Feb. 11, 1930. J. P. HISE 1,746,942

BEDSPRING

Filed May 19, 1928 2 Sheets-Sheet 1

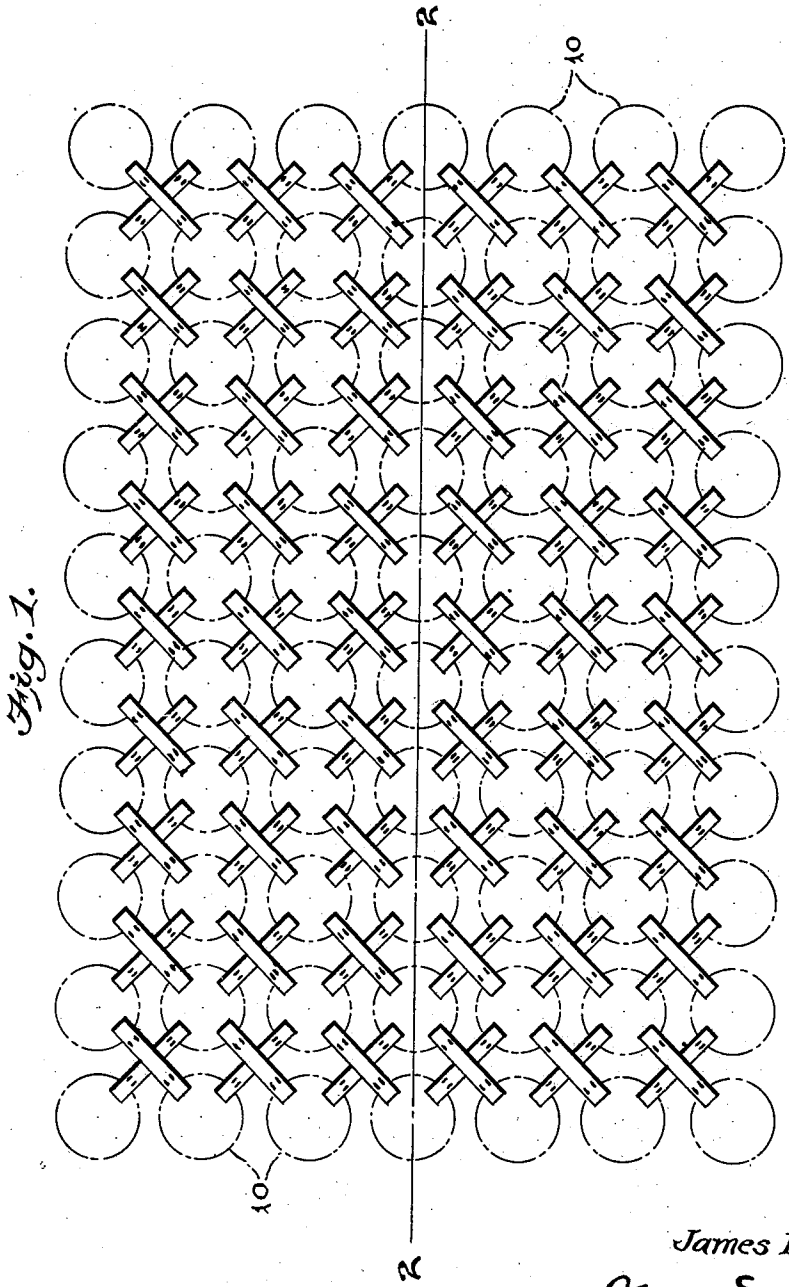

Fig. 1.

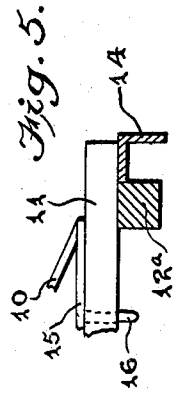

Fig. 5.

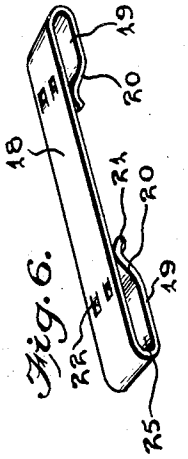

Fig. 6.

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BEDSPRING

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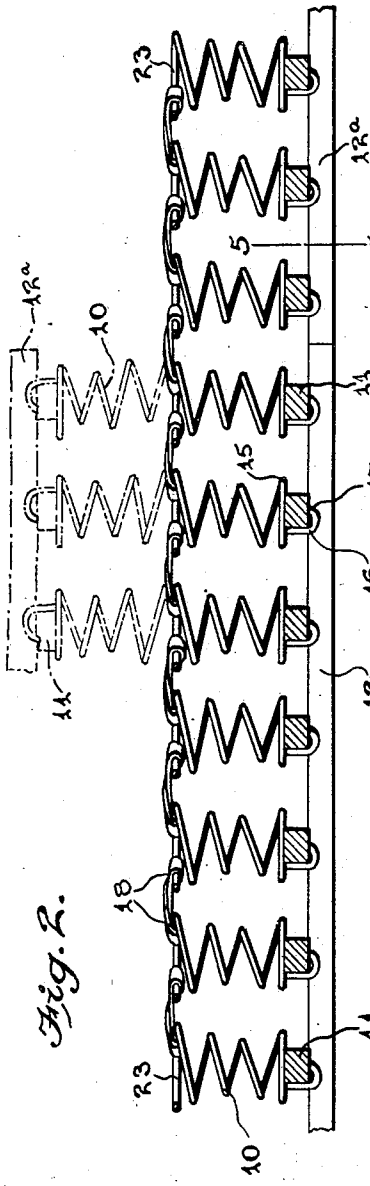

Fig. 2.

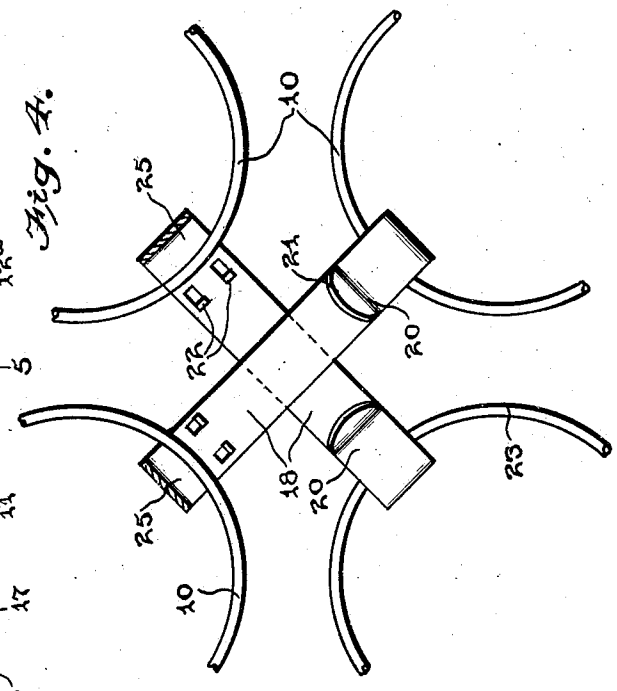

Fig. 4.

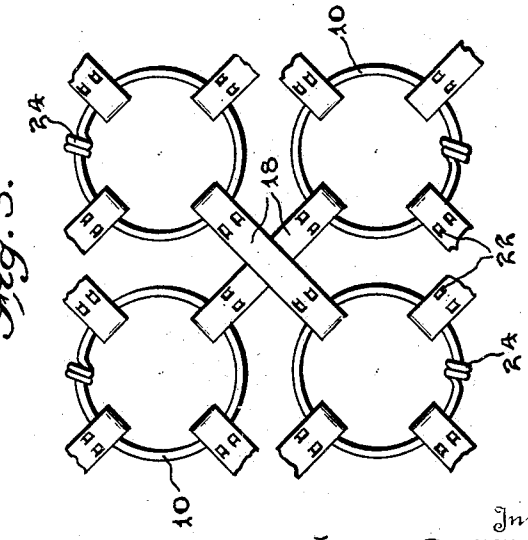

Fig. 3.

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Patented Feb. 11, 1930 1,746,942

UNITED STATES PATENT OFFICE

JAMES P. HISE, OF HIGHTOWN, VIRGINIA, ASSIGNOR TO HISE BED SPRING COMPANY, A CORPORATION OF VIRGINIA

BEDSPRING

Application filed May 19, 1928. Serial No. 279,141.

The object of the invention is to provide a bed spring consisting of a plurality of small springs and mounting and connecting means for the same, the whole being unassembled until mounting upon the bedstead to be equipped, so that the number of small springs employed may be varied to suit the dimensions of the particular bedstead; to provide a bed spring which, when assembled, will readily conform itself to the lines of the body in reclining position and only within the particular area of the body, so that there will be no tendency, where two persons of different size and weight occupy the same bed, for the one by reason of his or her heavier weight to affect the comfort of the other; and to provide a bed spring which may be easily and cheaply manufactured, marketed at small cost and readily installed by inexperienced persons.

With this object in view the invention consists in a construction and combination of parts of which a preferred embodiment is illustrated in the accompanying drawings wherein:

Figure 1 is a plan view of a spring constructed in accordance with the invention.

Figure 2 is a longitudinal sectional view of the plane indicated by line 2—2 of Figure 1.

Figure 3 is an enlarged detail plan view of a section of the spring to clearly illustrate the connecting means between its units.

Figure 4 is a bottom plan view, on an enlarged scale and partly in section, of the connecting means between adjacent springs.

Figure 5 is a sectional view on the plane indicated by line 5—5 of Figure 2.

Figure 6 is a perspective view of one of the connecting links.

The spring consists of a plurality of spiral springs 10 arranged in a uniformly spaced series of transversely arranged sets of which each set is carried on a slat 11. Where the bedstead is of the old form employing slats the latter may be used as the spring supports but in the modern form of bed the slats are employed as a part of the spring equipment and are assembled on side rails 12 abutting side rails 14 of the bedstead, the slats being secured to the rails 12 in any acceptable manner.

The springs 10 are of helico-spiral form, the lower convolution setting on top of the slat and the extremity of the wire forming the spring being extended to provide a gripper 16 of which the terminal 17 is directed upward to bite into the under face of the slat. The springs once positioned on the slats with the terminals of the grippers embedded in the under faces the positions of the springs on the slats become fixed until it is desired to remove them which may be done by springing the grippers down to clear the terminals from such engagement.

The springs of each set are interconnected with the springs of adjacent sets by means of crossing diagonal links 18 made preferably of flat spring steel of which the extremities are formed with loops by being bent back in parallelism with the body portions, as indicated at 19, and then up towards the body portions as indicated at 20, terminating in downturned lips 21. Positive abutment stops in the form of lugs 22 project from the under face of the body portions of the links adjacent the deflected portions 20 but between them and the bends of the terminals 19. The links are engaged with the terminal convolutions of the springs which are closed on themselves by twisting the extremities of the wire around the coils as indicated at 24. And these convolutions play in the spaces in the links defined by the throats 25 and the lugs 22. The links thus serve to interconnect the whole set of springs 10 and by reason of the play provided by the spaces in which the terminal convolutions float in the links, the depression of said springs will not be followed by depression of adjacent springs by reason of any pull from the links until all the play has been taken up and this will not be the case except where there is an abnormal pressure applied at any one point. By forming the links with the terminals 19 as indicated, they may be readily engaged with the terminal convolutions in assembling the springs, since the out-turned extremities or lips 21 provide for slipping the links over the convolutions deflecting the

tongues or extremities 19 until they have been passed beyond the lugs 22. The lugs serve as means to prevent accidental displacement of the links by reason of any pressure on the springs in a direction which would tend to force the terminal convolutions against the deflected portions 20. The links may be readily disengaged by deflecting the tongues 19 with the hands until the engaging convolutions have passed the lugs 22.

The rails 12 may, if desired, be divided to leave sections 12^a at the head end of the bed, so as to incline upwardly, if desired, that section of the spring structure supported by said rail sections 12^a. By dividing the rails 12 as indicated, that portion of the spring structure carried by sections 12^a may be swung over on the remaining section, as indicated in dotted lines in Figure 2 to facilitate the cleaning operation when such is to be performed, the links, at the line of separation of the sections 12^a from the main section serving as hinge connections between the two spring sections.

The invention having been described what is claimed as new and useful is:

1. A bed spring comprising a plurality of spiral springs arranged in parallel rows and diagonal crossing links engaging the terminal convolutions of the springs and connecting those of one row with those of adjacent rows, said links being formed of spring steel with the terminals bent back into parallelism with the body portions and having lugs on that side of the body portions facing the terminals, said lugs being spaced from the extremities of the body portions a distance materially in excess of the diameter of the wire of which the engaging convolutions are formed.

2. A bed spring comprising a plurality of spiral springs arranged in parallel rows and diagonal crossing links engaging the terminal convolutions of the springs and connecting those of one row with those of adjacent rows, said links having terminals bent back into parallelism with the body portions and constituting tongues of which the extremities are deflected towards the body portions and terminate in out-turned lips the body portions having lugs adjacent said deflected portions and spaced materially from the line of bend of the tongues.

In testimony whereof he affixes his signature.

JAMES P. HISE.