No. 763,607. PATENTED JUNE 28, 1904.

J. HOEY.

UPHOLSTERY SPRING SUPPORT.

APPLICATION FILED FEB. 23, 1904.

NO MODEL.

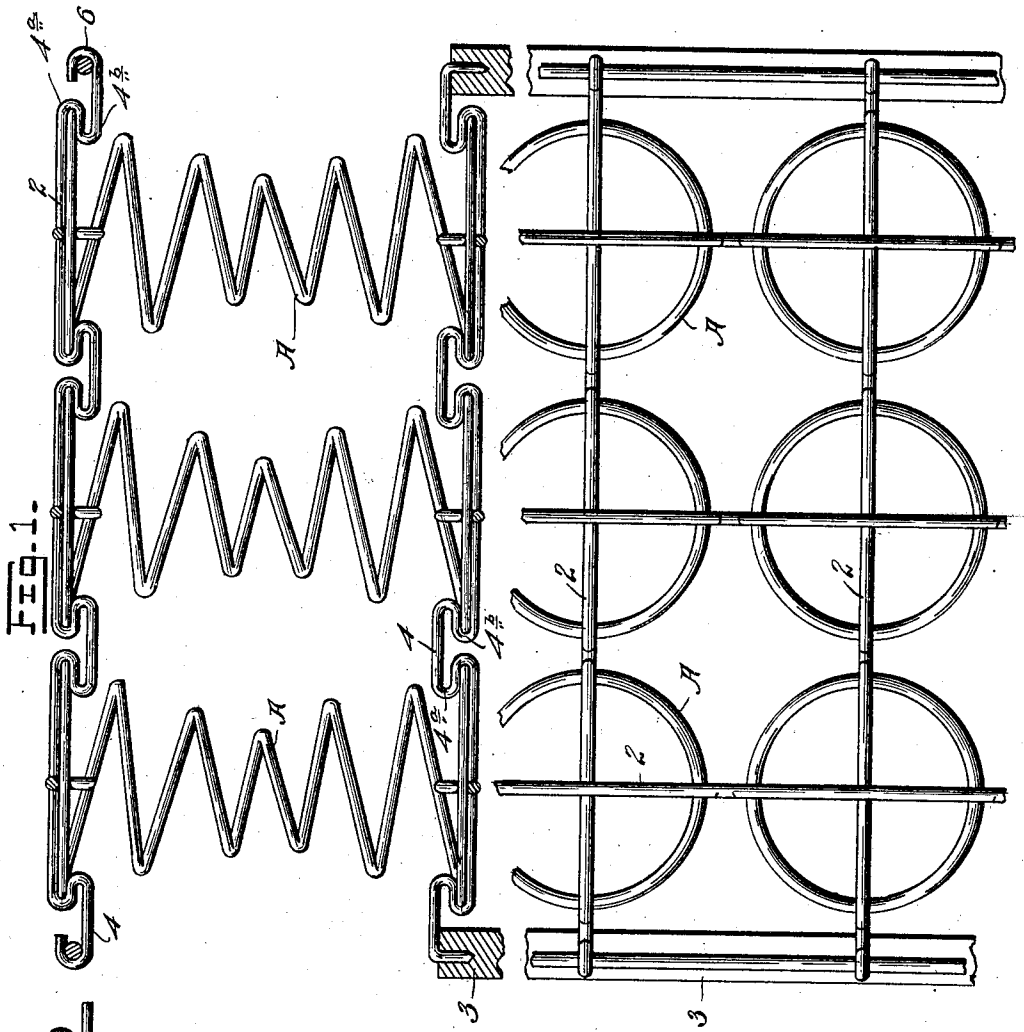


FIG. 1.

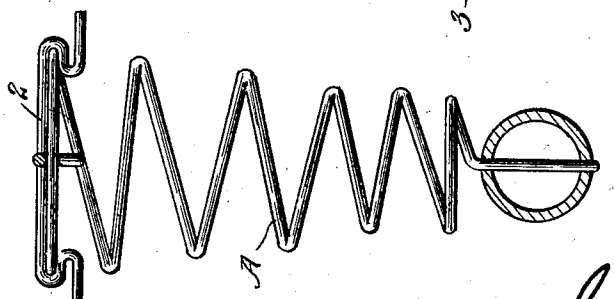


FIG. 2.

FIG. 3.

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No. 763,607. Patented June 28, 1904.

UNITED STATES PATENT OFFICE.

JOHN HOEY, OF SAN FRANCISCO, CALIFORNIA.

UPHOLSTERY-SPRING SUPPORT.

SPECIFICATION forming part of Letters Patent No. 763,607, dated June 28, 1904.

Application filed February 23, 1904. Serial No. 194,774. (No model.)

To all whom it may concern:

Be it known that I, JOHN HOEY, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Upholstery-Spring Supports, of which the following is a specification.

My invention relates to a device for maintaining the spiral vertical springs used in certain classes of upholstery-work in a vertical position.

It consists in a means for supporting and uniting said springs at both top and bottom in such a manner that the springs are maintained substantially vertical and their compression and extension are maintained in such lines, while the springs are united transversely by a support which is also elastic.

My invention comprises details of construction and combination of parts, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a side elevation of the springs, showing application of support and manner of fastening to frame. Fig. 2 is a plan view of Fig. 1. Fig. 3 shows a single spring with a lower end support.

A represents vertically-coiled spiral springs. These springs are usually made conical or tapering, either from one end to the other or from each end diminishing to a center, so as to form a double cone. Various devices have been employed for supporting said springs in a substantially vertical position and for also uniting the upper ends so as to prevent them from turning sidewise or getting out of their proper position, such as twine, rigid clips, &c.; but twine is liable to break and the clips bring the springs too close together and do not allow a sufficiently independent movement. It is the object of my invention to provide supports upon which the bottom of these springs rest and connections for the tops. For this purpose I employ wires 2 of sufficient size and strength, and these wires extend across in both directions, having the ends secured upon the framework 3 of the mattress. These wires are bent to form a series of loops, the upper portion 4 of each loop being here shown as substantially parallel with the main portion 2 of the wire. Between the main portion of the wire and the upper portion 4 the wires are bent into reverse curves, thus forming double loops 4^a 4^b. The distance between the lower loops 4^b is substantially equal to the diameter of the lower coil of the spring, so that the opposite sides of this lower coil of each spring will be securely held by the loops 4^b, and the length of the horizontal portion 4, which connects the S curves of the loop, is sufficient to separate these bottom coils of the springs any desired distance and maintain them at this distance from each other. The elasticity of the loops between the springs is such as to allow for a certain amount of depression of the whole body of springs which form the support for the upper portion of the mattress. I have thus the vertical compressible elastic coiled springs and the transverse loop-wires, which are also elastic.

Where the springs are made in the form of double cones convergent from the bottom to the center and thence divergent to the top, the upper portions of these springs are also held in position by similar wires 2, having the loops 4 4^a 4^b, and these wires are extended across between the upper portion of the mattress sides in the same manner as described for the bottom supporting-wires. It will be noted that in the bottom wires the bottom coils of the springs engage with the lower portion of the curves 4^b, and the upper ends of the springs engage with the upper portion of the curve 4^a. Thus the parts 4 of the bottom supports extend upwardly between the springs, while the upper coils of the springs interlocking with the upper bends or loops 4^a leaves the main body of the wires extending above the level of the upper parts of the spring-coils. There is thus no projection of these wires above the upper coils of the springs, except the thickness of the wire which forms the upper horizontal portion of each loop, and the upholstery, which is afterward applied to form the top of the mattress, sufficiently covers these wires and the tops of the springs so as to prevent any protuberance of these parts.

When single conical coils are employed, the lower ends of these coils may be supported by transverse tubes, as shown in my Patent No.

683,175, and the upper and larger ends of the coils are supported, as previously described, by these wire loops. These connections serve to support the springs and prevent the outside springs from bending in and getting out of position. The outer ends of these top wires may be provided with hooks, and these hooks will engage with and support the edge wires, which run around and form the edge of the mattress around the outside of the lines of the springs, as shown at 6.

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

1. The combination with coiled springs, of supports therefor comprising wires having portions intermediate of their ends provided with double reverse curves forming loops within which the end coils of the springs are clasped.

2. The combination with vertically-disposed coiled upholstery-springs, of wires having their ends fixed, double reverse curves intermediate between contiguous springs forming loops within which the terminating coils of the springs are clasped, and elastic connections between said springs.

3. The combination with substantially vertical coiled upholstery-springs, of wires extending between the sides of the frame and at right angles with each other, said wires having double reverse curves forming loops, the lowermost of said loops clasping the opposite sides of each bottom coil, and the uppermost loops projecting into the space above the bottom and between the springs and forming an elastic connection for the contiguous springs.

4. The combination with double conical vertically-disposed upholstery-springs, of wires crossing each other at right angles beneath the center of each spring having their ends fixed to the mattress-framework, said wires having double reverse curves intermediate of the springs, the lowermost coils of the springs supported in the lower loops formed by said curves, and the upper loops curving above the bottom of the springs, similar wires with reverse curves and loops engaging the upper ends of the springs, said wires having hooks at their ends adapted to engage the edge wire of the upper part of the mattress.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN HOEY.

Witnesses:
CHARLES F. HOEY,
WHITNEY C. WILLIAMS.