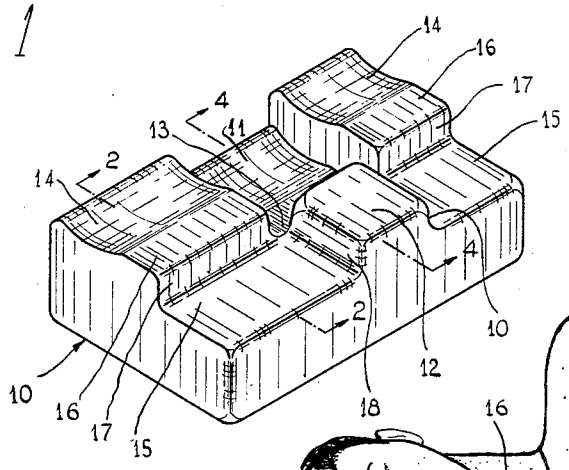
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THERAPEUTIC PILLOW

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Fig. 1



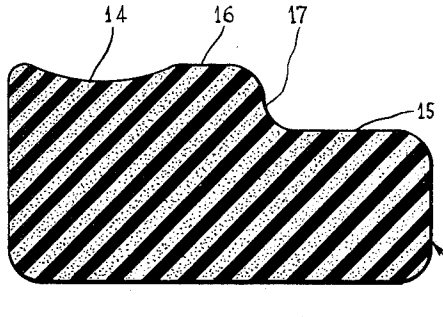


Fig. 2

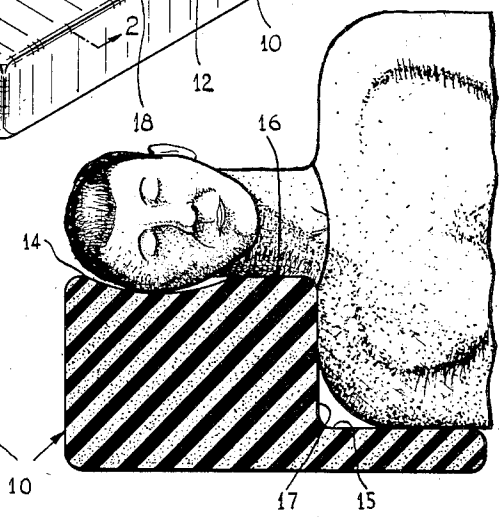


Fig. 3

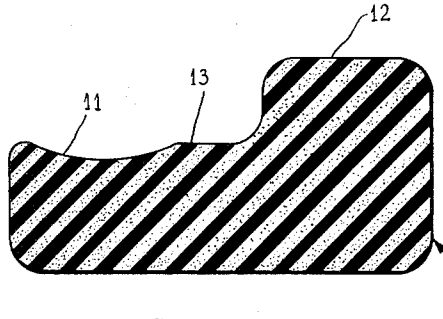


Fig. 4

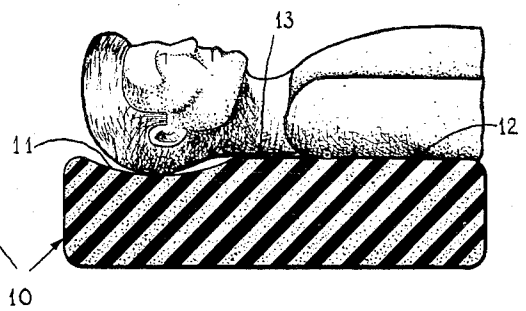


Fig. 5

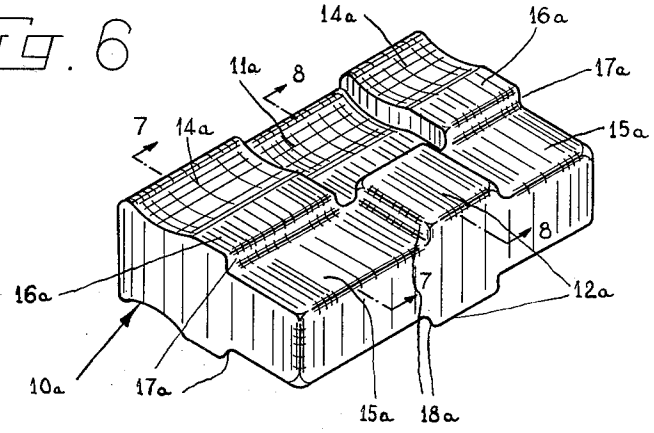
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THERAPEUTIC PILLOW

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Fig. 6



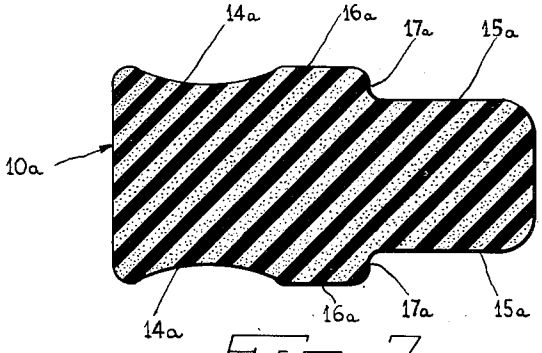


Fig. 7

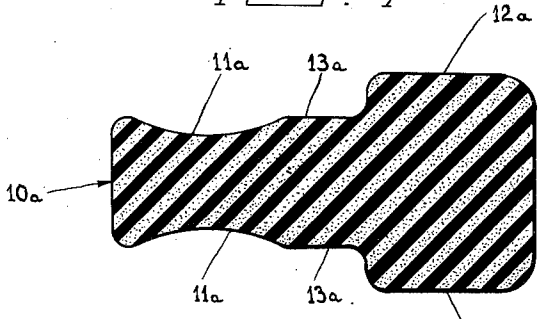


Fig. 8

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THERAPEUTIC PILLOW

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Application September 13, 1952, Serial No. 309,397

8 Claims. (Cl. 5—338)

The present invention relates to a special design and construction of pillow having therapeutic properties in that during use it relieves muscular tension and strain from the head, neck and shoulders of the user, thereby promoting relaxation and healthful and invigorating sleep.

It has been the custom for a great many years to employ pillows for rest and sleep which are essentially merely a mass of feathers, cotton or similar material enclosed within a ticking. Such pillows form a cushion for the head and vary greatly in thickness and softness. These conventional pillows have the recognized disadvantage that they raise the head somewhat and displace it from the position of a longitudinal and axial extension of the spinal column and, consequently, actually induce muscular tension and impede the free circulation of blood in the neck and head and even interfere with normal breathing. While some attention has been given to the construction of mattresses in an endeavor to correct posture during rest and sleep, such not only have limited value but such value is partially or wholly offset by the use of the conventional type of pillow but, so far as I am aware, no specially constructed pillow has been particularly designed for the present purposes in any manner comparable to the present invention. Foam rubber pillows of soft, medium and hard consistency are known but these are incapable of solving the present problem and are not constructed in accordance with my invention, which requires that the various parts of the pillow offer variable resistances to compression in proportion to the pressures exerted by the shoulders, neck or head of the user.

It is, accordingly, an object of this invention to provide a specially designed and constructed pillow for use during rest and sleep which overcomes the above noted and other existing disadvantages and which has, consequently, therapeutic properties in that muscular tension and strain are eliminated and the body caused to assume a relaxed position which enables the objects and advantages of the invention to be attained.

A further object of the invention resides in the provision of a therapeutic pillow composed of foam or sponge rubber or other aerated soft compressible material which is configured on at least one side thereof so as to receive the human head, neck and shoulders and to position the same during rest or sleep in such a manner as to relieve muscular tension and enhance the value of the rest or sleep.

More particularly, my invention comprises a foam or sponge rubber pillow having on at least one side thereof a plurality of raised and depressed portions to provide a cradle for the head and a support for the shoulders when the user thereof is lying on his back and further to provide for the accommodation of the right or left shoulder of the user when he is lying on his right or left side, respectively, the pillow being so constructed that the different pressures of shoulders, neck and head are equalized or compensated.

Other and further objects and advantages will be apparent or pointed out hereinafter, taken in conjunction with the accompanying drawings, in which

Fig. 1 is a perspective view of a therapeutic foam or sponge rubber pillow embodying the present invention;

Fig. 2 is a transverse sectional view taken along line 2—2 of Fig. 1 and showing the cross-sectional configuration of my new pillow when not in use;

Fig. 3 is a view similar to Fig. 2 but showing a portion

of the body of the user thereon and illustrating the ultimate shape of the pillow during use under the weight of the various body parts when the user is lying on his right side and further illustrating how the neck and head of the user are maintained in axial alignment with the spinal column.

Fig. 4 is a transverse, medial sectional view taken along line 4—4 of Fig. 1 and showing the configuration of the central portion of my new pillow when not in use;

Fig. 5 is a view analogous to Fig. 3 but showing the user lying on his back and the ultimate shape of the corresponding portions of the pillow during such use and further illustrating the provision of a cradle for the head, a support for the neck and the maintenance of the head and neck in axial alignment with the spinal column;

Fig. 6 is a perspective view of a somewhat modified form of the invention wherein, instead of having the full configurations on one side only of the pillow, the same are divided into two parts, one-half of which is on each side of the pillow;

Fig. 7 is a transverse sectional view taken along line 7—7 of Fig. 6 and

Fig. 8 is a transverse medial sectional view taken along line 8—8 of Fig. 6.

Referring, first, to the form of the invention illustrated in Figs. 1–5, inclusive, the numeral **10** designates my new therapeutic pillow as a whole. It will be noted that this pillow is of general rectangular or block shape and is composed preferably of foam or sponge rubber or latex, or other relatively soft and compressible material containing a substantial percentage of air cells and of uniform compressibility and which is hereinafter generically designated as aerated rubber. Such material not only has excellent properties and characteristics with regard to softness and compressibility in use but has the important advantage that compression occurs in substantially a direct proportion to the amount of weight thereon. Thus, for example, and as will be understood from Figs. 3 and 5, my new pillow is so configured and designed that, in the various resting or sleeping positions, appropriate portions of the pillow become compressed to a predetermined extent so as to ensure that, during rest or sleep, the head, neck and shoulders of the user are in the proper position in axial alignment with the spinal column. It has been found that, under such conditions, exceptionally restful, healthful and invigorating sleep or rest is induced, muscular tension due to improper positioning of the body parts is eliminated and the maintenance of the head, neck and shoulders in axial alignment has highly beneficial and therapeutic effects both for well and for sick persons. Due to the weight factors involved and the gradual increase in resistance to compression of foam rubber, the shoulders compress the pillow about five times as much as the head and thus the head will be five times higher than the shoulders in terms of the compressed rubber during use.

In the form of the invention illustrated in Figs. 1–5, inclusive, one side of my new therapeutic aerated rubber pillow is configured to provide a plurality of raised and depressed portions of such size and extent as to produce the benefits herein set forth. These configurations may be divided, for convenience of reference, into three sections. The central section is characterized by a depressed portion **11** having a gently concave upper surface shaped complementarily to the human head. The raised portion **12** serves as a support for the portion of the user's body between the shoulders, as will be clear from Fig. 5, and the upper surface thereof is preferably inclined slightly downwardly toward the adjacent side edge of the pillow but may, alternatively, be substantially level. During use, under the weight of the shoulders, this raised portion becomes compressed and lowered to the extent of approximately its own height, with respect to the adjacent depressed portions of the pillow surface and, consequently, when the user is lying on his back, as shown in Fig. 5, the concave depressed portion **11** serves as a cradle for the head, and the raised portion **12** flattens out so that it is approximately at the same level as the head cradle. When the raised portion **12** has an upper surface which is inclined slightly downwardly as above described, due to the greater weight of the shoulder por-

tion of the user as compared with the head and neck, there is a slight downward inclination of the pillow in its compressed condition during use in a direction toward the feet and this, it has been found, is the proper and best position for rest and sleep when lying on the back and that relief of muscular tension and healthful relaxation are thereby achieved. Between portions **10** and **12** is the neck-receiving and supporting surface **13** which is, in effect, a continuation of portion **11** and is normally flat and level and merges with portion **12**. Portion **13** becomes somewhat depressed under the relatively small weight of the neck and tends to conform to the shape of the neck to provide a transition surface between portions **10** and **12** to maintain the neck in axial alignment with the head and spinal column.

The portion of the pillow at the left of Fig. 1 is intended for use, as shown in Fig. 3, when the user is lying on his right side. This portion of the pillow includes the raised portion **14** having a concavity on its upper surface, generally complementary to the shape of a human head, and a depressed portion **15** adapted to receive the right shoulder portion of the user, there being an intermediate neck-receiving and -supporting portion **16** forming a part of the raised portion **14** and forming a more or less vertical wall **17** to define and limit the position of the right shoulder. In a manner comparable to that of the raised central portion **12**, the depressed portion **15** may be substantially flat and level or, preferably, has a slight downward inclination toward the adjacent outer edge of the pillow.

The right-hand portion of the pillow of Fig. 1 is identical with the left-hand portion thereof and is adapted for use when the user is lying on his left side, the raised and depressed portions and the neck-receiving and -supporting portion being designated by the same numerals. The shoulder recesses thus formed are further defined and limited by the sloping wall portions **18** on either side of the central raised portion **12**.

When the user is lying on his right side, the much greater weight of his shoulders causes a proportionally much greater compression of the pillow material with relatively little compression of the head- and neck-receiving and -supporting portions thereof so as to enable the user to take the position shown in Fig. 3, in which there is a shallow, comfortable cradle for the side of the head, a soft yielding support for the neck which, due to the nature of the material, conforms itself closely to the shape of the neck, the more or less vertical wall **17** acting as a soft and limiting abutment for the shoulder and a relatively deep recess to accommodate the shoulder and upper arm. Figs. 2 and 3 clearly show the conformation of the left- and right-hand portions of the pillow of Fig. 1 when not in use and when in use, respectively. In similar manner Figs. 4 and 5 show the conformation of the central portion of the pillow when not in use and when in use, respectively, and from these figures it will be noted that the central portion of the pillow during use becomes substantially level with a shallow comfortable cradle for the head and support for the neck and shoulders, the raised portion **12** flattening itself under the weight of the shoulders into the position shown in Fig. 5 so as to maintain the head and neck in axial alignment with the spinal column. Due to the nature of the material, the rest or sleep is exceptionally relaxing, healthful and comfortable and by maintaining the various portions of the body in the designated positions the objects and advantages herein set forth are obtained in a practicable and relatively simple and inexpensive manner.

In the modified form of the invention shown in Figs. 6–8, the construction is essentially the same as that already described and corresponding parts are therefore similarly numbered, followed by an "*a*," but it will be appreciated that this modified form of the invention has definite advantages. By having, in effect, half of the depressed (**11***a*, **15***a*) and raised (**12***a*, **14***a*) portions on each side of the pillow, it enables the pillow to be made more compact with less prominent protuberances while still obtaining substantially the same results and effects. The modified pillow has the additional advantage that it can be used on either or both sides or can be turned from one side to another, if desired, whereas the form of pillow of Fig. 1 is only usable in the position shown in that figure. The flat smooth underside of the pillow of Fig. 1 contributes to the maintenance of the pillow and the user thereof in a definite position and relationship which, due to the frictional resistance of the pillow material against sliding movement, prevents the pillow from becoming misaligned during use, although this same advantage is substantially shared by the modified form of pillow of Fig. 6 which, during use, has a substantially flat level undersurface due to the compression which occurs in the underside portions thereof due to the weight of the sleeper. It will further be understood that, if desired, the pillow may be enclosed in a conventional case or slip. The pillow may be molded, cut, extruded or otherwise suitably fabricated.

It will, therefore, be appreciated that I have provided a new and highly useful therapeutic pillow construction which is fully effective for carrying out the hereinabove and other stated objects and which embodies new principles not heretofore incorporated into pillows so far as I am aware. A pillow responding to either form of my invention is simple and easy to produce, inexpensive and automatically conforms itself for the intended purposes to the weight and size of the particular user. My new pillow provides for the various positions assumed by a sleeper during sleep and makes it possible to change positions without losing the benefits provided by my new pillow. It is understood, however, that the foregoing is intended as illustrative and not as limitative and that various other modifications may be made without departing from the invention as defined by the appended claims. It is also understood that, while my new pillow is preferably constructed so that it is 28" long, 20" wide and 10" thick, these dimensions may be varied, when desired, to accommodate persons of abnormally large or small size and weight. The pillow above described is, however, adequate for a large majority of users within a very wide range of sizes and weights.

While the invention has been described in connection with the use of an aerated rubber, such as foam or sponge rubber having uniform compressional characteristics, it is nevertheless to be understood that I may, if I so desire, also construct my new pillow from a compressible material which has non-uniform compressional characteristics. For example, the pillow may be so constructed as to provide inserts or inlays of material having greater or less compressibility so that such inserts compensate for the different weights of the various parts of the body which are received and supported thereon and so as to maintain the head and neck in substantially axial alignment with the spinal column. This may be carried out by employing inserts of greater resistance to compressibility at those areas where the weight of the body is greater or, conversely, by employing inserts having lower resistance to compression as to those portions which receive the lighter weight parts of the body. In each instance the inserts or inlays are so selected and used that the same ultimate result of axial alignment of the head and neck with the spinal column is achieved.

In making my new pillow in such a manner that it has non-uniform compressional characteristics, I may, furthermore, start with a material of uniform compressional characteristics and treat, cure or otherwise alter predetermined portions thereof in areas corresponding to those having the depressed and raised portions or the inserts to convert such areas into portions of greater and less compressibility without employing protuberances at all, and such constitutes a further modification of the invention.

I claim:

1. A therapeutic pillow comprising a generally rectangular block wholly of aerated rubber, at least one side of which is provided with configurations to receive and support the head, neck and shoulders of such user in substantially axial alignment with the spinal column of such user to relieve muscular tension and provide complete relaxation during use, and said configurations including a plurality of staggered, raised and depressed portions arranged in rows adapted to yield and to become compressed during use under the respective different weights and pressures of head, neck and shoulders of the user, said portions becoming compressed in substantially direct proportion to the weight of the particular user and complementarily conforming to the size and shape of such user.

2. A therapeutic pillow comprising a generally rectangular block wholly of aerated rubber, at least one side of which is provided with configurations to receive and support the head, neck and shoulders of such user in sub-

stantially axial alignment with the spinal column of such user to relieve muscular tension and provide complete relaxation during use, and the said configurations being arranged in the form of transversely disposed pairs of raised and depressed portions to accommodate the user in any one of the usual reclining positions, each such pair of raised and depressed portions including one raised portion and one depressed portion at each end of the pillow and a reversely arranged pair of depressed and raised portions in the central part of such pillow.

3. A therapeutic pillow in accordance with claim 2, in which each of the said depressed portions is substantially flat and level.

4. A therapeutic pillow in accordance with claim 2, in which each of the said depressed portions is substantially flat and inclined downwardly toward the adjacent edge of the pillow.

5. A therapeutic pillow in accordance with claim 2, which is composed of foam rubber.

6. A therapeutic pillow in accordance with claim 2, in which one side only of the pillow is provided with said configurations.

7. A therapeutic pillow in accordance with claim 2, in which each side of the pillow is provided with the said configurations.

8. A therapeutic pillow fabricated from foam rubber and at least one surface of which is provided at each end with a raised head-receiving and -supporting portion having a concave upper surface, a neck-receiving and -supporting portion contiguous to each head-receiving and

-supporting portion and forming an extension thereof and a depressed shoulder-receiving and -supporting portion in transverse alignment with each of the portions aforesaid, a central depressed head-receiving and -supporting portion between the said raised end head-receiving and -supporting portions, a neck-receiving and -supporting portion in transverse alignment with said central depressed portion and a raised shoulder-receiving and -supporting portion in transverse alignment with said central depressed portion and disposed between said end depressed shoulder-receiving and -supporting portions, said portions being adapted to become compressed during use proportionally to the respective weights and pressures of head, neck and shoulders and to the weight of the user and to maintain the head and neck of such user in axial alignment with the user's spinal column.

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