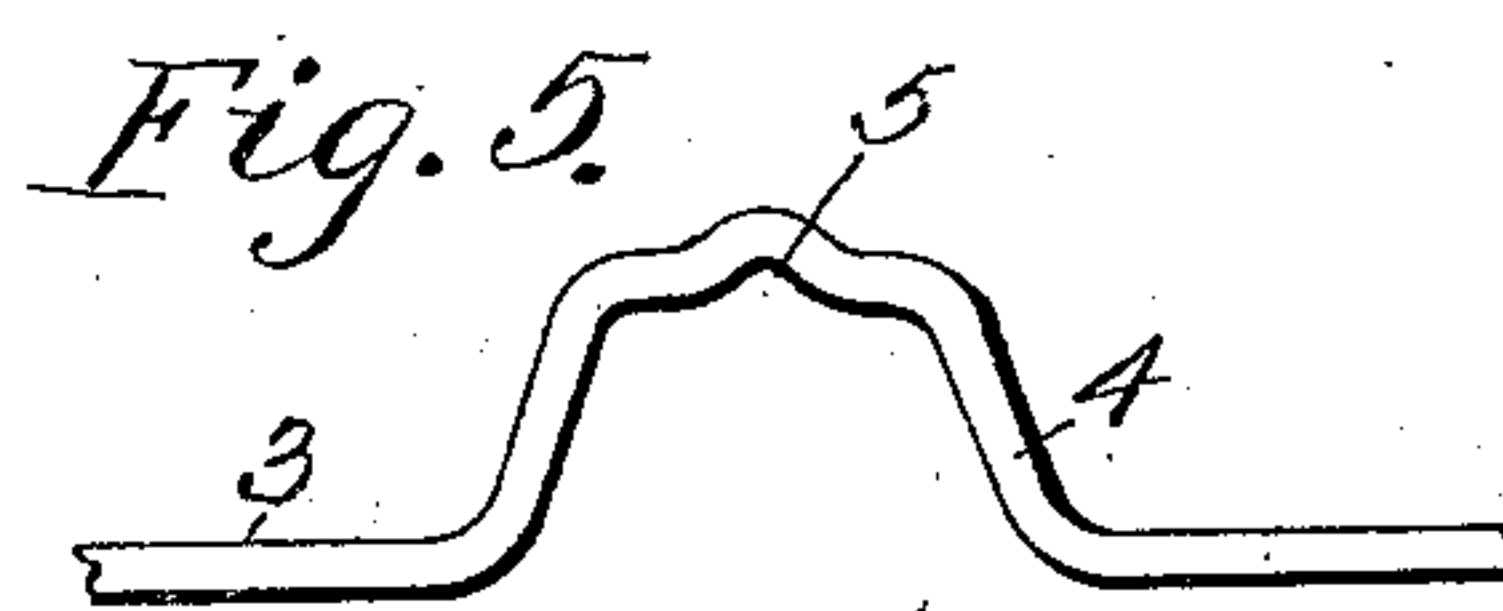
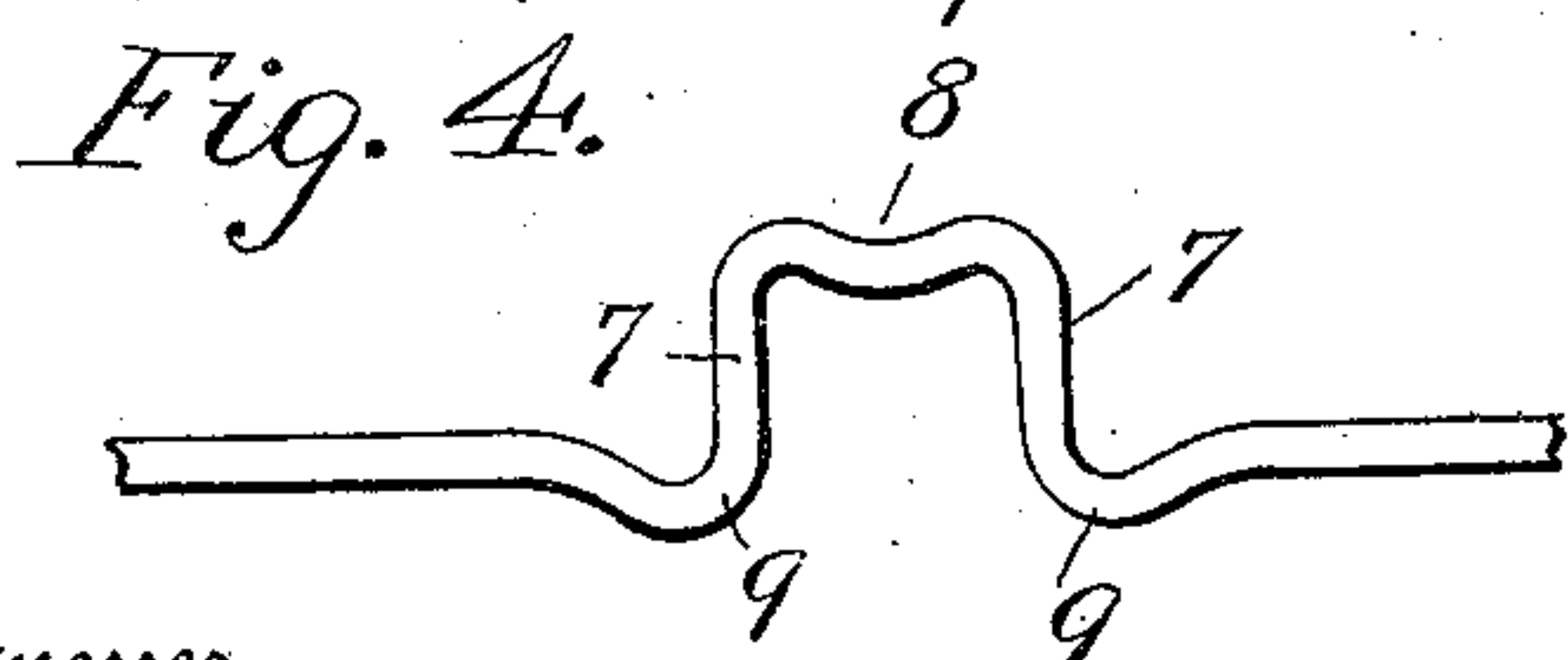
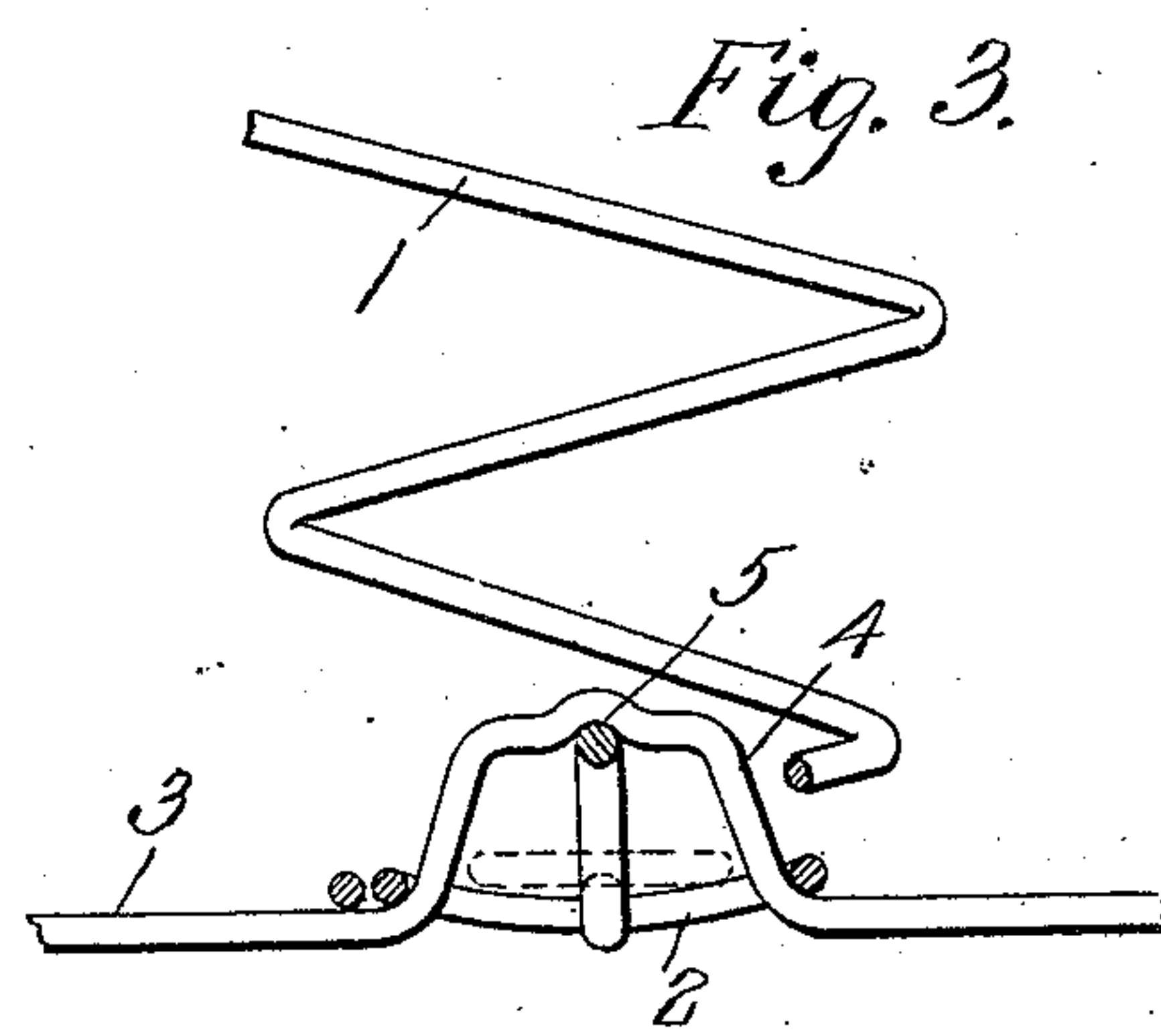
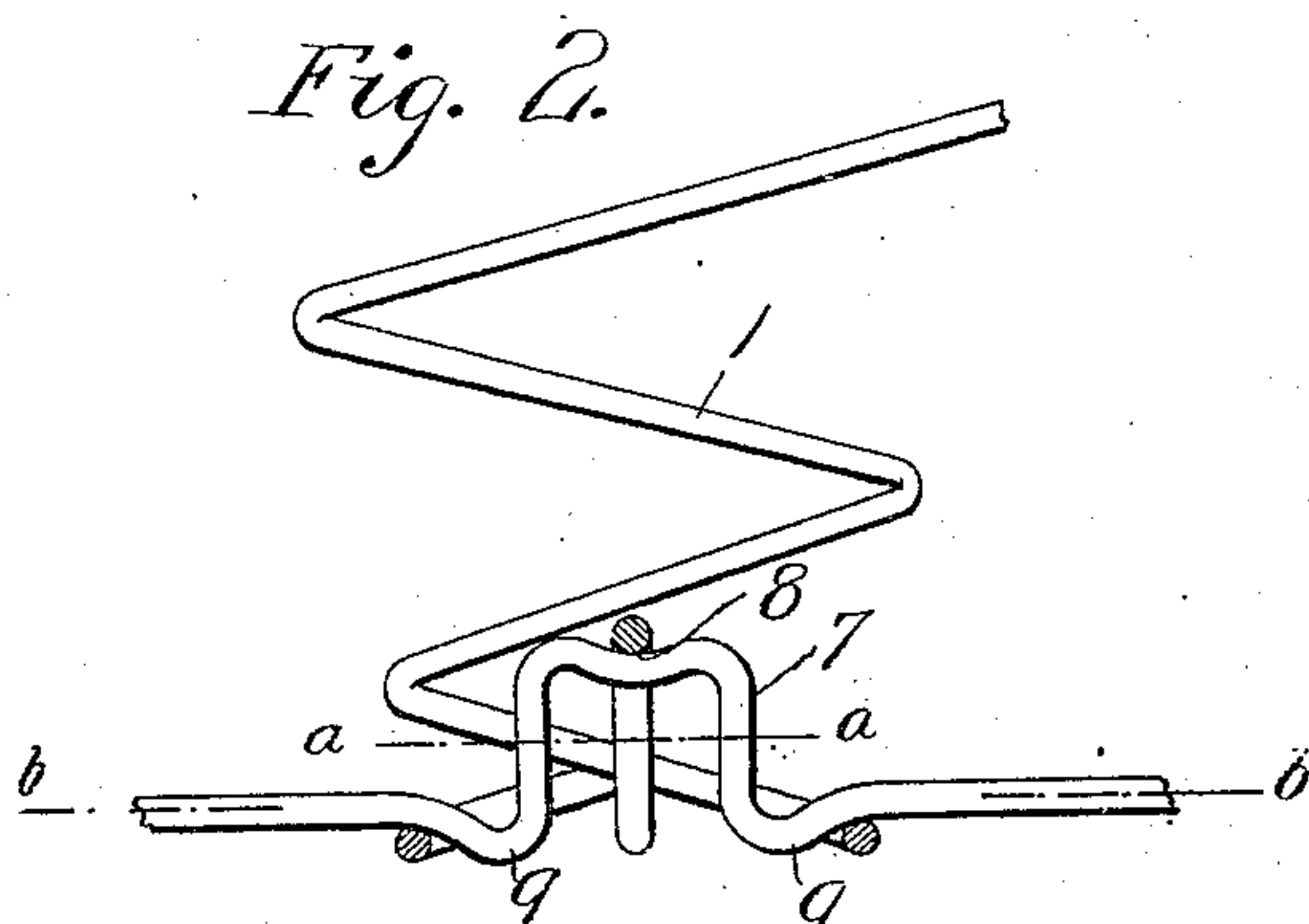
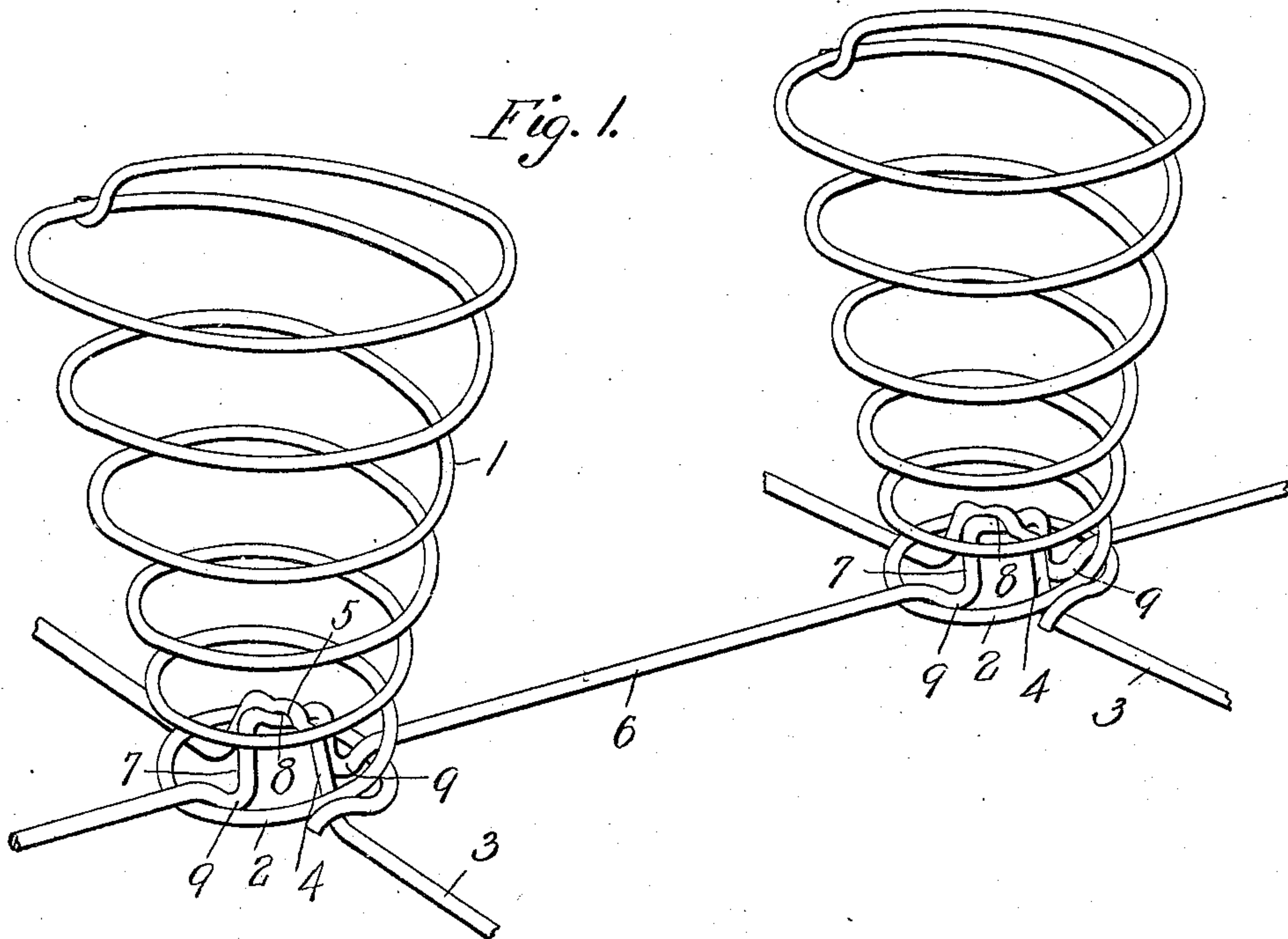


W. SHANNON.
 SPRINGWORK.
 APPLICATION FILED AUG. 2, 1907.

929,333.

Patented July 27, 1909.



Witnesses
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UNITED STATES PATENT OFFICE.

WOODFORD SHANNON, OF LOUISVILLE, KENTUCKY.

SPRINGWORK.

No. 929,333.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed August 2, 1907. Serial No. 386,811.

To all whom it may concern:

Be it known that I, WOODFORD SHANNON, a citizen of the United States, residing at Louisville, in the county of Jefferson, in the State of Kentucky, have invented certain new and useful Improvements in Springwork, of which the following is a specification.

This invention relates to spring work for bed bottoms, chair bottoms, couches and the like, and particularly to that type of spring work employing a pair of metallic members arranged at angles to each other, one of said members bearing upon one side of a ring of a coil spring and the other or key-member bearing on the other side of the ring, between said ring and the first member.

It has for an object to provide on the key-member a crank member of such form, that when turned, its longitudinal axis will be to one side of the longitudinal axis of the key member, whereby the longitudinal axis of the key member lies nearly in the plane of one face of the ring of the spring, and greatest pressure is placed upon the other member instead of the ring of the spiral, thus materially lessening the distortion of the latter.

Other and further objects will appear in the following description and will be more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of two springs secured by my invention. Fig. 2 is a sectional view showing the key member in elevation. Fig. 3 is a sectional view at right angles to Fig. 2 showing the other member in plan. Figs. 4 and 5 are detail plan views of the two members.

Referring more particularly to the drawings, 1 indicates a cone spiral spring having the usual lower ring 2, and 3 indicates a member made preferably of wire and bent to provide on one side, large recessed portions 4 having an inner seat 5. Opposite points of one face of the ring 2, preferably the lower one, bear on the member 3 on opposite sides of the recessed portion 4, which in turn projects through the ring to the opposite side.

The members 3 are placed in the usual guides of the bed bottom or the like in such a manner that the portions 4 stand with their apexes uppermost. The spiral springs 1 are then placed in position so that the small ends of the spirals are over the por-

tions 4. A key member 6 is then inserted over the lower ring 2 and underneath the portions 4 until the crank members 7 are directly underneath the portions 4 but lying in a plane horizontal to the plane of the lower rings 2, as shown in dotted lines in Fig. 3. The key members 6 with the crank members 7 are then turned until the crank members stand vertical to the plane of the lower rings 2. The height of the crank members is so proportioned that it is greater than the distance between the top of the lower rings 2 and the under side of the portions 4 and the turning of the crank members into vertical position will therefore cause the crank members to bind underneath the portions 4 thereby producing a very rigid connection between the three members 1, 3 and 6. Each of the crank members is so formed that its longitudinal axis $a-a$, Fig. 2, is on one side of the longitudinal axis $b-b$ of the key member. Upon the rotation of the key member until the parts assume the position shown in Fig. 1, pressure is exerted more on the first or recessed members than the spirals, and the lower rings of the spirals are but slightly distorted although they are clamped tightly between the two members. The outer portion of each crank member is bent or recessed at 8 to provide a seat to receive the first member 3 and prevent the lateral movement of the first member while the seat 5 of the first member 3 prevents the lateral displacement or turning of the key member 6.

On the side of the key member 6 opposite the crank 7 are formed shoulders 9 which prevent relative sliding between the key member and the spirals, relative sliding between the spirals and the first member being prevented by the rings 2 engaging the opposite sides of the recessed portions 4. To further hold the parts against movement, both members are secured at their ends to the frame of the article to which the spring work is applied.

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

1. The combination with the spiral spring, of a member bearing at two opposite points on the face of a ring of the spring, said member having a recessed portion projecting through said ring and provided with an inner seat, and a key member having a crank portion fitted between the opposite

face of the ring and the first member and resting in the seat of the recessed portion of said first member.

2. The combination with the spiral spring, 5 of a member bearing at two opposite points on one face of a ring of the spring and provided with a recessed portion projecting upwardly through the ring, and a key member projecting through the spring above said 10 ring and having a crank member bearing on the ring and the recessed portion of the first-named member, said crank member having the greater portion of its length located above the key member.

15 3. The combination with the spiral spring having a ring at its lower smaller end; of a recessed member upon which the ring portion of said spiral spring bears upon each side of the recessed portion of said recessed mem- 20 ber; and a key member extending through the spring above the ring portion, said key member being provided with a cranked portion of greater length than the recessed por-

tion of said recessed member and adapted to form a self-retaining wedge between said 25 recessed member and the ring portion of the spring.

4. The combination with a spiral spring having a ring at its lower end; of a member having a crimped portion the under side of 30 which forms a recess, said recess being provided with a seat; and a key member having a crank portion or member provided with a seat on the upper side thereof, which seat co-acts with the seat in the recess formed by 35 the under side of the crimped portion of the first member, the seats of both of said members lying in a common plane outside the plane of the nearest face of the ring on said spring.

The foregoing specification signed at 40
Louisville, Ky., this 8th day of March, 1907.

WOODFORD SHANNON.

In presence of two witnesses:

J. H. DICKEY,

ADOLPH ARMBRUST.