ABSTRACT: A resilient feather pillow comprising at least two internal chambers surrounded by an outer covering, with one of the chambers containing feathers and the other chamber being subdivided into a number of compartments which are arranged to alternately contain prestressed springs and yieldable elastic material. After compression of the pillow the prestressed springs serve to cause the pillow to assume its original shape and softness.
FEATHER SPRING PILLOW

BACKGROUND OF THE DISCLOSURE

The present invention relates to pillows, particularly feather-down pillows such as are used in conjunction with chairs, beds and other furniture. Feather-down pillows usually have an outer covering which is filled with feathers of a particular grade or type with the upper and lower surfaces of the covering being joined together at their edges as well as with intersecting ribs which define compartments in the interior of the pillow. The pillow may be joined together directly, for the ample by sewing them, or they may be indirectly joined by means of sidewalls.

Presently known feather pillows as a rule tend to become deformed and crumpled after extended use and must be shaken out in order to restore them to their former shape. Nevertheless, even after being shaken to loosen the feather-down within the pillows, the pillows will tend to lose their form and original softness with continued use.

SUMMARY OF THE INVENTION

It is an object of this invention to provide a feather pillow which will return to its original shape and retain its softness immediately after being used as well as after frequent and repeated usage.

Another object of this invention is to provide a novel means within a feather pillow to cause it to return to its original form and to reassume its softness immediately after being used.

A further object of this invention is to provide a feather pillow as described above which can be filled with inferior quality as well as high quality grades and/or types of feathers.

The improved pillow comprises an envelope having two panels, at least one deformable partition in the interior of the envelope which subdivides the interior into at least one outer chamber and a second chamber so that the outer chamber is adjacent to one of the panels. There is a supply of feathers in the outer chamber and elastic insert means in the second chamber.

The novel features which are considered as characteristic of the invention are set forth in particular in the appended claims. The improved pillow however, both as to its construction and its method of operation, together with additional features and advantages thereof, will be best understood from the following description of specific embodiments when read in connection with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side view of a first embodiment of the improved pillow, with its internal structure shown partly in section;
FIG. 2 is a plan view of the pillow shown in FIG. 1, with a partial sectional view showing its internal structure;
FIG. 3 is a side view of a second pillow shown partly in section; and
FIG. 4 is a plan view of the pillow shown in FIG. 3, shown partly in section.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIGS. 1 and 2, a first embodiment of the present invention is shown in FIG. 1 by a side view of a pillow, with the internal construction of the pillow shown partly in section and in FIG. 2 by a plan view, also with a section removed to show the internal structure of the pillow. FIGS. 3 and 4 depict a second embodiment of a pillow according to the present invention where FIG. 3 is a sectional side view of the pillow and FIG. 4 is a plan view with the internal structure shown partially in section. Those elements of the pillow shown in FIGS. 3 and 4 which are analogous to the elements of the pillow shown in FIGS. 1 and 2 are denoted by the same numerals followed by a prime.

In FIGS. 1 and 2 there is shown a feather pillow having an upper covering or panel 1, a lower covering or panel 2 and sidewalls 3, 4, 5 and 6, which are all joined together by sewing to form a continuous envelope of the pillow. Parallel to panel 1 and panel 2 are two deformable partitions 7 and 8, arranged in such a manner that they define with panels 1, 2 two outer chambers 9 and 10 and with each other a second, inner chamber 11. The outer chambers 9 and 10 are subdivided into a number of secondary compartments 14, here shown as being rectangular in shape, by means of deformable secondary parti- 12 and 13. These compartments 14 are filled with high-grade feathers.

Chamber 11 is subdivided into a series of elongated compartments 16, 17 and 18 by deformable auxiliary partition means 15. FIG. 1 shows only one compartment 17 and one compartment 18, although there are more than one of each kind. Further auxiliary partition means 19 subdivide chamber 11 into other compartments 20, only one of which is shown in FIG. 2, which surround compartments 16, 17 and 18.

Compartments 16, which are preferably of the same width are filled with feathers of an inferior quality as compared with the feathers used to fill outer chambers 9 and 10.

Metallic springs 21 and 22 are inserted into compartments 17 and 18. The springs are preferably of the helical or spiral compression type and can be made from relatively thin steel or copper wire. A single row of springs 21 has been inserted into each compartment 17 and a double row 22 in compartment 18. The springs, whether arranged in a single row or in several rows, serve as supports for the walls of their respective compartments, thereby acting against unwanted deformations of these walls as well as serving to support each other. The primary function of the springs is to cause the pillow to return to its original shape after being compressed. The springs, having been prestressed before being sewn into their respective compartments cause the surfaces of the pillow which are in contact with the ends of the springs to be resilient. Thus compressive forces applied so as to be coincident with the axes of the springs cause only a temporary deformation of the springs and hence, the pillow. When the forces are removed, the springs cause the pillow to return to its original shape.

Compartments 20, which surround compartments 16, 17 and 18 are filled with feathers of the same quality as compartments 16. The walls of these compartments 20 act as supports for the rows of springs 21 and 22 by tending to keep the springs in a substantially erect position and thereby preventing them from bending or tilting toward the outside of the pillow as well as serving to keep the pillow reasonably firm. These compartments 20 may also be filled with any flexible, deformable elastic material of a predetermined softness which will aid in keeping the pillow firm.

The pillow shown in FIGS. 3 and 4 differs from that of FIGS. 1 and 2 in that it has no sidewalls, there being instead an upper panel 1' and lower panel 2' which are sewn together at their edges to form the conventionally shaped envelopes of the pillow as shown.

The outer chambers 9' and 10' are filled with high quality feathers and the inner chamber 11' has only two compartments 17' which are formed on either side of partition 12' and between partitions 15'. Partition 12' extends from upper panel 1' through chambers 9', 11' and 10' to lower panel 2' in contrast to the pillow shown in FIGS. 1 and 2 where partitions 12 end at the interface between chambers 9 and 10 and inner chamber 11'. A single row of prestressed helical coil springs 21' is sewn into each compartment 17' and covered by a flexible elastic cover 23. Compartments 16', situated on either side of compartments 17' are filled with a soft padding material such as an inferior grade of feathers.

The manufacture of the pillow can be simplified by aligning the partitions 12 in the outer chamber with the partitions 15 in the inner chamber in the same plane as indicated by the dotted lines in FIG. 2. However, in order to further enhance the softness of the pillow and to avoid heavy bulky seams on its exterior panels it is sometimes advisable to stagger the partitions.

Although high quality feathers always must be used to fill the outer chambers 9, 10 and 9', 10', it is not necessary that
only inferior quality feathers be used to fill compartments 16 and 16'. Other deformable material such as foam rubber, cotton, pieces of soft foamed plastic and organic or synthetic fibers can also be used.

Thus, pillows which are manufactured in accordance with the basic features of the above-described examples, although differing in structural details, will be markedly superior to those presently used because of the fact that they will retain their shape and softness after extended periods of use. They will also be especially useful in hospitals, where they can be employed in the treatment of patients requiring long periods of confinement in bed. Furthermore, the semi-rigid but resilient nature of such pillows will make them especially suitable for use as supporting pillows for patients with back ailments and the like.

Without further analysis, the foregoing will so fully reveal the gist of the present invention that others can, by applying current knowledge, readily adapt it for various applications without omitting features which fairly constitute essential characteristics of the generic and specific aspects of the above-mentioned contribution to the art.

What is claimed as new and desired to be protected by Letters Patent is set forth in the appended claims:

1. A pillow, comprising a substantially flat envelope composed of two substantially parallel flexible panels forming edges along the circumference of said pillow; two flexible partitions in the interior of said envelope subdividing the same into two exterior chambers each located adjacent to one of said panels and an interior chamber located between said exterior chambers; flexible dividers in said interior chamber forming therein a central interior compartment spaced from said edges of said pillow; springs means having a high resiliency located in said central inner compartment yieldingly engaging said flexible partitions so as to urge them against the corresponding panels respectively; a first filler material having a lower average resiliency than said spring means filling at least portions of said interior chamber outside of said central inner compartment and a second filler material having an average resiliency higher than the average resiliency of said first filler material and filling said exterior compartments.

2. A pillow as defined in claim 1 wherein said spring means comprise metallic coil springs held in at least partly compressed condition by said flexible partitions.

3. A pillow as defined in claim 1 wherein said interior chamber is divided into a central compartment containing said spring means and two flanking compartments containing said first filler material.

4. A pillow as defined in claim 1 wherein said interior chamber is divided by said dividers into at least four interior compartments, and compartments having spring means therein alternate with compartments having first filler material therein.

5. A pillow as defined in claim 1 wherein said interior and exterior chambers are divided into elongated compartments, and said compartments in said interior chamber are staggered with respect to said compartments in said exterior chambers.