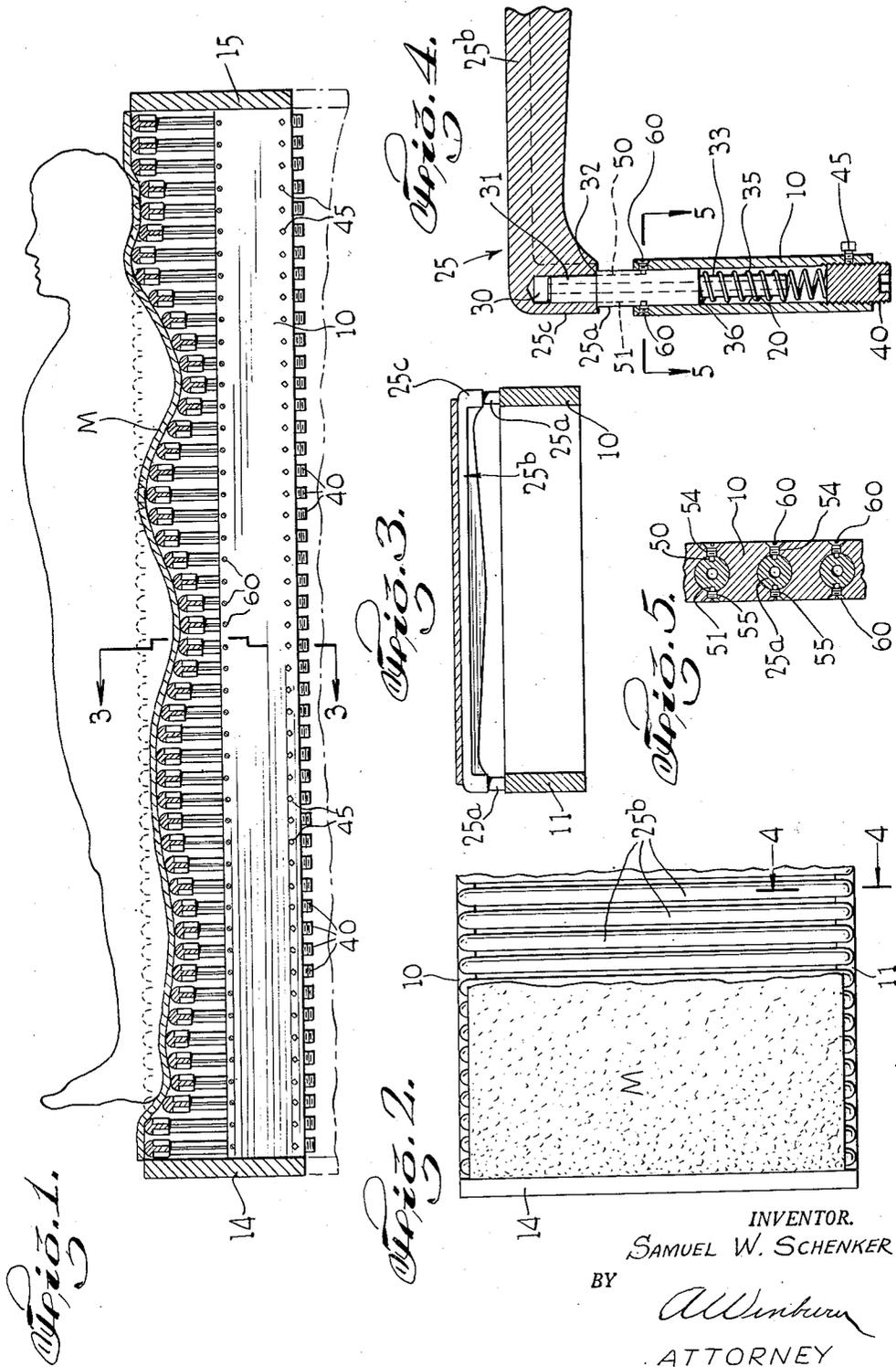


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BED OR BODY SUPPORT
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BED OR BODY SUPPORT

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My invention relates generally to beds or similar body resting appliances. More particularly my invention is directed to an improved construction for the body support portion of a bed, adapted to take the place of the usual bed spring.

One of the objects of my invention is to provide a novel bed construction of the class described in which the body supporting portion thereof shall be so constructed as to prevent sagging.

Another object of my invention is to provide a novel bed construction of the class described in which the body supporting portion thereof shall be so constructed and arranged that while it will yield in certain areas to curvatures of the body of the user, it will at the same time relatively rigidly and uniformly support all portions of the said body in accordance with the best therapeutic practices.

A further object of my invention is to provide a novel bed construction of the class described in which the resilience of certain selected areas of the body supporting portion thereof may be altered in accordance with the curvature of the spine to afford therapeutic relief for persons suffering from spinal or other bony ailments, especially backache due to the arthritides, spondylolisthesis, etc.

Other objects of my invention will hereinafter be pointed out or will become apparent in the following description thereof.

In the accompanying drawings,

Fig. 1 is a side elevational view, partly in cross-section, of a bed constructed and arranged in accordance with my invention;

Fig. 2 is a fragmentary plan view thereof with a portion of the top blanket part broken away to reveal the construction and arrangement;

Fig. 3 is a cross-sectional view taken substantially along the line 3-3 of Fig. 1;

Fig. 4 is an enlarged cross-sectional view taken substantially along the line 4-4 of Fig. 2; and

Fig. 5 is a cross-sectional view taken substantially along the line 5-5 of Fig. 4.

Referring now in detail to the drawings I have shown a bed, constructed and arranged in accordance with my invention and comprising a pair of longitudinal rails 10 and 11 and a pair of transverse members 14 and 15, the said members 14 and 15 being adapted to be used as head and foot boards of a bed, if desired. The rails 10, 11 and 14, 15 may be interconnected in any satisfactory manner to form a rectangular hollow frame.

My novel body supporting portion of the bed will now be described.

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In each of the rails 10, I provide a series of vertically disposed openings 20 (see Fig. 4), the said openings 20 being relatively closely spaced and extending along the length of said rails 10 and 11. It is noted that I prefer to have the openings 20 in the rail 10 in alignment with corresponding openings 20 in the rail 11. Into each pair of corresponding openings 20 there is received the legs 25a of an inverted V-shaped member 25. Each member 25 is provided with a transverse portion 25b which is of relatively rigid material on the nature of plastic, strong wood or any of the light strong metals, such as, for example aluminum. The transverse portion 25b and the legs 25a of the member 25 may be of one piece construction or the legs 25a may be independent members as shown in the drawings and attached in the following manner. The portion 25b may terminate at its opposite ends in slight downwardly depending portions 25c having vertically disposed openings 30 extending upwardly from the bottom edge thereof and adapted to receive therein the reduced diameter portions 31 of the legs 25a. A shoulder 32 limits the distance that the said portions 31 are inserted into the openings 30. The legs 25a may be held in attachment with the portion 25b by any suitable attaching means, such as, for example, a friction fit, as shown.

The leg portion 25a is of such size with respect to the opening 20 that it will freely, slidably move therein only in a vertical direction.

A portion 33 of the leg 25a, adjacent the bottom thereof, may be made of reduced size to accommodate a coil spring 35 surrounding the same. The upper end of the spring 35 is adapted to abut the shoulder 36 formed at the junction of the portions 25a and 33, while the lower end of the spring 35 is adapted to abut a suitable bottom wall which, in the drawings, I have shown as a screw threaded plug 40, threadedly received in the bottom of the opening 20. An additional function and purpose of the plug 40 will hereinafter be pointed out.

It is thus seen from the above described construction that in use, a person's body will rest upon the transverse portions 25b with the result that, due to the springs 35 certain of the said rigid rod portions 25b will move downwardly more than others, in accordance with the contour of the body of the user and against the action of the said springs 35.

As clearly shown in Fig. 1 of the drawings all portions of the body of the user will have some support furnished by the members 25, and there

will be no hollow areas, such as for example the hollow of the spine which are left unsupported to thus aggravate various forms of backache.

It is also noted that while the body is resiliently supported in a vertical direction, the rigidity of the portions 25b will prevent sagging and consequent distortion of the supporting efficiency of the bed.

The members 25 are preferably relatively closely spaced so as to reduce to a minimum the unsupported portions of the body.

It is also noted that the top surfaces of the portions 25b may be enlarged and rounded for the comfort of the user, and that any suitable type of mattress M may be placed over the portions 25b for the further comfort of the user.

Under normal conditions, all of the springs may be made of substantially the same compression strength. However, there may be certain instances where the user may be suffering from some form of back ailment and in which case it would be desirable to furnish greater or less support to certain selected areas of the body. In such cases, the plugs 40 may be rotated so as to compress the springs 35 or to ease the tension thereof, thus directly affecting the amount of support furnished by certain selected members 25. A set screw 45 maintains the plug 40 in its adjusted position.

In accordance with my invention I have provided the following means whereby, regardless of the variations in the strength of the springs 35, the transverse support members 25b will all be at a uniform level when the bed is not in use.

A pair of grooves 50 and 51 are provided in the surface of the leg members 25a, the said grooves extending downwardly from the shoulders 32 for a predetermined distance. Threaded apertures 54 and 55 are provided in the inner and outer walls of the rail 10, the said apertures 54 and 55 being in alignment with the grooves 50 and 51. Into the apertures 54 and 55 I place set screws 60.

It is thus seen from the above description that regardless of the position of the plugs 40 or of the amount of compression of the springs 35, all of the transverse portions 25b of the members 25 will be held at a uniform level when not in use by the action of the springs 35 in urging the legs 25a upwardly to their limit. Under these circumstances when the bed is made up during the day it will have the customary appearance of the usual standard type of bed.

While in the drawings I have described a bed construction in which the body supporting means is incorporated therein, it is understood that my invention also contemplates the construction of a bed spring member adapted to be used in connection with any standard type of bed.

In accordance with the provisions of the patent statutes, I have herein described the principle and operation of my invention, together with the apparatus which I now consider to represent the

best embodiment thereof, but I desire to have it understood that the apparatus shown is only illustrative and that the invention can be carried out by other means. Also, while it is designed to use the various features and elements in the combination and relations described, some of these may be altered and others omitted without interfering with the most general results outlined, and the invention extends to such use.

Having described my invention, what I claim and desire to secure by Letters Patent is:

1. In a bed construction of the class described, a pair of longitudinal side rails, a plurality of relatively rigid rods transversely disposed with respect to said rails, said rods being relatively closely spaced so as to afford support to substantially all areas of the body, means for independently resiliently supporting each of said rods on said rails, means for adjusting the degree of tension of said independent resilient support means, said last-named independent resilient support means being characterized by the fact that certain selected rigid rods are supported with a lesser degree of tension than others and means whereby regardless of the degree of resilience of said resilient supporting means, said rigid rods will all be at substantially uniform level when the bed is not in use.

2. In a bed construction of the class described, a pair of longitudinal side rails, a plurality of relatively rigid rods transversely disposed with respect to said rails, said rods being relatively closely spaced so as to afford support to substantially all areas of the body, means for independently resiliently supporting each of said rods on said side rails, said last named means comprising corresponding openings in said side rails, springs in said openings for resiliently supporting said transverse rods, means for adjusting the tension of said springs, certain of said springs being under less tension than others in accordance with the therapeutic needs of the individual and means whereby regardless of the degree of tension of said springs, said rigid rods will all be at substantially uniform level when the bed is not in use.

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