

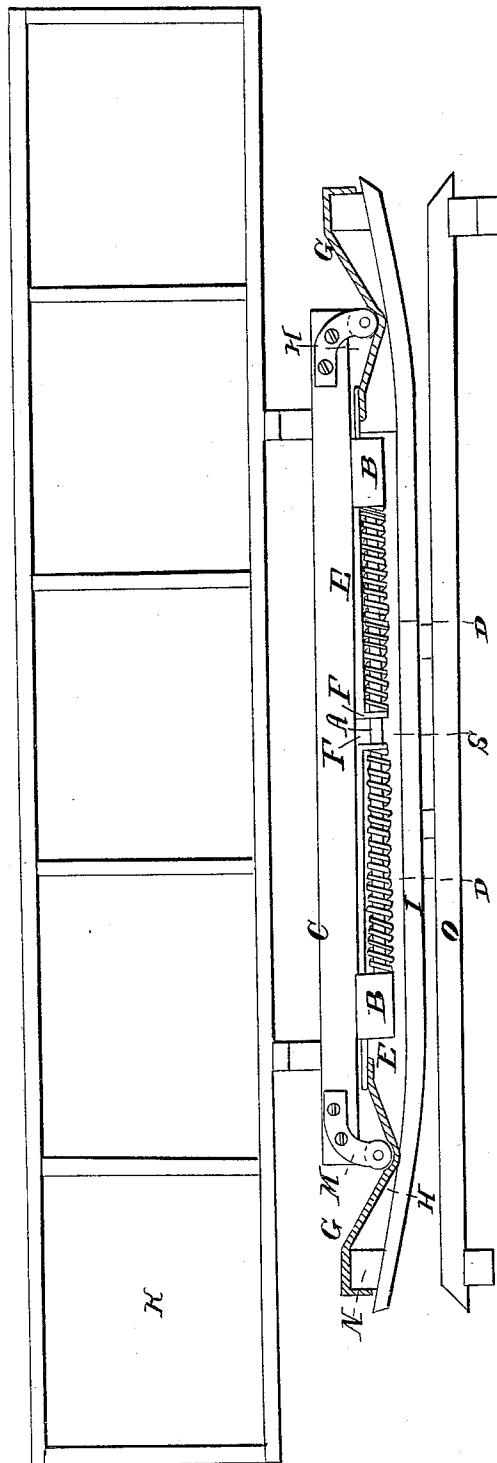
R. B. BROWN.

Carriage-Spring.

No. 2,385.

Patented Dec. 14, 1841.

*Fig. 1.*



# UNITED STATES PATENT OFFICE.

R. B. BROWN, OF ESSEX, VERMONT.

## SPRING FOR CARRIAGES.

Specification of Letters Patent No. 2,385, dated December 14, 1841.

*To all whom it may concern:*

Be it known that I, R. B. BROWN, of Essex, in the county of Chittenden and State of Vermont, have invented a new and useful Improvement in Springs for Carriages, Wagons, &c., which is described as follows, reference being had to the annexed drawing of the same, making part of this specification.

Figure 1 is a side view of a wagon body with springs attached.

This invention and improvement consists in placing under each side rail of the shoe *c* and parallel with the same an iron bar or rod *A* about two thirds as long as said shoe which is held in its place by each end being let into blocks *B* secured to the under side of the shoe *c*.

Around this rod or bar are wound two spiral springs *D D* extending from the inside of each block to near the center of the bar or rod *A* leaving a small space *S* between the springs at the center. Between the under side of the side rails of the shoe and the rod *A* are placed two rods *E E* extending from the outside of each of the blocks *B* through openings in said blocks to the ends of the spiral springs *D* near the center of the bar *A* where they are bent down at right angles and wound around the bar *A* so as to form heads *F F* which act on the spiral springs. To the other end of these bars are attached chains, bands, or

straps *G G* which pass under pulleys *H* turning on an axle between two ears *M* secured to the ends of the rails of the shoe, and are fastened to the cross piece *N* connecting two curved springs *I* together which from their figure are termed grass hopper springs. These grass hopper springs *I* are secured to two longitudinal parallel timbers *O* outside the shoe, which connect the bolster and hind axle tree of the wagon together by means of vertical bolts passing through them and said timbers and being riveted underneath. The carriage body or box *K* is secured to the shoe in any convenient manner.

When the spiral springs from sudden jars heavy loads, or other causes, are compressed the wagon body will have a longitudinal as well as a transverse movement by means of the before described arrangement.

The chair cords or straps *G G* may be attached to the bolster and hind axle-tree instead of the grass hopper springs.

What I claim as my invention and which I desire to secure by Letters Patent is—

The arrangement of the spiral springs *D* rods *E*, straps *G* and rollers *H* in combination with the grass hopper springs for the purpose and in the manner specified.

R. B. BROWN.

Witnesses:

HENRY COLLINS,  
WM. W. INGRAHAM.