

H. H. OLDS.
Carriage-Spring.

No. 49,545.

Patented Aug. 22, 1865.

Fig. 3.

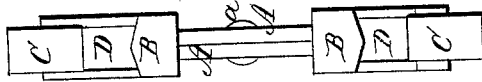


Fig. 1.

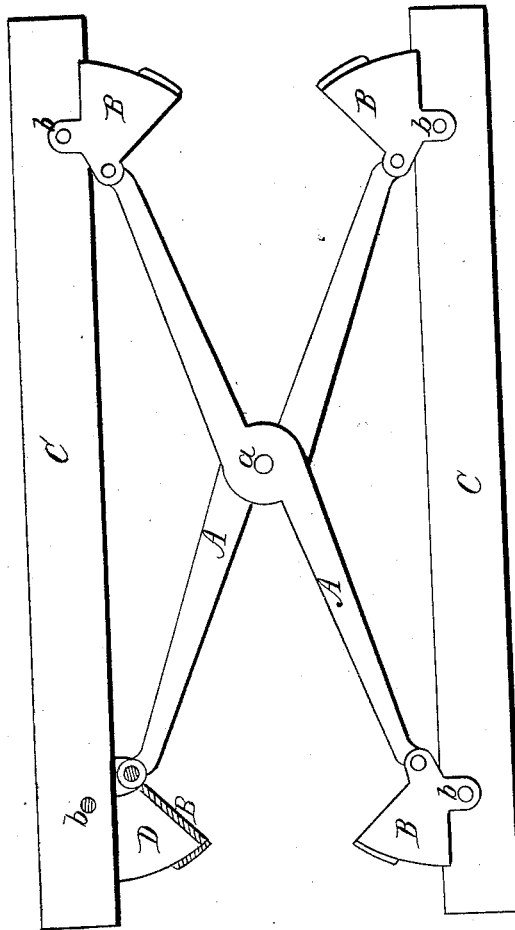


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY H. OLDS, OF NEW HAVEN, CONNECTICUT.

IMPROVEMENT IN CARRIAGE-SPRINGS.

Specification forming part of Letters Patent No. **49,545**, dated August 22, 1865.

To all whom it may concern:

Be it known that I, H. H. OLDS, of New Haven, in the county of New Haven and State of Connecticut, have invented a new and Improved Spring for Carriages, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a sectional side elevation of this invention. Fig. 2 is a plan or top view of the same. Fig. 3 is an end view of the same.

Similar letters of reference indicate like parts.

This invention consists in the use of two cross-arms provided at their ends with hinged caps which inclose blocks of india-rubber or other elastic material, and which are connected by longitudinal rails in such a manner that by placing a weight upon said rails, or by subjecting the same to a pressure of any description, the elastic blocks are compressed between the caps and the edges of the rails, and a spring is obtained which is strong, durable, and has considerable play, with a proportionately small quantity of elastic material.

A A represent two cross-arms, made of iron or other suitable material, and connected together in their center by a pivot, *a*, as clearly shown in the drawings. The ends of these cross-arms are hinged to triangular caps B, which swing on pivots *b*, that have their bearings in rails C. The caps may be made of malleable iron or of any other suitable material, and they are provided with lugs which straddle the rails; or they may be connected to said rails in any other desirable manner. The

rails C are made of wood or any other suitable material; or they may represent the axle and the bolster of a carriage or other vehicle, the caps being so shaped that they can be secured to said parts with little trouble.

Between the hinged triangular caps and the edges of the rails are suitable blocks, D, of galvanized india-rubber or other suitable elastic material, as shown in Fig. 1, where one of the caps is represented in section so as to show the elastic block.

When the two rails are exposed to some pressure, which has a tendency to bring them closer and closer together, the elastic blocks are compressed between the caps and the edges of the rails, and by their action a certain elasticity or spring force is imparted to the entire system. A spring for carriages or other vehicles can thus be produced which requires only a small amount of elastic material, which can be made entirely of iron or other cheap metal, and which allows of considerable motion. If one of the elastic blocks shall wear out, it can easily be replaced by another, and the whole device is not liable to get out of order.

My spring is applicable to vehicles of any description, particularly to light wagons and carriages; but it can also be made strong and heavy enough for railroad-cars, if it should be desired.

I claim as new and desire to secure by Letters Patent—

A spring composed of cross-arms A A, hinged caps B, and elastic blocks D, connected together substantially in the manner and for the purposes set forth.

HENRY H. OLDS.

Witnesses:

HENRY D. WHITE,
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