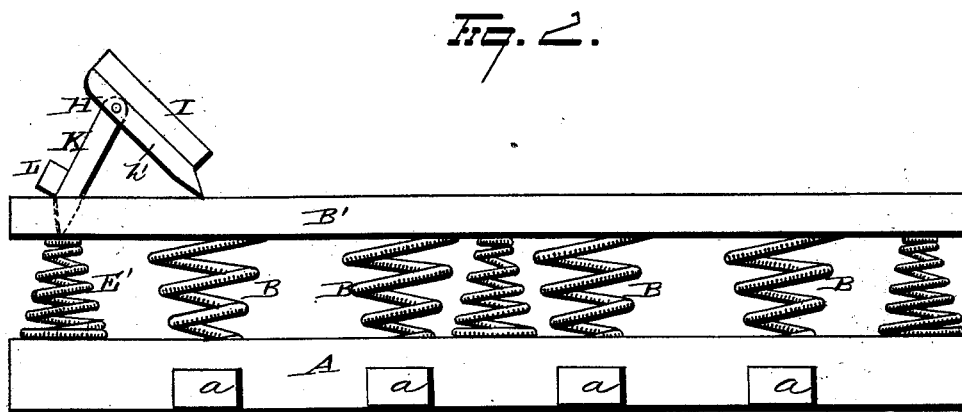
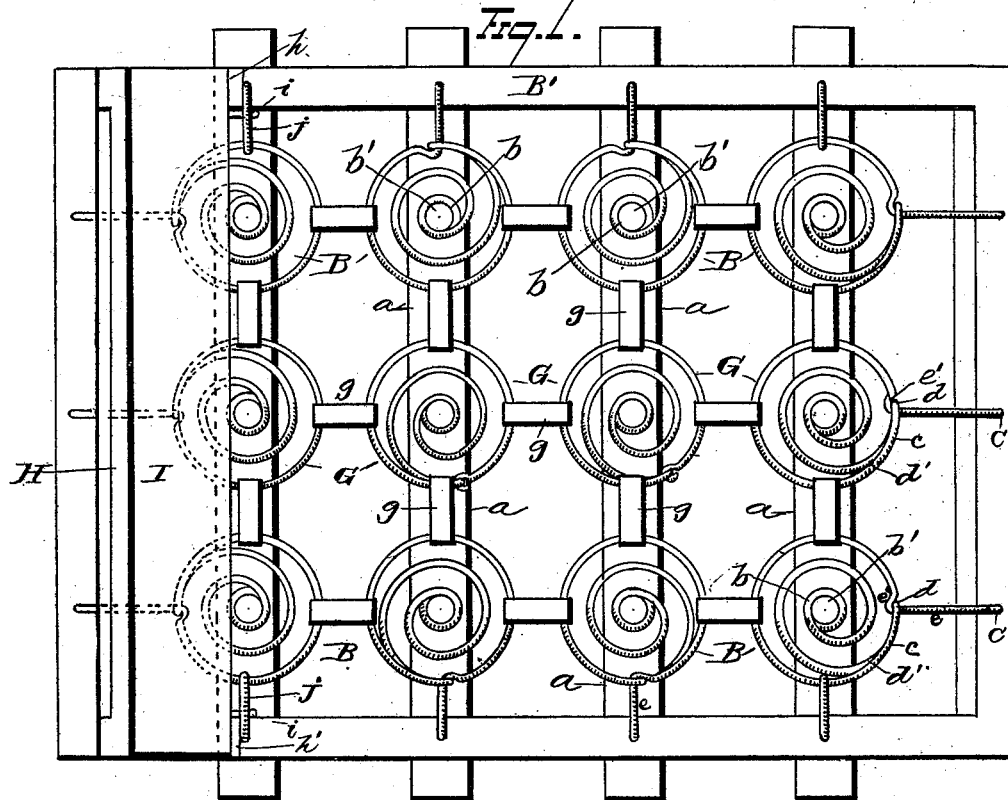


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Spring Bed-Bottom.

No. 215,200.

Patented May 13, 1879.



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Fig. 3.

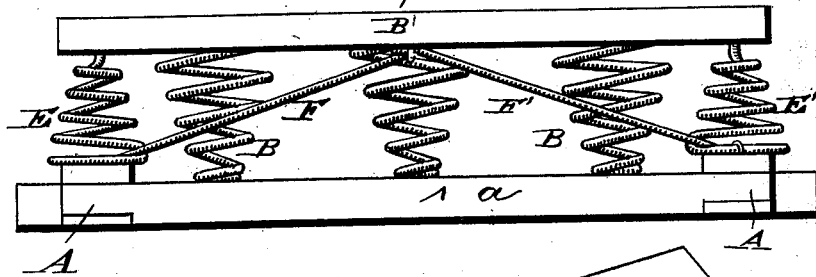


Fig. 4.

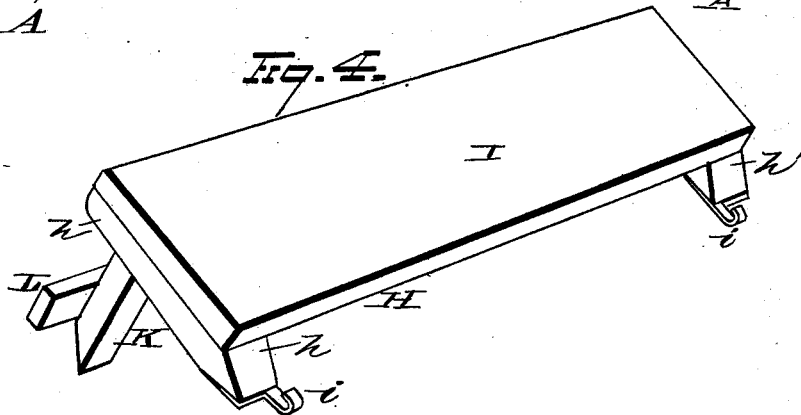


Fig. 5.

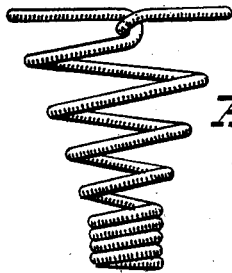


Fig. 6.

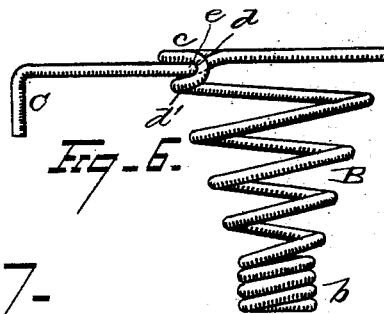
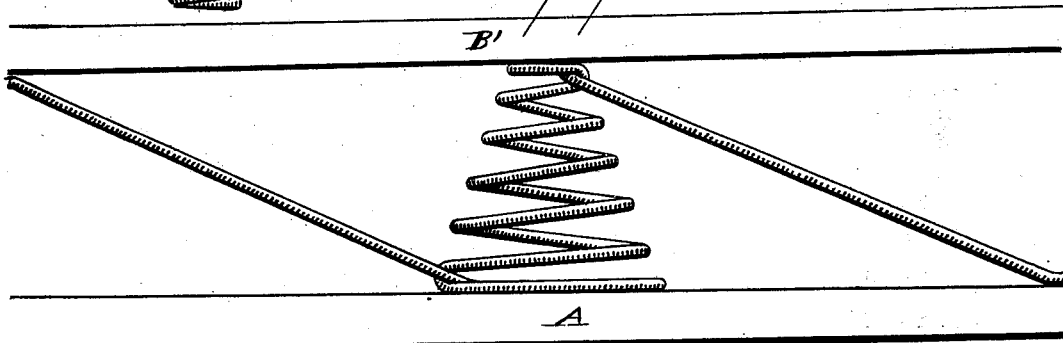


Fig. 7.



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WILLIAM B. ALLEN, OF ORLEANS, NEW YORK.

IMPROVEMENT IN SPRING BED-BOTTOMS.

Specification forming part of Letters Patent No. **215,200**, dated May 13, 1879; application filed January 3, 1879.

To all whom it may concern:

Be it known that I, WILLIAM B. ALLEN, of Orleans, in the county of Ontario and State of New York, have invented certain new and useful Improvements in Spring Bed-Bottoms; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in spring bed-bottoms.

The object of the improvement is to provide bed-bottoms with springs of such construction that they may be firmly attached to the frame and impart an equable yielding resistance to all portions of the yielding top frame of the bed-bottom.

A further object of my invention is to provide a bed-bottom with a removable and adjustable head-rest.

A further object of my invention is to provide yielding braces between the upper and lower frames of the bed-bottom, to prevent any undue lateral movement or displacement of the upper yielding frame.

To these several ends my invention consists, first, in a spiral spring for bed-bottoms, the upper end of which projects through a vertical return bend formed in the upper and the next adjacent coil of the spring, the extreme end of the spring having a short bend formed therein, which is inserted in the upper yielding frame of the bed-bottom, whereby the spring is firmly united to the upper frame and a firm support for the mattress provided between the frame and the series of springs adjacent thereto; and, further, the coils of the spring rendered uniform and symmetrical in form, and securely locked against displacement, and prevented from becoming distorted in shape and weakened by continual use.

My invention further consists in the combination, with the upper and yielding frame of a bed-bottom, of springs interposed between the upper and lower frames, said springs having braces formed in single pieces with their lower ends, the ends of which are secured to the upper frame, whereby the upper frame is al-

lowed to yield vertically, but is prevented from undue lateral or horizontal movement.

My invention further consists in the combination, with the upper frame of a bed-bottom, of a head-rest provided with hooks, which engage with the spring attachments of the bed, and with folding arms united by a cross-bar, which latter may rest upon one of the end pieces or bars of the upper frame.

My invention further consists in the several details in construction and combinations of parts, as will hereinafter be described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of my improved bed-bottom. Fig. 2 is a side elevation, and Fig. 3 an end elevation, of the same. Fig. 4 is a detached view of the adjustable head-rest. Fig. 5 is a detached view of one of the bed-springs. Fig. 6 is a similar view of one of the springs having a brace formed in single pieces therewith. Fig. 7 shows a spring provided with two braces and adapted for use on the sides of the bed-bottom.

A represents the lower frame of a bed-bottom, having any desired number of slats *a* secured therein. B represents spiral bed-springs, the lower and contracted ends, *b*, of which are forced into sockets *b'* in the slats *a*, and held therein by frictional resistance; or the springs may be secured at their lower ends to the slats in any desired manner.

The upper coil, *c*, of the spiral spring is formed in the manner illustrated in Fig. 5.

A vertical return bend is made at *d* in the coil *d'* next the top, and the top coil, *c*, is made slightly larger in diameter than coil *d'*, and the end *e* of the wire is passed through the looped end *d* and bent backwardly, forming a shoulder, *e'*.

The outer portion of end *e* is downwardly bent, forming a hook, C, which is driven into the top frame.

The outer series of the springs in my improved bed-bottom are constructed and secured in the manner above specified. The result is that the mattress has a firm support at all points around its edges upon the projecting ends of the several springs. Again, the coils of the spring are arranged symmetrically,

so that the weight will be equally disposed over the entire surface thereof; and the upper portion of the coil being secured in the manner described, the coil is prevented from unwinding and becoming distorted in shape and weakened by continued use.

It will be observed that the upper end of the spring is embedded in the upper frame of the bed, and thus the springs present a smooth surface to the mattress, whereby the latter is prevented from being torn, as is often the case when the ends of the springs come in contact with the mattress.

The springs are made as described at small expense, and are of great durability in actual use.

E E' represent spiral springs, the upper and smaller ends of which are attached to the upper frame, B', while the lower and larger ends are seated upon the corners of the lower frame, thereby affording a broad and extended bearing for the upper yielding frame.

Springs E E have reverse bends formed on the lower ends, the same as heretofore described, and the ends of the springs are inserted through said bends or loops, and attached to the upper frame, thereby constituting braces F F'. These braces operate to prevent any undue lateral movement of the upper frame when pressure is exerted thereon.

As the upper frame is forced toward the lower frame the braces are allowed an endwise movement by reason of the expansion of the lower coils of the springs E E', the braces moving to and fro within the looped ends of the springs, said loops serving as guides for retaining the braces in place. If desired, the opposite ends of the spring may have a brace formed in single pieces therewith, as illustrated in Fig. 7, and such spring, when secured between the sides of the upper and lower frame, serves to prevent any undue longitudinal movement of the upper and yielding frame, B'. The inner series of springs, G, are attached to the adjoining springs by clasps or links g, thus binding the entire number of springs together in such a manner that they are prevented from lateral expansion, and arranged to sustain the weight in an equable manner. H represents a removable head-rest, the main portion I of which has cleats h h' attached to the opposite ends thereof. Forward ends of cleats h h'

are provided with upturned hooks i, which engage with the links j, connected with the springs and upper frame of the bed-bottom. To the head-rest are hinged or pivoted the folding supports K, which are connected by a cross-bar, L. When the head-rest is desired for use the hooks are engaged with links j and the supports lowered so that the cross-bar L will rest upon the sides of the top frame. By moving the cross-bar toward or away from the end of the top frame, the head-rest may be raised or lowered to any desired angle of inclination. The head-rest, when not desired for use, may be readily removed, and folded into small compass for storage.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the upper frame of a bed-bottom, of a series of spiral springs located adjacent thereto, said springs formed with a vertical return bend or loop connecting the upper two coils, and the upper ends of the springs inserted through said loop and secured to the upper frame, substantially as set forth.

2. The combination, with the upper frame of a bed-bottom, of a series of spiral springs located adjacent thereto, said springs formed with a vertical return bend or loop connecting the upper two coils, and the upper ends of the springs inserted through said loops, the outer ends of the projecting portion of the spring being driven into the upper frame, substantially as set forth.

3. The combination, with the upper and lower frame of a bed-bottom, of spiral springs interposed between the same, the lower ends of said springs being firmly secured to the lower frame, and having braces formed in single pieces with the lower coils thereof, said braces being secured to the upper frame to prevent undue lateral movement of the same, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 23d day of December, 1878.

WILLIAM B. ALLEN. [L. S.]

Witnesses:

IRVING B. KING,
BRADFORD KINGSLEY.