D. McVAW.

SIDE-BAR WAGON.

No. 174,968. Patented March 21, 1876.

Fig. 1.

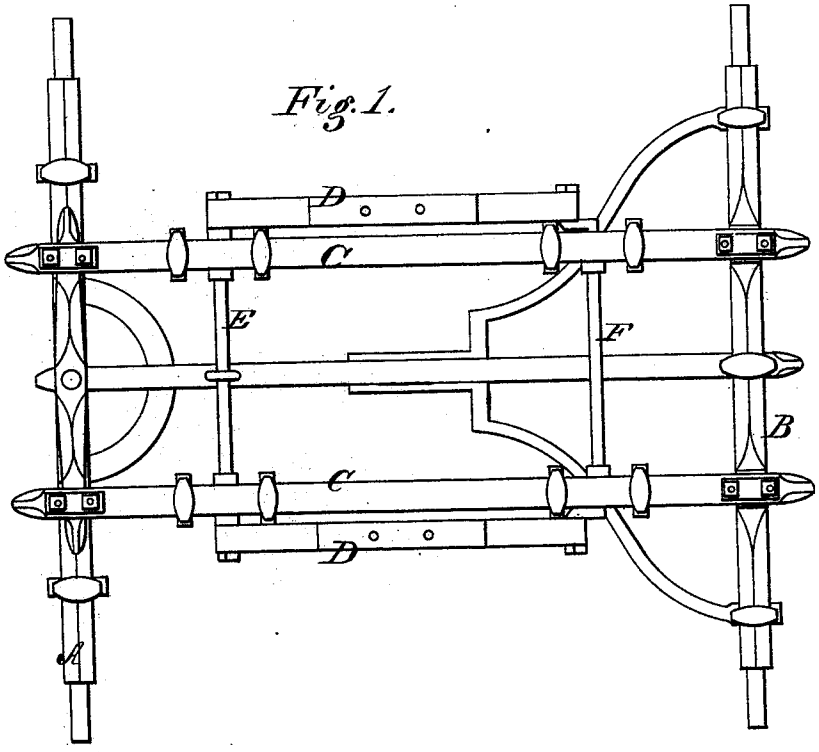
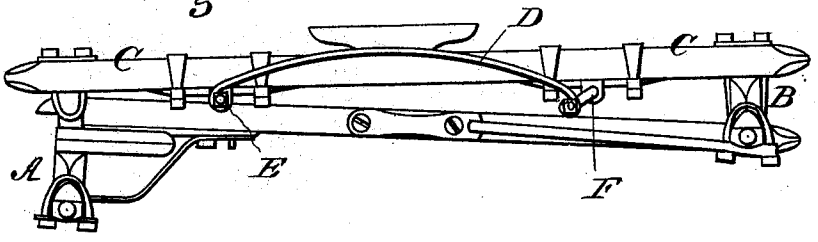


Fig. 2.



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UNITED STATES PATENT OFFICE.

DANIEL McVAW, OF GALLATIN, TENNESSEE.

IMPROVEMENT IN SIDE-BAR WAGONS.

Specification forming part of Letters Patent No. **174,968**, dated March 21, 1876; application filed September 9, 1875.

To all whom it may concern:

Be it known that I, DANIEL McVAW, of Gallatin, in the county of Sumner and State of Tennessee, have invented certain Improvements in Side-Spring Carriages, of which the following is a specification:

My invention relates to side-spring buggies or road-wagons; and consists in the combination of two longitudinal side or reach bars with two longitudinal side springs supported thereon by means of a transverse rod and crank-shaft, or two crank-shafts, as hereinafter described, whereby the action of the two springs is equalized, and at the same time advantage taken of the elasticity of both the springs and the side bars.

Figure 1 represents a top-plan view of my improved carriage-frame; Fig. 2, a side elevation of the same.

A represents the forward axle; B, the rear axle; and C C, the two side or reach bars, forming a rigid connection between the rear axle and the bolster or sill of the forward axle in the ordinary manner. D D are two semi-elliptical steel springs, arranged outside of and parallel with the bars C. E is a transverse rod mounted in saddles or bearings attached to the bars C, with its ends passed through or otherwise connected to the forward ends of the springs. F is a rock-shaft, mounted in bearings on the bars C, and provided at its ends with cranks which receive the rear ends of the springs, as shown in both figures. The body of the carriage will be connected by pillow-blocks, or in any other suitable manner, to the middle of the two springs, which will receive its entire weight and leave it entirely free and independent of the frame.

The crank-shaft and the rod E may be sustained in bearings of any suitable construction, either above or below the side bars C, according to the desired height of the body, and the bearings may be secured to the bars by clips, as shown, or by bolts, rivets, or other suitable fastening devices.

When the parts are in action the weight received upon the springs, flattening and elongating them, causes them to turn the cranks backward. As the two cranks are formed rigidly on the opposite ends of the said shaft, weight applied to either spring alone will transmit motion, through the shaft, to the other spring, which will also be caused to operate to the same extent as the first, so that, although the whole or the greater part of the weight may be on one side of the carriage, the strain will be distributed equally between the two springs, and the body maintained at all times in a horizontal position, and at the same time advantage taken of the elasticity of the side or reach bars, which are made light and flexible.

By hanging the springs on the outer sides of the bars in the manner shown I am enabled to set the bars inward close together and to sustain the springs at such height that the forward wheels can swing well under the body, and admit of the carriage turning in a small space.

Although the combination of the rod and the crank-shaft for sustaining the springs is considered the best arrangement for carriages to be used on smooth roads and for speeding purposes, it will be better, when the carriages are intended for rough roads, to employ two crank-shafts—one at each end of the springs—for the reason that they will permit an easy swinging or oscillating motion of the body without affecting the action of the parts in other respects.

Having thus described my invention, what I claim is—

The combination of the side bars C, the transverse rock shaft or shafts F hung upon the side bars and provided with the outside cranks, and the springs D, having their ends hung upon said cranks outside of the bars C, as shown, whereby the action of both springs is rendered equal, advantage taken of the elasticity of the bars, and the wheels of the carriage permitted to pass under the springs in making a short turn.

DANIEL McVAW.

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