This invention has reference to inflatable supporting members for the human body such as mattresses, pillows and cushions, particularly inflatable hospital mattresses, and has for its primary object to provide a construction wherein different pressures may be given to various parts of the supporting member whereby the load-bearing area can be divided into separate sections capable of independent adjustment as to degree of softness to suit individual requirements. Invalids who are forced to lie in bed for long periods, and who are unable to move easily from one position to another, suffer considerable discomfort, and by means of the invention the pressures at selected areas of the mattress may be relieved or increased to minimize this discomfort. The same considerations apply to smaller body or body-part supports such as pillows, or cushions for limbs.

According to the said invention an inflatable supporting member for the human body (particularly a mattress) is made of flexible airtight material and is divided interiorly by airtight webs extending between its upper and lower walls into a plurality of individually inflatable compartments, each compartment being provided with a pair of separate tubes respectively for inflation and deflation.

In order that the said invention may be readily understood, the following description of preferred embodiment is made, coupled with the accompanying drawings wherein:

FIGURE 1 is a perspective view of a mattress according to the invention;

FIGURE 2 is a perspective view of a pillow according to the invention, also shown in position (dot-and-dash) lines in FIGURE 1;

FIGURE 3 is an enlarged fragmentary view of the side of the mattress so as to show more clearly the arrangement of air tubes;

FIGURE 4 is a perspective view of an inflation and deflation control box used in conjunction with the mattress seen in FIGURE 1; and

FIGURE 5 is a sectional detail to an enlarged scale showing one way in which the control buttons, which appears in FIGURE 4, operate to strangle the flow of air through the respective air tubes.

Referring to FIGURE 1 a mattress of oblong form and requisite size is constructed of an airtight plastics material with a top 1 spaced from a similar bottom, sides 2 and ends 3. It is divided interiorly by a suitable number, e.g. nine, compartments 4. These compartments are of box-like form made by airtight webs 5 extending between the top wall 1 and bottom wall of the mattress, and in cross-cross disposition. It is advantageous to make the three compartments which lie in the transverse middle somewhat longer than the others. Each compartment is capable of being individually inflated and deflated, and for this purpose is connected by air tubes 6, 6a or other suitable ducts to a device such as a device comprising an inflating tube and a deflating tube, the outer ends of the inflating tubes and deflating tubes being coupled, by a control box, to a common main air pressure inlet tube and a common air extraction tube respectively, and manually operable means on the control box for selectively opening and closing the passage between each inflating and deflating tube and the respective air inlet and air extraction tube.

References Cited by the Examiner

UNIVERSITY STATES PATENTS

2,814,053 11/1957 Sevick 5--348
2,998,817 9/1961 Armstrong 128--33
3,209,719 10/1965 Christopher 5--349X

FRANK B. SHERRY, Primary Examiner.
A. CALVERT, Assistant Examiner.