H. HARD.

Spiral Springs for Furniture.

No. 136,507. Patented March 4, 1873

Fig. 1

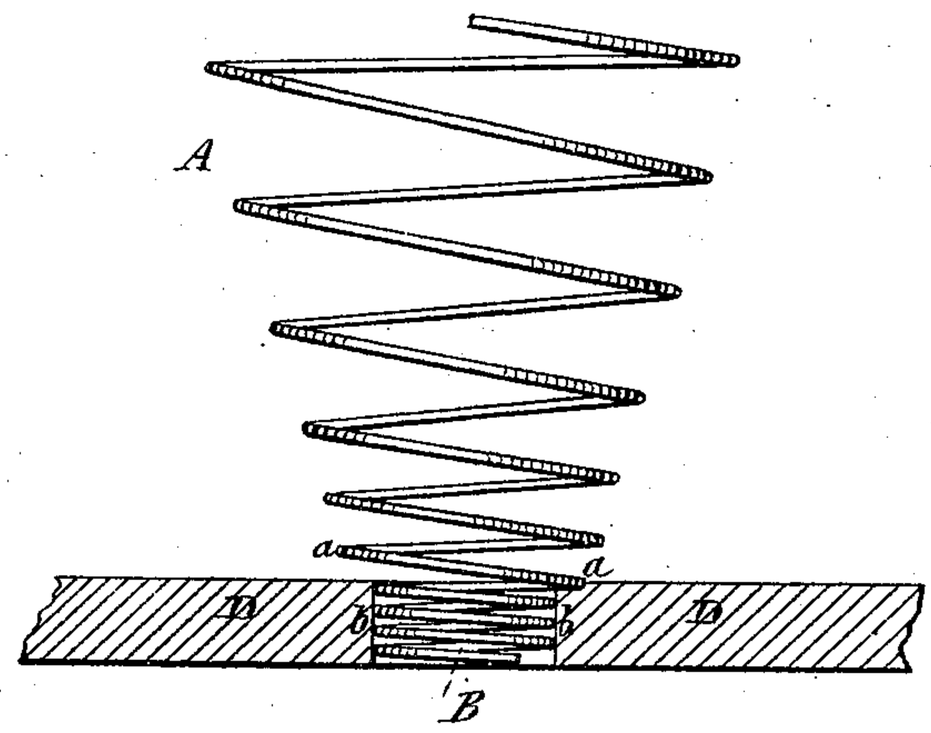
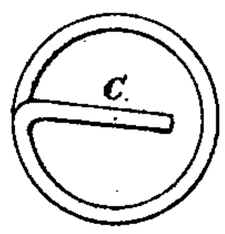


Fig. 2.



Witnesses.

Philip P. Bork
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UNITED STATES PATENT OFFICE.

HANSON HARD, OF AKRON, OHIO.

IMPROVEMENT IN SPIRAL SPRINGS FOR FURNITURE.

Specification forming part of Letters Patent No. **136,507**, dated March 4, 1873.

To all whom it may concern:

Be it known that I, HANSON HARD, of Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Spiral Springs, and their attachment to a base or body for mattresses and other purposes; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 represents a side view of one of my springs set in a base or body, represented in section. Fig. 2 represents a view of the small end of the spring and end of the wire of which it is composed.

My invention consists in the combination of a coiled spring—partly conical and partly cylindrical, and with a shoulder-coil between these portions, and having its end bent across the end of the coil, so as to be easily seized with pliers—with a base or bed, having a plain round hole for the reception of the said cylindrical portion, as will be explained.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawing.

In Fig. 1, A represents the free end of the spring, which is of conical form; and B represents the tenon or dowel end of the spring, which is of cylindrical form. The spring is wound on a mandrel in the usual way, and is made of a single or continuous piece of wire. Where the conical and cylindrical portions of the spring meet a shoulder, *a a*, is formed in the coils, which shoulder, when the spring is set in its base or body D, rests upon the upper surface of said base and sustains the superincumbent weight upon the spring, which otherwise would come upon the cylindrical dowel or tenon portion B thereof. The end of the wire, after the last coil of the cylindrical portion of the spring is formed, is bent across the opening in the cylindrical portion, as shown at C, Fig. 2, so that said end may be readily seized by a pair of pliers inserted through the round opening or mortise *b* in the base, and, by winding up the cylindrical coils, diminish the diameter thereof, and allow it to be easily inserted or drawn into said opening; and when released the reaction of the spring causes it to so bind or impinge against the straight walls of the mortise or opening as to firmly hold said spring in its proper position.

I am aware that the lower ends of coiled springs have been screwed into coiled seats in a base piece or body. This I do not claim. I bore simply a round hole with straight sides or walls, which is cheaply done, and hold a cylindrical dowel therein by the reaction of the coils, which are contracted when inserted. Besides, I support the spring to a great extent, if not entirely, on top of the base or body by the last of the conical coils, which forms a shoulder for the spring to bear and act upon.

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

In combination with coiled springs made partially conical and partially cylindrical, and with a shoulder-coil between them, and with a base or body having round mortises or seats therein, the bent ends C of said springs, for the purpose of easily introducing the dowel or tenon portions of such springs into their seats, as described and represented.

HANSON HARD.

Witnesses:
R. J. WINTERS,
PHILIP P. BOOK.