

I. E. PALMER.

RESILIENT BOTTOM FOR COUCH HAMMOCKS, &c.

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955,352.

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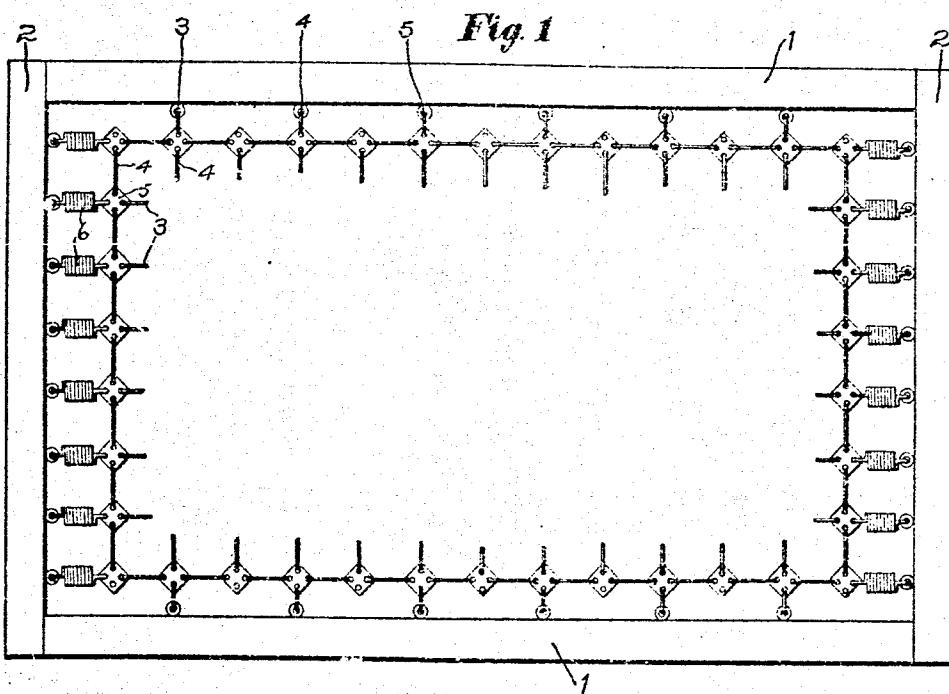


Fig. 2

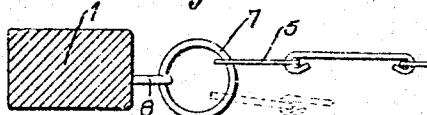


Fig. 3

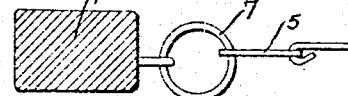


Fig. 6

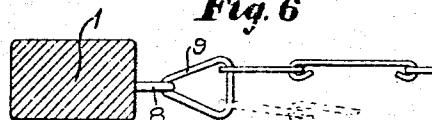


Fig. 7



Fig. 4

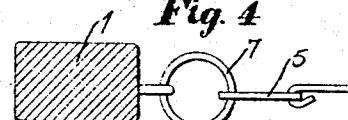
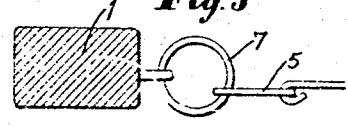


Fig. 5

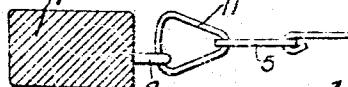


Witnesses:

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Fig. 8



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UNITED STATES PATENT OFFICE.

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RESILIENT BOTTOM FOR COUCH-HAMMOCKS, &c.

955,352.

Specification of Letters Patent. Patented Apr. 19, 1910.

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To all whom it may concern:

Be it known that I, ISAAC E. PALMER, a citizen of the United States, residing at Middletown, in the county of Middlesex and State of Connecticut, have invented an Improvement in Resilient Bottoms for Couch-Hammocks, &c., of which the following description, in connection with the accompanying drawings, is a specification, like numerals on the drawings representing like parts.

This invention relates to resilient bottoms for couch hammocks and other structures, and the object thereof is to provide a resilient bottom having a frame and seating, the latter being connected to the frame both longitudinally and laterally in such manner as to permit the seating to yield when subjected to pressure, thereby to support the occupant comfortably.

In order that the principles of the invention may be readily understood, I have disclosed a single type or embodiment thereof in the accompanying drawings, wherein—

Figure 1 is a plan view with parts broken away representing a resilient bottom constructed in accordance with my invention; Fig. 2 is a detail cross sectional view representing the preferable means for laterally connecting the seating to the frame; Figs. 3, 4 and 5 are similar views upon the broken lines 3, 4 and 5 of Fig. 1, and representing the position of the parts of the seating in use; and Figs. 6, 7 and 8 represent slightly modified forms of my invention.

Resilient bottoms particularly adapted for use with couch hammocks and similar structures are now upon the market. Such devices consist of a frame and a more or less flexible seating connected thereto both longitudinally and laterally. Preferably the seating is longitudinally connected to the frame by springs. The lateral springs connecting the seating and frame afford a thoroughly resilient connection between said parts, permitting the seating to yield in use, but add substantially to the expense of the structure. I have conducted numerous experiments with the object of doing away with the lateral springs, but yet connecting the sides of the seating and frame in such manner as to preserve their relative general position in use while permitting the seating to yield in use. I have found in the course of such experiments that if I employ enlarged eyes the diameter exceeding the thick-

ness of the lateral edges of the seating and connect said lateral edges to the longitudinal members of the frame, the seating in use is sufficiently resilient to support the occupant in comfort, because of the fact that the said enlarged eyes permit vertical play of the seating edges therein. The said enlarged eyes may be arranged in or out of transverse alignment and coöperate with flexible means connecting the ends of the seating and the end members of the frame, such flexible connections being preferably springs which tend to retain the seating level when not subjected to pressure, by bodily raising the seating, so that the lateral edges thereof are lifted bodily in said vertically enlarged eyes. In this manner, I provide a cheap and yet comfortable and thoroughly satisfactory resilient bottom serving all the purposes effected by those wherein lateral springs are employed. Moreover by the described construction I am enabled to support the seating in the longitudinal and end members of the frame, so that all the members of the resilient bottom lie in substantially a single plane, thus permitting the bottom readily to be applied to a couch hammock or similar structure.

Referring more particularly to the drawing, I have, in Fig. 1, represented a frame composed of longitudinal members 1—1 and end members 2—2 connected thereto in any suitable manner, all of said members being preferably arranged in the same plane, so that the frame may be readily applied to and used in connection with a couch hammock or similar structures. While any suitable seating may be employed, preferably I employ one composed of longitudinal links 3 and transverse links 4 connected together by plates 5 having eyes. The seating is provided with end flexible connections preferably in the form of coiled springs 6 connecting the same to the frame and in this instance directly to the end members 2—2 thereof. It is apparent that the number of end springs 6 may be varied as desired and that they may be connected to the frame otherwise than to the end members thereof, as, for example, to transversely arranged rods connected to the longitudinal members of the frame adjacent end members 2—2. A seating connected by longitudinal springs to the frame is sufficiently resilient longitudinally to support the occupant in comfort.

It is necessary, however, to connect such seating to the longitudinal members 1 of the frame for if the seating be connected only longitudinally it will in use sag below said longitudinal members 1-1 to the great discomfort of the user, as the said longitudinal members 1-1 present ridges if it be attempted to make use of the entire width of the frame. It is therefore important that the seating be connected to the frame in such manner that in use the seating may give or sag but slightly and in a gentle curve between the side connections. In attempting to do away with the side connecting springs between the seating and the frame, I have ascertained that I may accomplish all the results heretofore pointed out as important and also permit sufficient yielding of the seating in use by connecting the seating to the frame by connecting devices, which may be springless provided said devices be formed as enlarged eyes, as hereinafter described, to permit the vertical yielding of the seating as an entirety.

In Fig. 2, I have represented what I herein term an enlarged eye 7, here shown as circular and suitably connected to the adjacent longitudinal member 1 of the frame, as by eye 8. Any suitable number of these enlarged eyes may be employed at each side of the seating and the lateral edges of the seating may be connected thereto in any suitable manner. Preferably, however, the eyes 5 are directly connected thereto. When the frame is not subjected to the strain of use, the tension of the end springs 6 elevates the seating so that the lateral edges thereof are lifted to or closely adjacent to the tops of said eyes 7, as indicated in Fig. 2. When, however, the seating is subjected to the strain of use, the springs 6 are distended longitudinally and permit the seating to be depressed so that the lateral edges thereof sink in said eyes 7 in substantially the manner indicated in dotted lines in Fig. 3. This vertical depression of the seating, including the side edges thereof, affords a resilient support as the edges of the seating are free to rise and fall or vertically play in said eyes 7 as the weight to which the spring is subjected is increased or diminished or is shifted by movements of the occupant. In Figs. 3, 4 and 5, I have indicated more or less diagrammatically the positions occupied in said eyes 7 of portions of said seating which are different distances from the end members 2. For example, the eye 7 in Fig. 3 is closely adjacent the end coiled springs 6, so that even when the seating is subjected to the strain of use the tension of the springs 6 may be sufficient, unless the weight is excessive, to maintain the edges of the seating above the bottom of said eyes.

Figs. 4 and 5 represent eyes 7 at suc-

cessively greater distances from the end member 2, at which points the end springs 6 permit somewhat greater depression of the seating therein. The enlarged eyes to which I have referred may at opposite sides be arranged either in or out of transverse alignment, and in use may be combined with other lateral connecting devices.

My invention is not limited to the use of any particular shape or type of enlarged eye, the forms herein shown being merely illustrative of the scope of my invention; for example, in Fig. 6, I have shown an enlarged eye 9 of substantially triangular arrangement, which affords less vertical play between the eye and the longitudinal members 1 of the seating. In Fig. 7, I have represented an enlarged eye 10 formed as a hook herein shown as connected by an eye 8 to the longitudinal member 1. In Fig. 8, I have represented an enlarged eye 11 generally similar to that shown in Fig. 6, but reversed. In this case, the vertical play to which I have referred occurs between the eyes 11 and the longitudinal members 1 of the frame. In the form of my invention represented in Fig. 2, there is more or less vertical play between the enlarged eye 7 and the supporting eye 8, this being subsidiary to the vertical play of the seating in the eyes 5. In the construction shown in Fig. 8, however, this action is substantially reversed, as the subsidiary play occurs between the seating 5 and the enlarged eye 11.

It will be apparent from the foregoing description that the bottom is resiliently supported by the end springs 6 and that it is sufficiently yielding at its lateral edges to support the occupant in comfort but without permitting displacement of the seating, which would occur were no lateral connections provided. The enlarged eyes 7 protect the end springs 6 from overstrain when the seating is in use.

Having thus described one illustrative embodiment of my invention, I desire it to be understood that although specific terms are employed, they are used in a generic and descriptive sense and not for purposes of limitation, the scope of the invention being set forth in the following claims.

1. A resilient bottom for couch hammocks and other structures comprising in combination a frame composed of longitudinal and end members, a seating therefor having flexible connections to the said frame, and a plurality of connecting devices secured to the longitudinal members of the frame, and each having an enlarged eye of a diameter exceeding the thickness of the lateral edges of the seating and connected to the said lateral edges, said enlarged eyes permitting vertical play of the seating edges therein.

2. A resilient bottom for couch hammocks

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and other structures comprising in combination a frame composed of longitudinal and end members, a seating therefor having end springs connected to the frame, and a plurality of connecting devices secured to the longitudinal members of the frame and each having an enlarged eye connected to the lateral edges of the seating and of a diameter exceeding that of said lateral edges, thereby permitting the said end springs to draw the seating toward the upper face of

the frame by movement of said lateral edges in said eyes and permitting said edges to be depressed therein when the seating is subjected to the strain of use.

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In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ISAAC E. PALMER.

Witnesses:

IRVING U. TOWNSEND,
MAY H. LOWRY.