J. E. WOOTTEN.

Railroad Car-Spring.

No. 166,178. Patented July 27, 1875.

Fig. 1

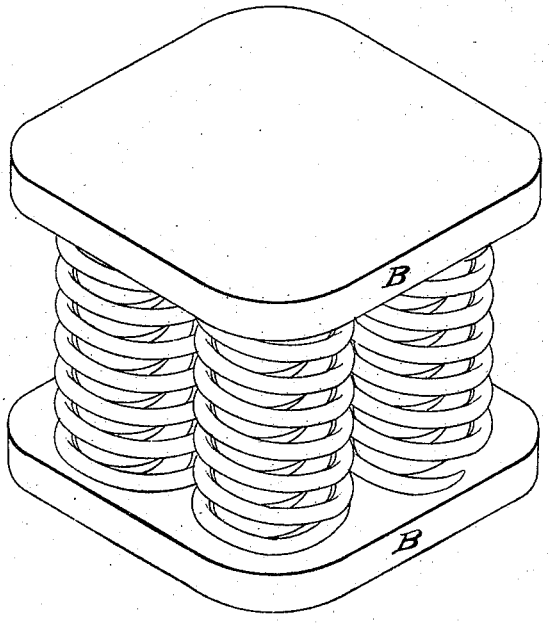
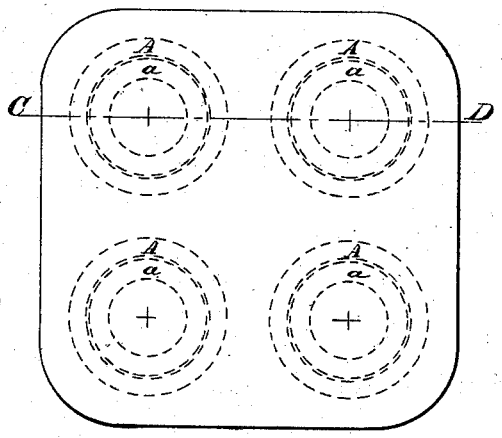


Fig. 2



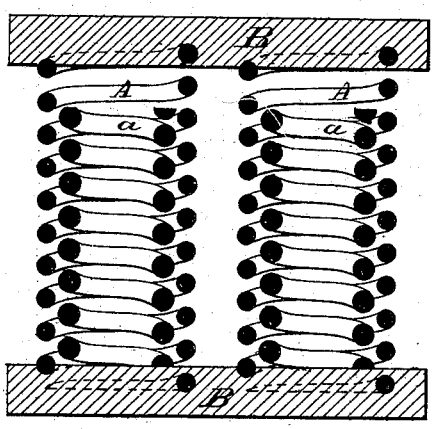


Fig. 3

WITNESSES

Jas. M. Landis

Edw. H. James

INVENTOR

John Eastburn Wootten

UNITED STATES PATENT OFFICE.

JOHN E. WOOTTEN, OF READING, PENNSYLVANIA.

IMPROVEMENT IN RAILROAD-CAR SPRINGS.

Specification forming part of Letters Patent No. **166,178**, dated July 27, 1875; application filed January 29, 1874.

CASE A.

To all whom it may concern:

Be it known that I, JOHN EASTBURN WOOTTEN, of Reading, in the county of Berks and State of Pennsylvania, have invented certain Improvements in the Construction of Springs for Railroad-Cars, of which the following is a specification:

My invention relates to the construction of that class of springs which are formed by the grouping of a number of spiral springs.

Figure 1 is a perspective view of a spring embodying my invention. Fig. 2 is a plan of same. Fig. 3 is a sectional elevation on line C D.

A A A A *a a a a* are spiral springs, which may be made of steel, iron, or other desirable metal. B B are metallic plates to which one end of the spiral springs A A A A, respectively, are firmly attached. The springs A A A A are made sufficiently large in their interior diameter to contain within their coils the spiral springs *a a a a*. They are also made of greater length, for a purpose hereinafter stated.

Before uniting the ends of the springs A A A A with the plates B B, the springs *a a a a*, respectively, are placed within the coils of springs A A A A, the ends of the springs *a a a a* being, however, kept free from any union or attachment to either of the plates B B.

As hereinbefore stated, the springs A A A A are longer than *a a a a*, the object of which is to permit them to receive the weight of the empty car unassisted by the shorter springs *a a a a*, the latter being only brought into action when the car is loaded, thus permitting a greater degree of spring action, and consequently reduced wear and tear, while the car is running empty or with a comparatively light load.

I make no claim to the use of a group of spiral springs attached to a plate or plates, for I am aware that such a construction is not new. Nor do I claim, broadly, the employment of concentric springs, irrespective of the specific manner herein described of combining them with the plates; but

I do claim as my invention—

In a car-spring, an outer spiral spring, A, firmly attached at its ends to the plates B B, and having inside thereof the shorter spring *a*, free at its ends, all combined substantially as and for the purpose set forth.

JOHN EASTBURN WOOTTEN.

Witnesses:
JAS. M. LANDIS,
EDW. W. JAMES.