

J. E. WOOTTEN.

Car Spring.

No. 38,255.

Patented Apr. 21, 1863.

Fig. 3.

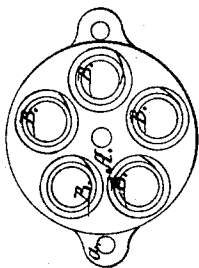


Fig. 2.

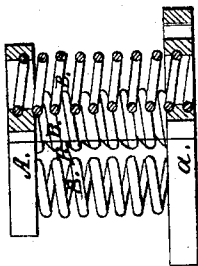
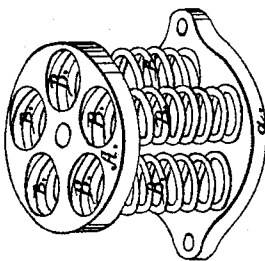


Fig. 1.



Witnesses:

Thos MacBride
James H MacBride

Inventor:

J. E. Wootten

UNITED STATES PATENT OFFICE.

JOHN E. WOOTTEN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN RAILROAD-CAR SPRINGS.

Specification forming part of Letters Patent No. **38,255**, dated April 21, 1863.

To all whom it may concern:

Be it known that I, JOHN E. WOOTTEN, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and Improved Mode of Constructing Springs for Railroad-Cars; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view; Fig. 2 is an elevation in half section, showing the manner in which the spiral springs are secured in the spirally-grooved orifices of the plates. Fig. 3 is a top view.

Similar letters refer to similar parts.

A *a* are metallic plates, having spirally grooved orifices through them to receive the ends of the springs, in a manner which will be hereinafter described.

B B B B B are spiral springs, wound in a direction corresponding with the spiral-grooves in the orifices of the plates A *a*, and having also a pitch and diameter corresponding therewith. This being done the springs are inserted and screwed to their proper positions in the plates A *a*. The ends of the springs, where in contact with the plates, are then expanded by means of a proper expanding tool, until they become rigidly and firmly fixed in their positions in the plates.

The entire spring thus constructed is ready for use, and I desire to state that my improved spring, as herein described, is capable of resilience under either a tensile or compressive strain, this property enabling it to act in the double capacity of a car-bumper spring, and draw-spring combined, as, from the manner in which the ends of the springs are secured, it will be seen that they cannot be removed from their places by any strain to which the spring would ordinarily be sub-

jected. Nor is it to tensile and compressive strain alone that my improved spring is resilient, for it will be observed that it exhibits resilience also in lateral directions, or in what direction soever the strain may be brought to bear upon it, thereby yielding an ease of motion in all directions such as is attained by no other metallic spring.

Having thus described the construction and operation of my improved car-spring, I do not claim the use of the spiral springs singly or together, as they have been before used for the purpose of car-springs, as, in the car-spring for which a patent was granted to A. B. Davis, February 15, 1859, in which the spiral springs are contained within a box and held in place by means of lugs or other suitable devices, the whole being retained in place by means of bolts or rivets. I, therefore, disclaim the use of any fastenings or lateral stays other than can be derived from the springs themselves; but

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

1. The spirally-grooved orifices in the plates A *a*, for securely holding the ends of the springs, when used in combination with the spiral springs of a railroad car spring.

2. The spring constructed as herein described, in which the ends of the individual resilient parts thereof are permanently secured to the plates A *a*, and serve the purpose of firmly holding the entire spring in one compact whole, which is equally capable of resilience under tensile, compressive, or lateral strains, without the intervention of lugs, bolts, rivets, or stays, in the manner and for the purpose herein set forth.

J. E. WOOTTEN.

Witnesses:

THOS. MACBRIDE, Jr.,
JAMES H. MACBRIDE.