(No Model.)

G. J. HARTMAN.

FURNITURE SPRING.

No. 307,300. Patented Oct. 28, 1884.

Fig. 1.

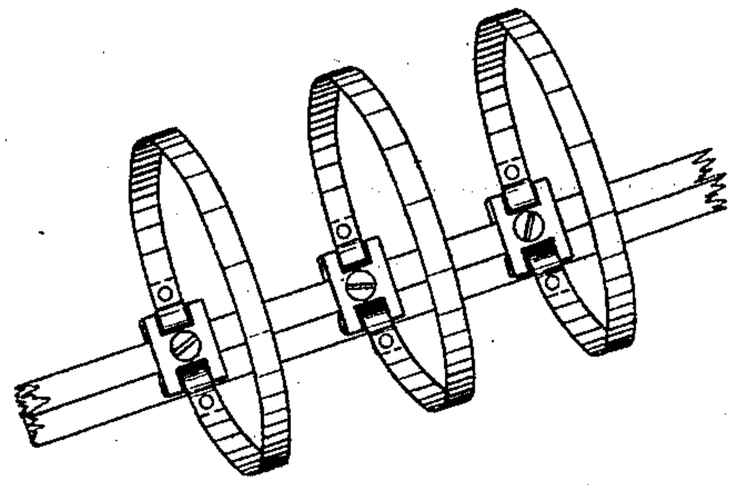


Fig. 2.

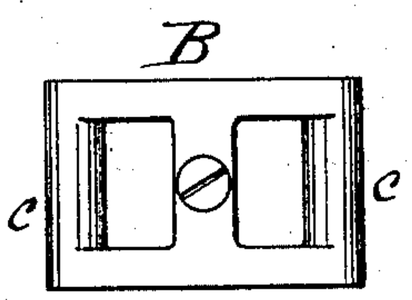


Fig. 3.

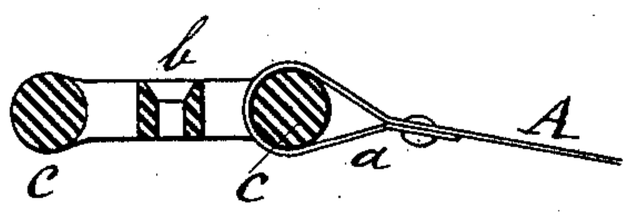


Fig. 4.

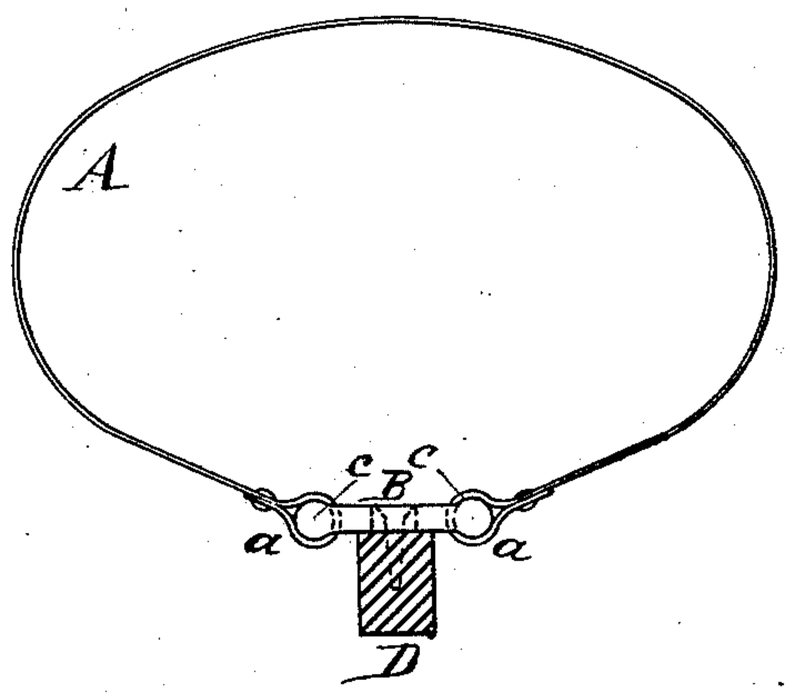
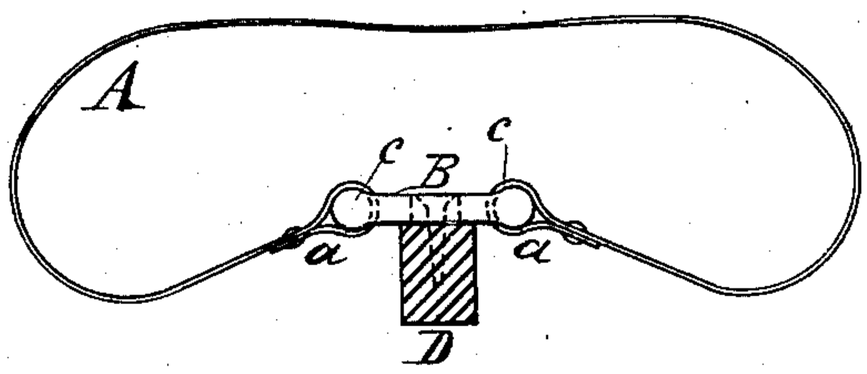


Fig. 5.



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FURNITURE-SPRING.

SPECIFICATION forming part of Letters Patent No. 307,300, dated October 28, 1884.

Application filed June 21, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE J. HARTMAN, a citizen of the United States of America, residing at town of Lake, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Furniture-Springs, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to springs adapted for car-seats and other upholstered furniture, and more particularly to elliptic springs made of flat steel, that are fixed in rows upon the supporting-frame. These springs heretofore were secured either by overlapping their ends and securing them thus rigidly together with rivets in a manner to form a solid ring, or by rigidly clamping the ends between two slats, or by riveting the ends to plates or clasps that were secured to the seat-frame. In either one of these constructions, however, such springs, by their stiff end connections, will lose the greater portion of their elasticity at or near the points where mainly needed, and are apt to break from the frequent strains brought upon them, and after breaking the sharp ends of the fractured spring will point upward and will cut through and damage the upholstering.

The object of my invention is to produce a spring of the kind described that will have uniform elasticity at all points, and that will yield to the heaviest pressure without breaking; and it consists in flexibly coupling the ends of each spring to the supporting-frame, or to a link that forms the fixture for holding the spring in position, all as hereinafter described and specifically claimed.

In the drawings, Figure 1 represents a perspective view of a series of springs as secured to the seat-frame bar; Fig. 2, a plan of the link-fixture; Fig. 3, a longitudinal section of the same; Fig. 4, an elevation of the spring when at rest, and Fig. 5 an elevation of the same when compressed.

Corresponding letters in the several figures of the drawings designate like parts.

A represents the spring, formed of a strip of flat steel, the ends of which, after being annealed, are bent and lapped to form eyes *a a'*, the lapped ends being secured to the body of the spring each by a rivet.

B denotes a metal plate that has a central countersunk hole, *b*, for securing it by a wood-screw, and has cylindrical bars *c* to its ends, over each of which the eyelapped end of a spring A is bent before riveting, so as to form a hinge-connection therewith. In this manner the plate B forms a loose-jointed connecting-link between the two ends of a spring A, that will allow such spring to form independent curved lines at either end, while yielding to a pressure, that are within the elastic limit of the spring and are not injurious to it, while springs having both ends stiff or rigidly connected will be exposed to strains that are destructible to them. These springs are arranged in rows upon a longitudinal bar, D, and are secured thereto each by a wood-screw through hole *b* of plate B, and in case one of them should break from not having the proper temper its fragments will offer no resistance to the upholstering, but will hang downward below the surface of the balance of the springs, where they can do no harm or injury, and can be easily detected and renewed.

What I claim is—

The plate B, provided with end bars, *c*, and secured to bar D, in combination with elliptic spring A, formed of flat steel, and provided at each end with an eye, *a*, the ends of said spring being pivotally connected to the end bars of said plate, as and for the purpose set forth.

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

GEORGE J. HARTMAN.

Witnesses:
H. W. HUEHL,
R. G. SCHMID.