

J. Sears

Spiral Spring.

No 110,293.

Patented Dec. 20. 1870.

Fig. 1.

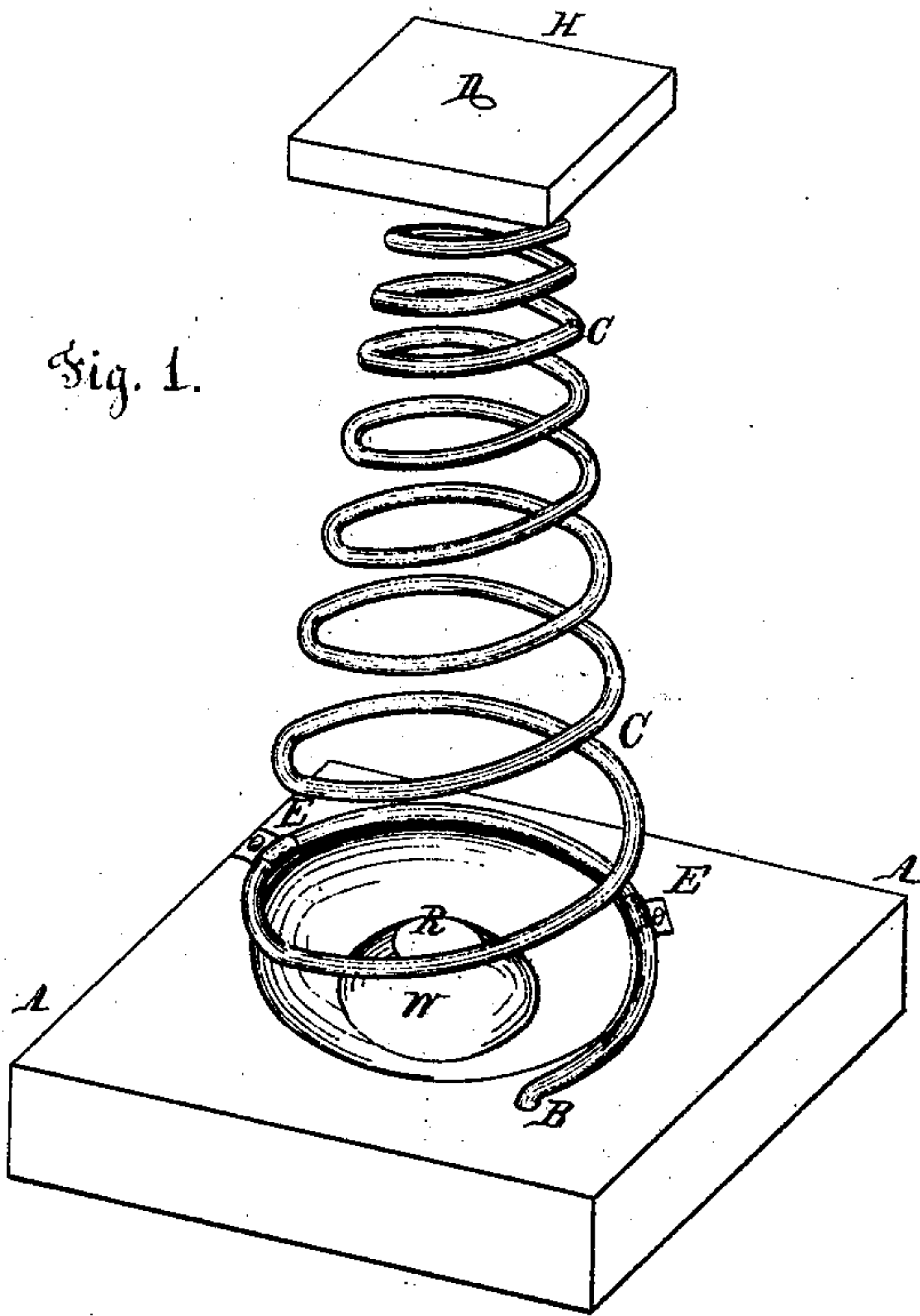
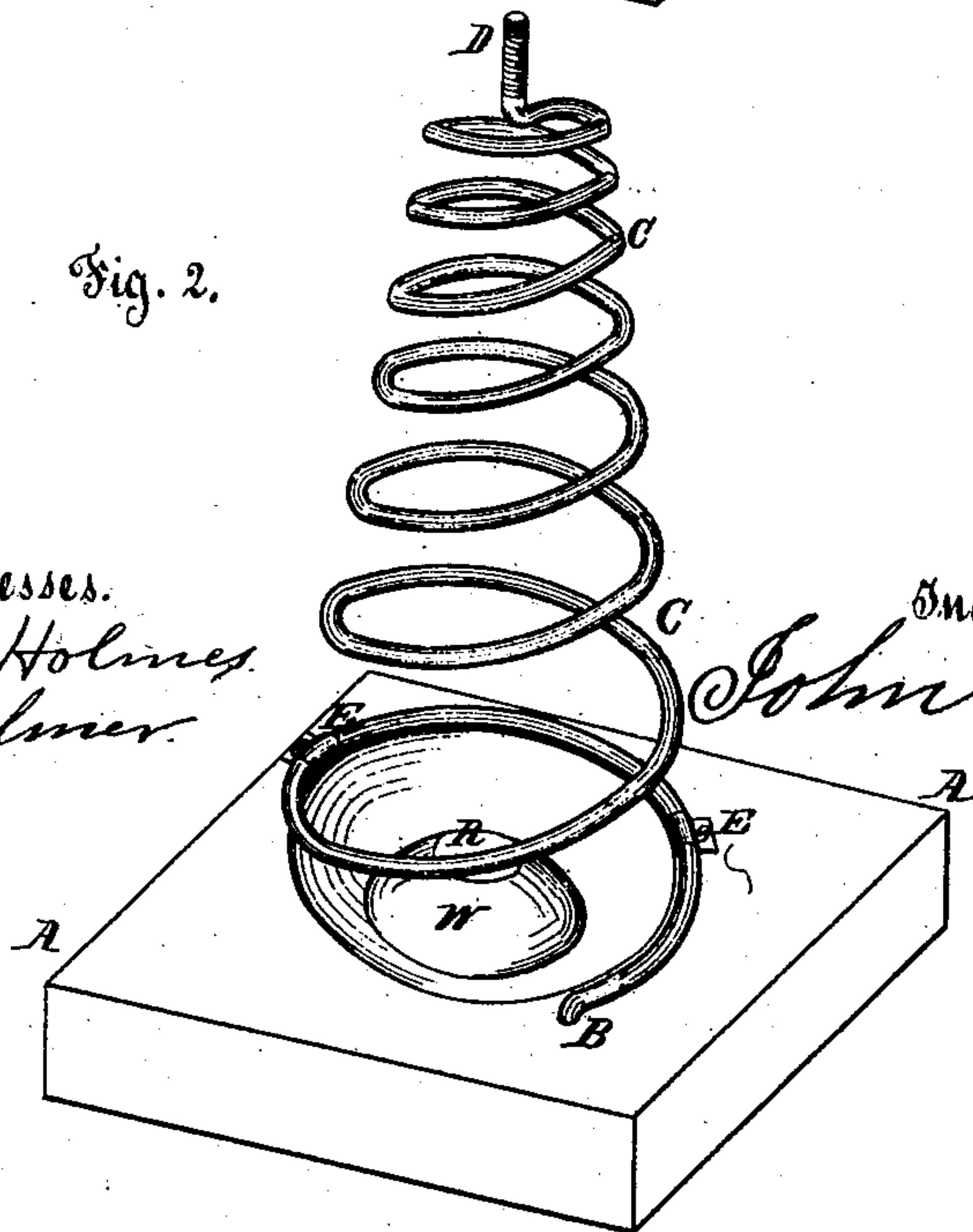


Fig. 2.



Witnesses.
Arthur Holmes
J. H. Palmer

Inventor.

John Sears

United States Patent Office.

JOHN SEARS, OF CORTLAND, NEW YORK.

Letters Patent No. 110,293, dated December 20, 1870.

IMPROVEMENT IN SPRINGS FOR BEDS, SOFAS, &c.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN SEARS, of Cortland, in the county of Cortland and State of New York, have invented a new and improved Spiral Spring for Beds, Sofas, Chairs, &c.; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

To enable others skilled in the arts to make and use my invention, I will proceed to describe its construction and operation.

A A is the support or slat into which the spring-coil is secured, and upon which it rests.

The size of the coil is to be adapted to the use intended. I take any suitable-sized wire and form my coil in conical form, with uniform or nearly uniform contraction from base to top. The top terminates in a stem, cut with a screw-thread, and sufficient in length to secure and hold a cap, as shown in Figure 1. The coil is secured to the base or slat in any convenient or suitable manner. The spring should be so wrought in the coil as to diminish the altitudinal spaces in the coil in ratio with the decrease in the diminishing diameter of the coil.

In the slat or rest, at W, I cut out a concave covering the space embraced within the wire, leaving in the center a cone, R.

The cap H is of any convenient size, and is screwed onto the thread D. To this cap may be secured the upper cross-slat in any suitable manner.

The advantages of my spring consist in its durability and operation.

Those heretofore used are the double spiral, having broad bases at top and bottom, and their tapering points meeting in the center. These are expensive in construction, liable to get out of order, and are very unsatisfactory in operation.

The single spiral hitherto used is made with an uncertain coil, and terminating the decreasing of the coil at about midway, and from thence running up in form of a stem.

When pressure is brought to bear on the spiral the stem is pressed down, being weaker than the expanding coil below, and doubles in at the point where the coil begins to expand, and comes down upon the base sidewise, and is found impracticable for use.

My spiral is so constructed that the pressure is uniform throughout the coil, and the lower come together in common with the upper, and there is no possible doubling of the coil or tipping to either side, but the descent is direct, and, descending into the concave, is held in true position by the cone R; and wherever used, whether beds, chairs, or in other articles, they work with perfect uniformity and prove equally durable.

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

The spring C, with screw-point D and cap H, in combination with the base A, with concave W and cone R, as shown and described.

JOHN SEARS.

Witnesses:

ARTHUR HOLMES,
J. H. PALMER.