Oct. 7, 1941. J. E. ZOFNASS 2,257,994

MATTRESS

Filed May 22, 1940

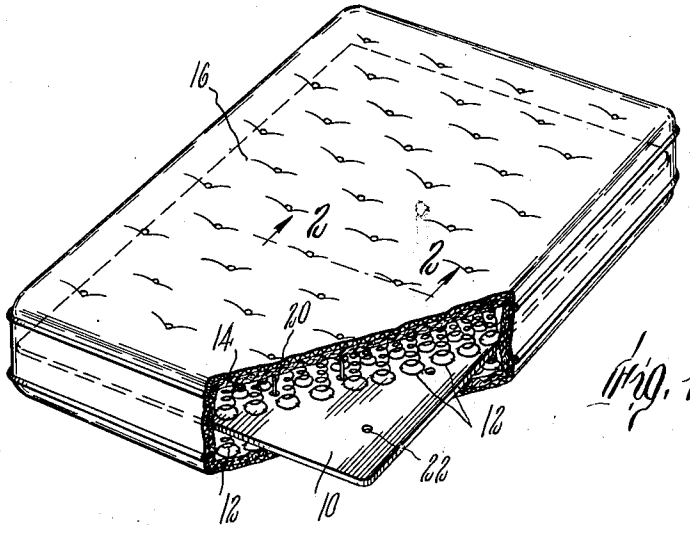



Fig. 1.

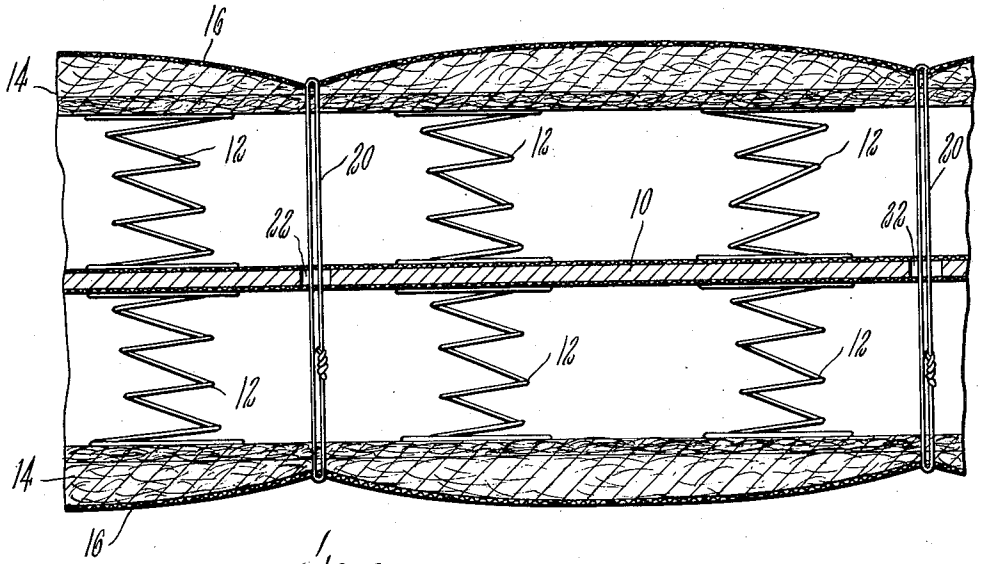



Fig. 2.

Inventor
Jesse E. Zofnass
by Nathaniel P. Wharton
Atty.

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# UNITED STATES PATENT OFFICE

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## MATTRESS

Jesse E. Zofnass, Roxbury, Mass.

Application May 22, 1940, Serial No. 336,564

1 Claim. (Cl. 5—351)

This invention relates to a mattress which is intended primarily for the use of persons suffering sacroiliac disorders.

In order to avoid great discomfort, such persons must be supported, when in prone position, upon a relatively rigid surface so as to avoid local sagging which tends to distort the back and to cause great pain.

It is an object of the present invention to provide a mattress which will afford proper support for persons suffering from sacroiliac or other spinal disabilities, and will also afford maximum comfort to such persons.

For a more complete understanding of the invention, reference may be had to the following description of an embodiment thereof, and to the drawing of which—

Figure 1 is a perspective view of a mattress embodying the invention, a portion being broken away.

Figure 2 is a fragmentary section on the line 2—2 of Figure 1.

The mattress embodying the invention is, as clearly appears from the drawing, characterized by a substantially continuous, rigid plate 10 which may be of plywood or any other light rigid material, such as sheet aluminum, sheeted "Bakelite" or other plastic material, etc. The plate 10 preferably extends substantially horizontally midway of the depth or thickness of the mattress and substantially parallel and coextensive with its surfaces. On one or both sides of the plate 10 are coil springs 12 which are arranged to close together in sets to support outer padding 14. The springs 12 are preferably shorter and stiffer than the springs usually employed in a spring mattress. Thus, while the springs provide a limited amount of yielding, they do not yield sufficiently to distort the back of the occupant of the bed. As shown, a set of springs 12 is secured to the top face of the plate 10 and another set of springs is secured to the bottom face of the plate, these springs being fastened to the plate by double-pointed brads or any other suitable means which serve to maintain the springs in their proper relative positions. If desired, each set of springs may be used in the form of a so-called spring assembly comprising, for example, tie-wires or clips for maintaining the individual coil springs of the assembly in the desired relative positions; or the assembly may be of the type in which the individual coil springs are housed in individual fabric pockets and are sewed or otherwise anchored to the fabric constituting the pockets.

Two pads 14 are provided, one forming the top and the other forming the bottom of the mattress. These pads preferably are approximately coextensive with the substantially continuous plate 10 and may be of any suitable material such, for example, as an inner layer of sisal fibers, overlaid by an outer layer of felt; or layers of hair, floss, cotton, or the like can be employed with or in lieu of such materials. The mattress structure is preferably encased in the usual envelope or cover 16 of ticking fabric or the like, which covers the top and bottom surfaces as well as the edge surfaces of the mattress. In order to keep the mattress in proper shape, it may be tufted by the use of suitable tufting cords 20. To this end, suitable spaced apertures 22 may be provided in the plate 10 for permitting passage therethrough of the tufting cords 20, which cords extend from one pad to the other, connecting them as indicated in Figure 2. However, it is possible to embody the combined features or principles of the present invention in a tuftless mattress, particularly when suitable padding material is provided for the purpose of insulating the top and bottom sets of springs, for instance, a quilted, stitched, or needled pad or a sisal fiber or hair pad or the like impregnated with suitable binder, such as rubber latex composition, for uniting or bonding together the fibers.

The mattress illustrated on the drawing is reversible in that it can be used with either side uppermost, but the invention hereof might well be embodied in a non-reversible mattress structure. The central plate, being preferably made of light weight material, adds little to the weight of the mattress but materially stiffens it.

It is evident that various modifications and changes may be made in the details of structure of the mattress herein shown and described without departing from the spirit or scope thereof as defined in the following claim. Thus, in some instances, the coil springs on either or both sides of the rigid interior plate may be omitted, in which case such superficial or limited resiliency as is desired in the mattress may be afforded by a suitable pad element substantially coextensive with such plate.

I claim:

A mattress comprising a central, substantially continuous, rigid plate having spaced apertures therethrough, a set of springs secured to the upper face of said plate, a set of springs secured to the lower face of said plate, padding covering the outer ends of each said set of springs, a fabric envelope enclosing said plate, springs and padding, and tufting cords connecting both pads and passing through said apertures in the plate.

JESSE E. ZOFNASS.