May 15, 1956 J. F. REISS 2,745,115

HAMMOCK

Filed Sept. 23, 1953

Fig. 1.

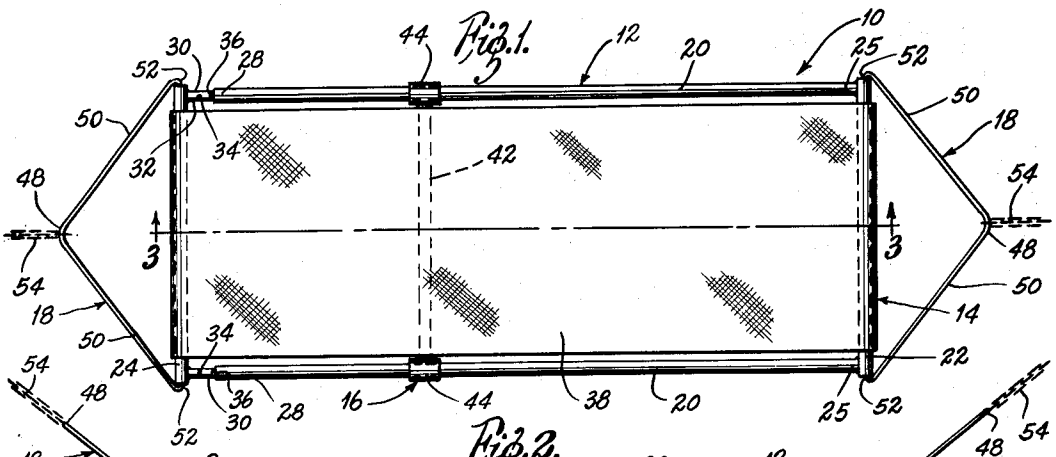


Fig. 2.

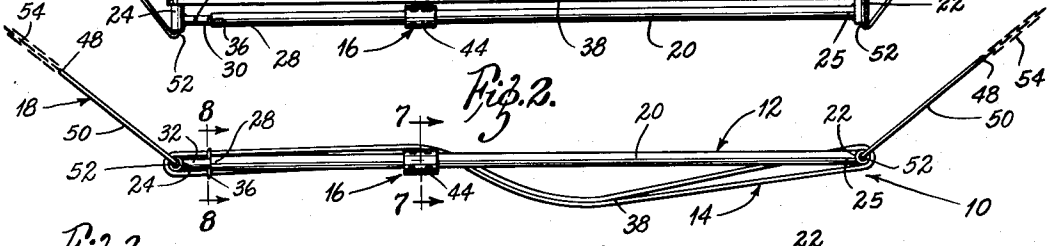


Fig. 3.

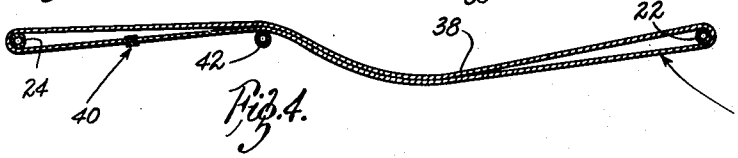


Fig. 4.

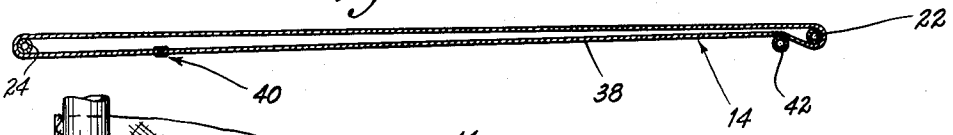


Fig. 5.

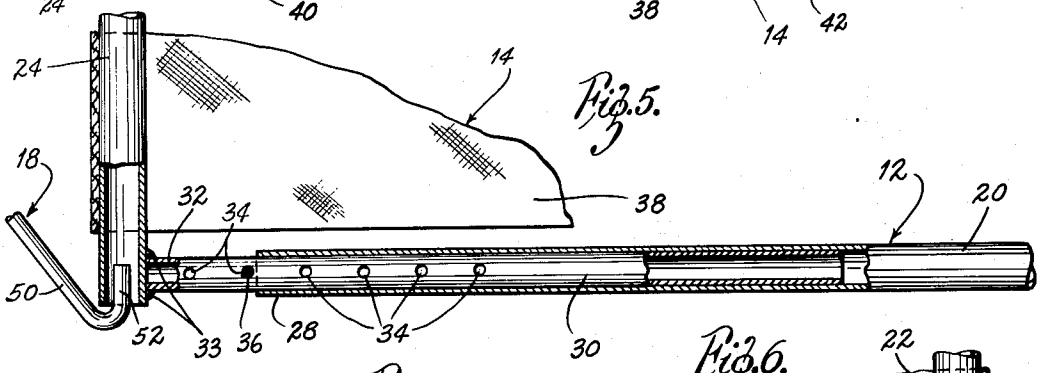


Fig. 6.

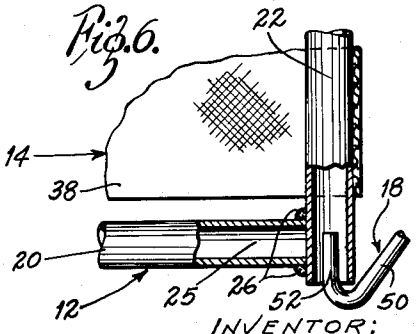


Fig. 7.

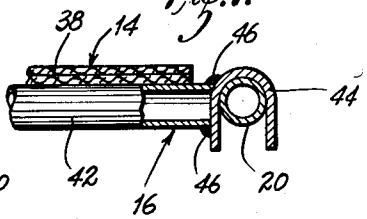
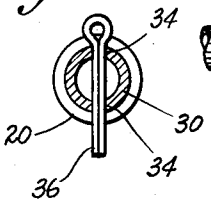


Fig. 8.



INVENTOR:
JOSEPH F. REISS,
BY George J. Mager
HIS ATTORNEY

United States Patent Office 2,745,115 Patented May 15, 1956

2,745,115

HAMMOCK

Joseph F. Reiss, St. Louis, Mo.

Application September 23, 1953, Serial No. 381,808

4 Claims. (Cl. 5—122)

The present invention relates to a novel and improved hammock construction.

The primary object of the invention is to provide a hammock including means designed to afford greater comfort to the user, and to simultaneously protect the user against personal injury.

Another object of the invention is to provide a hammock constructed entirely of metal with the exception of the body-supporting canvas.

Another object is to provide a hammock that may be assembled and dismantled quickly and with ease.

A further object is to incorporate in the hammock a two layer body-supporting canvas formed from a single piece of material the ends of which are permanently joined together so as to provide an endless construction.

It is another object of the invention to provide means for facilitating the removal and replacement of the canvas without dismantling the hammock.

Broadly, the hammock consists of a rectangular frame that is extensible and retractible, and is adapted to sustain between the ends bars thereof a body-supporting canvas of endless construction. The frame is metallic and of a generally tubular construction, as will appear. A pair of hangers is provided for suspending the hammock, said hangers being readily removable, and adapted to facilitate endwise movements of the suspended frame. A transverse bar extends between the side bars of the frame and beneath the canvas, the ends of said transverse bar being rigidly secured to a pair of inverted U-shaped brackets, each slidably mounted on one of said side bars.

With the transverse bar shifted to a position adjacent one of the end bars of the frame, the hammock may be utilized in the customary manner, with the canvas as taut as desired. Or optionally, the transverse bar may be temporarily removed instead of sliding it to one end of the frame.

When in use as will be more fully explained, the transverse bar is positioned beneath the knee of a person reclining in the hammock, at which time that portion of the canvas between one end bar and said transverse bar will automatically assume a taut position in a plane above that of the remaining portion, which as will be seen, is conducive to far greater comfort than obtainable in conventional hammocks.

Features and advantages of the hammock not specifically set forth hereinbefore, will be explained in the course of the detailed description to follow with reference to the accompanying sheet of drawings, wherein is portrayed the preferred embodiment of my invention.

In said drawings:

Figure 1 is a top plan view of a hammock embodying the principles of my invention;

Figure 2 is a side elevational view thereof;

Figure 3 is a longitudinal sectional view taken along the line 3—3 in Figure 1, elements which would appear in the background being omitted in the interest of clarity;

Figure 4 is a view similar to Figure 3, with certain elements in a moved and adjusted position;

Figure 5 is a fragmentary sectional plan view on an enlarged scale, of the lower left hand portion of Figure 1;

Figure 6 is a fragmentary sectional plan view on an enlarged scale, of the lower right hand portion of Figure 1;

Figure 7 is a fragmentary vertical sectional view, on an enlarged scale, taken on the line 7—7 of Figure 2; and

Figure 8 is a vertical sectional view on a further enlarged scale, taken on the line 8—8 of Figure 2.

In Figures 1 and 2, numeral **10** designates in its entirety an assembled hammock embodying the principles of my invention. The hammock **10** includes an extensible rectangular frame generally designated **12**, an endless body-supporting canvas generally designated **14**, a slidably mounted transverse bar assembly **16**, and a pair of hanger members each generally designated **18**.

As viewed in the drawings, the frame **12** includes a pair of transversely spaced side bars or rails **20**, a right hand end cross bar **22**, and a left hand end cross bar **24**.

All of the frame members are metallic and tubular, the right hand extremities **25** of the rails **20** being rigidly attached to the bar **22** by welding or brazing **26**, as illustrated in Figure 6. The left hand extremities **28** of the rails **20** are open for the slidable reception of metallic tubular rods or guides **30**, each of which has its left hand extremity **32** rigidly secured to the bar **24** by welding or brazing **33**, as clearly shown in Figure 5.

Formed in each of the tubular guide rods **30** is a series of pairs of longitudinally spaced openings **34**, the openings in both rods being correspondingly located with respect to the bar **24**. Each pair of openings **34** is in vertical alignment, and as demonstrated particularly in Figure 8, is adapted to receive a removable cotter pin **36**, or the like.

The body-supporting canvas **14** is formed from a single piece of material **38**. The ends of the material, as suggested at **40** in Figures 3 and 4, are joined in any feasible manner, for example by stitching or stapling, and so on, to provide an endless double layer canvas supported from the end bars of frame **12** as shown.

The assembly **16** includes a transverse metallic tubular bar **42**, and a pair of inverted U-shaped brackets **44** which are slidable longitudinally on the rails **20**. As especially shown in Figure 7, the opposite terminal portions of the bar **42** are rigidly secured to the brackets **44** by welding or brazing designated **46**.

The hanger members **18** are of spring metal rod stock, and as illustrated, are formed into a generally triangular configuration. The apex segment **48** of each hanger is arcuately contoured, and the divergent leg segments **50** thereof terminate in opposed inturned trunnions **52**, as best shown in Figure 5.

In Figures 1 and 2, numerals **54** designate sections of chain, the lowermost link of each section engaging the arcuate segment **48** of one of the hangers, whereby as is well understood, the hammock may be suspended between two spaced stationary supports, not shown. Obviously, the chain sections are exemplary only, and any of the well known means for suspending hammocks may be employed. It is to be noted however, that the arcuate shape of the apex segments **48** is considered an important feature, inasmuch as irrespective of the suspending means employed, the hammock will automatically center itself longitudinally, so that sidewise oscillation thereof if desired, is thus facilitated.

From the foregoing description and an inspection of the drawings, it should be apparent that the invention provides a novel construction including numerous features not found in conventional hammocks. For example, the ease with which the canvas **14** may be removed for cleansing and thereafter replaced, is believed to merit attention. As previously noted, the hangers **18** are of

resilient material, so that with reference to Figures 1 and 2, slight manual lateral pressure exerted against the lower left hand segment **50** of hanger **18**, will effect withdrawal of the adjacent trunnion **52** from bar **24**.

Thereupon, with the frame suspended at three corners and manually supported with one hand at the fourth corner, as should be understood, the left hand portion of canvas may be slipped off the bar **24**, whereupon the trunnion **52** may be re-positioned in frame supporting disposition. A repetition of the described operation with respect to the lower right hand structure will obviously complete the canvas removal operation, thus permitting cleansing of the said canvas without affecting the suspended position of the frame **12**. The manner in which the renovated canvas may be again positioned on the frame is deemed obvious in light of the immediately preceding description.

It is also to be noted that the endless canvas **14** provides a body-supporting medium which may be easily manipulated to transpose the lower fresh stretch of canvas into upper position without disturbing the existent position of the frame **12**.

It is well known that the canvases of hammocks have a tendency to stretch in consequence of repeated use, and another feature of the invention resides in the provision of the series of spaced openings **34** and the removable cotter pins **36**, whereby the frame may be extended to take up any permanent slack that may have developed. An inspection of Figures 5 and 8 should adequately demonstrate the extensibility of the frame for this purpose.

The hammock is primarily designed for use with the canvas in a position similar to that portrayed in Figures 2 and 3. There it is seen that the transverse bar assembly **16** has been brought to a position which would dispose it approximately beneath the knee joint of an average stature person, and that the cotter pins **36** have been positioned in a manner to provide sufficient slackness in the canvas for it to assume the illustrated position in consequence of the weight distribution of an occupant's body. Obviously, the bar assembly may be shifted selectively to the left and right along the rails **20**, until the most comfortable position for a particular occupant is brought about.

With this arrangement, one of the greatest drawbacks found in conventional hammock constructions is overcome. In other words, when a person reclines on a conventional hammock, a continuous strain is imposed on the person's heels and leg muscles, inasmuch as the greater weight of the remainder of the body constantly bears, so to speak, downwardly, as is understood. Thus it frequently happens that an occupant falling asleep, will awaken to find his heels sore and his legs muscle-bound.

Reverting to Figures 2 and 3, it should be apparent at once that an occupant of the instant hammock would not be subjected to any inconveniences of this nature. The weight of the body will maintain that portion of canvas **14** extending between the left end bar **24** and the transverse bar **42** in a taut condition, and in a plane above that of the remaining portion of said canvas. Thus the calves and heels of the occupant have merely to support their own weight, unaffected by the balance of the body weight of said occupant.

In addition to this decided advantage, it should be manifest that the side rails **20** may be grasped by the hands to shift the body into various positions. It should further be apparent, that with the canvas as shown, the side rails **20** serve to prevent personal injury to an occupant, inasmuch as even though the hammock be tilted severely angularly upwardly, one of said rails will nevertheless retain the occupant's body in place on the canvas.

Should it be desired to use the hammock in the flat conventional manner, the assembly **16** may be slid rightwardly along the rails **20** until the transverse bar **42** is adjacent the right end bar **22**, as demonstrated in Figure 4. As also shown in said view, the left end bar **24** may then be moved to the left until the canvas is taut. It is noted that the guide rods **30** are of sufficient length to maintain the frame **12** rigid, even though it be extended to a position wherein the cotter pins **36** would be disposed in the final rightward openings **34**. Obviously if desired, the assembly **16** may be lifted off the rails **20** and dispensed with, instead of being slid along them.

The entire hammock assembly may be quickly dismantled in a manner which should be clearly understood from the foregoing description.

The invention may manifestly be modified in some respects without departing from the principles of the invention. Therefore I do not desire to be limited to the precise details of construction illustrated and described, the scope of the invention being defined in the claims hereunto appended.

What I claim is:

1. A hammock construction comprising in combination: a rectangular metallic frame including a pair of transversely spaced tubular side rails and a pair of longitudinally spaced tubular end cross bars; an endless piece of canvas suspended within the frame by and between the end cross bars; a pair of resilient hanger members each removably attached to one of said end cross bars to suspend the frame; means to increase and decrease the space between the end cross bars aforesaid whereby to control the slack obtaining in said canvas; and a transverse bar assembly disposed beneath the canvas and slidably supported on said side rails intermediate the end cross bars whereby to automatically elevate one portion of the canvas to a higher plane than the remaining portion thereof when the body of an individual is supported thereon.

2. A hammock construction comprising in combination: a rectangular metallic frame including a pair of transversely spaced tubular side rails, a pair of longitudinally spaced tubular end cross bars, and a pair of guide rods each rigid at one end with one of said end cross bars and having its opposite end portion slidably extending into the adjacent end portion of one of said side rails; an endless piece of canvas suspended within the frame by and between the end cross bars; a pair of resilient hanger members each removably attached to one of said end cross bars to suspend the frame; means to increase and decrease the space between the end cross bars aforesaid whereby to control the slack obtaining in said canvas, said means consisting of a series of pairs of longitudinally spaced vertically aligned openings in each guide rod, and a pair of cotter pins or the like removably insertable in selected corresponding pairs of openings in the guide rods; and a transverse bar assembly disposed beneath the canvas and slidably supported on said side rails intermediate the end cross bars whereby to automatically elevate one portion of the canvas to a higher plane than the remaining portion thereof when the body of an individual is supported thereon.

3. A hammock construction comprising in combination the structure recited in claim 2, wherein the slidable transverse bar assembly consists of a metallic tubular member, and a pair of inverted U-shaped brackets unattached to but slidably supported on the recited side rails, each of the opposite terminal portions of the tubular member being rigidly secured to one of said brackets.

4. In a hammock construction, the combination of: a longitudinally extensible and retractible metallic frame including a pair of transversely spaced tubular side rails and a pair of longitudinally spaced tubular end cross bars; an endless piece of canvas suspended within the frame by and between said cross bars; a pair of resilient metallic hanger members each removably associated with one of said cross bars for suspending the frame in oscillatory fashion; and a transverse bar assembly slidable on said side rails between said end cross bars and disposed beneath the canvas, whereby to automatically produce a

taut leg-supporting section of canvas disposed in a plane above that section of said canvas whereon the body proper of an individual is supported when the hammock is in use.

References Cited in the file of this patent

UNITED STATES PATENTS

677,602	Sharrer	July 2, 1901
1,071,541	Young	Aug. 26, 1913
1,227,586	Couch	May 29, 1917
1,261,869	Tandy	Apr. 9, 1918
1,340,015	Claflin	May 11, 1920
1,389,073	Schlosser	Aug. 30, 1921
2,674,748	La Kaff	Apr. 13, 1954

FOREIGN PATENTS

269,754	Switzerland	Oct. 16, 1950