H. O. ERSIN.

BED BOTTOM.

APPLICATION FILED MAY 8, 1916.

1,270,608.

Patented June 25, 1918.

3 SHEETS—SHEET 1.

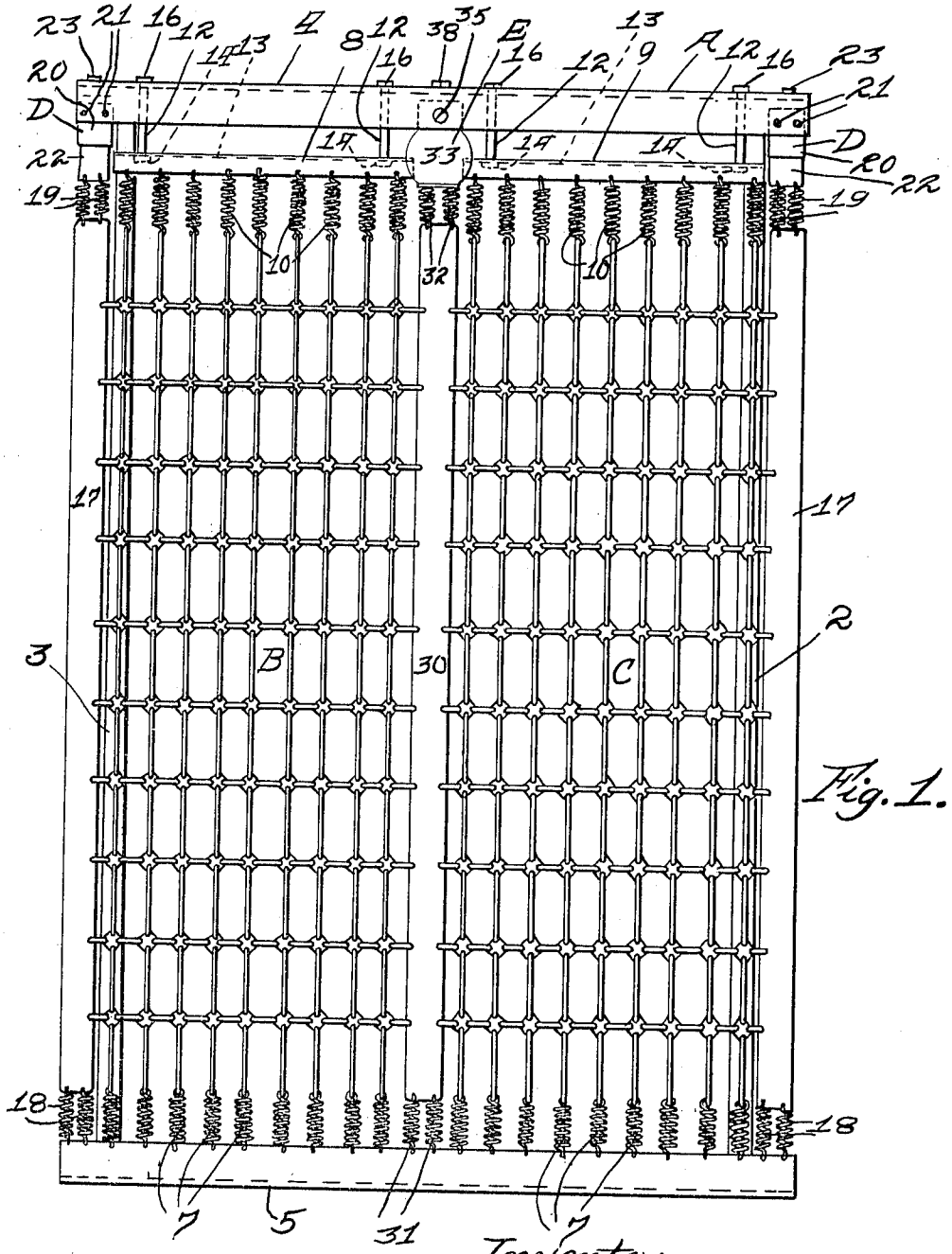


Fig. 1.

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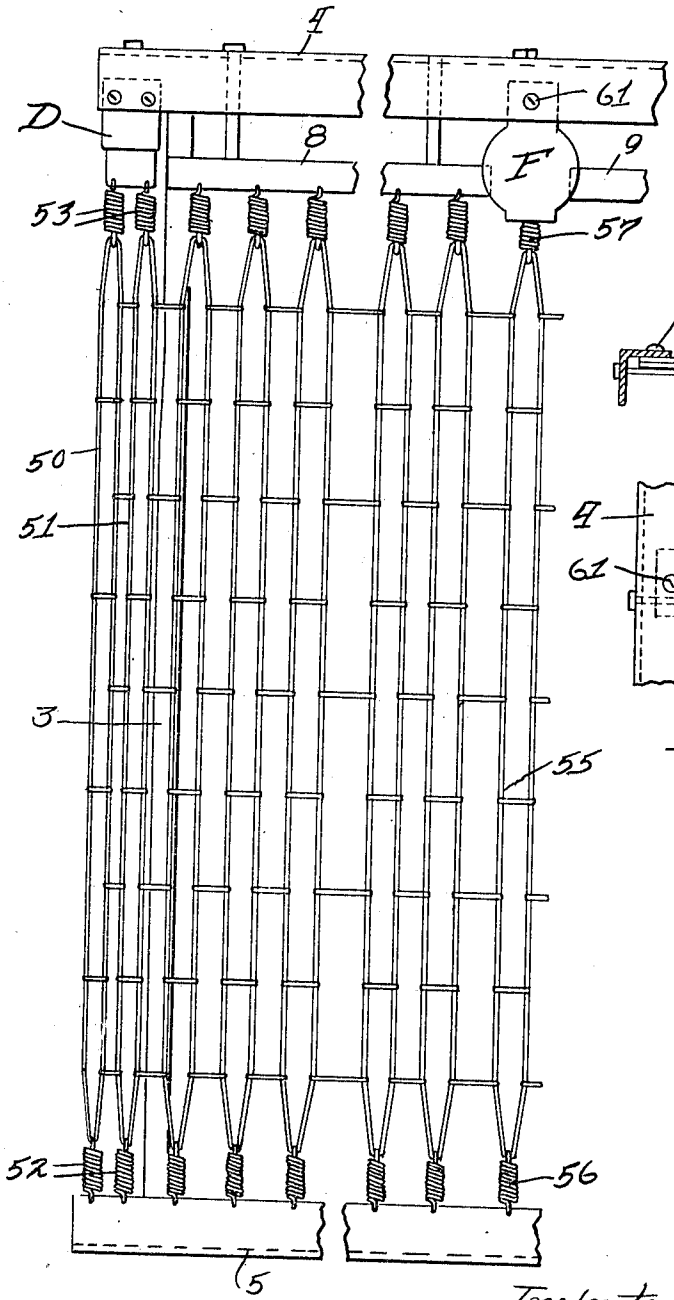
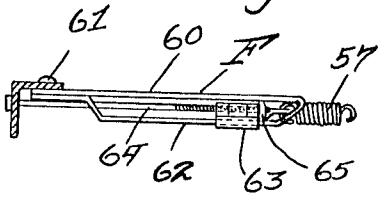


Fig. 2.

Fig. 9.



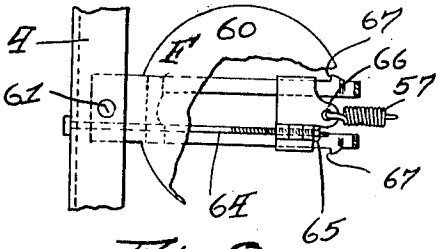


Fig. 8.

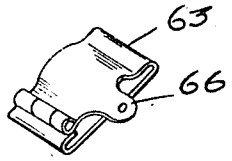


Fig. 10.

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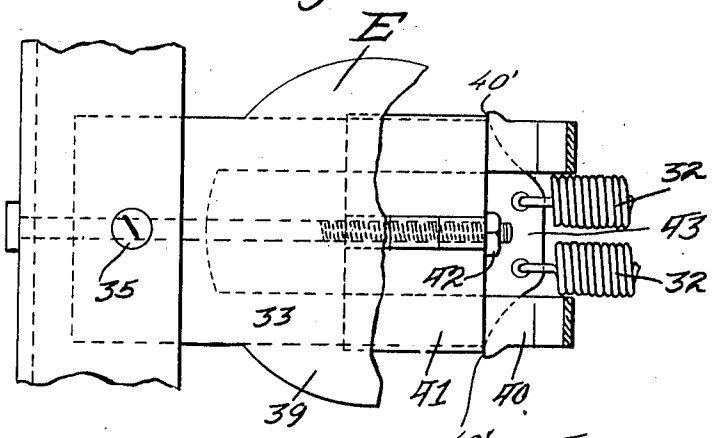
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3 SHEETS—SHEET 3.

Fig. 3.



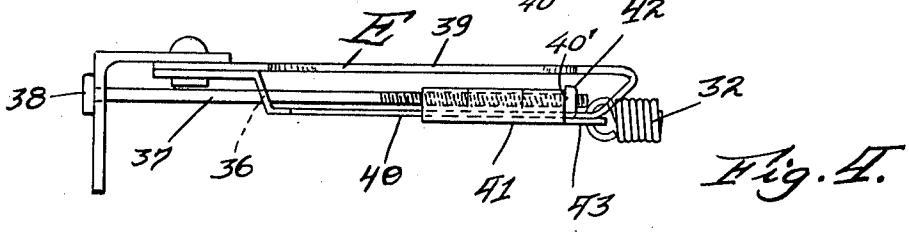


Fig. 4.

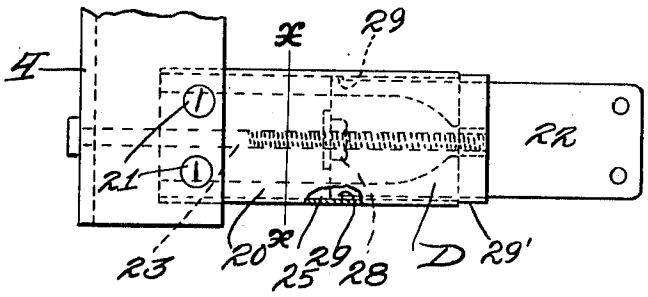


Fig 5

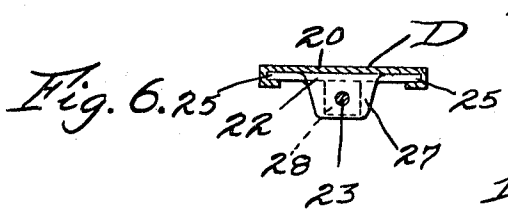


Fig. 6.

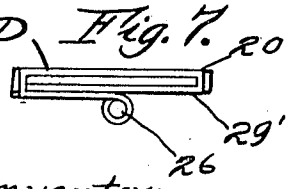


Fig. 7.

Inventor:
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UNITED STATES PATENT OFFICE.

HAROLD O. ERSIN, OF ANOKA, MINNESOTA.

BED-BOTTOM.

1,270,608. Specification of Letters Patent. Patented June 25, 1918.

Application filed May 8, 1916. Serial No. 96,035.

To all whom it may concern:

Be it known that I, HAROLD O. ERSIN, a a citizen of the United States, residing at Anoka, in the county of Anoka and State of Minnesota, have invented a new and useful Improvement in Bed-Bottoms, of which the following is a specification.

This invention relates to bed springs and more particularly to means for adjustably supporting parts thereof. The primary object is to provide an improved fabric, the tension of parts thereof being adjustable from time to time to suit working requirements. In the production of bed springs of that character set forth in my companion application Serial Number 767,952 filed on the 16th day of May, 1913, a flexible border is employed and a dividing selvage used between sections of the mattress, but the tension of these parts is permanently established so that any loss in tension cannot be equalized. By the use of my invention this loss of tension can from time to time be reestablished, thus extending the life of bed springs employing border or divisional elements of that general character shown in the application for patent above referred to. The invention further relates to novel adjusting devices which are simple and inexpensive in construction.

Other and further objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined by the appended claims.

This invention is particularly although not exclusively applicable to bed springs in which a mattress fabric is supported under tension in a mattress frame. This mattress fabric is composed of interconnected wire strands, links or other members attached directly or indirectly to end rails of said frame, short helical springs being usually employed for assisting in making the end connections. The side edges of the body of this fabric is usually provided with selvage means which resiliently strengthens the edges of the mattress and furnishes smooth edges which prevent the bed clothing from catching on the ends of parts of the fabric. This selvage means also acts as a guard to keep the mattress in place. The body of the fabric may also be divided centrally and longitudinally into two sections, said sections being independently supported at their ends, but linked together, the line of connection being resiliently supported independent of the end support of said sections, whereby the effect of two single beds in a double bed is produced, the yielding tendency of each of which being separately adjustable, so that a person lying or resting on one side of the bed and moving thereon will not disturb a person resting on the other side of the bed. The use of selvage strips as set forth in my application for patent above referred to accomplishes the advantages just stated, but to enhance these advantages, I have found that independent means for adjusting the tension of the selvage strips produces a marked advantage by enabling the user from time to time to regulate the selvage means according to conditions.

In the accompanying drawings forming part of this specification, Figure 1 is a plan of a bed bottom showing one embodiment of my invention; Fig. 2 is a plan of a detail of a bed bottom illustrating another embodiment of my invention; Fig. 3 is a plan of a detail partly in section of one of the adjusters employed in the construction illustrated in Fig. 1; Fig. 4 is a side elevation of the structure illustrated in Fig. 3, the end bar being in section; Fig. 5 is a plan of another adjuster, which is employed in the construction illustrated in Figs. 1 and 2; Fig. 6 is a section taken upon the line X—X of Fig. 5; Fig. 7 is an end view of part of the structure illustrated in Fig. 5; Fig. 8 is a plan partly broken away and in section of one of the adjusters employed in the construction illustrated in Fig. 2. Fig. 9 is a side elevation of the construction illustrated in Fig. 8 and Fig. 10 is a perspective of one of the parts employed in the structure illustrated in Fig. 8.

In the drawings A indicates a suitable frame of a bed bottom composed of a pair of side bars 2 and 3 and end bars 4 and 5, said side and end bars being rigidly connected in any well known manner and said frame being of any usual form within the scope of my invention. The end bars as illustrated are angle irons, although they may also be of any suitable form.

B and C indicate two parallel sections of link fabric lying substantially in the same plane, the ends of said sections being connected by their links and helical springs 7 to the end bar 5.

The ends of sections B and C opposite those which are connected to the end bar 5 are respectively connected to angle iron

draw bars 8 and 9, one pair being connected to each of said sections by means of a plurality of helical springs 10. These draw bars are freely connected to the end bar 4 of the frame by means of bolts 12 fastened through one side of the end 4 of the frame and through a side 13 of either of the draw bars 8 and 9. The ends of the bolts passing through the sides 13 of each of the draw bars are secured to nuts 14, so that by turning the bolts by their heads 16, they are screwed into and out of the nuts and the tension of the sections B and C of the link fabric thus adjusted longitudinally for the purpose of taking up any slack and holding the fabric under desired tension.

At each side of the frame A is a selvage strip or border 17 of any suitable construction, that illustrated in Fig. 1 consisting of a thin strip of material, one end of which is secured to the end bar 5 of the frame by a pair of helical tension springs 18. These springs 18 assist in supporting the selvage under tension to prevent the edge of each section of the fabric from sagging and becoming strained. The inner edges of said strips 17 are connected to the fabric links of the adjacent fabric section. The opposite end of the selvage strip which is connected with the end bar 5 is adjustably and resiliently connected with the end bar 4 by an adjuster D and a pair of helical tension springs 19, there being an adjuster and a pair of said springs provided on each selvage 17 forming the outer border of the spring mattress.

Each of the adjusters D in the construction illustrated in Fig. 1 consists of a stationary guide member 20 rigidly mounted upon the end bar 4 by bolts 21 or other suitable means, a slide 22 the outer end of which is attached to the ends of the helical springs 19 and an adjusting bolt 23 passing through and secured to the end bar 4, and movably attached to the slide 22, so that by turning said bolt the slide can be moved in the guide member and the tension of the selvage or border 17 regulated as desired. The guide is in the form of a plate having a pair of inner channels 25 in which the slide is guided, and is formed with an eye member 26 on its outer end which receives and movably holds the inner end of the bolt 23 to more rigidly unite the parts. The slide 22 is in the form of a plate having a depending flange 27 on its inner end upon which the nut 28 on the bolt 23 presses. Stop shoulders 29 on the slide 22 are arranged to strike the end 29′ of the guide should the bolt become detached and prevent the parts of the adjuster from becoming separated.

The adjacent edges of the sections B and C of the fabric are likewise secured to a centrally disposed selvage 30 in the form of a flat strip or other construction, one end of which is also secured by helical springs 31 to the end bar 5. The other end of the selvage 30 is secured by a pair of helical springs 32 to a central adjuster E which in turn is carried by the bar 4.

This central adjuster E consists of a guide member 33 in the form of a plate having upper and lower sides pivotally secured to the end bar, so as to swing laterally, by means of a bolt 35 or other suitable means. The upper and lower sides of said adjuster E are spaced apart, said lower side being formed with suitable openings 36 in which parts of the adjusting bolt 37 are admitted. The head end 38 of said adjusting bolt projects through and beyond the end bar 4, while the inner end extends into the space between the upper and lower sides 39 and 40 of the guide member E. Mounted upon the lower side of the guide member E is a slide 41 consisting of a plate having its ends turned inwardly over the inner surface of the lower side 40 and bent around the inner end of the bolt 37. Placed upon the inner end of the bolt 37 is a nut 42, which presses against the ends of the slide, so that when the bolt 37 is turned by its head 38, the slide is moved upon the lower side of the guide member. The body of the slide 41 is formed with a longitudinal lip 43 to which the ends of the pair of helical springs 32 are attached, thus by turning the bolt 37, the spring tension under which the central selvage is held is regulated. The pivot support 35 allows the adjuster to swing laterally and accommodate lateral movement of the central selvage. Shoulders 40′ on the lower side member 40′ limit or define the extreme outward pull of slide member 41 on member 40″.

The fabric composing the sections B and C may be of any suitable construction within the scope of my invention, another form of construction being illustrated in Fig. 2, in which it is composed of wire strands instead of links as illustrated in Fig. 1. The ends of the sections of this fabric are similarly connected with the adjusting bars 8 and 9 and to the end bar 5 of the frame as illustrated in Fig. 1. The outside selvage or border in the construction illustrated in Fig. 2 is composed of pairs of wire strands 50 and 51 secured under tension at their ends by helical springs 52 to the end bar 5 and by helical springs 53 to an adjuster D, which in turn is secured to the end bar 4, said adjuster being substantially of the same construction as the adjuster D illustrated in Fig. 1. The central strand 55, which composes the equivalent of the selvage 30 illustrated in Fig. 1, instead of being connected to one of the adjusting bars 8 or 9 is secured by a tension spring 56 at one of its ends to the end bar 5 and by a

helical spring 57 to an adjuster F, which is slightly different in construction from the adjuster E illustrated in Fig. 1, but which coöperates with the central selvage in performing substantially a similar result. This central adjuster F which is illustrated in Figs. 8 and 9 consists of a guide member 60 having upper and lower sides spaced apart with their ends pivotally secured to the end bar 4 by a pivot bolt 61. On the lower side 62 of the guide member is mounted a slide 63, which is adapted to move longitudinally thereon, and in which the inner end of the adjusting bolt 64 is secured by a nut 65. The outer end of the adjusting bolt 64 projects through the end bar 4, and is turned by its head to move the slide 63 upon the guide. The slide has its ends wrapped around the bolt 64 on a line at one side of a central line extending through the guide and its pivot point 61. Projecting forwardly from the slide on said central line is a lip 66 to which is secured the end of the helical spring 57, thus as the slide is moved by the draw bolt 64 placed at one side of said central line, the tension of the central selvage 55 is regulated freely. The shoulders 67 on the lower side 62 of the guide 60 prevent the slide 63 from becoming detached from the guide member if the bolt 64 is detached. The placing of the bolt 64 at one side of the center line on which the guide is supported allows free movement of the spring 57. The upper side of the central adjuster, both in the construction illustrated in Figs. 1 and 2 is of sufficient breadth to overlap the primary adjusting bars 8 and 9, so that there is free movement laterally of the central selvage upon the pivot, which secures the adjuster to the end bar 4.

In use the sections B and C of the fabric forming part of the bed bottom is regulated by turning the bolts 16. The side selvage members or borders are adjusted in tension by turning the bolts 23 and the tension of the central selvage is regulated by turning the bolts 38 in the construction illustrated in Fig. 1 and the bolts 64 in the construction illustrated in Fig. 2.

The term "selvage" as used throughout the specification as applied to the border members 17 in the construction illustrated in Fig. 1, and 50 and 51 in the construction illustrated in Fig. 2, and to the central member 30 in the construction illustrated in Fig. 1, and the central member 55 in the construction illustrated in Fig. 2 is employed in its broadest sense, and it is intended that any member that will perform the function or functions accomplished by the members referred to above shall be construed as the full equivalent thereof.

In accordance with the patent statutes, I have described the principles of operation of my invention, together with the apparatus which I now consider to represent the best embodiment thereof, but I desire to have it understood that the construction shown is only illustrative, and that the invention can be carried out by other means and applied to uses other than those above set forth within the scope of the following claims.

Having described my invention, what I claim as new and desire to protect by Letters Patent is:

1. In a spring mattress, the combination with the main frame of a pair of independent spring mattress sections resiliently supported at their ends in said main frame, a resilient selvage extending longitudinally between the mattress sections and means for connecting the ends of said selvage in said frame, said means being adjustable to vary the tension of said selvage.

2. In a spring mattress, the combination with the main frame, of a pair of independent spring mattress sections resiliently supported at their ends in said main frame, a selvage resiliently supported longitudinally at each of the outer side edges of said sections, and means for independently regulating the longitudinal tension of said selvage.

3. In a spring mattress, the combination with the main frame, of a mattress fabric resiliently supported at its ends in said frame, a selvage resiliently supported longitudinally at the opposite borders of said fabric and means for independently regulating the longitudinal tension of said selvage.

In testimony whereof, I have signed my name to this specification.

HAROLD O. ERSIN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."