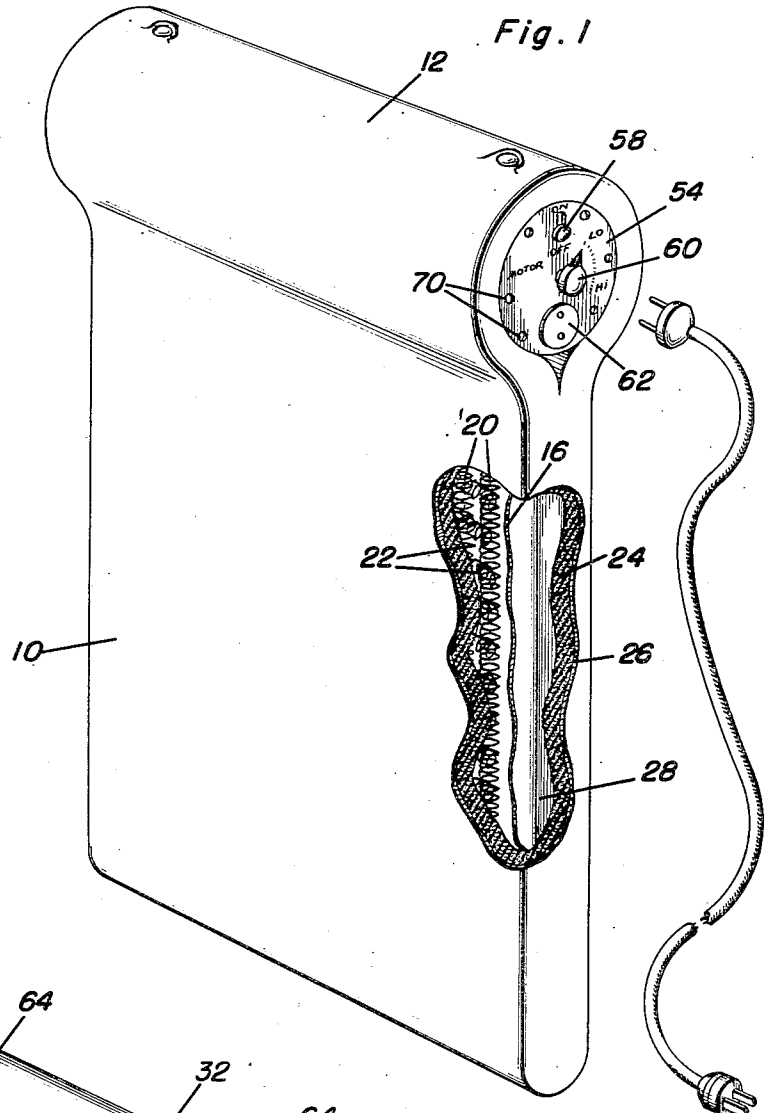
July 30, 1957 J. H. ROSS 2,800,897

PILLOW WITH VIBRATORY AND HEATING MEANS

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Fig. 1



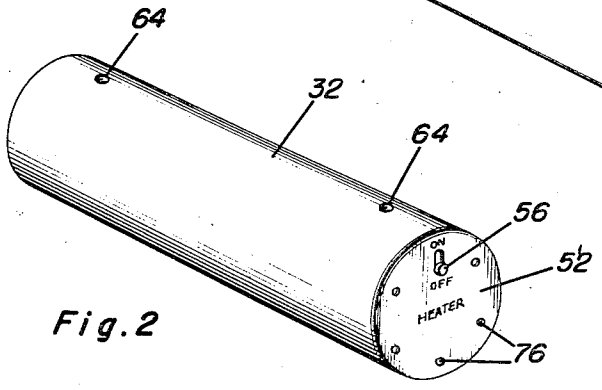


Fig. 2

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Fig. 3

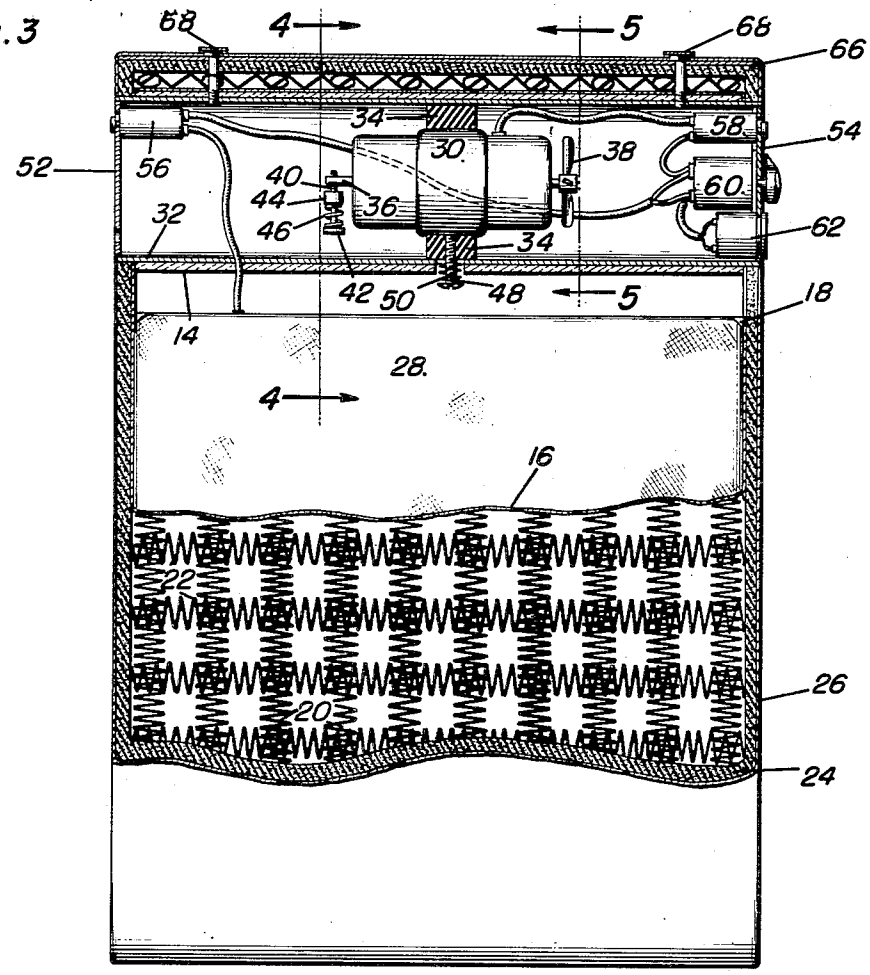


Fig. 4

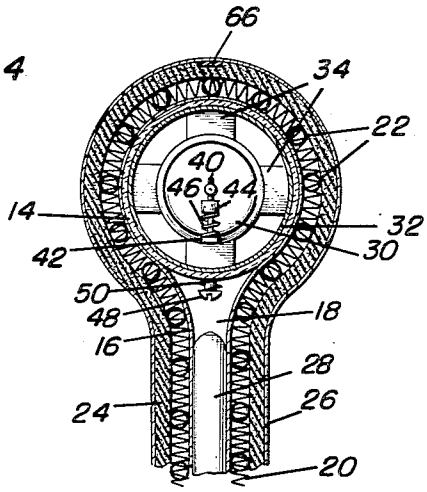
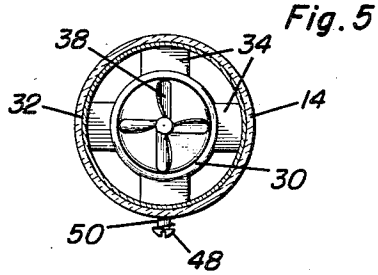


Fig. 5



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PILLOW WITH VIBRATORY AND HEATING MEANS

John H. Ross, North Hollywood, Calif.

Application July 23, 1953, Serial No. 369,871

7 Claims. (Cl. 128—24.1)

This invention relates to a pillow, and more particularly to a pillow having vibrating means and heating means mounted therein, whereby the pillow may be employed for therapeutic purposes.

An object of the present invention is to provide a pillow having a flexible flat portion and a roll portion conforming to the curve of the neck above the shoulders of a person.

Another object is to provide a pillow having a heating pad incorporated therein, whereby the pillow can be used for giving heat treatments to the user.

A further object is to provide a pillow having vibrating means incorporated therein, whereby massage treatments can be given to the user.

A still further object is to provide a pillow having heating means and vibrating means incorporated therein, whereby heat treatments and massage treatments can be given simultaneously to the user.

A yet further object is to provide a pillow having vibrating means incorporated therein, and in which the vibratory motion can be regulated.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is an end perspective view of the present invention, with part of the covering of the flat portion of the pillow broken away;

Figure 2 is an end perspective view of the motor housing, showing the opposite end from that shown in Figure 1;

Figure 3 is a front view partly in section showing the arrangement of the various elements within the pillow constituting the present invention;

Figure 4 is a sectional view taken substantially along the section line 4—4 of Figure 3; and

Figure 5 is an end view of the motor mounted in the motor housing and taken substantially along the line 5—5 of Figure 3.

Referring now more particularly to the drawings, it will be seen that the improved pillow forming the subject of this invention includes, as shown in Figure 1, a flat portion 10 and a roll portion 12 at an end thereof.

The pillow is formed of a plurality of layers, each layer being of a different material. Each layer is endless in form and extends around a cylindrical housing 14 which forms a core for the roll portion 12 of the pillow, and has a loop portion extending away from one side of the cylindrical housing 14 which forms the flat portion 10 of the pillow. The innermost layer 16 is of flexible material, such as canvas or the like, and rests against a substantial portion of the outer surface of the cylindrical housing 14 with the loop portion thereof forming a chamber 18 within the flat portion of the pillow. A plurality of endless coil springs 20 extend longitudinally of the flat portion 10 and around the cylindrical housing 14 over the layer 16. Secured to the longitudinal coil springs 20 along the length thereof are a plurality of transverse coil springs 22. A layer 24 of cushioning material, such as sponge rubber or the like, is disposed over the coil springs 20 and 22. The complete assembly is covered by a layer 26 of any suitable fabric.

A conventional heating pad 28 is disposed within the chamber 18 formed in the flat portion 10 of the pillow. The layers 16, 24, and 26 are of such a material as will permit the passage of heat therethrough. Thus, the benefits to be derived from the use of a heating pad can be received when the heating pad is mounted in the pillow.

The vibrating means for the pillow consists of a motor 30 mounted within a motor housing 32, which is adapted to be received within the cylindrical housing 14. The motor 30 is resiliently mounted within the housing 32 by means of a plurality of rubber blocks extending between the inner surface of the housing 32 and the outer surface of the motor 30. The motor 30 is provided with a shaft 36 extending therethrough. A fan 38 is mounted on one end of the shaft 36. This fan serves as a cooling means for the motor.

An eccentric weight member is mounted on the other end of the shaft 36. The eccentric weight member comprises a rod 40 attached perpendicularly to the shaft 36. The rod 40 has a flange portion 42 at the outer end thereof. A weight member 44 is slidably mounted on the rod 40 between the flange 42 and the connection of the rod 40 to the shaft 36. A spring 46 is disposed about the rod 40 between the weight member 44 and the flange 42, urging the weight member 44 along the rod 40 toward the shaft 36. Thus when the motor 30 is operated a vibratory motion will be set up due to the eccentric mounting of the weight 44. As the speed of the motor increases, the weight 44 will be urged against the action of the spring 46 toward the flange 42 thereby causing a greater vibratory motion.

The motor 30 is further provided with means for regulating certain of the vibratory motions. This means consists of a screw 48 extending through an aperture in the side of the motor housing 32 through one of the mounting blocks 34 and into the casing of the motor 30. A spring 50 is mounted on the screw between the wall of the housing 32 and the head of the screw. The wall of the cylindrical housing 14 is provided with an aperture which will freely receive the head of the screw and the spring 50. Thus by tightening the screw 48 the motor 30 will be urged toward the wall of the housing 32 and thereby compress the mounting block 34 through which the screw extends and at the same time relieve the pressure exerted by the casing of the motor 30 against the mounting block 34 on the opposite side. In this manner a greater amount of the vibratory forces will be transmitted through the compressed block 34 than through the block on the opposite side of the motor 30.

The ends of the housing 32 are closed by plates 52 and 54. Plate 52 has mounted thereon a control switch 56 for the operation of the heating pad 28. The plate 54 has mounted thereon a control switch 58 and a rheostat 60 for controlling the operation of the motor 30. The plate 54 also has a socket 62 mounted thereon, which socket provides an inlet for the current for actuating the motor and the heating pad. Suitable wires extend between the socket 62 and the control mmebers 56, 58, and 60. Suitable wires also extend between the control member 56 and the heating pad 28 as well as between the controls 58 and 60 and the motor 30.

The housing 32 is provided with a pair of apertures 64 along the side which is opposite the flat portion of the pillow when the housing is mounted within the cylindrical housing 14. The roll portion of the pillow is provided

with a strap 66, of a suitable material along the upper edge thereof between the layer of foam rubber and the fabric covering. The strap 66 is provided with a pair of apertures which are spaced apart the same distance as the apertures 64 in the housing 32. The housing 14 is likewise provided with a pair of spaced apertures which are in alignment with the apertures in the strap 66. The housing 32 is inserted in the cylindrical housing 14 and a pair of bolts 68 extending through the alined apertures in the strap 66, the housing 14, and the housing 32, retain the housing 32 in fixed position within the roll portion of the pillow.

The plates 52 and 54 are provided with a plurality of apertures 70 extending therethrough, which permit the fan 38 to circulate air around the motor for cooling purposes.

The pillow may be used for a heating pad, merely by turning the switch 56 to the on position. When it is desired to use the pillow as a vibrating device the switch 58 is first turned to the on position and then the speed of the motor is regulated by means of the rheostat 60. Both the heating means and the vibrating means can be used at the same time, independently of one another or both can be turned off and the complete assembly used merely as a pillow.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

What is claimed as new is as follows:

1. A pillow comprising a flexible flat portion and a hollow roll portion at one end thereof, said roll portion having a cylindrical housing mounted therein, an endless layer of flexible material disposed around a substantial portion of said housing and extending within said flat portion, said layer forming a chamber within said flat portion, a plurality of endless coil springs extending longitudinally of the flat portion and around said housing over the layer of material, a plurality of coil springs extending transversely of said longitudinally extending coil springs and secured thereto, an endless layer of cushioning material overlying the coil springs and a vibratory device mounted in said hollow roll portion, whereby vibrations set up in the hollow roll portion will be transmitted to the flat portion by the coil springs.

2. A pillow comprising a flexible flat portion and a hollow roll portion at one end thereof, said roll portion having a cylindrical housing mounted therein, an endless layer of flexible material disposed around a substantial portion of said housing and extending within said flat portion, said layer forming a chamber within said flat portion, a plurality of endless coil springs extending longitudinally of the flat portion and around said housing over the layer of material, a plurality of coil springs extending transversely of said longitudinally extending coil springs and secured thereto, an endless layer of cushioning material overlying the coil springs, and a heating pad disposed within the chamber in said flat portion and a vibratory device mounted in said hollow roll portion, whereby vibrations set up in the hollow roll portion will be transmitted to the flat portion by the coil springs.

3. A pillow comprising a flexible flat portion and a hollow roll portion at one end thereof, said roll portion having a cylindrical housing mounted therein, an endless layer of flexible material disposed around a substantial portion of said housing and extending within said flat portion, said layer forming a chamber within said flat portion, a plurality of endless coil springs extending longitudinally of the flat portion and around said housing over the layer of material, a plurality of coil springs extending transversely of said longitudinally extending coil springs and secured thereto, and an endless layer of cushioning material overlying the coil springs, a motor housing received in the cylindrical housing in said roll portion, said motor housing having a motor with an eccentric weight attached thereto resiliently mounted therein, whereby operation of the motor will cause vibrations to be set up in the cylindrical housing, which vibrations will be transmitted to the flat portion by the coil springs.

4. The combination of claim 3 wherein the eccentric weight comprises a rod mounted transversely of the motor shaft, a weight member slidably mounted on said rod, a flange on the end of said rod and a spring disposed on said rod between the flange and the weight member whereby the magnitude of the vibrations increases with the speed of the motor.

5. A pillow comprising a flexible flat portion and a hollow roll portion at one end thereof, said roll portion having a cylindrical housing mounted therein, an endless layer of flexible material disposed around a substantial portion of said housing and extending within said flat portion, said layer forming a chamber within said flat portion, a plurality of endless coil springs extending longitudinally of the flat portion and around said housing over the layer of material, a plurality of coil springs extending transversely of said longitudinally extending coil springs and secured thereto, and an endless layer of cushioning material overlying the coil springs, a motor housing received in the cylindrical housing in said roll portion, said motor housing having a motor with an eccentric weight attached thereto resiliently mounted therein, whereby operation of the motor will cause vibrations to be set up in the cylindrical housing, which vibrations will be transmitted to the flat portion by the coil springs, and control means for said motor including a switch and a rheostat mounted on said motor housing.

6. A pillow comprising a flexible flat portion and a hollow roll portion at one end thereof, said roll portion having a cylindrical housing mounted therein, an endless layer of flexible material disposed around a substantial portion of said housing and extending within said flat portion, said layer forming a chamber within said flat portion, a plurality of endless coil springs extending longitudinally of the flat portion and around said housing over the layer of material, a plurality of coil springs extending transversely of said longitudinally extending coil springs and secured thereto, and an endless layer of cushioning material overlying the coil springs, a motor housing received in the cylindrical housing in said roll portion, said motor housing having a motor with an eccentric weight attached thereto resiliently mounted therein, whereby operation of the motor will cause vibrations to be set up in the cylindrical housing, which vibrations will be transmitted to the flat portion by the coil springs, a heating pad disposed in the chamber in said flat portion, a switch for said heating pad mounted on one end of the motor housing and control means for said motor including a switch and rheostat mounted on the other end of said motor housing.

7. The combination of claim 3 wherein the resilient mounting for the motor is provided with means for adjusting the tension of said resilient mountings whereby certain of the vibratory motions set up by the operation of the motor are regulated.

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