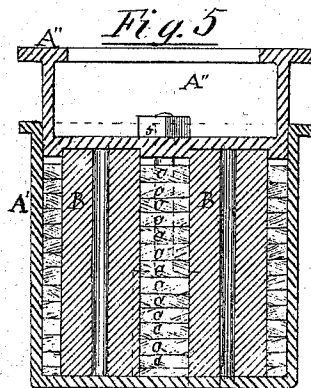
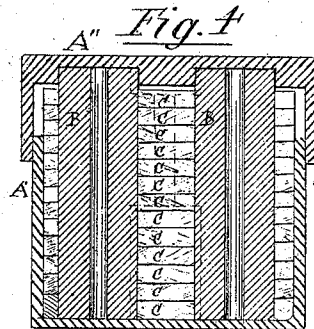
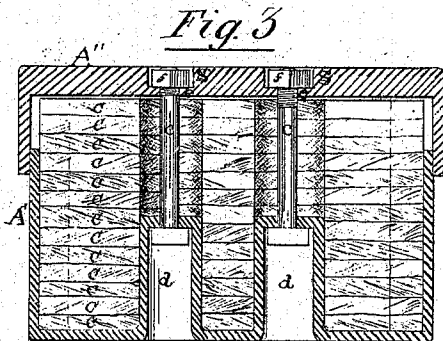
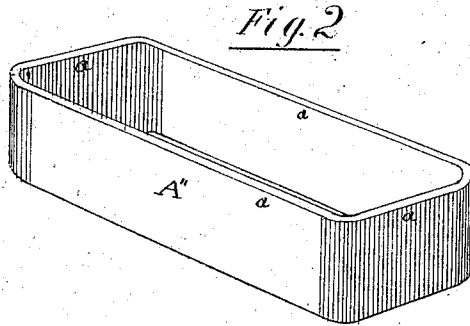
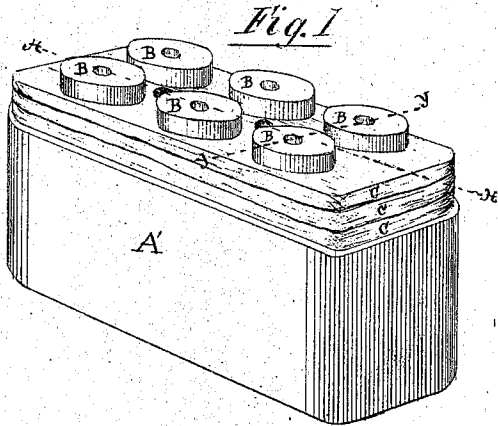


R. VOSE.  
Car Spring.

No. 105,524.

Patented July 19, 1870.



*D. S. Smith*  
*R. R. Wood*

Witnesses.

*R. Vose*

Inventor.

# United States Patent Office.

RICHARD VOSE, OF NEW YORK, N. Y.

Letters Patent No. 105,524, dated July 19, 1870.

## IMPROVEMENT IN CAR-SPRINGS.

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, RICHARD VOSE, of the city, county, and State of New York, have invented certain new and useful Improvements in Car-Springs, of which the following is a specification, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a perspective view of a car-spring embodying my invention. In this figure the top of the case in which the material forming the spring is contained is removed.

Figure 2 is a perspective view of the top part of said case turned upside down.

Figure 3 is a sectional view of my spring, cut through on the dotted line *x*, in fig. 1.

Figure 4 is a sectional view of the same spring, cut through on dotted line *y*, in fig. 1.

Figure 5 is a sectional view of the same spring, with another form of the case, which may be used, if preferred.

My invention consists in combining, for the purposes of a car-spring, one or more columns of rubber, in a suitable case, with felted wool, or other equivalent fibrous material, packed into and substantially filling the case, and external to and around the rubber columns, for the purpose of supporting the rubber, and in a measure preventing its outward lateral spread when under pressure.

A is the case, made of cast-iron, or any other suitable material, designed to receive and hold the rubber and wool. This case should be made in two parts, A' A", the upper part, A", forming a top or cover, having a deep rim or flange, *a*, that sits down over the lower part or body A' of the case.

If preferred, the top A" may be made to fit into and move within the body A', being extended up above the top of the rubber and wool, as shown in fig. 5.

B indicates a number of columns of rubber, arranged within the case A'.

C indicates a number of layers of wool felt, cut to fit the size and shape of the case, and enough of them are used to fill the body of the case nearly or quite to the height of the columns of rubber. Circular perforations are made in these layers of felt, corresponding in size and position with the columns of rubber as arranged in the case, through which the rubber may pass. The wool is thus made to fill the case and surround the columns of rubber.

The top and bottom parts of the case are held together by bolts *c c'*, which are passed up through the recessed columns *d d'* in the lower part, and through the holes *e e'* in the top part, and secured by the nuts *f f'*, that are received in the recesses *g g'* in the top face of the upper part. These bolts thus hold the two parts of the case together, while the top part is allowed to move in or upon the lower, with the motion of the springs contained in the case.

Wool in a felted state, as described, I consider the most serviceable. But, if preferred, it may be packed in the case without being felted.

### Claim.

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

A car-spring, composed of the case A, the columns of India rubber B, and the wool C, when arranged and combined substantially as and for the purposes specified.

RICHD. VOSE.

Witnesses:

J. P. FITCH,  
R. R. WOOD.