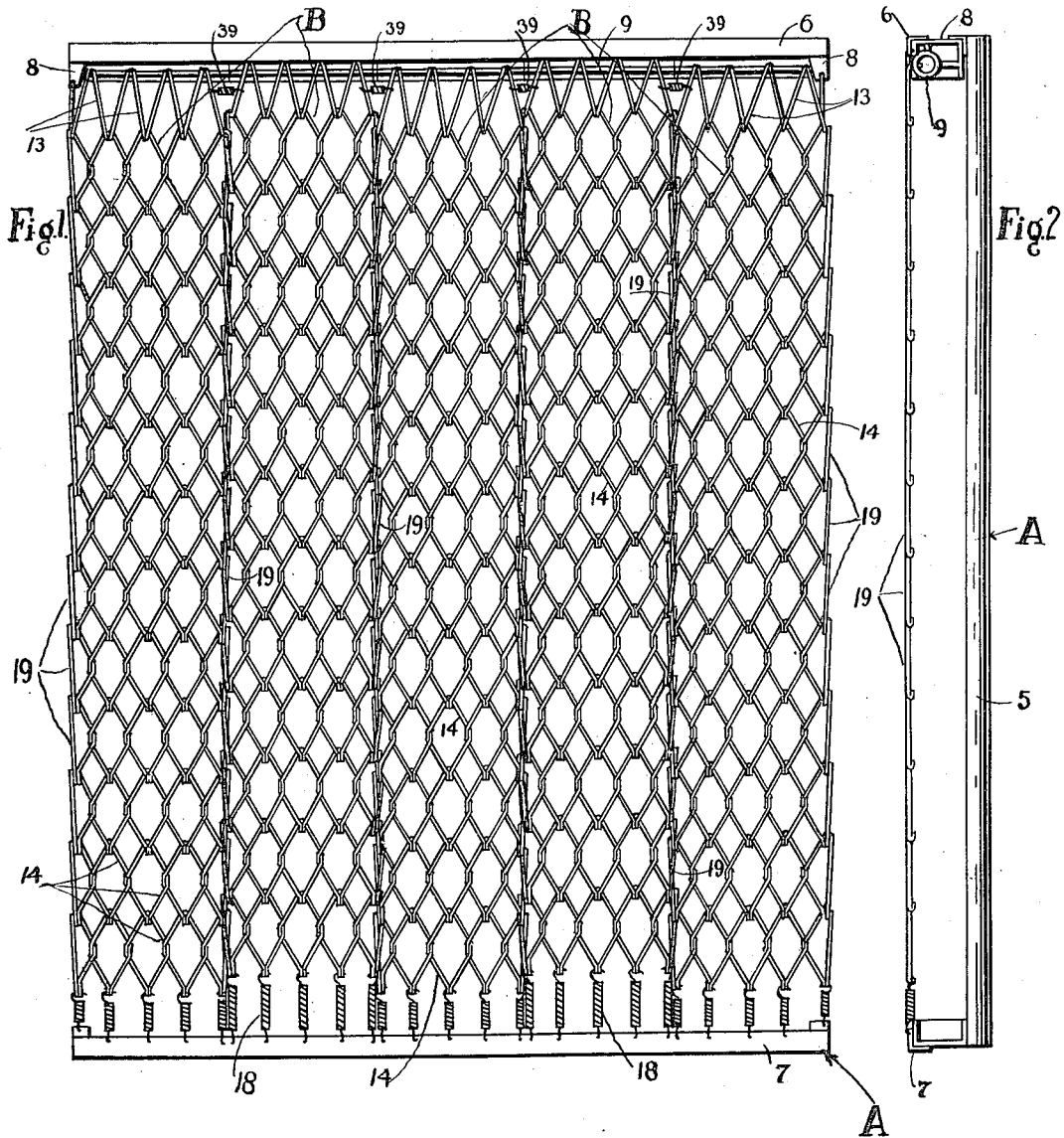


F. W. H. WEISHAUP.
 BED SPRING FABRIC.
 APPLICATION FILED APR. 27, 1912.

1,064,578.

Patented June 10, 1913.

3 SHEETS—SHEET 1.



Witnesses
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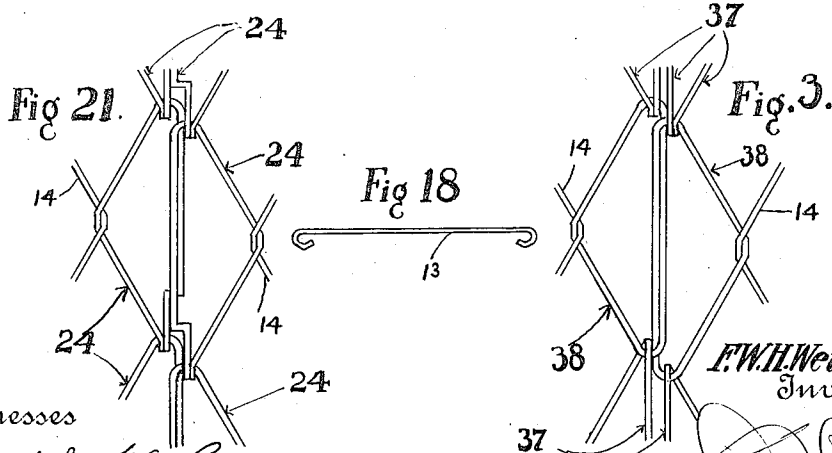
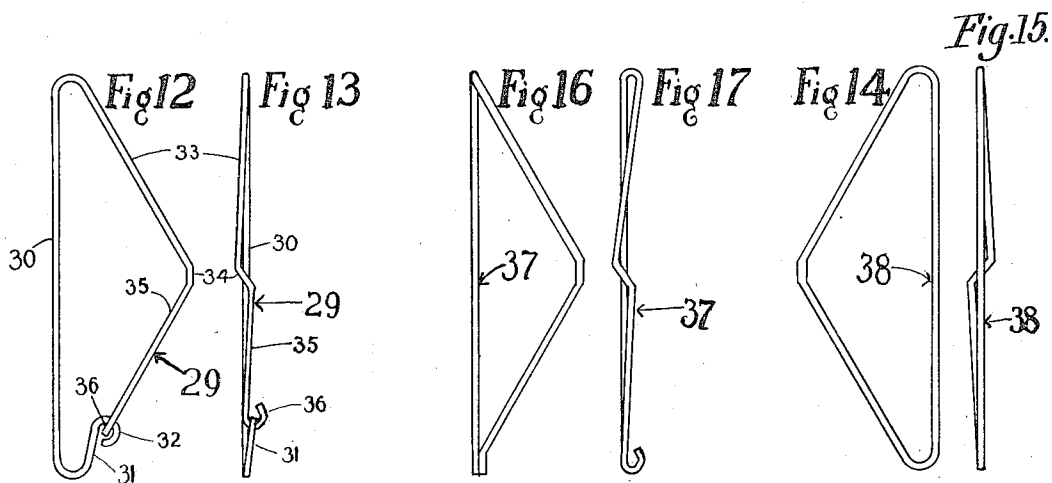
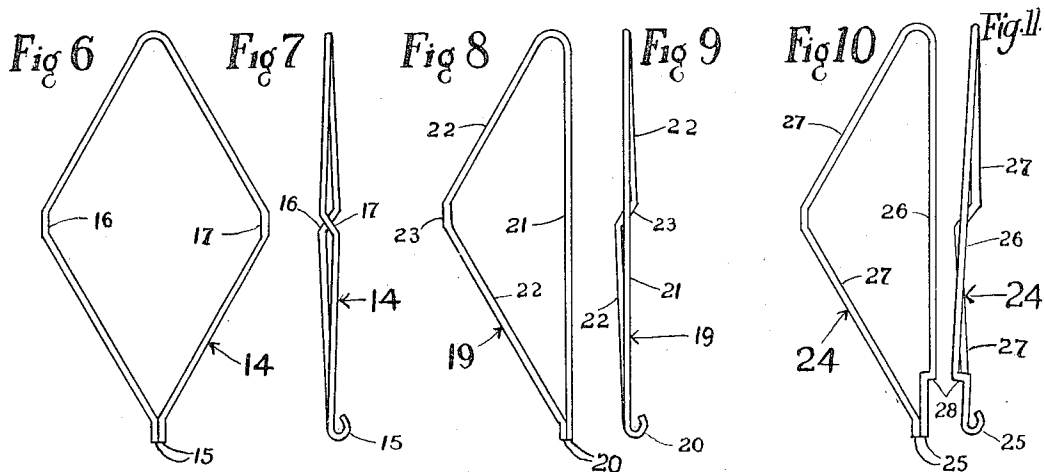
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3 SHEETS—SHEET 2.



Witnesses

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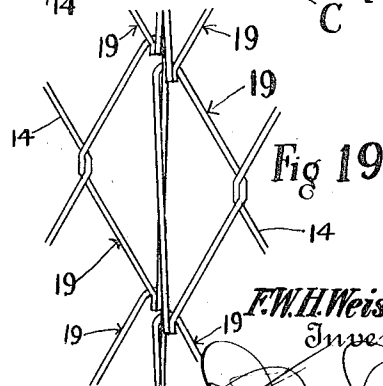
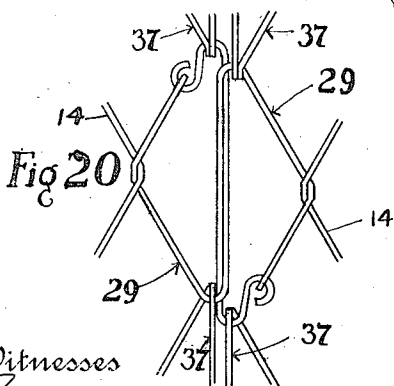
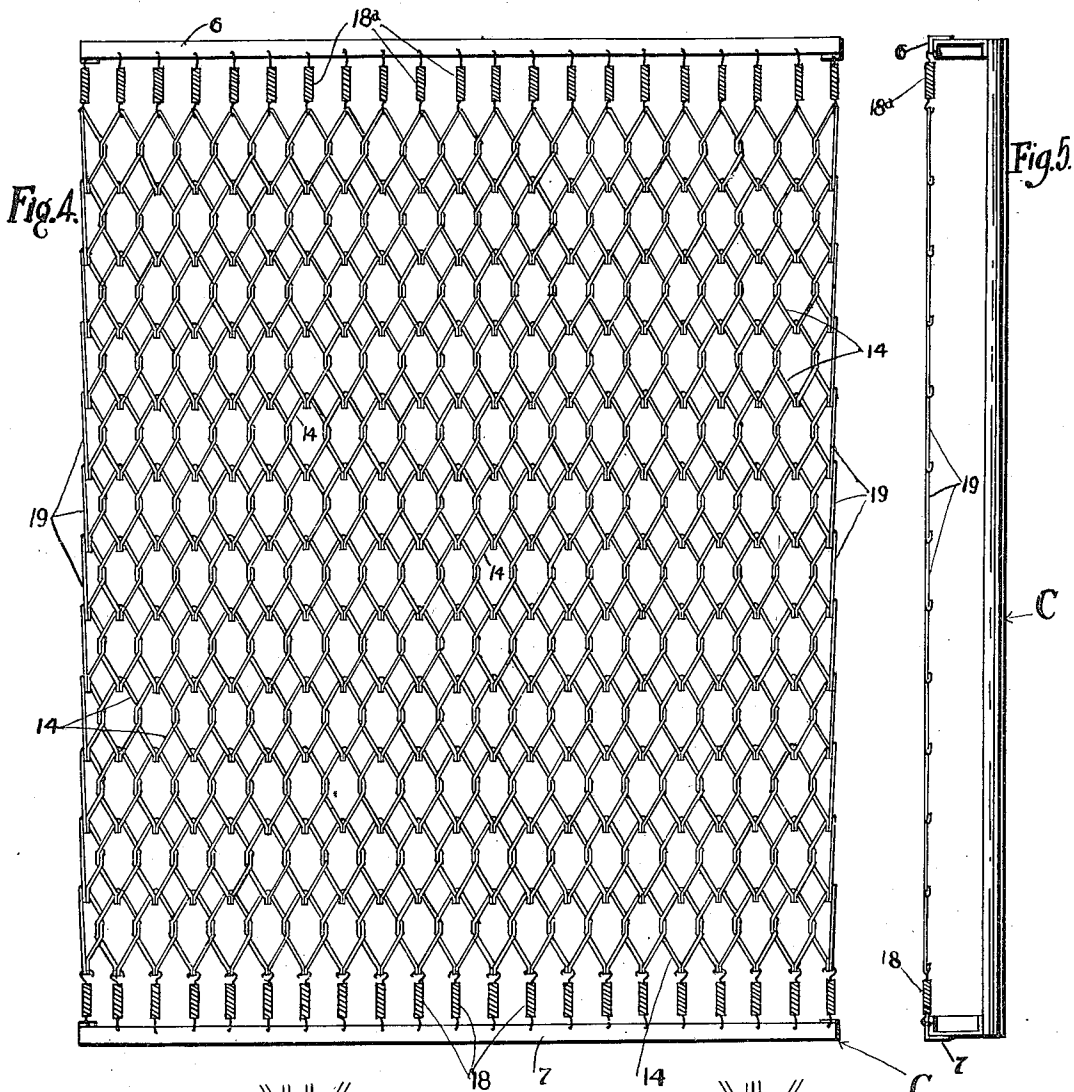
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3 SHEETS—SHEET 3.

1,064,578.



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UNITED STATES PATENT OFFICE.

FREDERICK W. H. WEISHAUP, OF WASHINGTON, DISTRICT OF COLUMBIA.

BED-SPRING FABRIC.

1,064,578.

Specification of Letters Patent.

Patented June 10, 1913.

Application filed April 27, 1912. Serial No. 693,623.

To all whom it may concern:

Be it known that I, FREDERICK W. H. WEISHAUP, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Bed-Spring Fabrics; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in bed spring fabrics, and relates more particularly to improvements upon my former Patent No. 966723, issued August 9, 1910.

The principal object of the invention is to provide a bed spring fabric which is formed from a plurality of units of novel construction whereby any one or more longitudinal rows of units may be stretched longitudinally independent of the other longitudinal rows so as to take up any slack in the spring.

A further object of the invention is to provide a bed fabric of the character described in which the units are so constructed as to position the same in a single plane.

A still further object of the invention is to provide a bed spring of the character described which is extremely simple in construction, and is cheap to manufacture.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings and pointed out in the claim hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction within the scope of the claim may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings: Figure 1 is a top plan view of a bed spring and frame constructed in accordance with my invention, Fig. 2 is a side elevation thereof, Fig. 3 is an enlarged detail plan view showing the manner of interlocking one form of edge units. Fig. 4 is a top plan view of a bed spring and frame showing a modified form of spring, Fig. 5 is a side elevation thereof, Fig. 6 is an enlarged plan view of one of the units used in the construction shown in Figs. 1 and 4 of the drawings, Fig. 7 is a

side elevation thereof, Fig. 8 is an enlarged plan view of one of the edge units used in the fabric shown in Figs. 1 and 4 of the drawings, Fig. 9 is a side elevation thereof, Fig. 10 is an enlarged plan view of a modified form of edge unit, Fig. 11 is a side elevation thereof, Fig. 12 is an enlarged plan view of another form of edge unit, Fig. 13 is a side elevation thereof, Fig. 14 is an enlarged plan view of a further modified form of edge unit, Fig. 15 is a side elevation thereof, Fig. 16 is an enlarged plan of a still further modified form of edge unit, Fig. 17 is a side elevation thereof, Fig. 18 is a plan view of one of the connecting hooks, Fig. 19 is an enlarged detail plan view showing the manner of interlocking the edge units shown in Figs. 8 and 9 of the drawings of adjacent spring sections, Fig. 20 is a similar view but showing the manner of interlocking the edge units shown in Figs. 12 and 13 of the drawings of adjacent spring sections, Fig. 21 is a similar view but showing the manner of interlocking the edge units shown in Figs. 10 and 11 of the drawings of adjacent spring sections.

Like reference characters designate corresponding parts in all the figures of the drawings.

Referring to the drawings and particularly to Figs. 1 and 2 thereof, there is shown a bed frame which is designated as a whole by the reference letter A, and this frame includes the usual side rails 5—5 and head and foot rails 6 and 7 respectively, the latter being preferably formed from angle iron. Secured to the end of the head rail 6 are end blocks 8—8. Journaled between these blocks 8 is a longitudinal series of independent pipe sections 9 of uniform height. There are preferably five of these pipe sections so that the intermediate section will be centrally disposed with respect to the frame. These pipe sections 9 are similar in construction and are mounted in the same manner as is shown in my former patent above noted, and therefore, a specific description thereof is deemed to be unnecessary. Engaged in openings in each of the pipe sections 9 are wire hooks 13. The bed spring is formed from a plurality of longitudinal sections which are each designated as a whole by the reference letter B. Each section consists of a plurality of units which are each designated by the reference nu-

meral 14, the units of each section being arranged in longitudinal and transverse rows. Each unit is formed from a single length of wire and is bent into a diamond-shaped formation, the ends of the wire being downwardly bent to form attaching hooks 15—15, said hooks forming one of the longitudinal points of the unit. The transverse points of each unit are oppositely offset, as indicated by the reference numerals 16 and 17. The units of each longitudinal row each have the hooks 15 fixedly connected to the opposite longitudinal point of the unit, and the adjacent offset portions 16 and 17 of the adjacent unit of each horizontal row are interlocked for sliding engagement. The upper horizontal row of the units 14 of each section are connected to a respective roller 9 by means of the hooks 13 as will be readily observed from an inspection of Fig. 1. The lower units 14 of each longitudinal row are connected to the foot rail 7 by means of a coil spring 18. Each section is furthermore formed with longitudinal edge rows of units 19. Each edge unit is also formed from wire, and is bent into a half diamond-shaped formation, the ends of the unit being downwardly bent to form hooks 20—20. Each unit includes a longitudinal arm 21 and inwardly extending arms 22—22. The point which is formed at the juncture of the arms 22—22 is offset as indicated by the reference numeral 23. The hooks 20 of the edge units 19 are fixedly connected to the next adjacent unit of that row, and the points 23 of said edge units have sliding interlocking engagement with the transverse points of the outer units 14 of each horizontal row. The outer units 19 are also connected to a respective pipe section 9 by means of the hooks 13, and the lower edge units are connected to the foot rail 7 by means of springs 18. It will thus be observed that upon rotation of a respective pipe section 9 in one direction the bed spring section B may be uniformly stretched, and by means of the locking bar 11 the section will be firmly held in its taut relation. By arranging one of the sections B centrally of the bed spring, the central portion of said springs may be independently stretched. This is found to be more advantageous because of the fact that the weight of a person is invariably directed upon the central portion of a bed frame. In order that the sections B may have independent longitudinal movements and at the same time prevent lateral spreading between the sections, the adjacent edge units of adjacent sections are slidably interlocked one with the other.

In the modification as shown in Figs. 4 and 5 of the drawings, the bed spring is indicated as a whole by the reference letter C. This spring is of non-sectional forma-

tion and includes diamond-shaped units 14 and edge units 19. These units are respectively arranged in longitudinal and transverse rows, and the lower end of each longitudinal row is connected to the foot rail 7 by means of coil springs 18. The upper end of each longitudinal row is connected to the head rail 6 by means of a coil spring 18^a. It will thus be observed that in both forms shown in Figs. 1 and 4 of the drawings, the offset points of the units dispose all of the units of the spring in a single plane.

In Figs. 10 and 11 there is shown a modified form of edge unit which is designated as a whole by the reference numeral 24. This unit is also formed from wire, and is bent into a half diamond-shaped formation, the ends thereof being downwardly bent to form hooks 25—25. This unit includes a longitudinal arm 26 and inwardly extending arms 27—27. The longitudinal arm 26 is formed with a downwardly and inwardly extending offset 28 constituting a bearing for the longitudinal arm of a similar unit, this form being employed with the sectional spring.

In Figs. 12 and 13 a further modified form of edge unit is shown, and this unit is indicated as a whole by the reference numeral 29. This unit is also formed from wire, and is bent into a half diamond-shaped formation consisting of a longitudinal arm 30 which has one end 31 rearwardly bent, as at 29, which terminates in an eye 32. The other end of the longitudinal arm 30 is rearwardly bent at an angle to form an inwardly extending short arm 33, and this arm is again bent to form an intermediate point 34 and a second short arm 35, the last mentioned arm terminating in an eye 36 which engages the eye 32 previously mentioned.

In Figs. 16 and 17 of the drawings there is shown a still further modified form of edge unit, and this unit is designated as a whole by the reference numeral 37. This unit is also formed from a single length of wire, and is similar in construction to the units shown in Figs. 8 and 9 with the exception that the longitudinal point opposite the hooks 20 is angular in formation instead of being curved.

In Figs. 14 and 15 of the drawings, there is shown a still further modified form of edge unit, and this unit is designated as a whole by the reference numeral 38. This unit is formed from a single length of wire, and is bent into a half diamond-shaped formation, the ends of the wire being welded so as to present a solid unit.

In practice, either of the units 29 or 37 may be used together, or the units 37 and 38 used together as will be readily understood.

In order to prevent any of the edge units 19 from separating when a strain is applied

to the fabric, the adjacent hooks 13 of adjacent sections B are connected by a coil spring 39.

It will be observed that each diamond-shaped unit is bent at its transverse axis to form short side arms which are arranged parallel to the longitudinal axis of the unit.

It will also be observed that by means of these arms the longitudinal rows of units are capable of having relative longitudinal sliding movements within a distance substantially equal to twice the length of one of said arms.

What is claimed is:

15 A bed fabric comprising a plurality of groups or sections of longitudinal series of

units, the groups being loosely connected at their side edges for longitudinal movement with respect to each other and the units of each longitudinal series being connected to 20 the corresponding units at the sides thereof of the next series for longitudinal movement with respect thereof to a lesser degree than the longitudinal movement of the groups with respect to each other. 25

In testimony whereof, I affix my signature, in presence of two witnesses.

FREDERICK W. H. WEISHAUP.

Witnesses:

JOSEPH H. LEAR,

PHILIP F. LARNER.