

(No Model.)

C. D. LE GRAND.
SIDE BAR WAGON.

No. 249,471.

Patented Nov. 15, 1881.

FIG. 1.

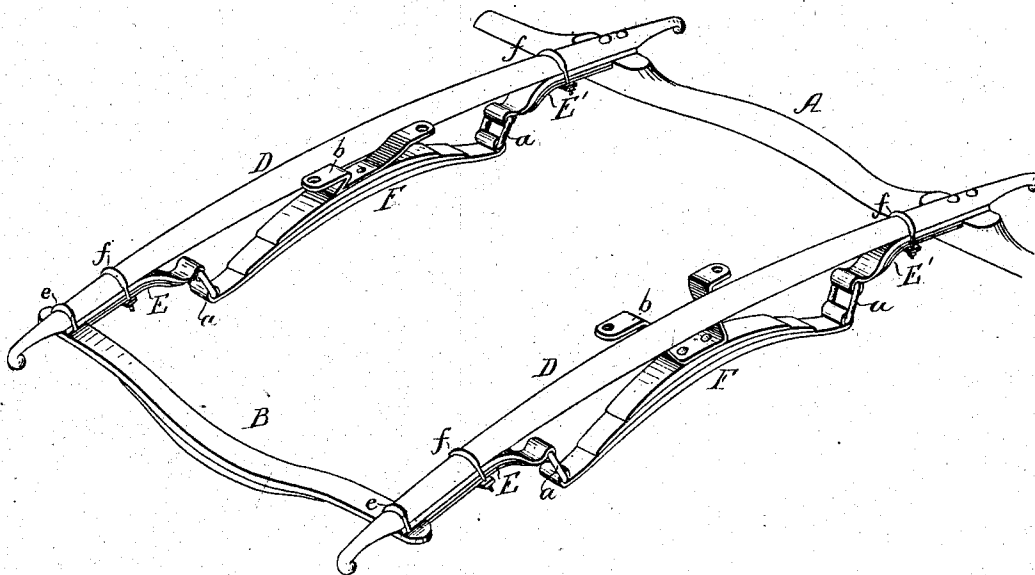


FIG. 2.

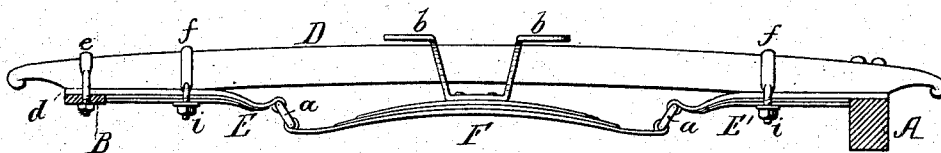
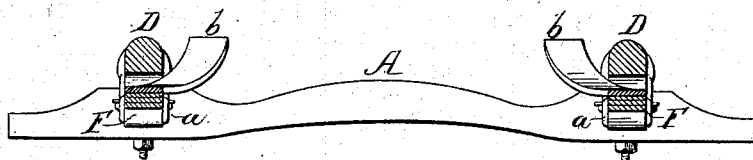


FIG. 3.



Witnesses
James F. Tobin.
Harry Smith

Inventor
Charles D. LeGrand
by his Attorneys
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UNITED STATES PATENT OFFICE.

CHARLES D. LE GRAND, OF WILKES-BARRÉ, PENNSYLVANIA.

SIDE-BAR WAGON.

SPECIFICATION forming part of Letters Patent No. 249,471, dated November 15, 1881.

Application filed May 23, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES D. LE GRAND, a citizen of the United States, residing in Wilkes-Barré, Luzerne county, Pennsylvania, have invented certain Improvements in Side-Bar Wagons, of which the following is a specification.

The object of my invention is to provide an elastic support for the body of a side-bar wagon without interfering with the proper strength of the supporting structure, and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the body-supporting frame of the wagon constructed in accordance with my invention; Fig. 2, a longitudinal section of the same, and Fig. 3 a transverse section.

A is the rear axle of the wagon, and B the spring which rests upon the front axle, D D being the opposite side bars, supported at the ends upon said spring and axle.

Secured to the under side of each side bar, D, adjacent to the front end of the same, is a short spring, E, a similar spring, E', being secured to the under side of each bar adjacent to the rear end of the same; and from the springs E E' of each bar is suspended, by means of links *a a*, a central spring, F, carrying one of the brackets *b*, to which the wagon-body is secured, these brackets being inclined inward, so as to support the wagon-body between the side bars and permit the free vertical vibration of the same.

It will be seen that the supporting structure possesses the combined elasticity of the side-bars, the end springs, E E', and the central

springs, F, so that an easy-riding wagon is insured, the arrangement of the springs directly beneath the side bars resulting in compactness and imparting a neat appearance to the vehicle. The end springs, E E', are rigidly secured to the side bars by means of the usual yokes, *f*, and nuts *i*; and in addition to this fastening one of the plates *d* of each spring E projects over the spring B, and is secured thereto by the yoke *e*, which fastens the side bar to the spring, the springs E' being likewise secured to the rear axle by the confining-bolts of the side-bars.

I claim as my invention—

1. The combination of the springs E E', adapted to be secured to the side bars of the wagon, with the springs F, suspended from the springs E E', and carrying the body-supporting brackets *b*, as set forth.

2. The combination of the supporting-spring B and axle A, the side bars, D, and the springs F, with the springs E E', carrying the springs F, and having projecting plates *d* secured to the said spring B and axle A by the bolts which secure the side-bars, as set forth.

3. The combination of the springs F, having the body-supporting brackets *b*, the springs E E', adapted to be secured to the side bars, and the links *a*, whereby the springs F are suspended from the springs E E', as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHAS. D. LE GRAND.

Witnesses:

MONTVILLE YOUNG,
HENRY W. SMITH.