(No Model.) 2 Sheets—Sheet 1.

L. A. HELLER.

SPRING BED BOTTOM.

No. 328,117. Patented Oct. 13, 1885.

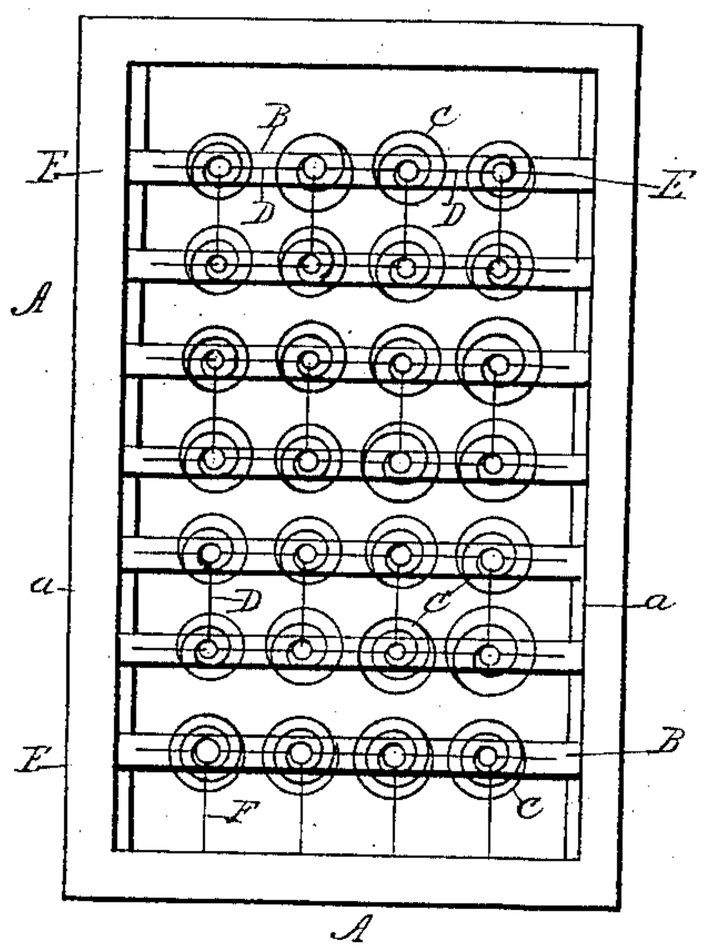
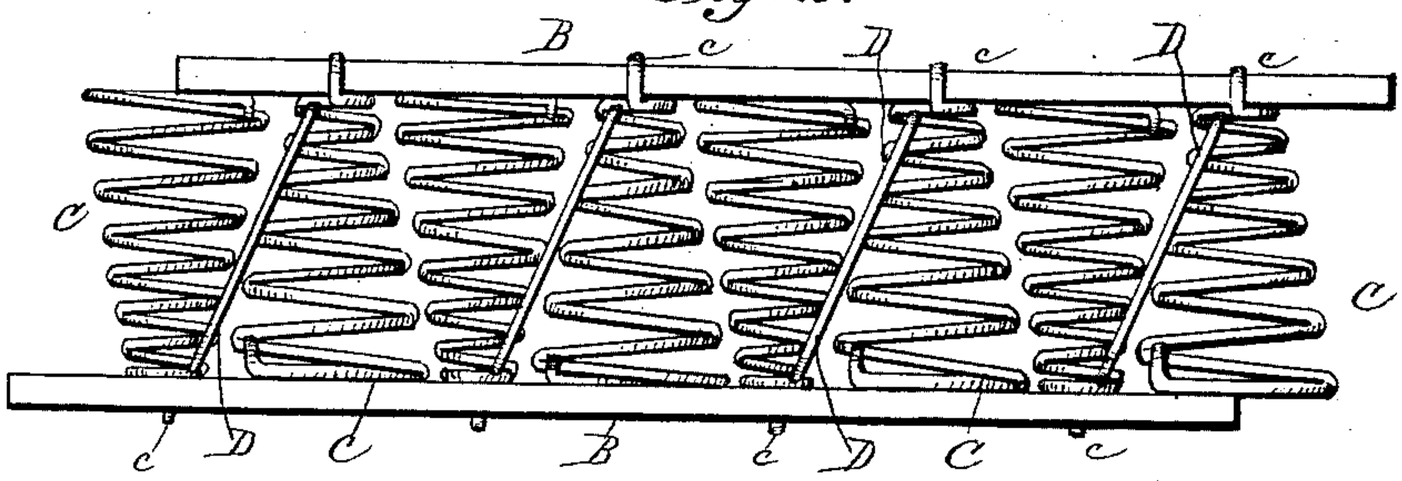


Fig. 1.

Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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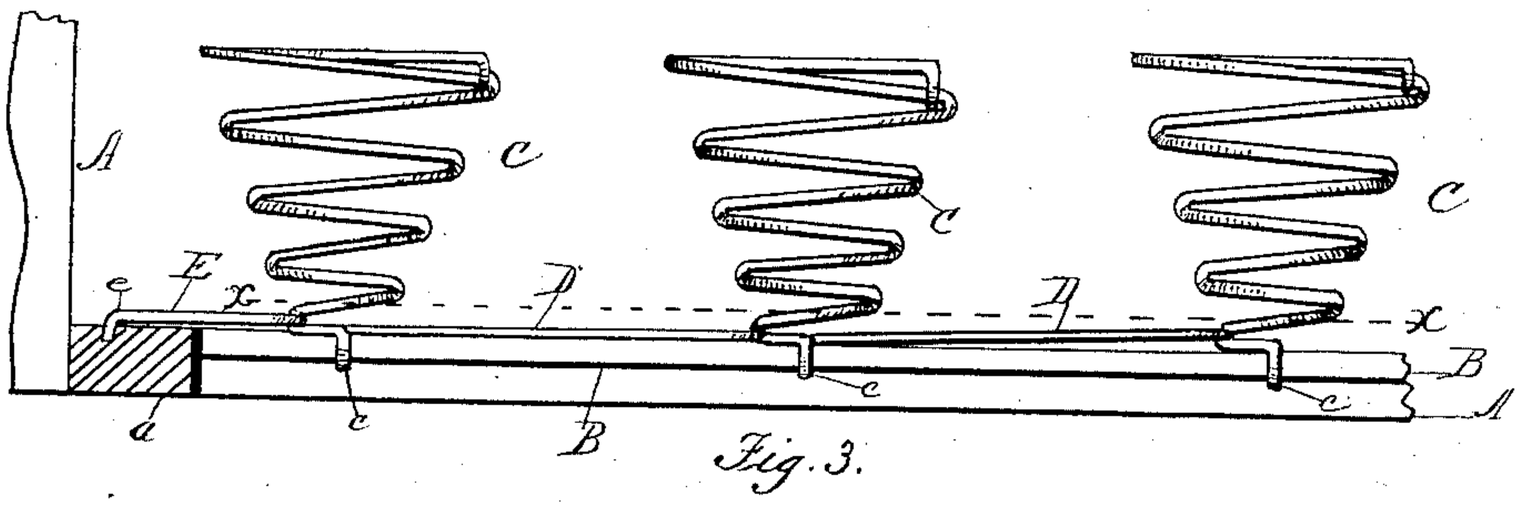
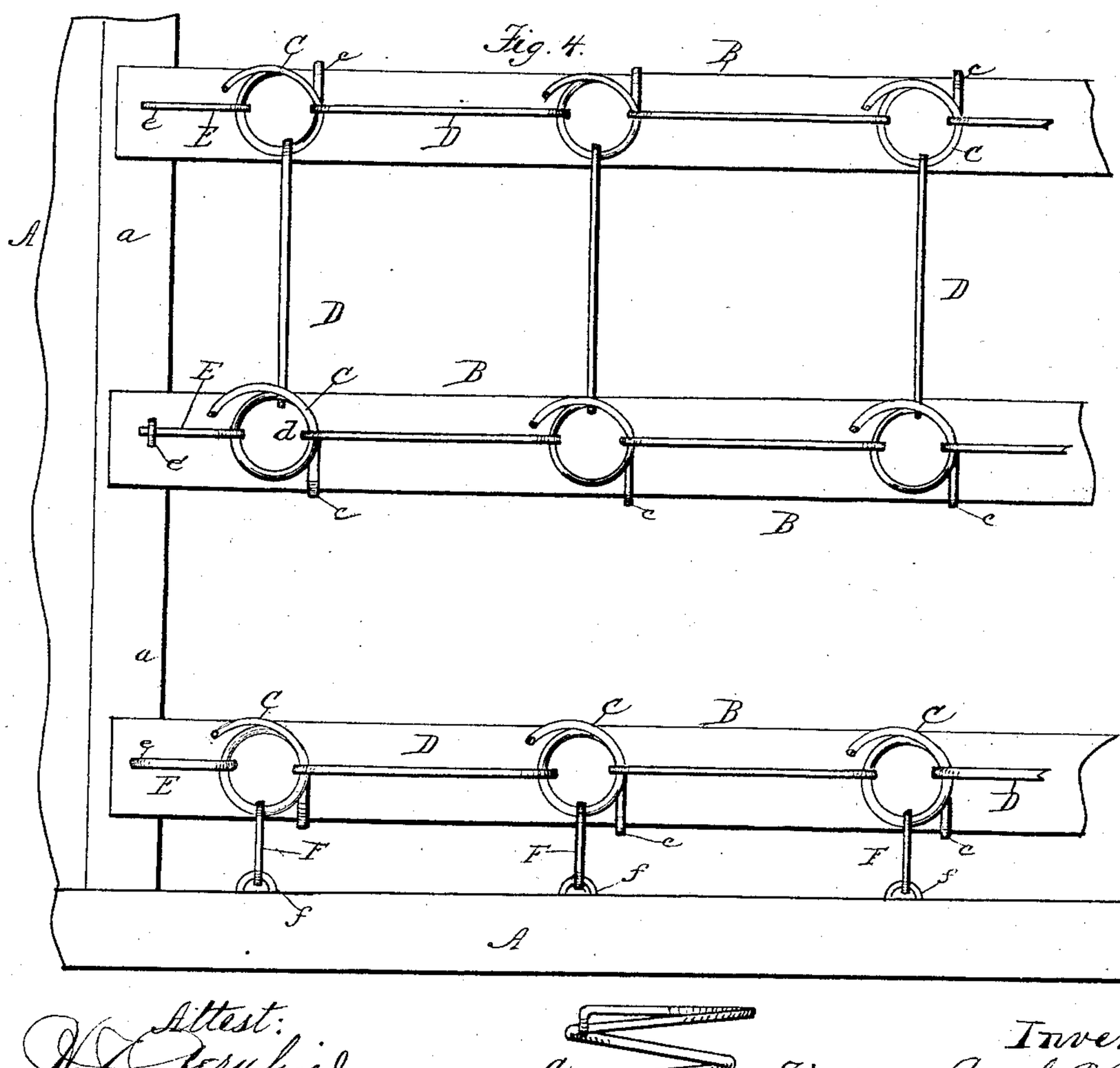


Fig. 3.



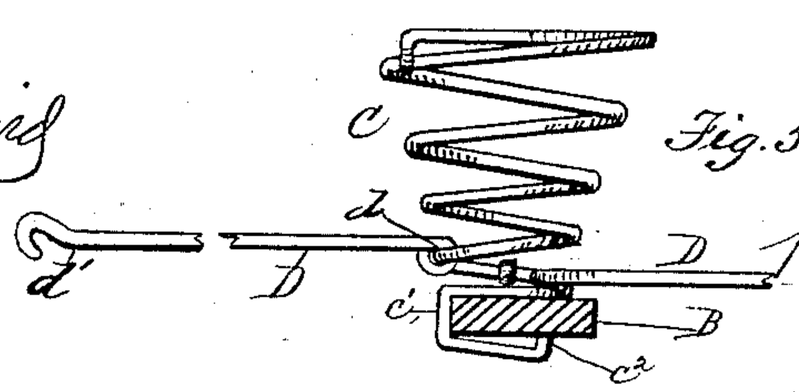


Fig. 5.

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UNITED STATES PATENT OFFICE.

L. ALBERT HELLER, OF PHILADELPHIA, PENNSYLVANIA.

SPRING BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 328,117, dated October 13, 1885.

Application filed November 13, 1884. Serial No. 147,879. (No model.)

To all whom it may concern:

Be it known that I, L. ALBERT HELLER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Spring Bed-Bottoms, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in bed-bottoms of that class which employ transverse slats on which the springs are mounted, and has for its object to rigidly secure and connect the springs at the lower ends thereof to the slats and to each other in sections; and it consists, essentially, of two slats and their springs, the springs being free at their upper ends and having independent motion, and the sections adapted to be readily removed from the bed-frame when it is desired to remove, repair, or store the same.

The invention consists in the combination and arrangement of parts, substantially as hereinafter described and claimed.

In the drawings, Figure 1 is a top or plan view of a bed-bottom embodying my improvements. Fig. 2 is a side elevation of two slats and their springs folded for storage or transportation. Fig. 3 is an enlarged side elevation of a portion of the bed-bottom in position for use. Fig. 4 is a horizontal section on the line *x x* of Fig. 3, showing a portion only of the bed-bottom, and Fig. 5 is a detail view.

Similar letters of reference in the several drawings denote like or corresponding parts.

Referring to the drawings, A designates the bed-frame, having cleats *a* secured to the inner surfaces of the longitudinal pieces thereof, and B designates the slats extending from side to side of said longitudinal pieces and fitted in recesses in the said cleats.

C designates spirally-coiled springs, the upper free end of each being bent in a horizontal plane and connected to the upper coil thereof, while the lower end of the spring is formed into a bracket, *c*, the upper horizontal and vertical arms of which embrace a slat, B, while the lower horizontal arm is bent at an obtuse angle to the vertical arm, and is provided with an upwardly-turned end, c^2, which is adapted to bear against the under surface of the slat, as clearly shown in Fig. 5. The springs of two adjoining slats are connected together by links or rods D to form sections, one end of each of said links being pivotally connected to the lower coil of its springs, as at *d*, while the other end is hook-shaped, as at *d'*, which is adapted to take over the lower coil of the adjacent spring.

It will be observed that each spring of the set is connected to its fellow on the slat to which it is secured, and also to the adjacent spring on the opposite slat of the set, and that the springs at the ends of the set are held from displacement by the action of its fellow by links E, secured to said spring and having its opposite end bent to form a point which is driven into the slat, as shown at *e*, Fig. 3, or secured thereto by a staple, *e'*. (See Fig. 4.)

The bed is provided with six or more slats or three sets; but it sometimes happens that there is an odd number of slats, in which case I secure the springs C of the odd slat to the slat and to each other by the links E and D, and provide the same with rods F, which are pivotally connected to said springs and have their hooked free ends take over staples *f* in the head or foot board of the bed, thereby firmly securing the slat and springs in position.

When it is desired to fold the sections of the bottom for storage or transportation, the two slats composing the same are removed from the frame of the bed, the free ends of the links are disconnected from the coils of the springs which they engage, and one of the slats is then turned over, when the springs thereof are passed sidewise into the spaces between the second set of springs, after which the hook-shaped ends of the links of one set of springs are caused to engage the upper coil of the other set of springs, as clearly shown in Fig. 2.

It will be observed that my invention provides a bed-bottom which is composed of sections which are adapted to be folded for transportation or storage, and that the springs of each section are firmly and rigidly secured to the slats and to each other, whereby displacement is prevented, the upper ends thereof being free and adapted to act independently of each other, while at the same time any one of each of said springs can be quickly and easily disconnected from its fellow and the slat when it has become broken or out of order.

It will be further observed that the brackets

c of the springs of each set are bent in opposite directions over the slats, as clearly shown in Fig. 4, and that whatever tension the links D exert is at the bottom or base coils of the springs on the slats and in line with the bed-frame.

Modification in details of construction may be made without departing from the principle or sacrificing the advantages of my invention—as, for instance, two or more slats with their attached springs may be tied together instead of using the links D.

I am aware that it is not new to make the upper coils of a spring of less pitch than the lower coils, and to connect such springs at about the point where the larger and smaller coils join by means of connecting links; also, that two bars with their attached springs have been used to form a section of a bed-bottom.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A bed-bottom composed of sections, each section consisting of two slats having springs provided with brackets adapted to embrace the slat, said springs being connected at their lower ends by links D, constructed substantially as described, and adapted to be detached at one end only, the upper ends of the springs being free, substantially as herein shown and described.

2. In a bed-bottom, the combination of the bed-frame, the slats having springs secured thereto and connected together by links to form sections, springs C C, having their ends provided with a point, as c^2, links D, having one end pivotally connected to one of the springs of one set, and its hook-shaped end connected to one of the springs of the second set, and links E, having one end secured to a spring and its opposite end to the slat, all arranged and combined as hereinbefore set forth.

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

L. ALBERT HELLER.

Witnesses:

GEORGE BROWN,

JAMES F. CORRIGAN.