This invention relates to springs such as are used in cushions, seats and mattresses.

The invention has especial reference to means to sustain the top edges of articles of the character mentioned, and including those using a double deck spring.

The principal object of the invention is to provide a spring embodying means of such character that the top edges of the article in which the spring is used will be yieldingly sustained without robbing the article of its cushioning or pillowing effect, and also keeping said top edges from sagging or breaking down, to thus preserve the normal condition and shape of the article.

A further object is the provision of means of the indicated character which will be simple, inexpensive and of efficient and substantial design.

The nature of the invention and its distinct advantage will appear when the following specification is read in connection with the accompanying drawings, in which

Figure 1 is a fragmentary side view of a spring selected to illustrate an embodiment of the invention;

Figure 2 is a section on the line 2—2 of Figure 1, the springs being shown in elevation.

Figure 3 is a perspective view of one of the cushion springs.

Figure 4 is a perspective view of the top end of a cushion spring showing a modification.

In the drawing, the invention has been shown, by way of example, in conjunction with a double deck spring. It is to be understood that this spring may be used in cushions, seats and mattresses. The spring shown includes a base or lower deck and a top or upper deck on the base or lower deck. The base deck includes a suitable supporting base 10 and coil cushion springs 11 which are arranged in rows and which have their lower coil portions secured to the base 10 as at 12. It is to be understood that the springs 11 will be interconnected by suitable means, and additional means will be provided which is connected with the base 10 and the springs 11 to limit the upward flexure of the springs 11. The said means for the stated purpose is well known and has been omitted for the sake of clearness.

The top or upper deck includes webbing 13 and coil cushioning and pillow springs 14. The webbing 13 has a bound marginal edge and is laid on the uppermost coils of the springs 11 and is secured in any suitable manner thereto. The springs 14 are arranged in rows and the lowermost and also the uppermost coils thereof are connected together. The lowermost coils of the springs 14 are secured to the webbing 13. The uppermost coils of the springs 14 form an upper supporting structure for the outer covering or upholstery (not shown). The springs 11 and 14 are of relatively different compressive strength, the springs 11 being of greater strength than the springs 14. The springs 11 take up most of the weight imposed, whereas, the springs 14 serve as a cushion, and pillow the upholstery. Use is made of a frame 15 which may be constructed of metal, willow or any other suitable material. The frame 15 aids in supporting and giving shape to the covering or upholstery, such as, in fact, forms a top edge support. The marginal rows of springs 14 have their uppermost coils connected with the frame as at 16 to keep the frame from spreading.

In accordance with the principal feature of the invention there is provided means of such character that the top edges of the cushion, seat, mattress or the like in which the spring is used will be yieldingly sustained without robbing the article of its cushioning or pillowing effect, and also keeping said top edges from sagging or breaking down to thus preserve the normal condition and shape of the article. The said means are arranged between the springs 11 and the frame 15. In the present instance, the means is arranged between the marginal rows of the springs 11. The said means as shown in Figures 1, 2 and 3, and appearing most clearly in Figure 3, is formed integral with the uppermost coil portions of each spring in the marginal rows. The said means, designated 17, is of arcuate formation in continuation of the upper end of the spring, and is disposed substantially vertical. The means 17 is secured to the frame 15 in any suitable manner such as by the use of cord 18 or the like. The frame 15 may be provided with a groove or the like to receive the means 17, as shown in Figure 2. From the foregoing it will be apparent that any weight imposed on the frame 15 will be sustained mainly by the springs 11 thereby relieving the springs 14 which serve merely as relatively soft cushioning means, and also perform the function of pillowing the upholstery. Due to the greater strength of the springs 11 which are connected with the frame 15, the frame 15 will be properly yieldingly sustained, and in this manner the top edge of the article, such as a cushion, seat or mattress in which the spring is arranged, will be kept from sagging or breaking down during the life of the spring.
The same result hereinabove described may be accomplished by providing a rigid connecting member 19 in lieu of the means 17. Said member 19 consists of a horizontal portion 20 connected with the uppermost coil of a spring and a vertical portion 21 which is integral with the portion 20. The portion 21 has means 22 on its upper end for connection with the top edge frame 15.

We claim:

1. A double deck spring including a base deck of relatively stiff springs, a top deck of relatively soft nonyieldingly interconnected pillowing springs on the base deck, an upholstery supporting top edge frame connected with the marginal rows of said pillowing springs, and the marginal springs of said deck of pillowing springs, and the upturned arched members formed from the material of the upper end coils thereof and extending upwardly therefrom in contact with said frame and secured thereto so as to yieldingly sustain the frame and also to prevent lateral movement and sagging of said top deck of pillowing springs.

2. A double deck spring including a base deck of relatively stiff springs, a top deck of relatively soft nonyieldingly interconnected pillowing springs on the base deck, an upholstery supporting top edge frame connected with the marginal rows of said pillowing springs, and rigid means connected with and supported on the upper end coils of the marginal rows of said base deck springs, and extending substantially vertically upwardly therefrom, in contact with the said frame and secured thereto, so as to yieldingly sustain the frame and also to prevent lateral movement and sagging of the said top deck of pillowing springs.

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