I. E. PALMER.

RESILIENT BOTTOM FOR COUCH HAMMOCKS, &c.

APPLICATION FILED JUNE 5, 1909.

942,841. Patented Dec. 7, 1909.

2 SHEETS—SHEET 1.

Fig. 1

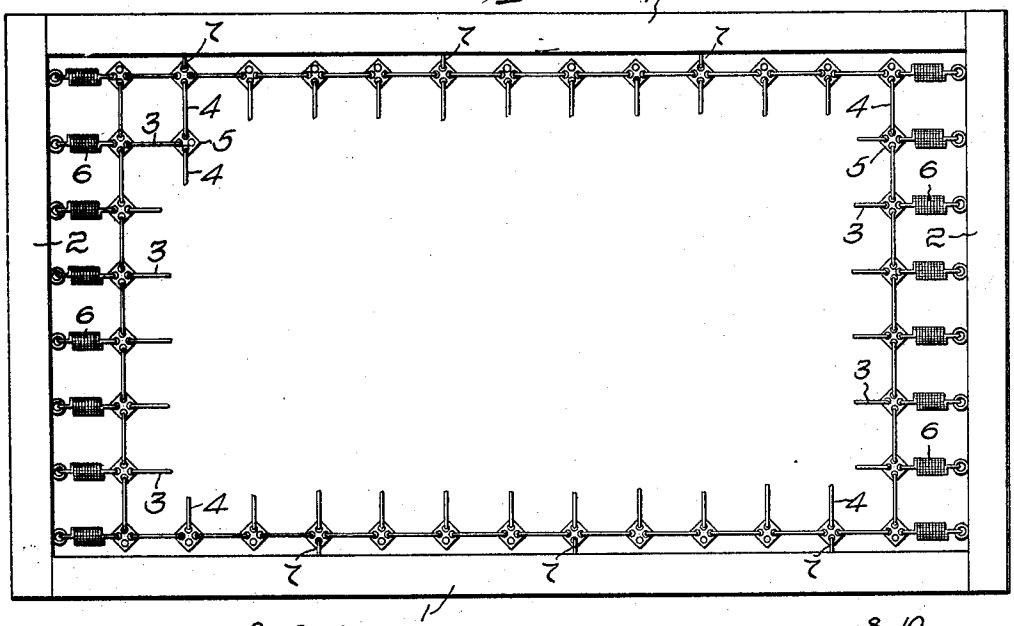


Fig. 3

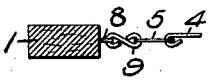


Fig. 4

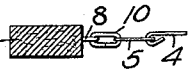
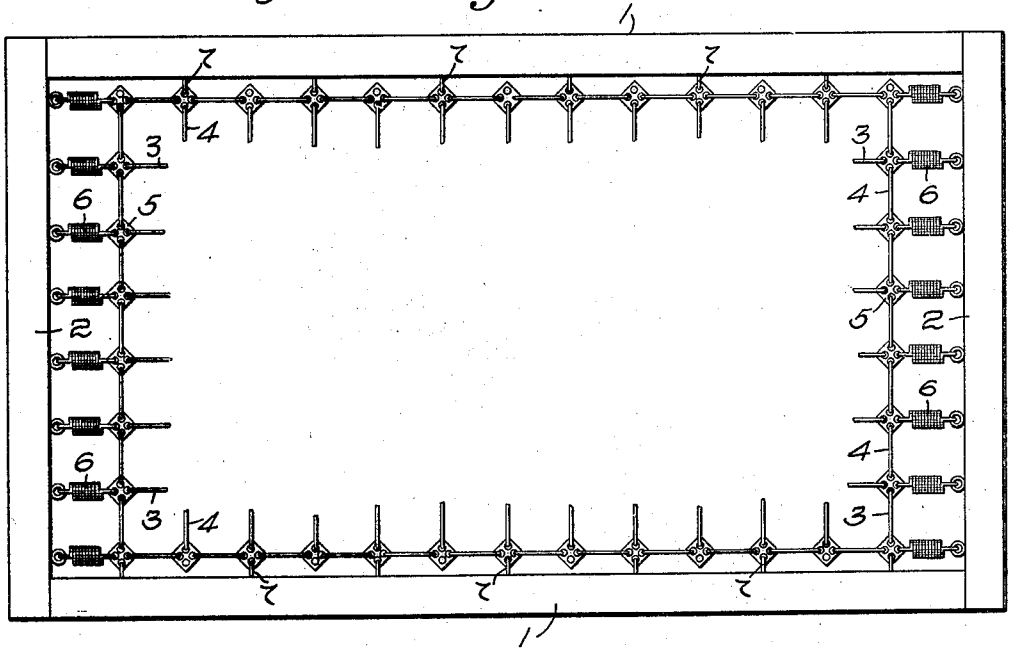


Fig. 2



Witnesses:
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Robert H. Hammler.

Inventor:
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2 SHEETS—SHEET 2.

Fig. 5

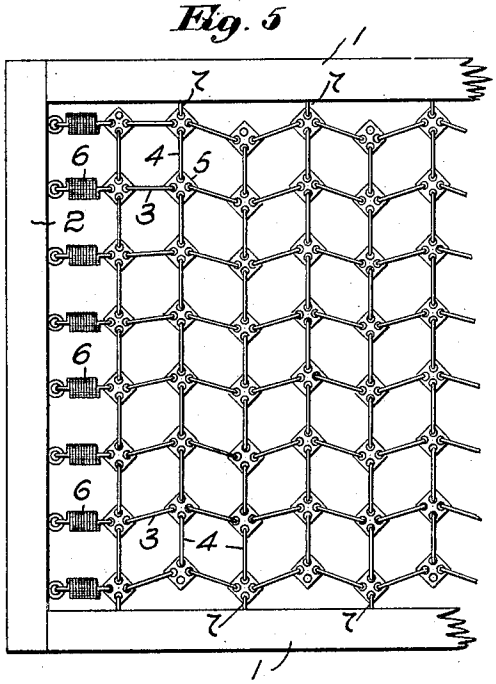


Fig. 6

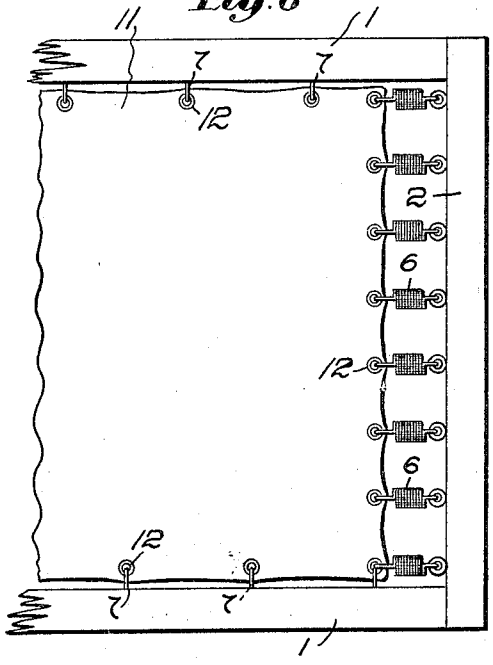
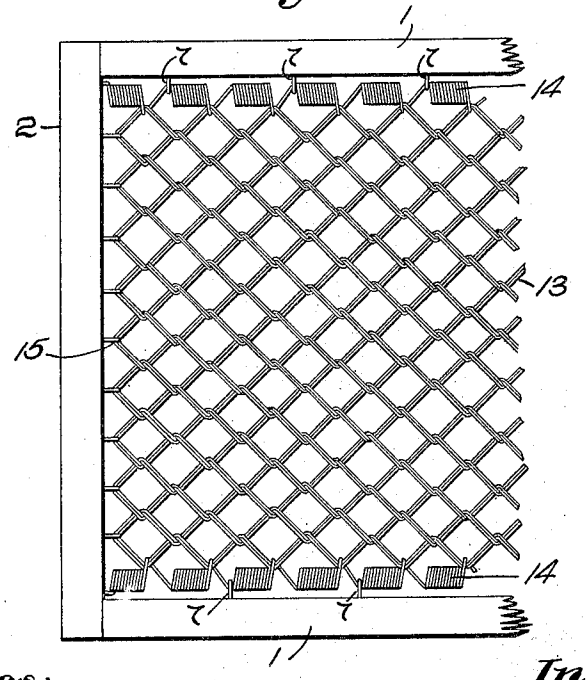


Fig. 7



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UNITED STATES PATENT OFFICE.

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RESILIENT BOTTOM FOR COUCH-HAMMOCKS, &c.

942,841. Specification of Letters Patent. Patented Dec. 7, 1909.

Application filed June 5, 1909. Serial No. 500,306.

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 laterally to yield when subjected to pressure, thereby to support the occupant comfortably.

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

Figure 1 is a plan view, parts being broken away, representing a resilient bottom constructed in accordance with my invention; Fig. 2 is a similar view of a slightly modified form of my invention; Figs. 3 and 4 are details representing a slight modification of the lateral connecting devices for the frame and seating; Fig. 5 is a view similar to Fig. 2, but representing the position assumed by the elements of the seating when the resilient bottom is in use; Fig. 6 is a plan view of a part of a resilient bottom provided with the textile seating; and Fig. 7 is a similar view representing another form of wire seating.

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 the frame in such manner as to preserve their relative position in use, while permitting the seating to yield in use. I have found in the course of such experiments that if lateral connecting devices be employed on each side in transverse alinement with each other, the seating is not laterally yielding and the desired result cannot be accomplished, unless lateral springs be interposed in the body of the seating itself and in the line of said connecting devices. This adds to the cost of the seating. I have, however, discovered and demonstrated that I may employ springless lateral connecting devices connecting each side of the seating with the longitudinal members of the frame, and yet obtain all the desired lateral yielding of the seating in use, by arranging each connecting device upon each side out of substantial transverse alinement with the connecting devices upon the opposite side. In other words, the seating is free in this case to yield at one edge in the line of the connecting device at the opposite edge, this construction being carried out throughout the longitudinal extent of the seating. 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 plane of the longitudinal and end members of the frame, so that all the parts 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 in the same plane, so that the frame may be readily applied to and used in connection with a couch hammock or similar structure. While any suitable seating may be employed, preferably I employ one composed of longitudinal links 3—3 and transverse links 4—4 connected together by eyes 5. Preferably the seating is provided with end 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 only be connected 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 from side to side, so that the upper surface of the side members 1—1 merges without noticeable gradation into the gentle slope of the seating.

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 the lateral yielding of the seating in use, by connecting the seating to the frame by connecting devices which may be springless, provided each of said devices upon one side of the seating be arranged out of transverse alinement with the similar devices upon the other side of the seating, or, in other words, if each of the connecting devices upon each side of the frame be obliquely arranged with respect to those upon the opposite side of the seating.

The lateral connecting devices may be of any suitable character (preferably springless) and any suitable number may be employed. In Fig. 1, I have represented three connecting devices 7 upon each side of the frame, said devices being herein represented as hooks screwed into the frame, the hooked ends engaging holes in the eyes 5 and affording some freedom of play. Thus, in Fig. 1, certain of the transverse lines of connecting links 4 are at both ends unconnected to the frame. In Fig. 2, however, I have shown a greater number of connecting devices 7 at each side of the seating, and in this construction each of the transverse lines of connecting links 4 is connected to one of the longitudinal members 1 of the frame at one side, but is unconnected at the opposite side. The lateral connecting devices may be of any suitable character. In Fig. 3, I have represented them as composed of hooks 8 screwed into the longitudinal members 1 and themselves connected to the eyes 5 of the seating by double ended hooks or links 9 and affording some freedom of play. In Fig. 4, I have represented the hooks 8 as connected to the eyes of the seating by loops 10. In this manner more freedom of movement is afforded at the side where the seating is connected to the frame. It is, of course, apparent that other types of connecting devices may be employed.

In Fig. 5, I have represented the position assumed by the links 3 and 4 when the resilient bottom is in use. It will be noted that the links 4 are shifted laterally toward the hook 5 with which they are in transverse alinement, this condition occurring throughout the longitudinal extent of the seating. When the seating is relieved of strain or weight the end springs 6 serve to return the links to the position indicated in Fig. 2.

In Fig. 6, I have represented a textile seating 11 of some suitable material such for example as canvas, preferably provided with eyes 12 receiving hooks 7 positioned out of transverse alinement as previously described. In the event that a textile seating is used, I preferably provide end springs as illustrated.

In Fig. 7, I have represented a form of seating composed of interwoven or intermeshed wire strands 13 preferably provided with longitudinally arranged edge springs or coils, 14. The said intermeshed wires may be if desired connected to the end members 2 of the frame or bottom by end coil springs, as indicated in the preceding figures. If desired, however, said intermeshed wires may be connected to the end members by hooks or eyes 15, inasmuch as the end springs are afforded by the elastic nature and arrangement of the intermeshed or interwoven wires 13 themselves. The said seating shown in Fig. 7 is laterally connected to the longitudinal members of the frame by hooks or eyes 7 arranged out of transverse alinement, as already described. It is evident that other types of seating may be employed in the practice of my invention and may be connected by lateral springless members out of transverse alinement as described.

It is apparent from the foregoing description that in the use of the resilient bottom, each of the transverse lines of links 4 is free to yield laterally. This affords therefore a comfortable support to the occupant. At the same time, the seating is preserved in substantially the plane of the upper face of the side members 1, so that the entire width of the frame may be utilized without any discomfort whatever.

Having thus described one type or 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.

Claims.

1. A resilient bottom for couch hammocks and other structures comprising in com-

bination a frame composed of longitudinal and end members, a seating therefor having end flexible connections to the said frame, and a plurality of connecting devices at each side of the seating, thereby to connect said seating to the said longitudinal members, said connecting devices at one side being obliquely arranged with respect to the said connecting devices at the other side, whereby the seating is under pressure laterally yielding in the transverse line of each of said side connecting devices, as well as being longitudinally resilient.

2. A resilient bottom for couch hammocks and other structures comprising in combination a frame composed of longitudinal and end members, a seating therefor having end springs, and a plurality of springless connecting devices at each side of the seating, thereby to connect said seating to the said longitudinal members, all of said springless connecting devices on each side being obliquely arranged with respect to each of the said springless connecting devices on the opposite side, so that in use the seating yields in the transverse line of each of said connecting devices.

3. A resilient bottom for couch hammocks and other structures comprising in combination a frame composed of longitudinal and end members, a seating therefor composed of longitudinally extending members and transverse links connected thereto, end springs connecting said seating to the frame, and a plurality of springless connecting devices at each side of the seating and connecting the same to said longitudinal frame members, said springless connecting devices at one side of the frame being in substantial lateral alinement with certain of said transverse links and the said springless connecting devices at the opposite side of the frame being in substantial transverse alinement with other of said transverse links, whereby each transverse line of links is free from the frame at one end at least of such transverse line so as to be free to yield when subjected to pressure.

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

ISAAC E. PALMER.

Witnesses:
FRED. E. FOWLER,
GEO. C. HEINS.