(No Model.)

L. W. BOYNTON.

SPRING BED BOTTOM.

No. 321,419. Patented July 7, 1885.

Fig 1

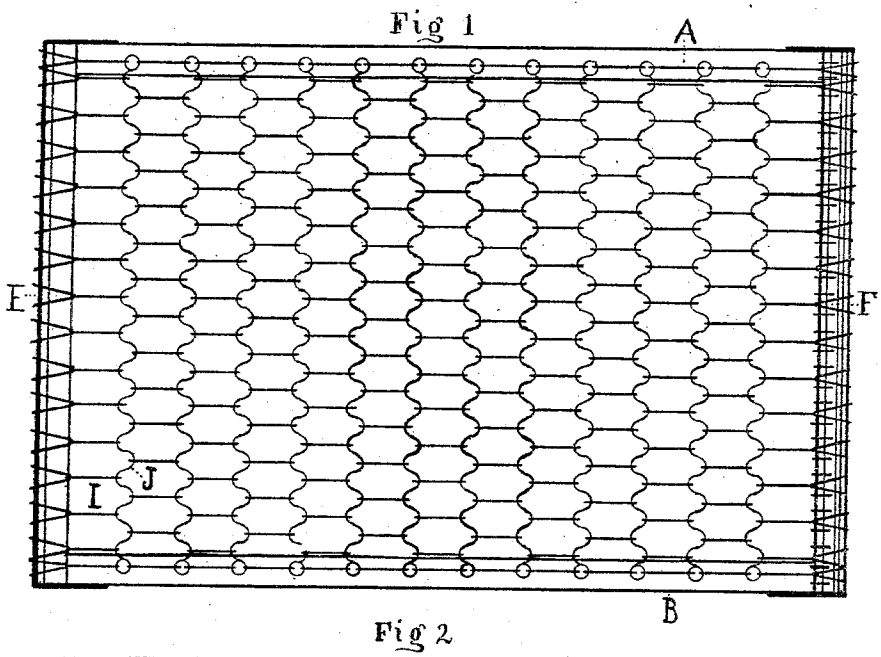


Fig 2

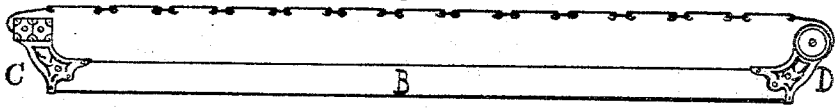


Fig 3

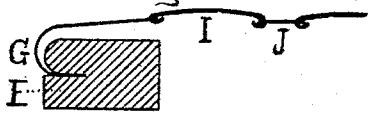


Fig 4

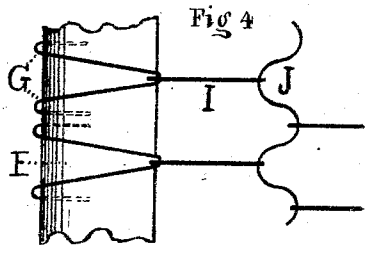


Fig 5

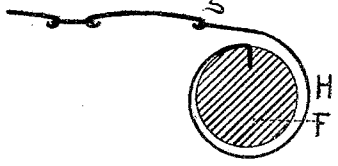
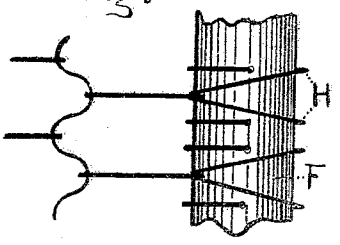


Fig 6



Witnesses

Morgan W. Beach

Willard Eddy.

Inventor

Leander W. Boynton

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BELL BROS., PHOTO-LITHOGRAPHERS, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

LEANDER W. BOYNTON, OF HARTFORD, CONNECTICUT.

SPRING BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 321,419, dated July 7, 1885.

Application filed March 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, LEANDER W. BOYNTON, of Hartford, Connecticut, have invented a new and useful Improvement in Spring Fabrics, of which the following description and claims constitute the specification, and which is illustrated by the accompanying sheet of drawings.

Figure 1 of the drawings is a plan view of a spring bed-bottom embodying this invention. Fig. 2 is a side view of the same. Fig. 3 is a cross-section of the left-hand end piece of the frame with sundry features of the invention attached thereto, and Fig. 4 is a plan view of a fragment of that end piece and with the same attachments. Fig. 5 is a cross-section of the right-hand end piece with similar attachments, and Fig. 6 is a plan view of a fragment of that end piece with the same attachments as those of Fig. 5.

A and B are the side pieces, and C and D the corner pieces, of the bed-frame, while E and F are the left-hand and right-hand end pieces, respectively.

G is one of a series of springs, V-shaped in plan view, and having the forks of the V bent into semicircles, substantially as shown in the drawings. The spring G consists of a wire bent centrally in V form, having its branches diverging and extending rearward and downward and curved downward in rear, terminating in forwardly-extending parallel prongs to be inserted into the rail.

H is one of a series of springs, V-shaped in plan view, and having the forks of the V bent into circles or coils, substantially as shown in the drawings.

The springs G and H are fastened to the end pieces by having their fork ends driven into the wood which composes those end pieces.

I is one of a series of convex hooked end springs. There are thirteen series of these springs in Fig. 1, and each spring is bent so as to present its convex side upward, as shown in Fig. 3.

J is one of a series of serpentine springs, each end of each of which is a ring-like coil of the end of the wire of which the spring is composed. There are twelve such springs in Fig. 1. Those in the middle are heavier than those nearer the ends.

The novel features of this fabric are the following: first, the springs G and H, which are identical in principle, differing only in the degree in which they respectively embody that principle; second, the springs I, being made bent, with convex side upward, instead of having their bodies substantially straight, as heretofore; third, the springs J, being made of variant weight and size of wire.

The mode of operation of these novel features is, respectively, as follows: The springs G and H, encircling, as they do, part or all of the end piece to which they are respectively attached, and touching that end piece only at the point where fastened thereto and thereabout, much increase the elasticity of the wire fabric of which they form a part or parts. The springs I, having, as they do, bent bodies, with the convex sides upward, cause the wire fabric to become and remain uniformly flat when pressed downward by superincumbent weight; whereas if, as heretofore, those springs had straight bodies, that weight would press them into a bent form with the concave side upward, and would thus cause the fabric to become and remain uneven in respect of its general upper surface. The springs J, being made of variant sizes and consequent stiffness of wire, and with the larger and stiffer specimens in the middle of the fabric, cause the sagging of the bed to be nearly uniform from end to end, instead of, as heretofore, to be most marked at the middle. This result follows from the fact that the larger and stiffer wires have less elasticity than the others, and therefore sag less than they in proportion to the superincumbent weight resting upon them.

The mode of operation of the entire bed differs from that of other similar beds in that the superincumbent weight causes it to sag nearly uniformly from end to end, instead of sagging mainly in the middle and not at all at the ends of the bed. The features which produce this general mode of operation are the springs G and H and the variant sizes of the springs J. I prefer to make those springs vary in size by regular gradations; but they may consist of only two sizes, or may vary with irregular gradations.

I claim as my invention—

1. The combination of a bed-bottom frame with a series of two or more V-shaped springs, G, and with a series of two or more serpentine springs, J, and with a series of two or more hook-springs, I, all substantially as described and shown.

2. In a bed-bottom, the wire spring bent centrally in V form, and having its diverging branches extending rearwardly and curved downwardly, and terminating in forwardly-extending parallel prongs to be inserted into the rail, substantially as specified.

LEANDER W. BOYNTON.

Witnesses:
ALBERT H. WALKER,
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