

D. H. BROWN.
Carriage-Spring Support.

No. 111,809

Patented Feb: 14, 1871.

Fig: 1

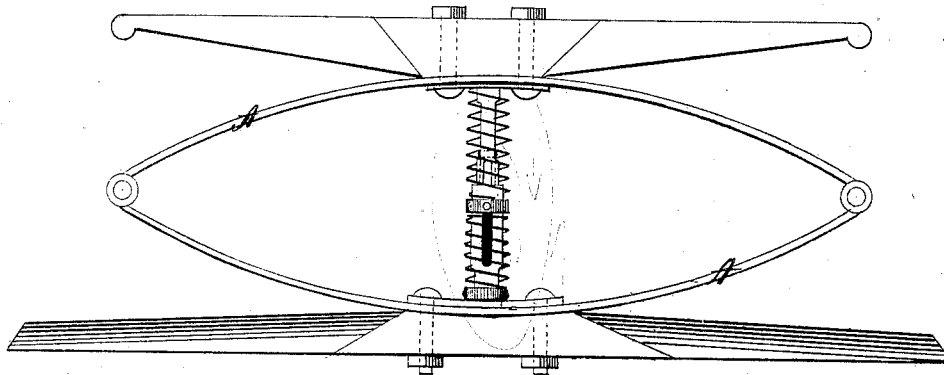


Fig: 2

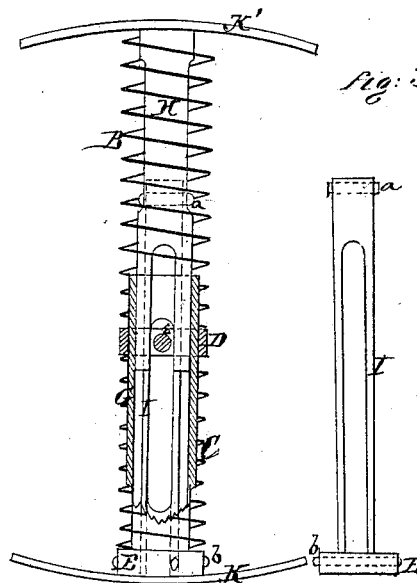


Fig: 3

Witnesses:

A. A. Yeatman,
C. L. Everett

Inventor.

Daniel H. Brown
per
Alexander Massey

Atty.

United States Patent Office.

DANIEL H. BROWN, OF UTICA, MISSOURI.

Letters Patent No. 111,809, dated February 14, 1871.

IMPROVEMENT IN SPRING-SUPPORTERS FOR CARRIAGES.

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, DANIEL H. BROWN, of Utica, in the county of Livingston and State of Missouri, have invented certain new and useful Improvements in Spring-Supporters; and do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The nature of my invention consists in the construction and arrangement of a support for carriage-springs, as will be hereinafter fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing which forms a part of this specification, and in which—

Figure 1 is a side elevation of a carriage-spring with my supporter attached;

Figure 2 is an enlarged side view of the spring-supporter; and

Figure 3 is an enlarged side view of the inner tube of the supporter.

A represents an ordinary elliptic carriage-spring, in the center of which my supporter is attached.

The supporter is composed of two coil-springs, B C, two rings, D E, and three tubes, G H I.

In the center of the lower half of the spring A, by the same bolts which secure the spring in place, is secured a plate, K, from which rises the outside tube G.

In the upper end of this tube is inserted the middle tube H, which is attached to and descends from a similar plate, K', secured in the same manner in the center of the upper half of the spring A.

Through the tubes G and H passes the inside tube

I, which, at its upper end, is provided with a pin, *a*, projecting through vertical slots in the middle tube H.

The lower end of the tube I is, by a pin, *b*, connected with the ring E, surrounding the lower end of the outside tube G, said pin passing through vertical slots in this outside tube.

Surrounding the outside tube G and resting upon the lower ring E is the coil-spring, on top of which is placed the middle ring D.

This ring has a pin, *e*, through it, which pin passes through vertical slots in the outside tube G, and prevents said ring from going upward more than a certain distance.

Both the tubes H and I are also slotted for this pin *e* to pass through and allow the supporter to be compressed.

On top of the middle ring D is placed the coil-spring B, surrounding the upper end of the outside tube G and the middle tube H, and its upper end bearing against the plate K'.

By this device the carriage-spring is supported, both when it goes down and when it comes up.

I am aware that a single spiral spring or pad of rubber placed between the parts of any ordinary elliptical spring is not new.

What I claim is—

In combination with the elliptical spring A the slotted tubes G H I, connected to the curved plates K K', coil-springs B C, rings D E, and pins *a e b*, all constructed and arranged to operate substantially as set forth.

DANIEL H. BROWN.

Witnesses:

W. A. SMITH,
JAMES K. STONE.