J. MURRAY.

Car Spring.

No. 48,084. Patented June 6, 1865.

Fig: 1.

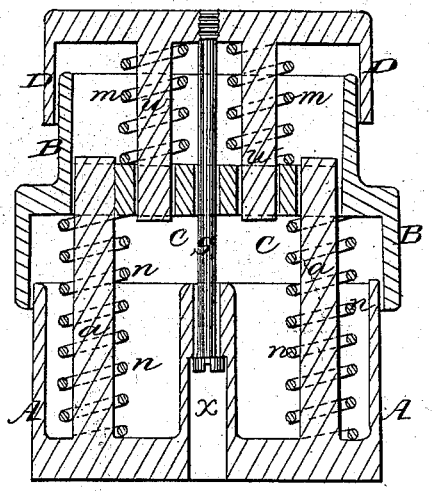
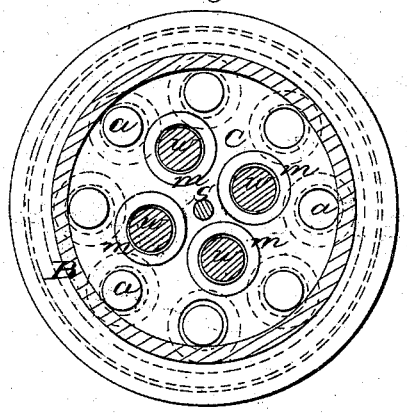


Fig: 2.



Witnesses

Henry E Rawdon

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UNITED STATES PATENT OFFICE.

JOHN MURRAY, OF NEW YORK, N. Y.

IMPROVEMENT IN CAR-SPRINGS.

Specification forming part of Letters Patent No. **48,084**, dated June 6, 1865.

To all whom it may concern:

Be it known that I, JOHN MURRAY, of New York, in the county and State of New York, have invented a new and useful Improvement in Springs; 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.

My invention consists in the peculiar construction and arrangement of the dividing-plate between the upper and lower boxes or cases which contain the spiral springs and studs or spindles which constitute the spring, by which this plate is made to answer the twofold purpose of a base for the upper set of springs and a cap for the lower set, and also to act as a guide to hold both sets of springs, those of the upper and those of the lower box in a vertical position, and allowing at the same time the play of the springs and the sliding of the spirals or studs through the plate.

Figure I represents a vertical section, and Fig. II a horizontal section, of my improved spring.

In the accompanying drawings, A represents the bottom case of the spring, to which a number of studs or spindles, *a a*—say eight or more—are fastened, around which the spiral springs *n n* are placed. Over this case A a cap, B, is placed, fitting loosely over the same, and provided with a division-plate, C, arranged with suitable holes, into which the studs *a a* fit, and wherein said studs are guided. Over the upper end of this cap B a top box, D, is fitted loosely, provided with studs or spindles *w*, the number of which should be less than those in the bottom case—say about one-half. Spiral springs *m* are likewise placed around those studs or spindles *w*. The ends of those studs *w* pass through suitable holes in the division-plate C of the cap or central part, B, and are thereby guided. The top box, D, and the bottom box, A, are secured together by a central bolt, S, secured into the top box, D, and arranged with its head fitting into a central recess, *x*, so as to allow the free action of the spring without said head coming below the under side of the bottom box, A.

The dividing-plate C is constructed in one piece with the sliding cap or cover B, which shuts over the lower box, A, and under or within the upper box, D, and it is pierced with holes *w a*, Fig. II, directly above the spindles *a* of the lower box and directly below the spindles *w* of the upper box, and with the apertures sufficiently large to permit the spindles to slide easily back and forth, by which the springs are kept in a vertical position, and at the same time the play of the springs and of the boxes above and below are provided for.

The great disadvantage of spiral springs arranged in a box or case, whether put in loosely or packed with an elastic substance, arises from their bending or bulging out in one or the other direction while said springs are in action, which produces a rubbing against the side of the case, whereby the spring wears very quickly, is prevented in its free action, and causes the repeated breaking of the springs, while by my improvement the spring is guided through and by the apertures in the central division-plate, C, as described, and prevents any bending or bulging out in either direction, and consequently increases materially the efficiency of its action.

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

The peculiar construction of the division-plate C, combined with the boxes, springs, and spindles or studs, by which it is made to answer the twofold purpose of a cap and a base for the two boxes and sets of springs, respectively, and at the same time acts as a guide and support to the spindles and allows them the required action, as described.

JOHN MURRAY.

Witnesses:

HENRY E. ROEDER,
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