

(No Model.)

W. S. FOSTER.
COMBINED SPIRAL SPRING AND SUPPORT.

No. 486,773.

Patented Nov. 22, 1892.

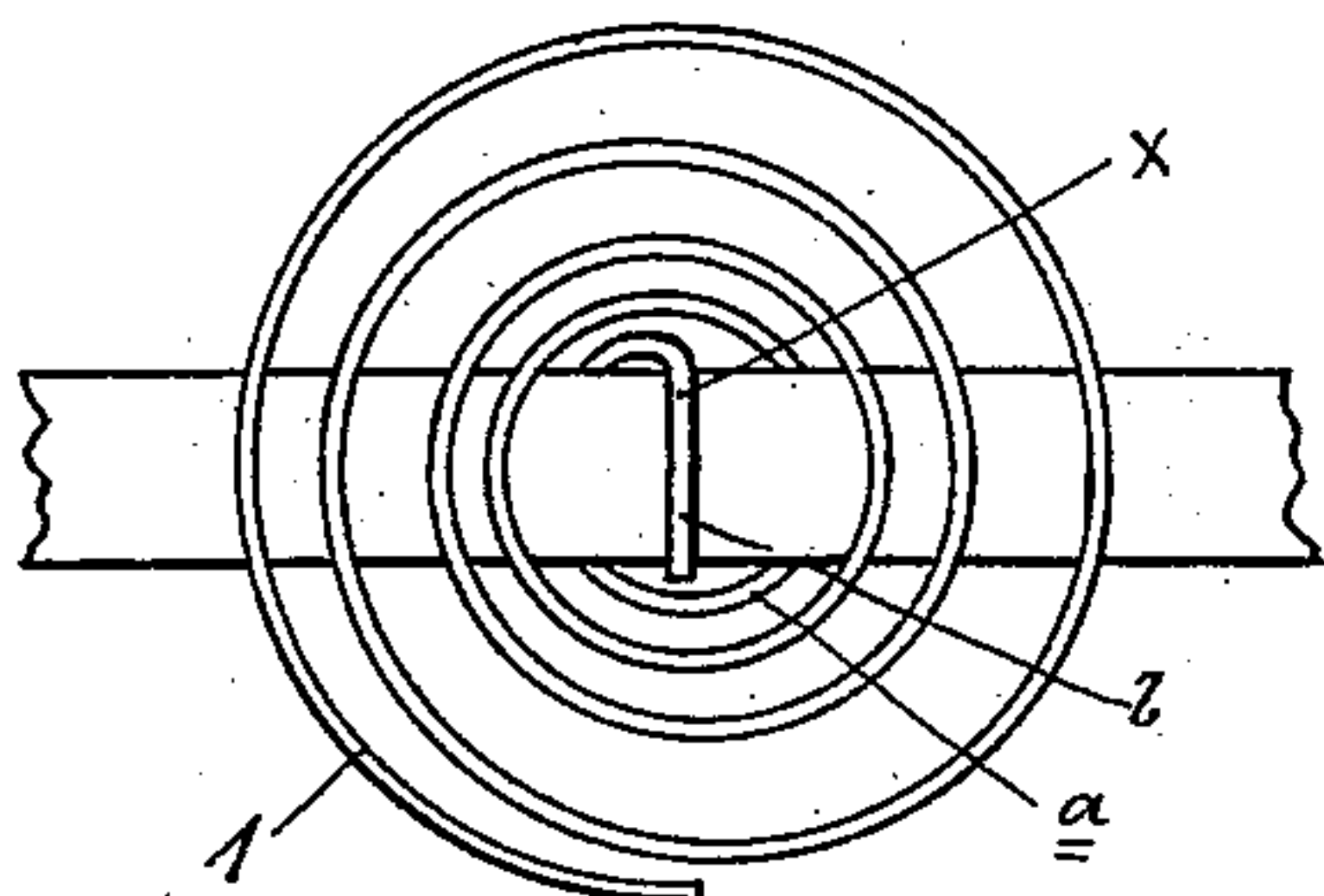


Fig. 1.

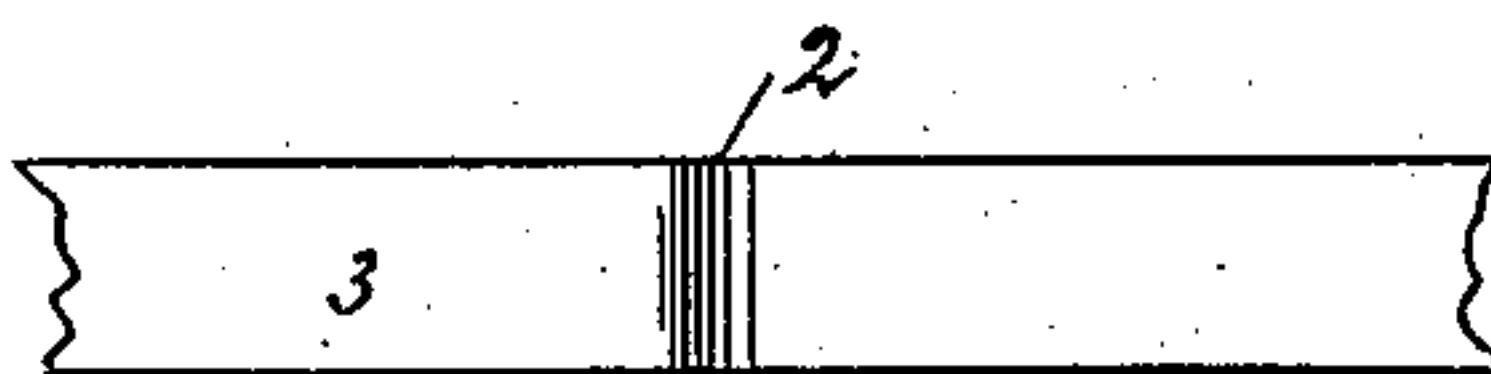


Fig. 3.



Fig. 4.

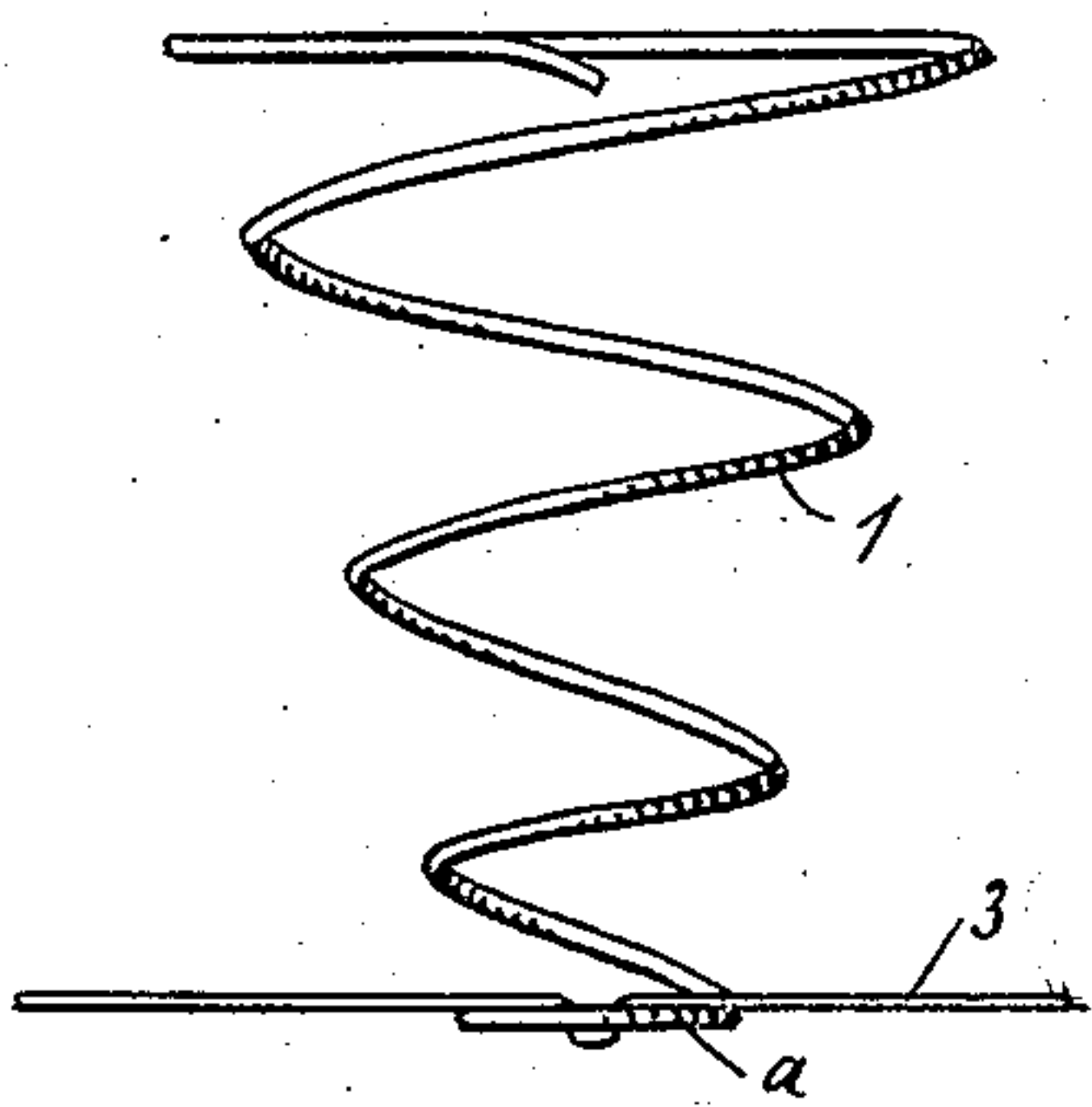


Fig. 2.

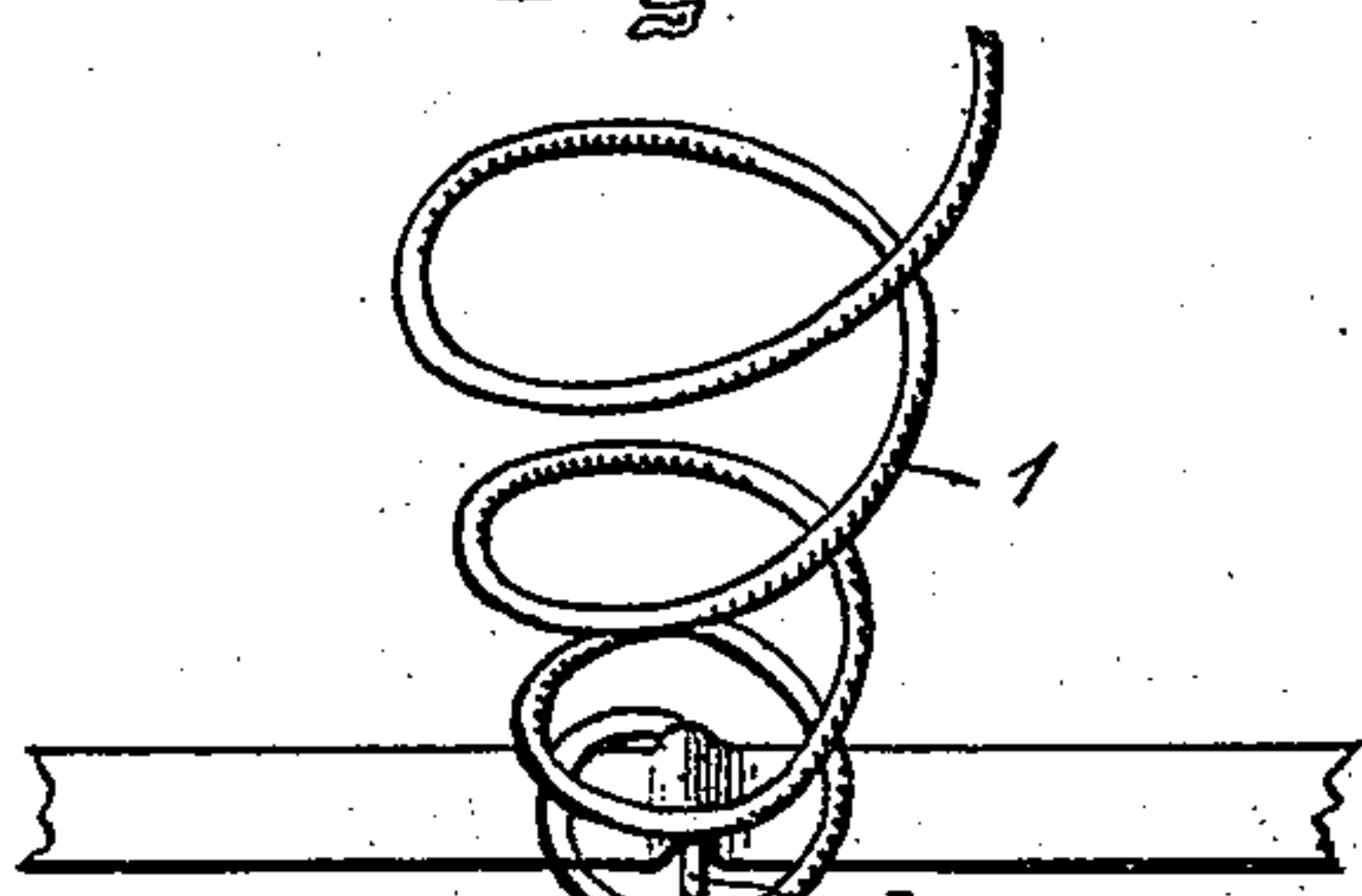


Fig. 6.

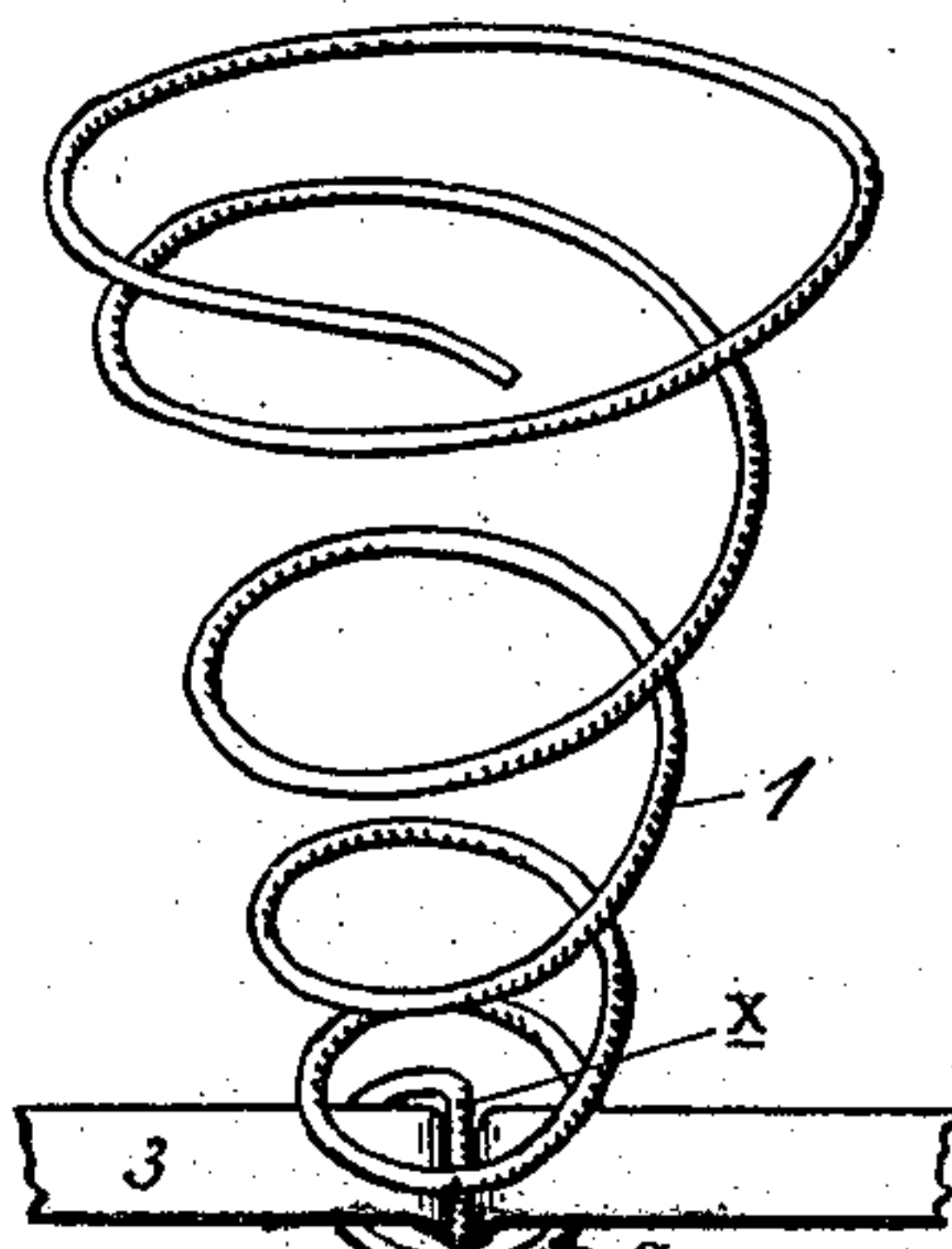


Fig. 5.

WITNESSES.

Rich. A. George.

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UNITED STATES PATENT OFFICE.

WILLIAM S. FOSTER, OF UTICA, NEW YORK, ASSIGNOR TO FOSTER BROS.,
OF SAME PLACE.

COMBINED SPIRAL SPRING AND SUPPORT.

SPECIFICATION forming part of Letters Patent No. 486,773, dated November 22, 1892.

Application filed April 21, 1892. Serial No. 429,997. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. FOSTER, of Utica, in the county of Oneida and State of New York, have invented certain new and
5 useful Improvements in a Combined Spiral Spring and Support; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable
10 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 letters and figures of reference marked thereon, which form part of this specification.

My present invention relates to an im-
15 provement in the manner of securing a spring, and more particularly a spiral spring, adapted for use in a spring-bed, lounge, car-seat, or similar devices, the spring being secured, preferably, to a strip of metal constituting a
20 frame, although the frame could be equally well formed of separate or distinct pieces, to which the strips would be secured for the purpose of securing the spring only.

In the drawings, Figure 1 shows a plan view
25 of a portion of a conical spiral spring and a portion of a securing-strip, forming, also, a part of the frame, as before set forth. Fig. 2 shows from the side the same parts shown in Fig. 1. Fig. 3 shows a plan view of a section
30 of the securing-strip. Fig. 4 shows an edge view of the same. Fig. 5 shows the combined strip and spring in perspective. Fig. 6 shows a different manner of securing the spring onto the strip.

Referring more specifically to the refer-
35 ence-numerals marked on the drawings, in a more particular description of the device, 1 indicates a conical spiral spring adapted for use, as before stated, terminating at one end
40 in a convolution *a*, which is flat or plain, or nearly so. The final end of the wire forming the spring forms a supporting or securing bar or projection *b*, which projects diametri-
45 cally across the convolution *a* and preferably lies in the same plane as the convolution *a*. The supporting or securing projection *b* is adapted to engage in a transverse groove, de-
50 pression, or offset 2, provided in metallic supporting or holding strip 3. The strip 3 is

the shoulder *x* at the secured end of the pro-
jection and the opposite side of the convolu-
tion *a*. The depth of the depression 2 and
the thickness of strip 3 are preferably rela-
tively such that the projection *b* has to be
55 sprung out of the plane of the convolution to permit the strip 3 to be engaged between the
projection *b* and the convolution *a*, either in
the manner shown in Figs. 1, 2, and 5, in which
the convolution *a* is on the opposite side of
60 the strip from the rest of the spring or in the manner shown in Fig. 6, in which the projec-
tion *b* is on the opposite side of the strip from the rest of the spring. I prefer the former
65 arrangement, as when weight is placed on the spring, as shown, the supporting-point is in
central line of the spring, and there is no
tendency to throw or tilt the spring out of
70 vertical position. It will be observed that the spring cannot become disengaged in use, for the
projection on the strip made in forming the depression will become engaged with
the convolution of the spring. It is evident
that the upper or lower end of a spiral spring,
75 or both ends, may be secured in this manner.

What I claim as new, and desire to secure
by Letters Patent, is—

1. The combination of a spiral spring hav-
ing a diametrically-extending end and a strip
having a depression adapted to receive the
80 end, substantially as set forth.

2. The combination of a spiral spring hav-
ing an end extending diametrically across the
end convolution of the spring and a secur-
ing-strip having a depression adapted to re-
85 ceive the end of the spring and be clamped between the projecting end and the end con-
volution, substantially as set forth.

3. The combination of a spiral spring hav-
ing a plain end convolution and the end of
90 the wire forming the spring projecting into the vertical center of the spring and a secur-
ing or supporting strip having a depression or offset adapted to receive the end of the
95 wire, the strip being clamped between the end of the wire and the end convolution, sub-
stantially as set forth.

4. The combination of a spiral spring hav-
ing a plain end convolution and a supporting
end projecting diametrically across the end
100

convolution and a supporting-strip having a transverse offset adapted to receive the supporting end, the strip being clamped between the supporting end on the side of the spring
5 and the end convolution on the opposite side of the strip from the spring, substantially as set forth.

In witness whereof I have affixed my signature in presence of two witnesses.

WILLIAM S. FOSTER.

Witnesses:

RICH. A. GEORGE,
JOSIAH PERRY.