24.

Each of the corner sections extends upwardly from the upper supporting loop 26 to provide a supporting rod portion extending considerably above the level of the fabric surface 10 of the cot, and the vertical supporting rods 27 associated with each of the end frames are joined by a cross-bar 28 terminating in right-angled portions 29 to which the telescoping sleeves 31 are welded or otherwise suitably secured. It will be understood, of course, that the telescoping sleeves are of proper diameter to fit snugly over the upper ends of the supporting rods 27 to unite the two rods at each end of the cot and complete the individual end assemblies. The mosquito-bar 38 or other fabric is then stretched from one end assembly to the other and secured by tying, as with the cords 33, 34, 35, and 36, or by any other suitable means desired.

From the foregoing description, it will be readily apparent that the entire frame structure may be economically manufactured by forming the several sections out of single pieces of round, metal rod (in practice, they are preferably formed of 0.312–0.315 hard drawn bright steel wire) and while it is not regarded as essential to finish the loops 21 and 26, it is considered desirable to close the loop 21 by welding at the point 37 and to close the loop 26 by welding at the point 38 in order to provide a more finished appearance and to impart somewhat greater rigidity to the frame structure.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a mosquito-bar supporting frame for a canvas cot having rigid end frame elements, rigid side frame elements, a fabric surface and a plurality of supporting legs, the combination of a mosquito-bar supporting frame comprising two separate cooperating end frame assemblies adapted for attachment to the opposite end frames of the cot, respectively, each of said end frame supporting members including a pair of vertical corner sections including a horizontal base loop adapted to rest on the floor surface and to receive one of the cot legs, an offset extension from said base loop to the lower end of a riser portion, a vertical riser extending upwardly from the offset, an upper supporting loop lying in a vertical plane and adapted to receive the end of a horizontal frame member of the cot, and a vertical supporting rod extending upwardly above the upper loop and above the surface of the cot, said supporting rod terminating in a straight vertical end portion adapted to receive and be inclosed by a telescoping sleeve, and a cross-bar extending in a general horizontal position between the supporting rods, each end of the cross-bar terminating in a right-angled portion having a telescoping sleeve affixed thereto and adapted to receive and fit in snug engagement with the upper end portion of the supporting rod.

2. In a mosquito-bar supporting frame for a canvas cot having rigid end frame elements, rigid side frame elements, a fabric surface and a plurality of supporting legs, the combination of a mosquito-bar supporting frame comprising two separate cooperating end frame assemblies adapted for attachment to the opposite end frames of the cot, respectively, each of said end frame supporting members including a pair of vertical corner sections including a horizontal base loop adapted to rest on the floor surface and to receive one of the cot legs, an offset extension from said base loop to the lower end of a riser portion, a vertical riser extending upwardly from the offset, an upper supporting loop lying in a vertical plane and adapted to receive the end of a horizontal frame member of the cot, a vertical supporting rod extending upwardly above the upper loop and above the surface of the cot, and a cross-bar extending in a general horizontal position between the supporting rods, and a telescoping connecting sleeve adapted to interconnect the upper end portions of the supporting rods and the ends of the cross-bar.

3. In a mosquito-bar supporting frame for a

canvas cot having rigid end frame elements, rigid side frame elements, a fabric surface and a plurality of supporting legs, the combination of a mosquito-bar supporting frame comprising two separate cooperating end frame assemblies adapted for attachment to the opposite end frames of the cot, respectively, each of said end frame supporting members including a pair of vertical corner sections including a horizontal base loop adapted to rest on the floor surface and to receive one of the cot legs, a vertical riser extending upwardly from the base loop, an upper supporting loop and adapted to receive the end of a frame member of the cot, and a vertical supporting rod extending upwardly above the upper loop and above the surface of the cot, said supporting rod terminating in a straight vertical end portion adapted to receive and be inclosed by a telescoping sleeve, and a cross-bar extending in a general horizontal position between the supporting rods, each end of the cross-bar terminating in a right-angled portion having a telescoping sleeve affixed thereto and adapted to receive and fit in snug engagement with the upper end portion of the supporting rod.

4. In a mosquito-bar supporting frame for a canvas cot having rigid end frame elements, rigid side frame elements, a fabric surface and a plurality of supporting legs, the combination of a mosquito-bar supporting frame comprising a pair of vertical corner sections, each including a horizontal base loop adapted to rest on the floor surface and to receive one of the cot legs, a vertical riser extending upwardly from the base loop, an upper supporting loop lying in a vertical plane and adapted to receive the end of a horizontal frame member of the cot, and a vertical supporting rod extending upwardly above the upper loop and above the surface of the cot; and a cross-bar extending in a general horizontal position between the upper ends of the supporting rods.

5. In a mosquito-bar supporting frame for a canvas cot having rigid end frame elements, rigid side frame elements, a fabric surface and a plurality of supporting legs, the combination of a mosquito-bar supporting frame comprising a pair of vertical corner sections, each including a horizontal base loop adapted to rest on the floor surface and to receive one of the cot legs, a vertical riser extending upwardly from the base loop, an upper supporting loop lying in a vertical plane and adapted to receive the end of a horizontal frame member of the cot and a vertical supporting rod extending upwardly above the upper loop and above the surface of the cot, said supporting rod terminating in a straight vertical end portion adapted to receive and be inclosed by a telescoping sleeve, and a cross-bar extending in a general horizontal position between the supporting rods, each end of the cross-bar terminating in a right-angled portion having a telescoping sleeve affixed thereto and adapted to receive and fit in snug engagement with the upper end portion of the supporting rod.

CHARLES M. BOYCE.