

RICHARD VOSE.

Improvement in Nest-Spiral Car-Springs.

No. 119,254.

Patented Sep. 26, 1871.

Fig. 1.

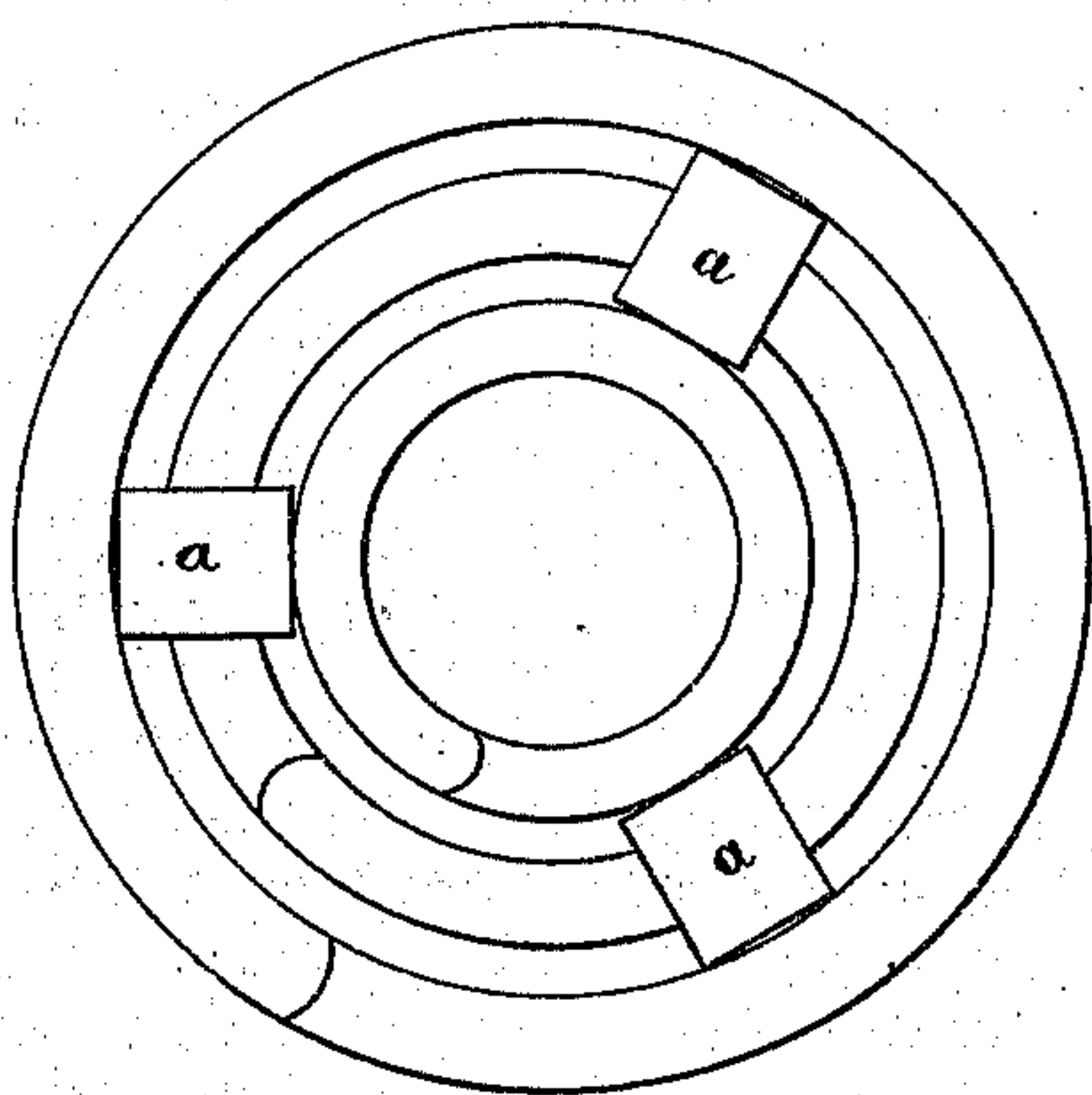


Fig. 2.

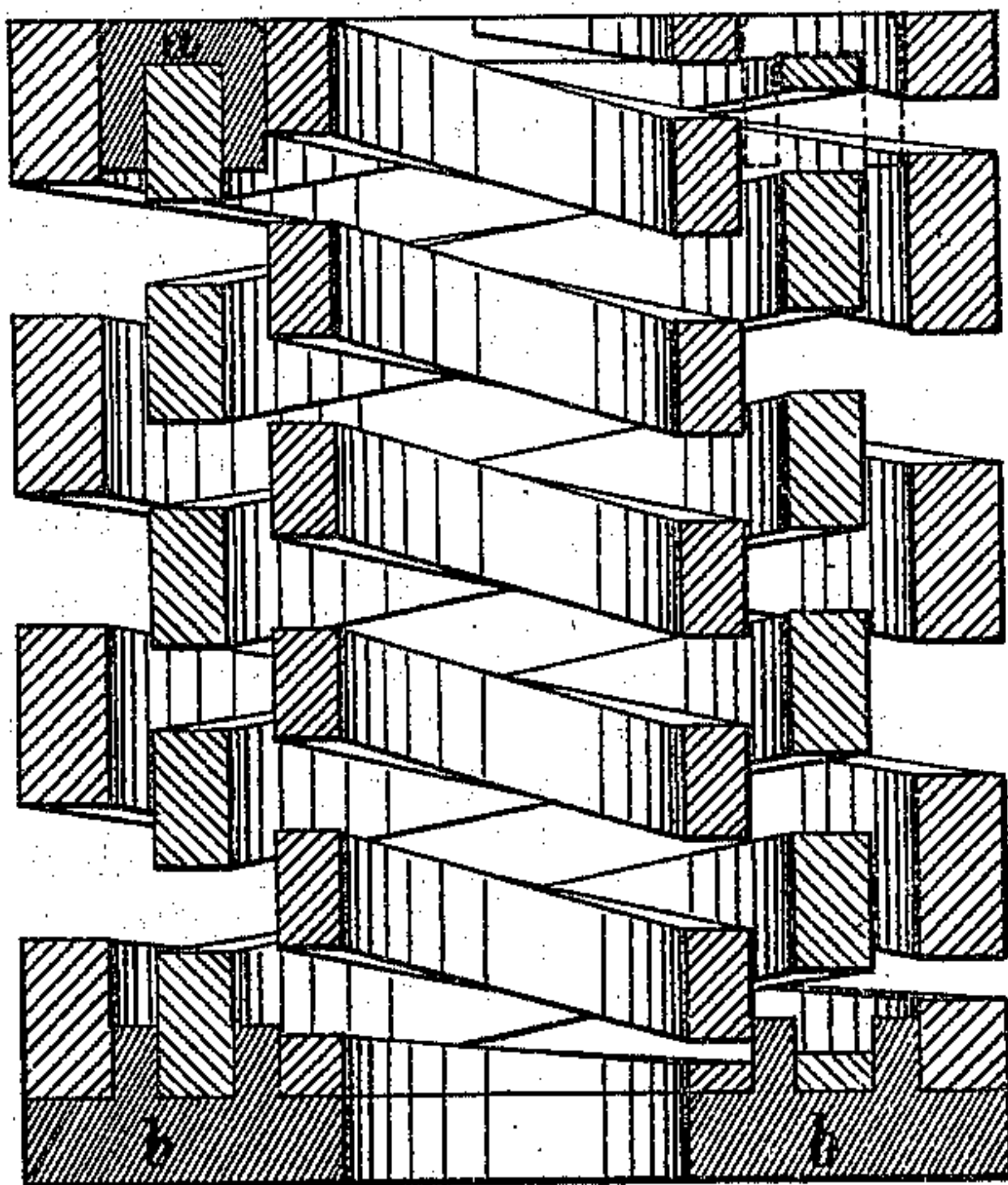
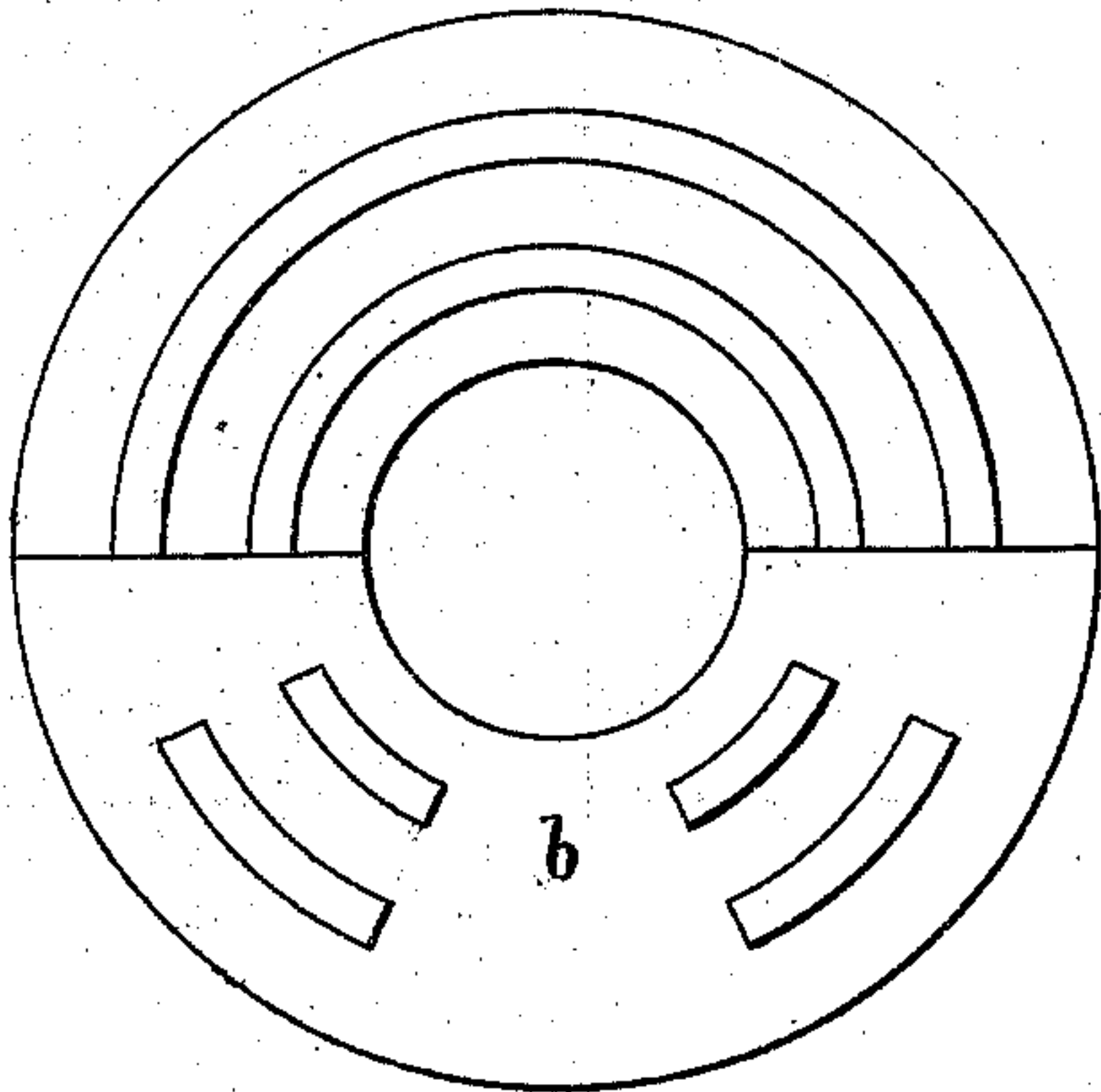


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

RICHARD VOSE, OF NEW YORK, N. Y.

IMPROVEMENT IN NEST SPIRAL CAR-SPRINGS.

Specification forming part of Letters Patent No. 119,254, dated September 26, 1871.

To all whom it may concern:

Be it known that I, RICHARD VOSE, of the city, county, and State of New York, have invented a new and useful Improvement in Spiral Nest-Springs, of which the following is a specification, reference being had to the accompanying drawing forming part thereof.

Figure 1 is a top view of a nest of spiral springs embodying my invention. Fig. 2 is a central sectional view of the same. Fig. 3 is a bottom view of the same, showing another form of embodying my invention.

When spiral springs have been nested together hitherto, as shown in the drawing, the several spiral coils have been made of such sizes as to leave spaces between them, and being left loose, without adjustments or supports, have been allowed to take their chances of coming in contact or not, as accident or the jolting of the springs might determine; or the coils have been made of such relative sizes as to be closely in contact with each other.

My invention relates to so arranging a nest of two or more spiral springs, placed one within another—the several spirals of which being made of such relative sizes that when they are centrally adjusted, spaces are left between them—that such central adjustment is secured by introducing in the spaces between the terminal coils of the several spirals suitably-shaped wedges or flanges of metal.

The several spirals are made in the ordinary way, and it is preferable that they be of rectangular bars of steel, as shown in the drawing. It is also preferable to coil the spirals alternately right and left, as shown. The diameters of the several spirals are made to be such that when the springs are nested together and all are centrally adjusted and held in position there shall be sufficient space between them to preserve them from contact with each other. This central adjustment is effected by introducing or driving firmly in between the terminal coils of the several spirals the flanged or U-shaped wedges of metal, *a a a*, as shown in Figs. 1 and 2. The wedges may be made of cast-iron, or may be wrought out of a suitable thickness of boiler-

plate iron. Their number should be governed by the size of the nested spring. Instead of these wedges may be used the flanged disk or cap *b*, shown in Figs. 2 and 3, the flanges being inserted and driven firmly in between the terminal coils of the spirals. This disk or cap consists of a suitably thick piece of metal, which may be cast with annular ribs or flanges on the inner face, made to fit into the spaces between the several springs, and this disk, with its ribs, is thus made to serve the double purpose of maintaining the springs in position apart from one another and a seat for the nest of springs. One may be placed, also, on the top of the nest and there serve as a bearing for the same.

It is evident that when thus constructed and arranged the terminal coils of the several springs will be all centrally adjusted and held firmly in place, and the entire springs themselves will be kept perfectly in relative adjustment, while the live coils will possess an entirely free and independent motion, and play without contact with or friction against each other.

It is well known that such contact and consequent friction in nested springs are objectionable, rendering their action under railway carriages rough and unpleasant, and tending greatly to impair their durability and efficiency. My invention furnishes a convenient, inexpensive, and perfectly successful method of obviating these objections.

I do not here claim, broadly, holding in relative adjustment with each other the several spirals of a nest of springs so that contact of the live or acting coils of the several springs is prevented; but

What I do claim as my invention is—

A nest of two or more spiral springs placed one within another, with spaces between them, the several springs being maintained in position so that they cannot come in contact with each other, by the means substantially as described.

RICHD. VOSE.

Witnesses:

B. J. GUIBERT,
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