

S. PALMATIER.  
Vehicle-Spring.

No. 210,142.

Patented Nov. 19, 1878.

Fig. 1.

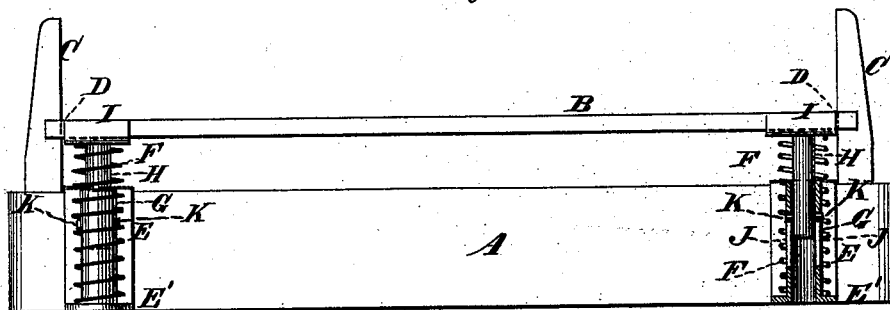
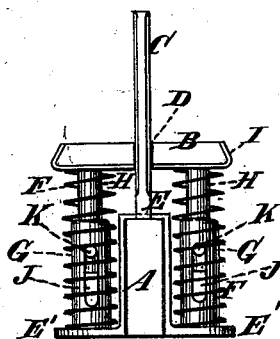


Fig. 2.



Witnesses  
John Becker  
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Inventor  
Samlr Palmatier  
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# UNITED STATES PATENT OFFICE.

STANTON PALMATIER, OF LEEDS, ASSIGNOR OF ONE-HALF HIS RIGHT TO  
GELSTON SANFORD, OF BROOKLYN, NEW YORK.

## IMPROVEMENT IN VEHICLE-SPRINGS.

Specification forming part of Letters Patent No. **210,142**, dated November 19, 1878; application filed  
October 5, 1878.

*To all whom it may concern:*

Be it known that I, STANTON PALMATIER, of Leeds, in the county of Greene and the State of New York, have invented an Improvement in Springs for Vehicles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification.

My invention is intended primarily for wagons, more especially for lumber-wagons; and it has for its object to furnish an easy elastic spring, cheap in construction and durable in use.

The invention consists in the combination, with coiled compression-springs, of various devices for rendering the application of such springs more practicable than heretofore, and rendering their use more convenient and efficient than heretofore.

Figure 1 in the drawing is a side view of a bolster having my invention thereunto applied. Fig. 2 is an end view of the same.

A represents the bolster, constructed in the ordinary or in any approved manner. B is a movable false bolster, which is fitted to move vertically upon guides C, preferably stakes attached to the bolster in the ordinary way, but which may be guide-rods made to move in guideways formed in the bolster A, and rigidly attached to the false bolster. When the guides C are attached to the bolster A guideways D are formed in the ends of the false bolster B, which slides upon said guides or stakes when it is moved vertically. Fitted snugly to the extremities of the bolster A are yokes E. Said yokes are provided at their lower parts with ledges or steps E' on opposite sides of the bolster. Between the said ledges or steps, and supported by the same, are placed the springs F, upon which the movable false bolster B is supported. Said springs are of the kind known as "coiled compression-springs," and may be made of round or rectangular steel. Within the coil of each spring is placed a hollow cylinder, G, and a plunger, H, fitted to work within the said hollow cylinder. The hollow cylinder is, by preference,

attached at its lower end to the bolster A, and the plunger is attached at its upper end to the false bolster B; but this may be reversed, and the plunger may be attached to the bolster and the hollow cylinder to the false bolster without in any way departing from the spirit of the invention. When said cylinders and plungers are placed as shown in the drawing, the attachment of the hollow cylinders to the bolster is made at and to the ledges or steps E' of the yokes E, and the attachment of the plungers to the false bolsters is effected by fastening them to plates or clips fitted to the ends of said false bolsters.

In opposite sides of each of the hollow cylinders G are formed vertical slots J, in each of which slides a pin, K, projecting from the side of the plunger. Said pins are made preferably of leather; but they may be made of wood or other suitable material. Said pins act as stops to limit the motion of the false bolster, and are preferably made of leather, rawhide, or other soft material, to prevent shocks.

It is desirable to say that in the arrangement of springs of this kind for the front axle-trees of wagons no part of the devices should in any position extend below the bottom of the bolster, as such a construction would interfere with the turning of the vehicle.

I claim—

1. The combination, with the plungers H, hollow cylinders G, and springs F, of the movable false bolster B and plates or clips I, for attaching said plungers to said movable false bolster, substantially as and for the purpose set forth.

2. The combination, with the bolster A, of the yokes E E', hollow cylinders G, attached to said yokes, plungers H, fitted to slide within the said cylinders, springs F, and movable false bolster, substantially as and for the purpose specified.

STANTON PALMATIER.

Witnesses:

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