Sept. 30, 1952 P. E. SIGGERS 2,611,908

TENSION ADJUSTMENT FOR CANVAS COTS

Filed May 29, 1951

Fig. 1

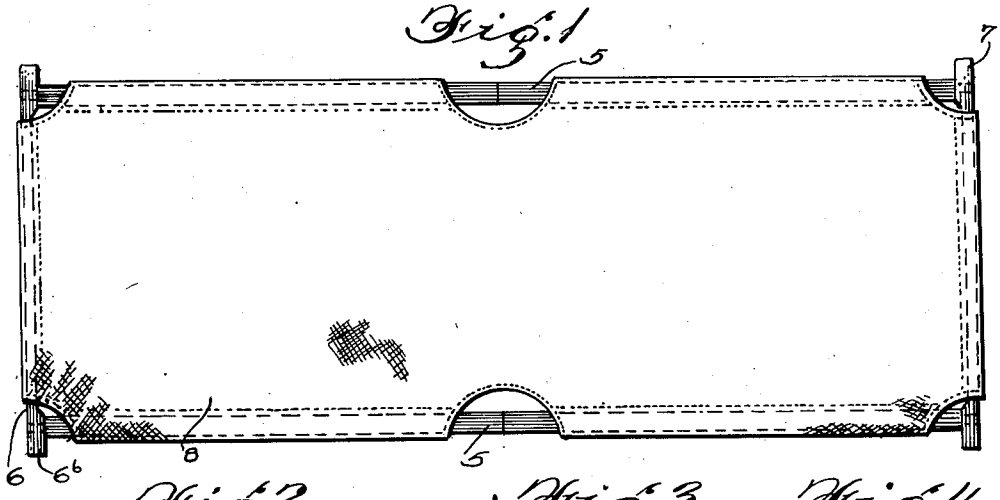


Fig. 2

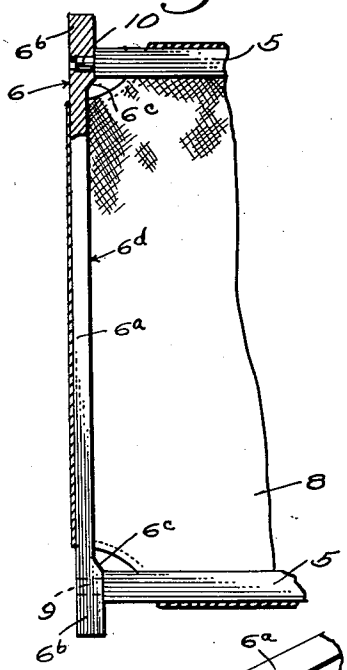


Fig. 3

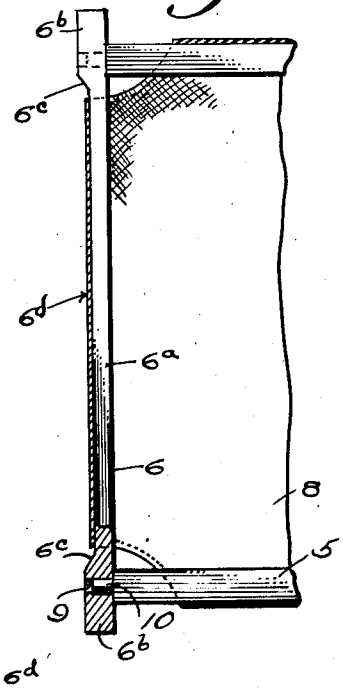


Fig. 4

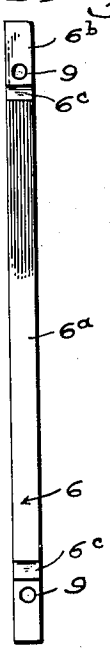
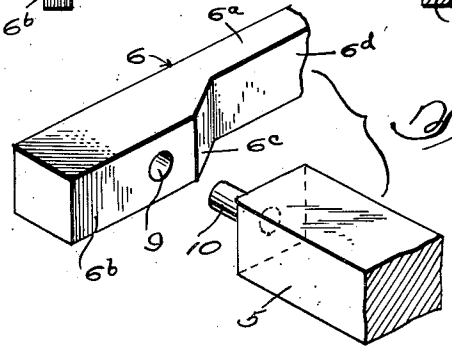


Fig. 5



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TENSION ADJUSTMENT FOR CANVAS COTS

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2 Claims. (Cl. 5—187)

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

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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.

This invention relates to improvements in folding canvas cots and in general aims to provide a simple but effective construction permitting an adjustment in the tension of the canvas strip which supports the body of the user of the cot.

Army cots consist of a folding wooden frame having metal parts at the joints and having four legs, with a canvas strip secured by hems along four sides to the wooden frame. This canvas strip may be removed from the frame, washed, and then replaced. Different strips are subjected to different stresses imposed by heavy or light men and some strips will sag considerably in the middle, which causes discomfort to the user. It is highly desirable to provide a construction which will take up some of the sag in a canvas strip or which will permit the strip to be adjusted lengthwise when assembling it on the frame, or even after assembly. The present invention provides such a construction.

Referring to the accompanying drawings forming a part of this specification,

Fig. 1 is a top plan view of a cot with the improved end sticks in operative position, parts of the cot being omitted;

Fig. 2 is an enlarged fragmentary plan view of one end of the cot, with parts in section, showing the end stick adjusted for maximum fabric tension;

Fig. 3 is a view like Fig. 2 but showing the end stick adjusted for minimum fabric tension;

Fig. 4 is a side elevation of one of the end sticks; and

Fig. 5 is a perspective view of the preferred mortise and tenon joint between a side rail and the end stick.

As shown, the cot comprises a frame having legs (not illustrated), said frame consisting principally of wooden side members or rails 5 connected by metal parts, and two end sticks 6, 7 removably secured at the opposite ends of the side rails to hold said rails (and the legs attached thereto) spread apart. A canvas or other fabric strip 8 is stretched over the frame with hems securing it to the frame in the usual manner. Most of the details of construction are entirely conventional and hence are omitted from the drawings.

The end sticks 6, 7, which are the novel elements, are exactly alike, and hence a description of one will suffice for both. End stick 6 is

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straight and is substantially rectangular in cross section with its central portion 6*a* of reduced width, measured horizontally, and its two end portions 6*b* oblong and of about twice the width of the central portion 6*a*, a beveled surface 6*c* joining each end portion 6*b* with the central portion 6*a*. Bores 9 extend entirely through each oblong end portion 6*b* at right angles to provide mortises, while the ends of the side rails 5 have tenons 10 to fit into mortises 9. It will be observed that while the oblong end portions or enlargements 6*b* are about twice as wide as the central portion 6*a* they have the same thickness vertically. The enlargements 6*b* project to one side of the plane of one vertical face 6*d* of the end stick, and said vertical face is either toward the cot, or else faces away from the cot, when the end stick is assembled. In other words, the end stick is symmetrical in its central portion 6*a* but asymmetrical at its ends relative to its longitudinal axis. By turning the end sticks to present either the enlargements 6*b* on the inside, as in Fig. 2, or on the outside, as in Fig. 3, the outer surfaces of the central portions 6*a* of the two end sticks at opposite ends of the cot are either separated from each other by twice the difference in width of portions 6*a* and 6*b*, or are brought nearer together the same distance. As the hems of the canvas strip pass around these outer surfaces, the canvas strip is necessarily stretched longitudinally when the parts are in the position of Fig. 2, while its tension is lessened if the parts are in the position of Fig. 3. In lieu of turning both end sticks to present the oblong enlargements inwardly, only one end stick may be so turned.

It is contemplated that the end sticks may be about 31 in. long, with the central portions 6*a* three-quarters of an inch wide, measured horizontally, and one inch thick, measured vertically, and with enlarged end portions 1¼ in. to 1½ in. wide and one inch thick, the centers of the bores 9 each being 2⅝ in. from the nearer end of the end stick. These dimensions will permit use of the end sticks on standard Army cots. If only one end stick is turned to bring the enlarged ends 6*b* on the inside, a tension take-up of one-half to three-quarters of an inch is effected, but if both end sticks are so turned, a tension take-up of 1 in. to 1½ in. is accomplished, the amount of take-up depending on the difference between the widths of the central portions 6*a* and of the enlarged ends 6*b*. Thus three different adjustments of canvas tension are possible without tools or change in

the parts: only the positions of the end sticks are changed and this may be done by merely rotating the end sticks on their longitudinal axes, without removal from the hems.

While the end sticks could be of hardwood, the well-known propensity of wood to warp, and the likelihood that an elongated wood section only three quarters of an inch wide would bend under a heavy load, suggest the use of a metallic tube of some non-rusting metal such as aluminum alloy, or one of the plastics known for its rigidity under bending moments, e. g., lignin plastics, or polystyrene or laminated phenolics, reinforced with metal if preferred. The described mortise and tenon joints, though desirable, are not indispensable and in lieu thereof clamps may me used to hold the side rails and end sticks together. Obviously the invention could be used with cots employing nylon or other fabrics in lieu of canvas strips.

It is clear that the described construction is extremely simple, is inexpensive and involves nothing that will break or get out of order. No attachments to the cot are used, nor is the cot modified in any way except for the novel end sticks. It will also be clear that if only a slight adjustment is desired, only one of the described end sticks need be employed, with the other end stick of conventional construction.

Having described my invention, what I claim is:

1. A folding cot of the type comprising a folding frame, and a flexible fabric connected on four sides with said frame thereby to be stretched taut when the frame is set up; said folding frame including two longitudinal side rails, two elongated end sticks, and means to secure each of the end sticks removably to the ends of the side rails; the improvement which consists in the provision of enlargements formed on both ends of at least one of said end sticks, said enlargements being substantially wider than the central portion of the respective end stick and making said end portions asymmetrical relative to the longitudinal axis of the respective end stick; the flexible fabric of the respective end stick; the flexible fabric having hems at each end, each hem receiving the central portion of an end stick so that both end sticks may be turned 180° on their longitudinal axes to reverse the areas of the end sticks which are in contact with the ends of the side rails.

2. The invention defined in claim 1, wherein there are mortises extending laterally all the way through the enlargements, and tenons on the extreme ends of the side rails fit in said mortises from either end thereof to hold the end sticks assembled on the side rails.

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