

L. A. YOUNG.  
 SPRING ATTACHING CLIP.  
 APPLICATION FILED DEC. 26, 1908.

976,973.

Patented Nov. 29, 1910.

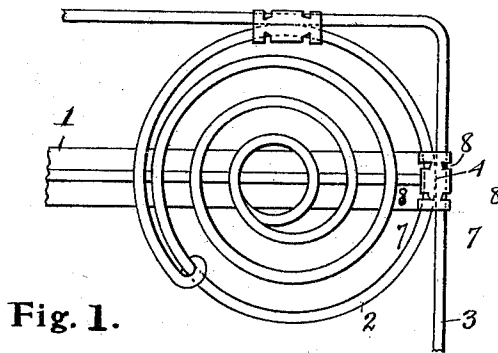


Fig. 1.

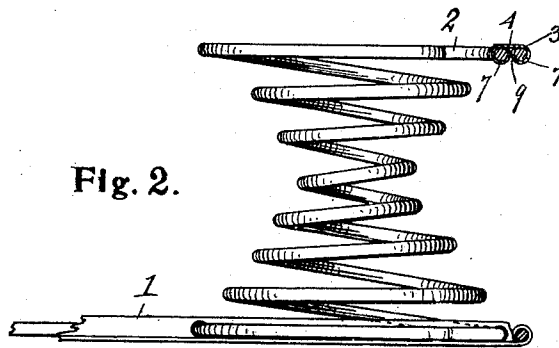


Fig. 2.

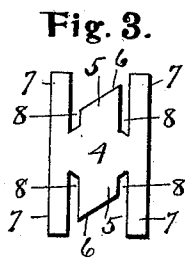


Fig. 3.

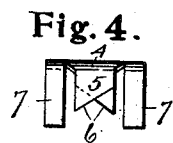


Fig. 4.

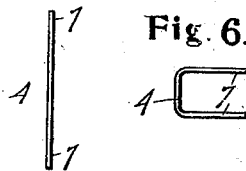


Fig. 5.

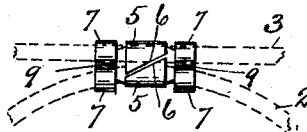


Fig. 6.

Fig. 9.



Fig. 7.

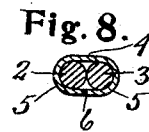


Fig. 8.

Witnesses  
*O. B. Brenziger.*  
*I. G. Howlett.*

Inventor  
*Leonard A. Young*  
 By *V. W. Wheeler & Co.*  
 Attorneys

# UNITED STATES PATENT OFFICE.

LEONARD A. YOUNG, OF DETROIT, MICHIGAN.

## SPRING-ATTACHING CLIP.

976,973.

Specification of Letters Patent.

Patented Nov. 29, 1910.

Application filed December 26, 1908. Serial No. 469,473.

*To all whom it may concern:*

Be it known that I, LEONARD A. YOUNG, a citizen of the United States, residing at Detroit, in the county of Wayne, State of Michigan, have invented certain new and useful Improvements in Spring-Attaching Clips; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to a clip for attaching coiled springs commonly used in upholstery, to the border wires in a spring seat structure, and consists in the formation and arrangement of parts hereinafter more fully set forth and pointed out in the claims.

The object of the invention is to provide a simple, efficient and strong clip by means of which the upper coil of an upholstery spring may be securely fastened to the straight border wire of a spring seat structure, the arrangement being such as to enable said clip to be readily secured in place in a manner to effect a rigid connection between the border wire and spring.

The above object is attained by the device illustrated in the accompanying drawings, in which:—

Figure 1 is a fragmentary view in plan showing a spring and a portion of the spring seat structure wherein my improved clip is employed to attach the spring to the border wire. Fig. 2 is an elevation of Fig. 1 with the clip, the coil of the spring and the border wire connected thereby in transverse section. Fig. 3 is a plan view of the clip before being shaped. Fig. 4 is an end elevation of the clip partially formed. Fig. 5 is an edge view of Fig. 3. Fig. 6 is an end view of Fig. 4. Fig. 7 is a transverse section on line 7—7 of Fig. 1. Fig. 8 is a transverse section on line 8—8 of Fig. 1. Fig. 9 is an enlarged inverted plan of the clip in position when uniting the spring to the border wire, said spring and wire appearing in dotted line.

Referring to the characters of reference, 1 designates the base strip or cross bar upon which the springs are mounted, and of which any desired number may be employed. One only of the springs 2 is shown, the bottom coil of which is mounted upon said base

strip in the usual manner. The top coil of the springs stand adjacent the border wire 3 to which it is secured by means of my improved clip. Said clip as will be seen on referring to Figs. 3, 4, 5, and 6, is struck from sheet metal and comprises a body portion having the oppositely extending relatively wide body prongs 5 provided with oppositely beveled ends 6, and having the oppositely extending end prongs 7 of greater length than the body prongs and spaced therefrom by the intervening openings 8. In shaping said clip for use, all of the prongs are bent laterally at their points of juncture with the body to extend in the same direction, as clearly shown in Figs. 4 and 6, producing in effect a staple having six prongs or legs extending in parallel relation from the loop or body portion and nearly at right angles thereto. The clip so formed by suitable dies, not shown, is forced onto the coil of the spring and contiguous border wire with its legs or prongs astride thereof, when said prongs are folded inwardly so as to cause the end prongs 7 to form around the wire of the spring and said border wire with the terminals of said prongs lying between said wires, as clearly shown at 9 in Fig. 7. The curve of the spring wire at this point carries said wire such distance from the border wire 3 as to enable the entrance of the terminals of the prongs 7 therebetween, effecting a secure and firm tie. While the end prongs are being shaped as just described, the central or body prongs 5 are folded around the spring and the border wires so as to bring the beveled ends together on the under side thereof, as clearly shown in Figs. 8 and 9. Because of the fact that the wires of the spring and border touch each other at that point, the prongs 5 are shorter than the prongs 7 which are obliged to embrace said wires where said wires are somewhat separated. By beveling the ends of the prongs 5, they are caused to slide past each other should the diameters of the two wires be slightly less than the combined length of said prongs and the body portion of the clip to which they are attached, obviating the buckling of the prongs, as would otherwise result and enabling a smooth and perfect clasping of the prongs around said parts to be effected. By this arrangement it will be seen that the end prongs serve to join the wires of the spring and the border frame, in such manner as at the same time to

wedge said wires apart by the entrance of the terminals of the prongs 7 between said wires as they diverge from their point of contact securely tying said wires against movement in either direction, while at the same time the central prongs 5 securely bind said wires together at their point of contiguity, effecting a fastening which is rigid and comparatively small in size and which may be quickly placed in position and is free from objectionable projections.

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

1. A structure for attaching a curved wire spring to a straight border wire comprising a staple-like member having relatively long end prongs adapted to separately wrap around the spring and border wires on each side of their point of contact, the free ends

of said prongs passing into contiguity between said wires, and central prongs relatively wide and shorter in length than said end prongs adapted to embrace the spring and border wires collectively at their point of contact.

2. A clip for attaching springs to a border wire comprising a staple-like member having end prongs adapted to be formed around said wires and interposed central prongs relatively wide and short, and having beveled end portions, said central prongs being adapted to embrace said wires between said end prongs.

In testimony whereof, I sign this specification in the presence of two witnesses.

LEONARD A. YOUNG.

Witnesses:

O. B. BAENZIGER,  
I. G. HOWLETT.