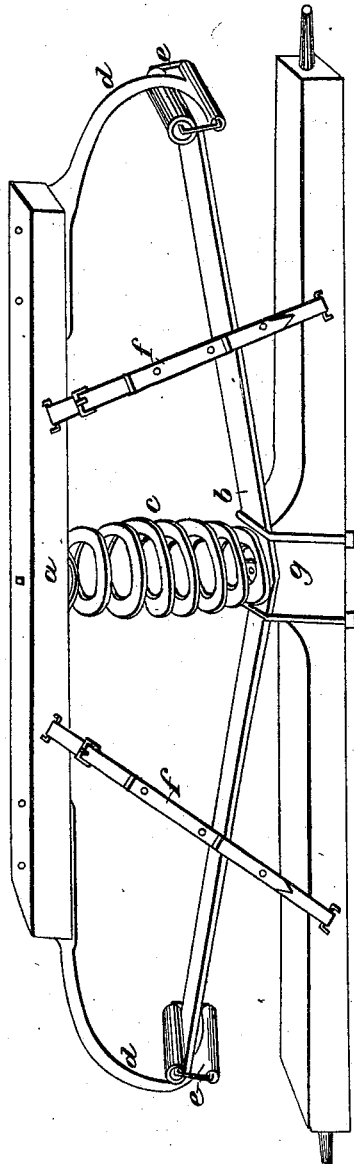


W. PATTON.  
Carriage-Spring.

No. 569.

Patented Jan. 9, 1838.



*Inventor.*  
W. Patton.

# UNITED STATES PATENT OFFICE.

WM. PATTON, OF TOWANDA, PENNSYLVANIA.

## CARRIAGE-SPRING.

Specification of Letters Patent No. 569, dated January 9, 1838.

*To all whom it may concern:*

Be it known that I, WILLIAM PATTON, of Towanda, Bradford county, Pennsylvania, have invented a new and useful Improvement in Carriage-Springs for Vehicles of Pleasure or Burden of Various Descriptions; and I do hereby declare that the following is a full and exact description thereof.

My improvement consists in inserting between the rocker (*a*) of the carriage bed and a single bow or semielliptical spring (*b*) one or more spiral springs (*c*), placed at suitable distances apart, made of flat rods of steel, of from  $\frac{1}{16}$  to  $\frac{1}{2}$  an inch or more in thickness and from  $\frac{1}{4}$  of an inch to one inch or more in width. A single spiral sufficient for a light Dearbourne I usually make of a steel rod about 5 feet long  $\frac{1}{4}$  of an inch thick and  $\frac{5}{8}$  of an inch wide, which I wind edge-wise in round coils equidistant from each other and about  $2\frac{1}{2}$  inches in diameter from outside to outside thereby giving to the outline of the spiral a cylindrical form; which may however be varied to a square, an oblong, a triangular, conical, semicircular or other form according to fancy. The spiral is prepared for fastening it with bolts to the rocker above and semielliptic below by contracting the circle of the coil at each end, leaving the holes to correspond with the size of the bolts which are to pass through them. The rocker is connected with the semielliptic by means of plates or arms (*d*) of iron or other material fastened to and projecting outward from each end of it to the ends of the semielliptic and is then secured to them or suspended from them by connecting links (*e*) or otherwise. The flat wire spiral made as above described may also be advantageously used between straight bars or double bows of wood or other material or be suspended from projecting standards or cross beams. The way to prepare them for the projecting standards or cross beams is by making a long square shouldered swivel and a long bolt on the neck of which the spiral is strung so as to

have it play or spring between the head of the bolt and foot of the swivel. The head of the bolt is lengthened horizontally and gains are cut in each extremity of it to guide it in sliding up and down the arms or sides of the swivel and to give uniformity of action to the spiral. A link or eye is formed on the top of the swivel and also on the lower end of the bolt to connect it with the standards or cross beams and carriage bed. The flat wire spiral made for any of the purposes above mentioned requires but little, if any, temper above the natural temper of the steel.

I sometimes attach a pair of leather straps (*f*) to the rocker and axletree (*g*) diverging downward from near the center of either the inside or outside of the rocker to near the extremity or shoulders of the corresponding side of the axletree to guard against overstraining the semielliptic by the lateral inclination of the carriage bed in passing over sidling ground.

The flat wire spiral accommodates itself with singular facility to a variety of pressure; occupies but little space when pressed together; gives additional strength and security to the spring with which it is combined without impairing its suppleness or limiting its action beyond what is necessary to relieve it from the danger of breaking and prevents whatever it is placed between from coming together with a sudden jolt.

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

The adding to and combining with the semielliptical or "cradle spring," straight bars, cross beams, double bows, or projecting standards, one or more flat wire spiral springs, constructed as above described, in the manner and for the purposes herein set forth and illustrated by the drawing hereto annexed as a part of this specification.

W. PATTON.

Witnesses:

L. H. MACHEN,  
JNO. C. FITZPATRICK.