O. Blake,

Bed Bottom.

No. 103,548. Patented May 31. 1870.

Fig. 1

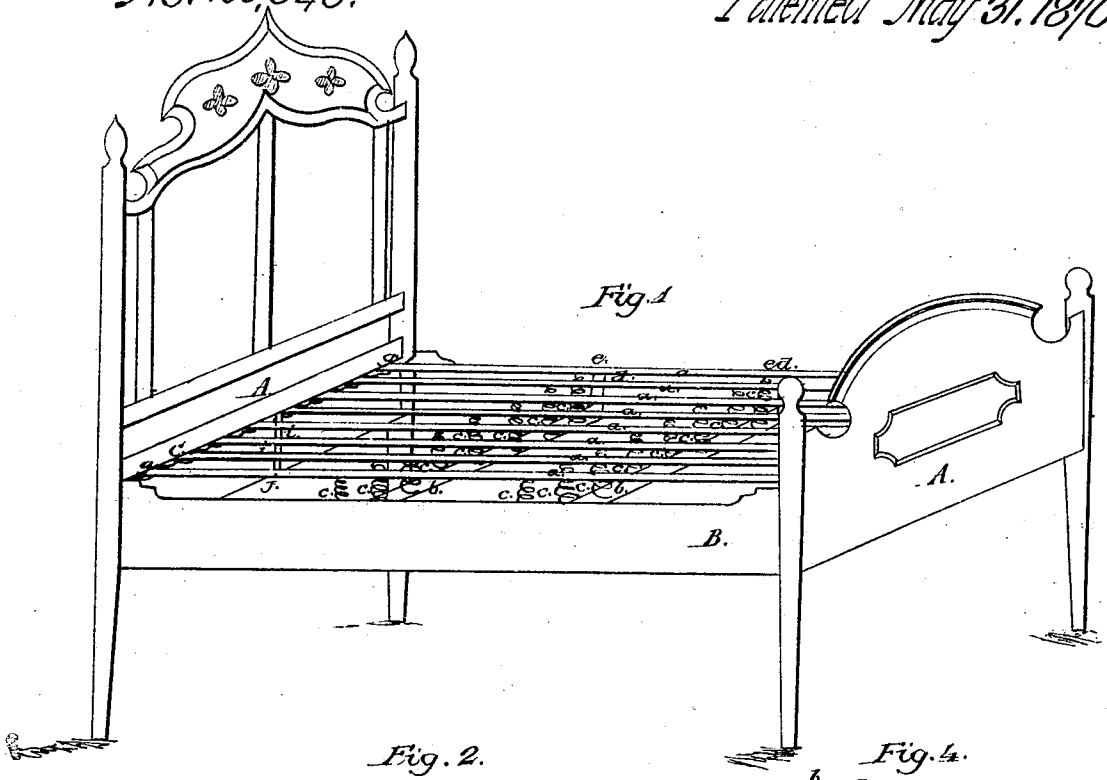


Fig. 2.

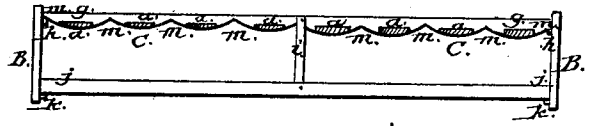


Fig. 4.

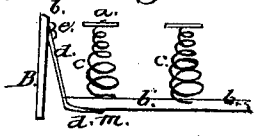
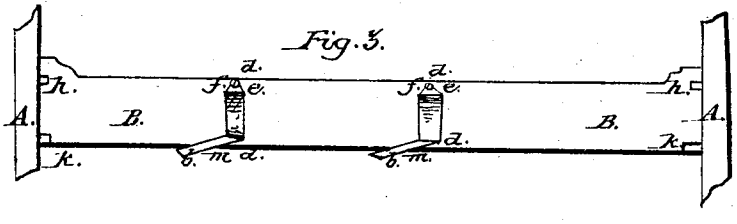


Fig. 3.



WITNESSES:

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ORRIS BLAKE, OF PERU, INDIANA.

Letters Patent No. 103,548, *dated May* 31, 1870.

IMPROVED SPRING BED-BOTTOM.

The Schedule referred to in these Letters Patent and making part of the same.

I, ORRIS BLAKE, of Peru, in the county of Miami and State of Indiana, have invented certain Improvements in Spring Bed-Bottoms, of which the following is a specification.

Figure 1 of the drawings is a plain diagonal top view of a spring bed-bottom, ready for use.

A represents the head and foot, and B the side rails of an ordinary bedstead.

a represents wooden slats.

b represents cross-bars beneath the slats *a*.

c represents steel spiral springs upon the bars *b*.

d represents an elastic spring fastened to the bars *b*.

e represents a wire triangle attached to the spring *d*, as shown by drawing 3.

g represents a cross-bar at the head and foot.

C represents a rubber strap, or a strap of firm elastic webbing.

j represents a board resting on edge, as a brace, as shown by drawing 2.

i represents an upright wooden brace, as shown by drawing 2.

Figure 2 of the drawings is a transverse view on a line with the side rails B of an end section of drawing 1.

g represents a cross-bar at the head and foot, extending across the entire width of the bed-bottom, with each end resting upon a block of wood, *h*, which is securely fastened to the inside of the side rails B. These bars are one inch in thickness. The one at the head is about two and one-half inches in width, and the one at the foot about two and one-fourth inches wide. They may be made of any kind of wood, but soft wood is preferable, for the reason hereinafter stated.

j represents a board three inches wide by one in thickness, turned up on its edge to prevent it from springing, with each end resting upon a block, *k*, which is securely fastened to the inside of side rails B.

i represents a perpendicular brace, made of wood, one-half an inch in thickness and one and one-half inch in width, the top of which is securely fastened to the front edge of the bar *g*, midway from the ends, or at such intervals as desired, and the lower end is also securely fastened to the board *j*; thereby the bar *g* is prevented from springing or sagging in the center.

C represents a rubber strap, or strap of firm elastic webbing, about one and three-fourth inch wide at the head, and one and one-half inch wide at the foot, which is securely fastened to the bar *g* by a heavy wire staple, *m*. One-half an inch of the strap is folded under and next to the bar at the end, thus making it of double thickness. The prongs of the staple *m* are inserted in holes in the bar, which are bored at each edge of the strap. The staple is then driven tightly against the strap thus folded, and the prongs are firmly clinched on the top of the bar. The bar *g* is made of soft wood, such as pine, and by driving the staple tightly it becomes indented into the wood, holding the strap firmly, and dispensing with a groove in the bar between the prongs of the staple. The strap is then drawn tightly on the under side of the bar, and the opposite end is secured to the end of the bar *g* in the same manner. The strap is also firmly fastened to the bar at intervals of equal distance between the slats *a*, by means of the staples *m*, as above described, without a groove in the bar.

a represents the ends of the slats resting upon the strap C, and which are secured to the strap at equal distance between the staples *m*, by means of a screw or heavy tack, and are thus held in place. These slats are from three to four inches in width by about one-half inch in thickness, and may be made of any kind of wood. They extend from head to foot.

Figure 3 of the drawings is an inside view of the side rails B.

b represents the end of the cross-bars below the slats *a*, and upon which the spiral springs *c* rest, as shown by drawing 4.

d represents a front view of the elastic spring, which is made of heavy elastic webbing, two inches wide, doubled in the shape of a loop, about four inches in length. Each end of the webbing is folded in next to the bar, and is securely fastened to the end of the bar *b* by staples *m*, in the same manner as the ends of strap C are fastened to the bar *g*. To the loop end of this spring is attached a triangle, *e*, made of very heavy wire, which is hooked onto the shoulder of a screw, *f*, which is screwed into the side rail B at the proper height.

Figure 4 of the drawings is a transverse view on a line with the side rails B of a part of a middle section, as shown by fig. 1.

b represents a wooden bar, about three inches in width by about one inch in thickness, suspended at each end, below the slats *a*, by the springs *d*, as above described, and upon which steel spiral springs *c* are placed, the lower ends of which are fastened to the bar *b* and the top to the under side of the slats *a*, to keep them in place. The bar *b* is of a length to leave a space of about one and a half inch between the ends thereof and the side rails B. These sections may be increased or diminished in number, and their respective positions may be changed toward the head or foot, as desired.

Thus my invention is constructed; and when in use the bed-bottom is firmly held on a level by the cross-bars *g* resting solidly at the ends on the blocks *h*. By means of the braces *i* secured to the bar *g*, and the boards *j* supported by the blocks *k*, the bed-bottom is made of great strength at the head and foot, enabling it to support great weight, without allowing the bars *g* to spring or sag in the center, and thus the

bed-bottom is also prevented from forming an inclined plane toward either side, as it would do if it was suspended at the corners by elastic webbing and the persons lying upon it were of greatly unequal weight.

The spiral springs *c* prevent the slats *a* from permanently sagging or losing their proper shape, as they otherwise would do from continued use, for, as soon as the weight of the person is removed, they spring the slats back to their original position, and the entire bed-bottom is kept in proper shape.

The spiral springs also serve as a protection to the elastic springs C, for by their strength the slats are enabled to be made much thinner and elastic; therefore do not press upon the strap so heavily at the end, for without the spiral springs the slats would be required to be heavier and stiffer.

The elastic springs *d* serve to protect the spiral springs, for by this means the bars *b* upon which the spiral springs rest are enabled to yield in proportion to the increase of weight upon them, and persons of heavy weight are prevented from lying upon a hard bed.

The elastic springs C serve to support and protect the slats *a* and to render the bed-bottom more elastic and pleasant, and while each slat is also a spring, independent of the others, they are by this means firmly held to their places and supported at the ends.

Thus the combination of springs, consisting of the thin wooden slats, the several elastic springs, and the spiral springs, serve to strengthen and protect each other, and to render the bed-bottom easy and pleasant, while at the same time the bars, blocks, and braces serve to hold the bed-bottom firmly in its proper position.

Claim.

I claim as my invention—

The combination and arrangement of the transverse sections, consisting of the straps C, the bars *g*, the braces *j* and *i*; the middle sections, consisting of the bars *b*, the springs *c* and *d*, the fastening *e* and *m*, and the blocks *h* and *k*, attached to the side rails, as herein described.

ORRIS BLAKE.

Witnesses:
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