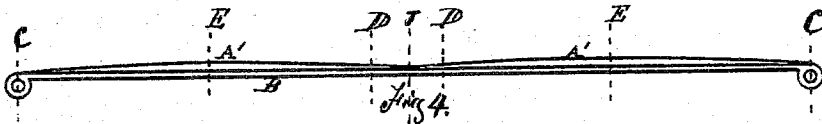
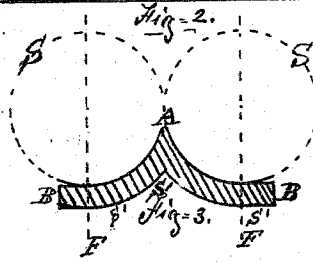
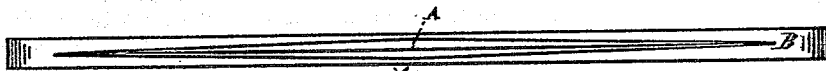
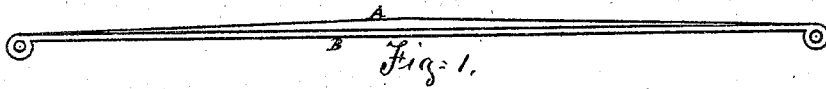


C. W. SALADEE.

Improvement in Springs for Vehicles.

No. 124,220.

Patented March 5, 1872.



Witnesses.

Edm. F. Brown.

G. Weston

Inventor.

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UNITED STATES PATENT OFFICE.

CYRUS W. SALADEE, OF ST. CATHARINE'S, CANADA.

IMPROVEMENT IN SPRINGS FOR VEHICLES.

Specification forming part of Letters Patent No. 124,220, dated March 5, 1872.

SPECIFICATION.

Be it known that I, CYRUS W. SALADEE, of St. Catharine's, in Dominion of Canada, have invented certain new and useful Improvements in Side and Elliptic Springs for Wheeled Vehicles, of which the following is a specification embodying my invention:

My invention relates to the formation of side and elliptic springs for wheeled vehicles, the principal object being to construct them from a single leaf or plate of steel, and support and strengthen the same by means of a rib or ribs raised upon the surface by the peculiar formation or shape of a corrugation or indentation made into the reversed side or surface of the plate.

In the drawing, Figure 1 is a side view of a single-plate spring, B, showing the rib A formed upon the top surface by a corresponding indentation made into the under surface, and showing the plate as it appears before being bent into the usual form.

Fig. 2 is a top view of Fig. 1, showing the form of the rib A, which is raised upon the top surface, as above described, and as clearly shown by the circular dotted lines S S in the center cross-section of the plate in Fig. 3, and by the corresponding curves S' S' of the lower edge, which latter represents the form of the indentation in the surface of the plate opposite the rib A, and by which the rib is formed, as already shown and described. As the rib A tapers gradually, both in width and depth, from the cross-center of the spring to the ends, the peculiar form thus imparted to the plate B, Fig. 3, will give the required strength and elasticity, as well as impart a degree of lightness not attained in the spring composed of a number of plates, one washing on top of the other.

Figs. 4 and 5 represent another modification of my invention in single-plate springs. By practical tests it has been established as a fact that the breaking strain upon springs of this form is found to be at points somewhere between the cross-center and extreme ends of the plate or spring. By reference to the dotted lines across the figures last above mentioned, C C are the

ends of the plate; I, the center; E E, the centers between the center I and ends C of the spring. The center of the spring between the lines D D is amply supported by being firmly clipped to the under side of the spring-bar on which the body of the vehicle rests, while the extreme outer ends C C are supported in their usual bearings, and at which latter point little or no strain is imposed upon the plate B. Plainly, then, the breaking point of the plate must be somewhere midway between D and C, and about the locality of the cross-line E. To strengthen the plate throughout that portion most liable to break, as above recited, I make use of two ribs, A' and A', a side view of which is seen in Fig. 4, and a top view in Fig. 5. These ribs may be rolled or stamped solid with the top surface of the plate, or may be raised by an indentation rolled or stamped into the opposite surface of the plate, substantially as shown and described in the other figures, 1, 2, and 3; and, like the ribs in the last-named figures, those in Figs. 4 and 5 are widest and deepest at their cross-center E, and tapering off to nothing, or nearly so, at both ends.

Claims.

I claim as my invention, and desire to secure by Letters Patent—

1. In springs having one plate, B, or more, the rib A, raised upon the surface of the plate by impressing or rolling into the opposite surface an indentation corresponding with the shape of the rib, substantially as described, and as clearly shown by center cross-section in Fig. 3.

2. In single-plate springs, ribs A' A' raised upon the surface of the plate B between the center J and ends C C of the plate, having the deepest and strongest portion of the rib at E, midway between the center and ends of the plate, or nearly so, substantially as and for the purpose set forth.

CYRUS W. SALADEE.

Witnesses:

EDM. F. BROWN.
C. BESTOR.