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J. C. GORDON
MATTRESS CONSTRUCTION

2,540,441

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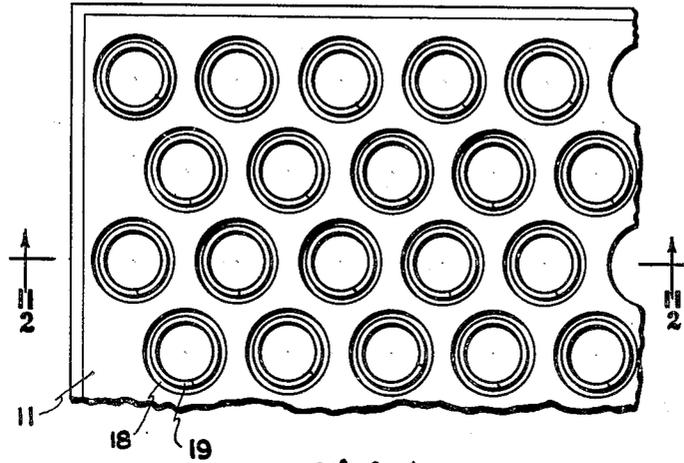


Fig. 1

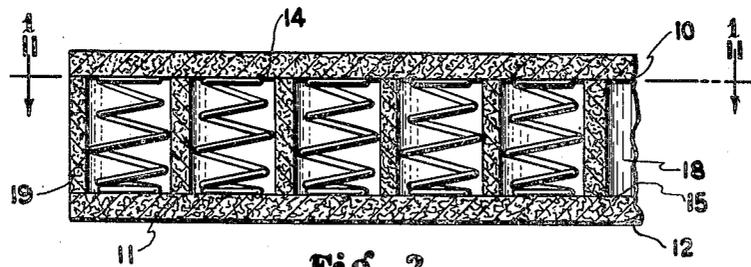


Fig. 2

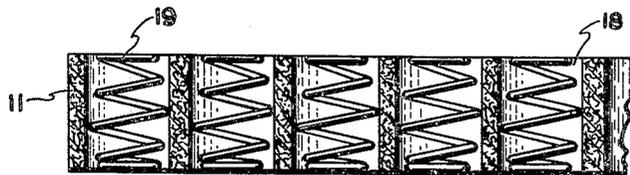


Fig. 3

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MATTRESS CONSTRUCTION

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1 Claim. (Cl. 5—353)

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This invention relates to the construction of mattresses, and the present invention takes into consideration many of the problems which have hitherto been matters of some concern to mattress manufacturers in meeting the requirements of quality, efficiency, comfort, durability, appearance and economy of manufacture.

A principal object of the invention is the attaining of the above-mentioned desirable features.

The invention contemplates the provision of a central or inner slab of resilient material such as rubberized hair, formed with many perforations or spring sockets in which barrel springs are positioned and frictionally held. The springs are not intersecured, being free of one another and of the remaining components of the mattress so that they will operate independently and freely, despite that they and the inner slab maintain themselves in a unitary subassembly.

A complete understanding of the invention will be obtained upon reference to the appended drawing and to the following specification.

In this drawing:

Fig. 1 is a fragmentary top plan view of a mattress made according to the invention.

Fig. 2 is a section on line 2—2 of Fig. 1.

Fig. 3 shows a subassembly, a center slab of the mattress with springs frictionally held therein.

The drawing shows a mattress consisting of several slabs or laminae 10, 11 and 12 with the center slab or lamina separated from the outer laminae by protector sheets 14 and 15 of finely woven burlap, jute, or other fibrous material, etc.

All the laminae are shown as made of any suitable resilient material such as rubberized hair, and all of the laminae and the protector sheet are understood to be secured to one another by interfacial adhesive material of any suitable character.

The center lamina 11 has numerous sockets or perforations 18 formed therein, as by cutting, in which are disposed and frictionally held barrel springs 19 which are not intersecured, being free of one another so as to operate independently, and being also free of the laminae, and thus operate freely and independently of one another and of all of the remaining components of the mattress or cushion construction.

In the finished mattress construction, the springs are not compressed, being in their normal or free or expanded condition. The free length of the springs is normally equal to the thickness of the center slab, and thence the top slab is supported by the center slab as well as by the springs.

Even when uncompressed or free, the center portions of the springs are substantially of the diameter of the socket so that lateral frictional en-

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agement between the springs and the sockets is provided in the subassembly of a center slab and the springs, as shown in Fig. 3, with the result that the sockets maintain the springs in place in the center slab, even during assembly operations.

It will be observed that the construction here disclosed is a novel and highly efficient and economical construction for mattresses.

Each spring floats or is suspended without any positive attachment to any of the laminae or to any other spring.

It will be understood that the proportions and characteristics of the springs may be as desired, to assure the desired degree of support, and this is obtained by a proper selection of the diameter of the spring wire used, as well as the diameter and tension of the coil itself, as well as by a proper selection of the number of springs to be used in any construction. In the preferred embodiment, the free height or length of the coil springs is equal to the thickness of the center slab or lamina.

The protector sheet functions to prevent cupping of the outer slabs and may be of any suitable or desired material, burlap or other fibrous material being found useful for this purpose.

Now having described the mattress construction herein disclosed, reference should be had to the claim which follows for a determination of the invention hereof.

I claim:

A multiply laminated mattress construction comprising two outer laminae between which is an inner lamina, all of resilient material, all initially separate lamina and joined to form a complete mattress, the inner lamina being of foam rubber and having numerous spring sockets therein in the form of rough surfaced through perforations, coiled convex or barrel springs within said sockets frictionally engaging said sockets at their sides intermediate their ends, the outer laminae closing the sockets, said springs being not intersecured, i. e., being free of one another, and operating independently of one another and of the laminae, said springs being expanded or uncompressed and being maintained in assembly in the inner lamina solely by the frictional engagement between the springs, at the centers of their sides, and the rough surfaces of the sockets.

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REFERENCES CITED

The following references are of record in the file of this patent:

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Number	Name	Date
2,446,775	Marsack	Aug. 10, 1948