

(No Model.)

2 Sheets—Sheet 1.

J. P. HARRIS.  
SPRING BED, SEAT, &c.

No. 537,768.

Patented Apr. 16, 1895.

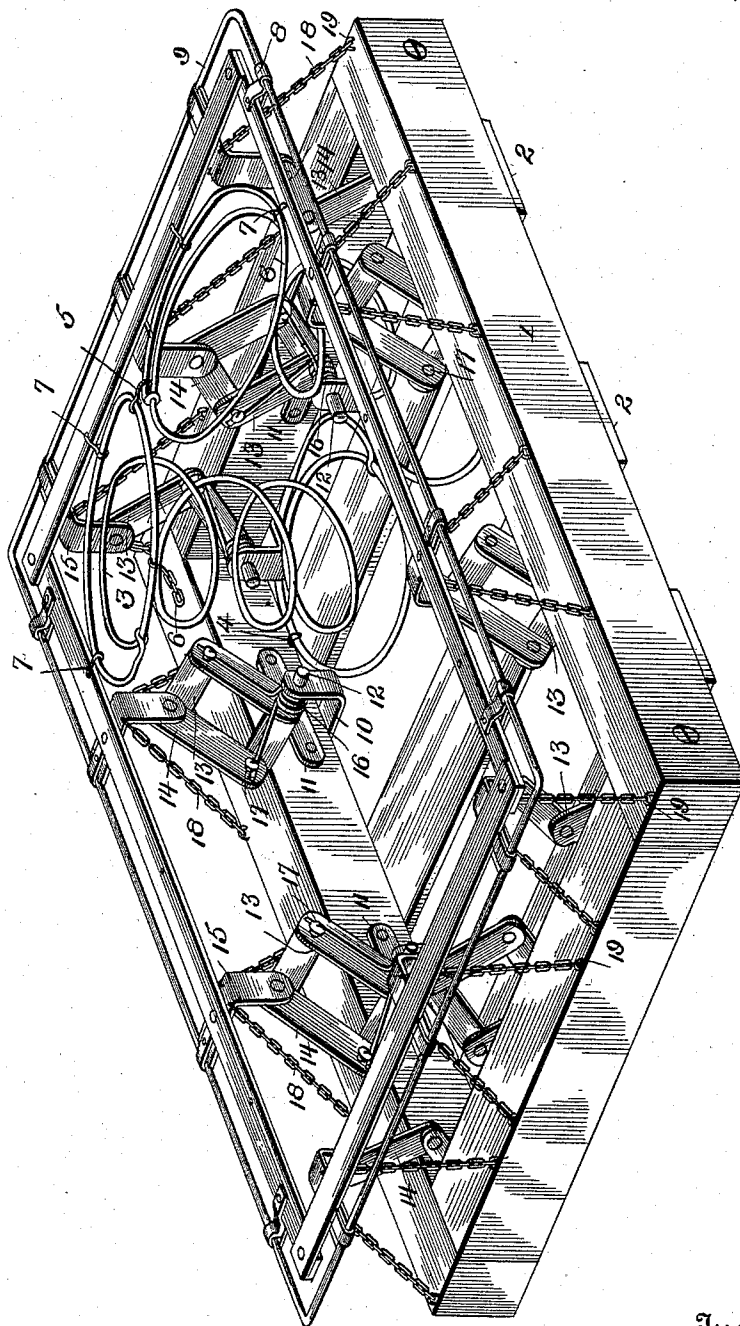


Fig. 1.

Witnesses

*J. H. Smith*

*Thos. E. Robertson*

Inventor

*James Porter Harris*

*By T. W. Robertson*

Attorney

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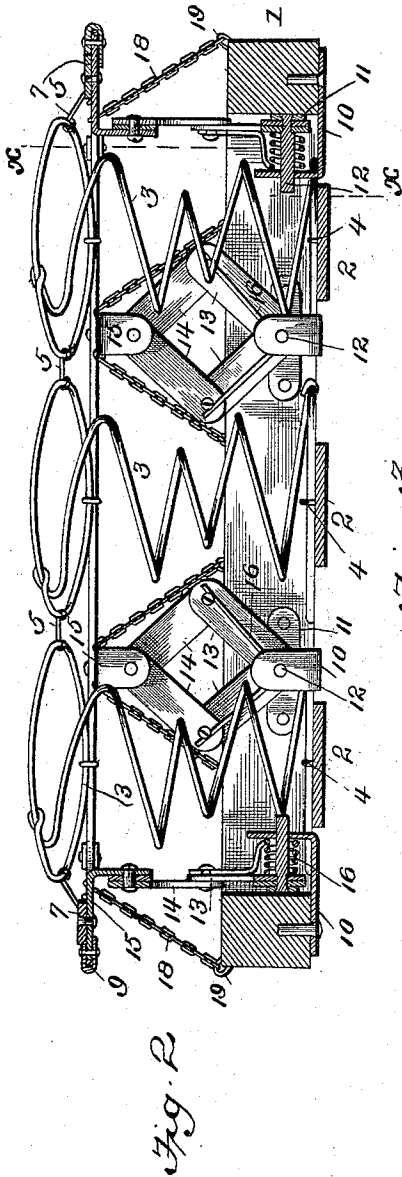
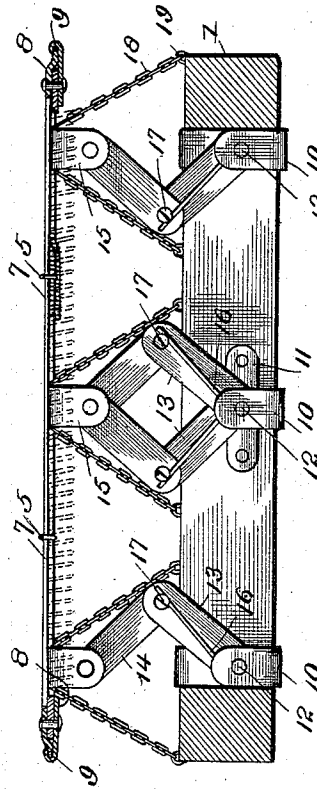


Fig. 3.



Witnesses

J. H. Smith

J. E. Robertson.

Inventor  
James Porter Harris

By J. W. Robertson

Attorney

# UNITED STATES PATENT OFFICE.

JAMES PORTER HARRIS, OF HARRISBURG, PENNSYLVANIA.

## SPRING BED, SEAT, &c.

SPECIFICATION forming part of Letters Patent No. 537,768, dated April 16, 1895.

Application filed July 10, 1894. Serial No. 517,116. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES PORTER HARRIS, a citizen of the United States, residing at Harrisburg, in the county of Dauphin and State of Pennsylvania, have invented certain new and useful Improvements in Spring Beds, Seats, &c., of which the following is a specification, reference being had therein to the accompanying drawings.

This improvement is designed to provide an arrangement of springs adapted to be used for many purposes, such as box beds, mattresses, sofas, chair or car seats, &c., and the invention consists in the peculiar construction, arrangement and combinations of parts hereinafter more particularly described and then definitely claimed.

In the accompanying drawings—Figure 1 is a perspective view of an assemblage of springs, &c., arranged according to my improvement. Fig. 2 is a vertical, longitudinal, central section of the same. Fig. 3 is a vertical cross section on the line  $x x$ , Fig. 2. Fig. 4 is a vertical section on a larger scale showing the mode of securing the outer wire to an inner frame.

Referring now to the details of the drawings by figures—1 represents the frame to which is attached the cross-slats (or strips of webbing) 2 by nailing or otherwise, and on which rest the volute wire springs 3 and which are secured by staples 4 driven into the slats and clinched on the under side or by other suitable means. The tops of these springs are preferably connected by links 5 at their nearest contiguous points and by small chains 6 (usually running diagonally to the sides of the frame) where they are farther apart. The springs are also connected by links to a light top frame 7, preferably made of thin spring steel from which project clips 8 holding in position a spring wire 9 which forms the extreme outer edge of the bed or seat and to which the binding or the seams of the covering may be readily secured.

Underneath the frame 1 are secured brackets 10, through which and through plates 11 attached to the inside of the frame are passed pins 12, which are also driven into the frame, but in some cases the plates 11 and pins 12 may be firmly united or cast with each other

or otherwise made integral, in which case it may be unnecessary for the pins to pass into the frame. Pivoted on these pins 12 are links 13, to which are pivoted other links 14 which in turn are pivoted to small brackets 15 firmly attached to the top frame 7 by rivets or otherwise. The pins 12 also support coiled springs 16, the ends of which extend upward, forming arms engaging with the heads of the rivets 17, connecting the links 13, 14, said heads being grooved or notched to receive the arms of the springs and retain them in place.

In Fig. 3 only a single pair of links 13, 14 is shown at each end of said figure and consequently only one end of the coiled spring is extended to the rivet 17, the other end being turned down under the bracket 10, or it may rest on the top of the same, or be disposed of in any convenient way.

Connected to each bracket 15 are two chains 18 which are arranged diagonally and secured by staples 19 to the frame 1, and serve to prevent too great strain coming on the upholstering, or to prevent the force of the spring carrying the frame 7 too high, and generally serve as stays to the whole seat or bed, preventing lateral motion of the frame, &c.

By this construction, a chair, sofa or car seat, a box bed, mattress or bed bottom may be provided, that will be very elastic and comfortable, strong, easily made, and very durable; as there is nothing about it liable to get out of order; and moreover, it can be easily upholstered, because while the frame 7 gives great strength to the edge, the wire 9 facilitates the forming of the edge in upholstering of the cover and the keeping of the same in place.

I deem it important that the frame 7 should be comparatively stiff and be surrounded by the wire 9, for when this is the case there is a substantial frame to receive the wear and the tension of the springs. At the same time wire 9, being of much less substance, gives easier to pressure, and therefore forms a much easier seat.

In some cases, I may dispense with part or all of the volute springs and substitute woven wire springs therefor, securely fastened to the frame 7 (as shown in dotted lines in Fig. 1), or I may use other forms of springs in place

of said volute springs, as it is obvious that parts of my invention may be used without them.

When used in making beds, it may be preferable to make them in two, three or more sections for convenience in handling them.

The device can also be used for what is known among upholsterers as a "double bordered bed," *i. e.*, reversible, in which case would be used one frame, one set of spiral springs, supported at their centers upon the frame by webbing or twine, and all the other parts duplicated.

What I claim as new is—

1. The combination in a mattress, seat, or the like, of a stiff spring-frame near the upper edge, and a spring-wire of greater resiliency extending along the edge outside of said frame, and on substantially the same horizontal plane, substantially as described.

2. The combination in a mattress, seat, or the like, of a stiff spring-frame near the upper edge, a spring-wire of greater resiliency extending along the edge outside of said frame, and on substantially the same horizontal

plane, and spring-arms connecting said wire to the frame, substantially as described.

3. The combination in a mattress, seat, or the like, of a stiff spring-frame near the upper edge, a spring-wire of greater resiliency extending along the edge outside of said frame, and on substantially the same horizontal plane, spring-arms connecting the wire and frame, a rigid frame below the spring-frame, pivoted arms connecting said frames, and springs arranged to throw the upper frame upward, substantially as described.

4. The combination in a mattress, seat, or the like, of a stiff spring frame of thin metal near the upper edge, and a wire extending along the edge of greater resiliency outside of said frame and on substantially the same horizontal plane, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 7th day of July, 1894.

JAMES PORTER HARRIS.

Witnesses:

FREDERICK M. OTT,  
M. W. JACOBS.