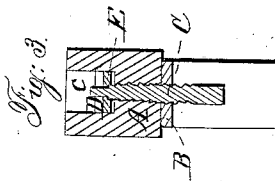
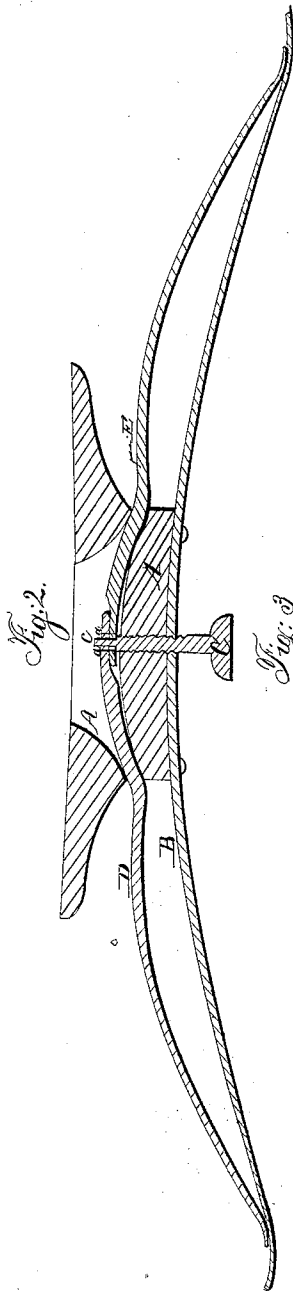
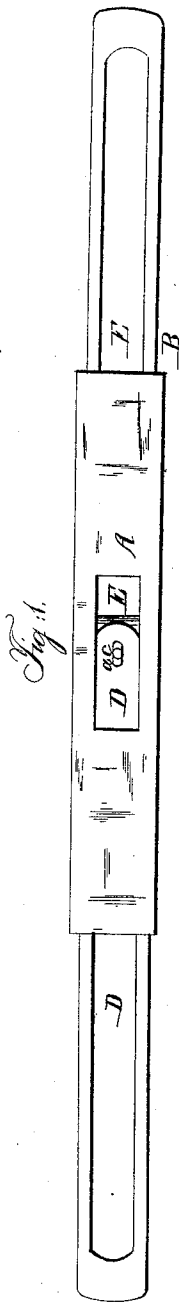


R. S. MORSE.  
Carriage-Spring.

No. 10,188.

Patented Nov. 1, 1853.



# UNITED STATES PATENT OFFICE.

RUSSELL S. MORSE, OF DIXFIELD, MAINE.

## ADJUSTABLE SPRING FOR CARRIAGES.

Specification of Letters Patent No. 10,183, dated November 1, 1853.

*To all whom it may concern:*

Be it known that I, RUSSELL S. MORSE, of Dixfield, in the county of Oxford and State of Maine, have invented a new and  
5 useful Improvement in Adjustable Springs for Carriages and other Purposes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings,  
10 making part of this specification, Figure 1 being a plan of a spring constructed in my improved manner; Fig. 2, a longitudinal vertical section thereof, and Fig. 3 a transverse section thereof through the center.

15 Like letters designate corresponding parts in all the figures.

The nature of my invention consists in the combination of adjustable auxiliary springs with a main or bed spring substantially in  
20 the manner hereinafter fully set forth.

In the first place, I make a spring B, of suitable shape and dimensions for the use to which I mean to apply it, which I call the bed spring. I then make a box A, of suitable  
25 dimensions, form and material, for attaching it to the article, to which it is to be applied; and to the under side of this box I fasten the aforesaid bed spring B, by means of bolts or screws or other suitable device.  
30 I then make a short spring D, to extend from the center of said box, out, at one end near the bottom of it, along over the bed spring to near the end of it; and another similar short spring E, to extend from the center of  
35 the box, the other way, in the same manner; or these short springs may consist of two or more layers of similar springs, one over the other, when found best. These short springs are confined between fulcrums at each end  
40 of the box when they pass out, and extend along above the bed springs so that, by raising the ends which are in the middle of the box, the opposite ends will be pressed down

on the bed spring. They thus perform the functions both of springs and levers. They 45 may be lapped a little in the center of the box, or otherwise connected, but not so as to prevent their being elevated or lowered at pleasure. To raise or lower the ends of these short springs in the center of the box 50 and thus increase or lessen the pressure of the other ends on the bed spring, I make use of a screw C, (or other suitable means,) passing from the under side of the bed spring up through the center of the box, and 55 extending upward so as to bear against the said springs; so that, by turning said screw, the ends of these short springs in the box will be raised or lowered, and their pressure thus increased or diminished as may be 60 found necessary or expedient. A small pin *c*, projecting upward from the top of said screw, and passing through short slots *a, a*, in the springs D, E, so as to allow them proper play but to keep them in place, will 65 be found convenient. The upper part of said box is made to project at each end, through which bolts or screws are inserted to fasten said box to the body of the carriage, or to whatever it is applied to. 70

Having thus fully described my new and useful improvement in adjustable springs, what I claim therein as new and desire to secure by Letters Patent, is—

The adjustable auxiliary springs D, E, in 75 combination with the bed spring (or springs) B, substantially in the manner and for the purpose herein set forth.

The above specification of my new and useful improvement in adjustable springs 80 for carriages and other purposes signed by me this third day of September, 1853.

RUSSELL S. MORSE.

Witnesses:

J. S. BROWN,  
GEO. A. C. SMITH.