

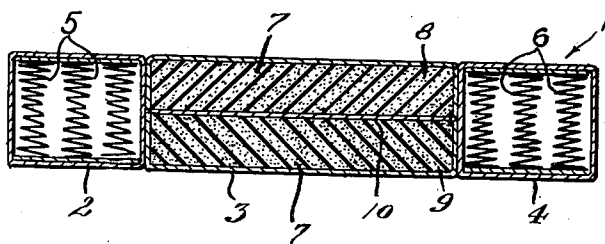
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MATTRESS

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MATTRESS

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This invention relates to new and useful improvements in mattresses.

Mattresses have been known at whose outer edges stronger springs were provided than in the part on which a person would ordinarily lie. While this expedient protected the mattress from breaking down at the edges, it added nothing to the comfort of the user. The body of the average person was not level because the springs on which he lay, being of the same resiliency, were depressed lower in the zone bearing the greatest weight, namely, the torso, than the zones bearing the head and feet. This resulted in sagging, hammock-like body support, instead of a flat support which is the most hygienic and restful.

It has also been suggested to provide additional support for the center of the mattress either by providing stiffer springs or by multiplying the number of springs to counteract the tendency of mattresses to sag in the middle. The object of these arrangements was to increase the support at the center or to prolong the life of the mattress.

Hospital mattresses have been known in which certain portions could be raised or inflated by various means. One well-known device was a pneumatic mattress divided into several compartments which could be raised or lowered with a corresponding effect on parts of a reclining body. Such pneumatic devices are extremely complicated and, while they served well enough to prevent bed sores and the like, they were not suited for the ordinary sleeper.

It is the object of my invention so to construct a resilient mattress that it will be compressed evenly by a reclining body and thereby maintain the body of a sleeper on a level horizontal plane at all times. Of course, not the entire body of the sleeper need be kept on a level, horizontal plane. As a matter of fact, for most people that part of the body which is above the respiratory organs is preferably kept at a higher level than the balance of the body.

I accomplish this by means of different rather than uniform elasticity in the various zones of the mattress with which the body comes in contact, the elasticity being inversely proportional to the weight the zone has to bear.

In addition to the greater comfort, lying on a level yet soft surface is most healthful and restful. The mattress may be divided into three zones corresponding to the areas normally covered by the head, trunk and feet of a reclining body, the zones extending throughout the width of the mattress. The middle zone which sup-

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ports the trunk comprises material of less elasticity than the head and foot zones because it supports the greatest weight. The zone supporting the head may have material of the same or lower elasticity than the zone supporting the feet.

The elastic material used in the mattress may be of metal springs, sponge rubber or any other suitable resilient plastic or other material. If sponge rubber is used, the suitable resiliency of any zone may be insured by selecting material of the proper specific density or by forming air pockets or cavities in the bottom surface of the rubber. The zone supporting the trunk will, for instance, have the smallest such pockets, the zone supporting the head larger ones, and the zone supporting the feet the largest pockets.

The zones of varying elasticity may all be enclosed within a common covering and ticking, or they may be in individual, separate sections attachable by any conventional means to one another or within a frame.

Whether separable or not, the zones, especially the middle one, can be constructed to suit different types of people. For instance, a short heavy person would need a middle zone of an elasticity lower with respect to the head and foot zones than a tall, thin person. Also, the elasticity in the head zone can be varied depending on whether or not a person uses a pillow.

Many other variations can be incorporated in the construction of a mattress to suit the individual's comfort.

In order to facilitate turning of the middle section of the mattress, the section may be formed of two layers of sponge rubber.

Any combination of elastic elements may be used in the different zones, the most expensive resilient materials being restricted to the zones where they are most needed.

My invention will now be explained in connection with the drawing in which the single figure is a vertical sectional view.

A vertical cross section of a mattress is shown. Mattress 1 is divided into three sections 2, 3, 4 for respectively supporting the head, trunk and feet of a person. Springs 5 in the head section are less resilient than springs 6 in the foot section. The middle or trunk section is filled with sponge rubber 7 less resilient than the springs in the other two sections and divided into layers 8 and 9 separated by a partition 10. Because of this division it is not always necessary to turn the entire middle section of the mattress; the layer 8 of the middle zone alone need be turned.

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However, the middle section 3 may be constructed of a single piece of sponge rubber or the like rather than being divided into two horizontal sections. The sections are separable and can be attached to one another to form a complete mattress by means of snaps or hooks, or by being placed inside any frame or in any other suitable manner.

It will also be obvious that the present invention may be combined with any of the well known expedients, such as reinforcing the edges of the mattress and the like, my invention being concerned solely with the position in which the various parts of the body are maintained.

While I have shown the mattress divided into three sections it will be obvious to those skilled in the art that the mattress may be divided into two sections or into more than three sections, depending on the results that one wishes to obtain.

What I claim is:

1. A mattress divided transversely into three separate sections respectively for the head, torso and feet of a human body, a plurality of resilient springs in the section for the feet, a plurality of less resilient springs in the section for the head, and sponge rubber comprising the section for the torso of a density, such as to make it less resilient

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than the other two sections, whereby the body will depress the sections to substantially the same depth at all points of contact therewith.

2. The mattress according to claim 1, and in which a horizontal partition divides the torso section into two separate layers.

3. The mattress according to claim 2, and in which a partition horizontally divides the torso section into two layers.

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