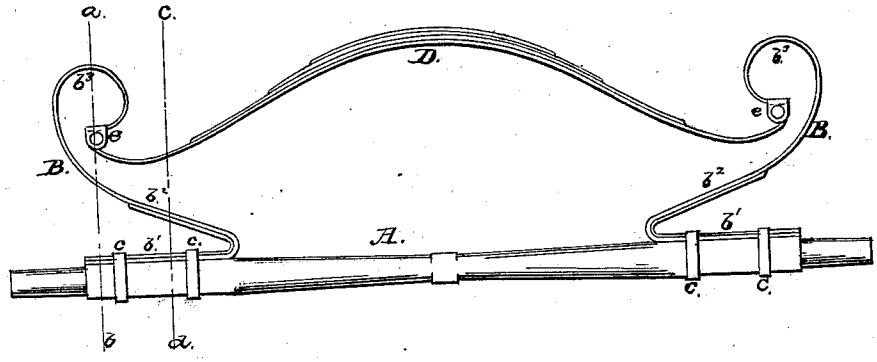
W. TAYLOR.

Carriage-Spring.

No. 50,886. Patented Nov 7, 1865.



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UNITED STATES PATENT OFFICE.

WILLIAM TAYLOR, OF EAST ZORA, CANADA.

IMPROVED CARRIAGE-SPRING.

Specification forming part of Letters Patent No. **50,886**, dated November 7, 1865.

To all whom it may concern:

Be it known that I, WILLIAM TAYLOR, of East Zora, in the county of Oxford, in the Province of Canada, clergyman, have invented a new and Improved Carriage-Spring; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure I is an elevation showing my improved spring as placed and used on a carriage-axle.

The nature of this invention consists in making and using a compound bow and scroll spring, placed upon the outer end of a carriage-axle and near the wheel, in combination with a half-elliptic spring, the said spring being so formed and placed upon the axle that the straight part thereof shall lie upon the axle, the extreme end being close to the collar of the axle, and the straight part running inwardly toward the center of the axle—say from ten to eighteen inches—and then gradually bending outwardly toward the wheel and forming a scroll the outermost curve of which shall stand within two or three inches of the spokes of the wheel, and at the end of the scroll connecting with a half-elliptic spring.

Letters of like name and kind refer to like parts in each of the figures.

A represents a carriage-axle, made of wood or metal in any approved or well-known manner.

B represents my improved compound bow and scroll spring. It is made straight and flat at one end, which straight and flat part is placed upon the axle, as shown at b', and may be from ten to eighteen inches in length, and is secured to the axle by bolts or clips, as shown at *c*. It then bends outwardly and upwardly, as shown at b^2, and is extended and formed into a scroll, as shown at b^3. One of these springs is placed upon each end of the axle, as shown in the drawings, and connected with a half-elliptic spring, D, by an ear and bolt, as shown at *e*. This spring may be made of two or more leaves of spring-steel, as may be required to give it the requiste strength and elasticity. The half-elliptic spring D may be made in any common and well-known manner.

The advantages of this improvement are—

First, it secures in its construction and combination a longer spring, and hence greater elasticity.

Second, it is better adapted to light and heavy loads than other forms of spring. With a light load the great length of the elastic part of the spring insures ease and elasticity of movement. If the load is increased to a heavy load, so as to bring the elliptic spring D down into contact with bow-spring between the lines *a b c d*, the elasticity of the spring B is not thereby destroyed. It is only slightly lessened. It still retains all the elasticity required for a heavy load.

Third, it brings the weight of the load mainly upon the axle near the wheels, and hence a lighter axle can be used than when springs of ordinary construction are employed.

Fourth, on account of the superior elasticity of the spring, and its position upon the axle, a greater durability of the carriage is secured.

This improvement is applicable to carriages, buggies, "democrat" wagons, and similar vehicles.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

The compound bow and scroll spring B, in combination with the elliptic spring D, constructed and applied for the purposes and substantially as described.

WILLIAM TAYLOR.

Witnesses:

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