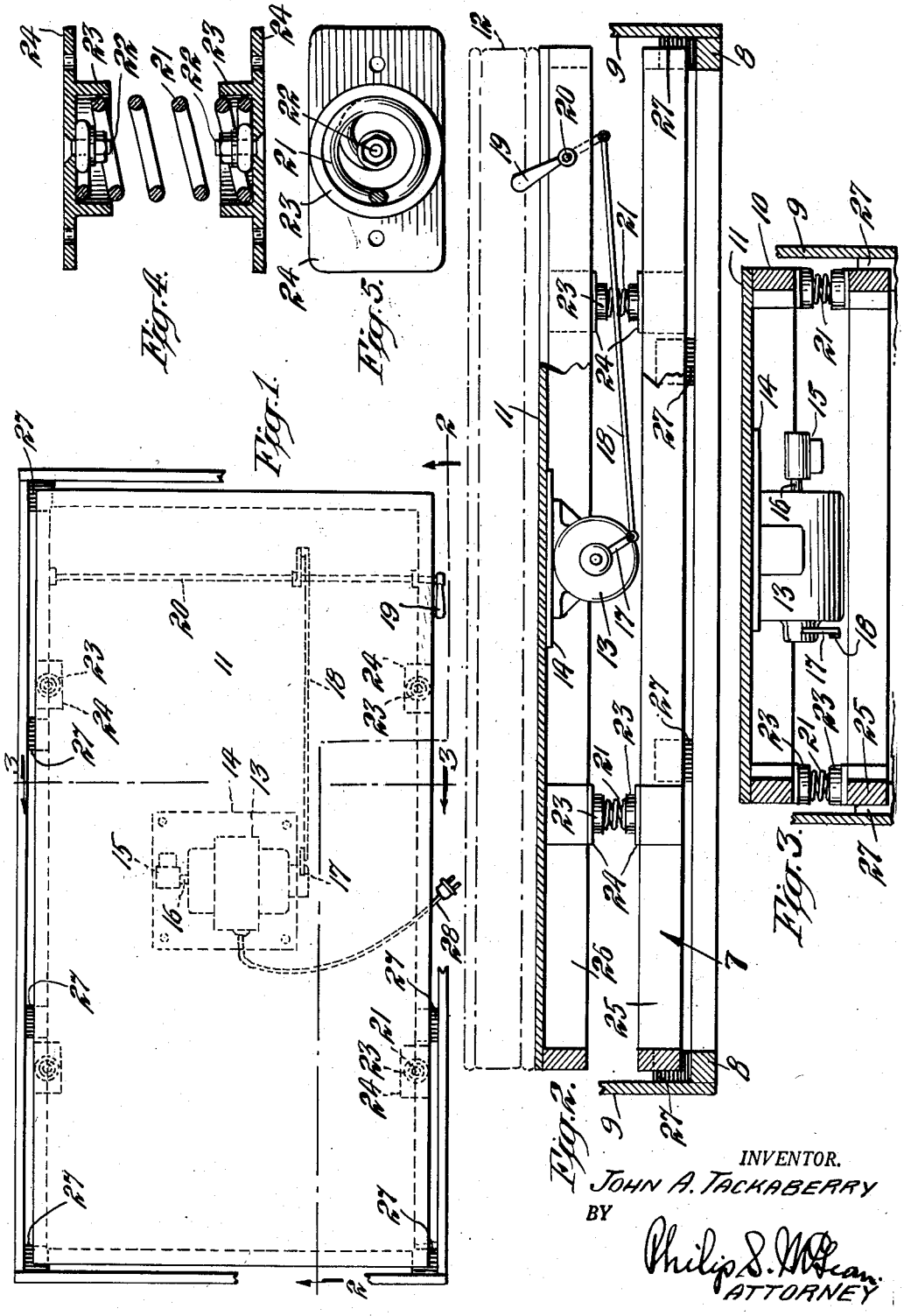
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VIBRATION BED

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2 Claims. (Cl. 128—33)

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The invention disclosed in this patent is what has been termed a vibration bed.

Objects of the invention have been to provide a mattress supporting unit which could be substituted in place of the ordinary box spring in a bed and which, under regulatable control, would impart desirable sleep or rest inducing vibration to the mattress supported on the unit.

It has been a purpose of the invention also to provide this vibration unit in a mechanically simple, low-cost form which could be quickly and easily located in or be removed from the well of a bed frame.

Further objects of the invention have been to keep the size of the vibration unit down to the size of an ordinary box spring so that the unit could be used without adding to the bulk or spoiling the appearance of the bed.

Another special object of the invention has been to insulate the vibration unit from the supporting bed structure so as to prevent vibratory movement being communicated to the bed or to the floor or external objects.

The foregoing and other desirable objects have been attained by the novel features of construction, combinations and relations of parts hereinafter described and claimed.

The drawing accompanying and forming part of the following specification illustrates a present practical embodiment of the invention but structure may be modified and changed as regards this particular illustration, all within the true intent and scope of the invention as hereinafter defined and claimed.

Fig. 1 in the drawing is a plan view of the complete unit as it is installed in the well of a bed frame;

Fig. 2 is an enlarged broken longitudinal sectional view as taken on substantially the plane of line 2—2 of Fig. 1;

Fig. 3 is a cross sectional view of the unit taken on substantially the plane of line 3—3 of Fig. 1;

Figs. 4 and 5 are detail views of the spring supports, Fig. 4 being a vertical sectional view and Fig. 5 a horizontal sectional view of one of these supports.

The vibration unit here illustrated is shown as made up of two relatively movable frames, a lower frame 7 of a size to seat upon the ledges 8 on the side rails 9 of an ordinary bed frame, and an upper frame 10 resiliently mounted on the lower frame and carrying power driven vibrating mechanism.

The upper frame is shown as having a plywood or other such flat top 11 for supporting the mattress 12 and the power mechanism is shown as an electric motor 13 having an extended base 14 directly attached to the underside of the top.

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The vibrating means is shown as an off-center weight 15 mounted on one end of the motor shaft 16. It is contemplated that the motor shaft may be extended at both ends and carry these off-center weights at both ends.

The motor preferably is of the variable speed type and governed by brush control, rheostat or the like, through the medium of a lever 17 connected by link 18 with a control handle 19 located on the upper frame at a point within convenient reach of the occupant.

The motor is shown substantially centrally located and the control handle is shown fixed on one end of a rock shaft 20 journaled transversely across one end of the upper frame.

The resilient supports for the upper frame are shown as coiled springs 21 secured at the opposite ends by fastenings 22 in the cups 23 of brackets 24 which are fastened to the side rails 25 and 26 of the lower and upper frames.

These supporting springs thus, in addition to resiliently mounting the upper frame on the lower frame, tie the two frames together, so that the device can be handled in any usual way without the frames coming apart.

These coiled springs, fixed at their ends in vertical relation, also restrict and confine the action of the upper, vibratory frame to substantially vertical movement, the vibration desired for most restful and beneficial effects.

Four of the supporting and connecting springs are shown located near the corners of the unit, but it will be appreciated that more than this number and located in different relations, may be employed as may be found desirable.

To prevent objectionable vibration being communicated to the bed, and possibly from the bed to the floor or adjoining objects, the vibration unit is insulated from the bed frame in the present disclosure, by the provision of angular or L-shaped resilient pads 27 of sponge rubber or the like, beneath the sides 25 of the bottom frame and between these members and the supporting ledges and the inner faces of the bed rails.

These pads cushion the entire vibrating unit and substantially insulate the unit from the bed frame and surrounding objects.

The complete unit consists of but few parts and these are compactly arranged so that it can be made the same size as an ordinary box spring, and as only a small motor is required, it need not weigh much or any more than a box spring.

Being handled as a unit, it may be put in the well of the bed or be removed just as easily as an ordinary box mattress. In place, the unit does not take up any more space and the bed may be made up just the same as usual without the presence of the vibration unit being shown.

The control may be for speed or for amplitude of movement, or both. The motor is an integral part of the unit and the weight of the motor is desirable as a balancing element for the resiliently supported mattress platform. The electrical connection to the motor may be provided by a simple flexible extension cord such as indicated at **28**.

While particularly desirable as a rest inducing device, the vibration unit has therapeutic value as for imparting a certain amount of exercise to patients otherwise unable to take such exercise.

What is claimed is:

1. A bed vibrator comprising a unit of the dimensions of an ordinary box spring and adapted to the substituted for a box spring in the well of an ordinary bed frame, said unit comprising upper and lower frames of substantially the same size, the upper frame carrying a platform for a mattress, resilient supports inseparably connecting the two frames, a motor suspended from the mattress supporting platform of the upper frame, means operated by said motor for imparting substantially vertical vibrations to said upper frame, bed supporting structure of substantially L-shaped angular cross section and angular, L-shaped pads of cushioning material beneath the bottom frame and interposed between that frame and said supporting structure of the bed.

2. A bed vibrator comprising a unit of the dimensions of an ordinary box spring and adapted to be substituted for a box spring in the well of an ordinary bed frame, said unit comprising upper and lower frames of substantially the same size, the upper frame carrying a platform for a mattress, resilient supports inseparably connecting the two frames, a motor suspended from the mattress supporting platform of the upper frame and means operated by said motor for imparting substantially vertical vibrations to said upper frame, said resilient supports comprising vertically extending coil springs, brackets enclosing the upper and lower ends of the springs and attached to the upper and lower frames and means securing the opposite ends of the springs to said brackets and whereby said spring and brackets serve to resiliently but inseparably connect the two frames so that they may be handled as a single unit.

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