

J. M. VANDERZEE.
Wagon-Springs.

No. 156,071.

Patented Oct. 20, 1874.

Fig. 1.

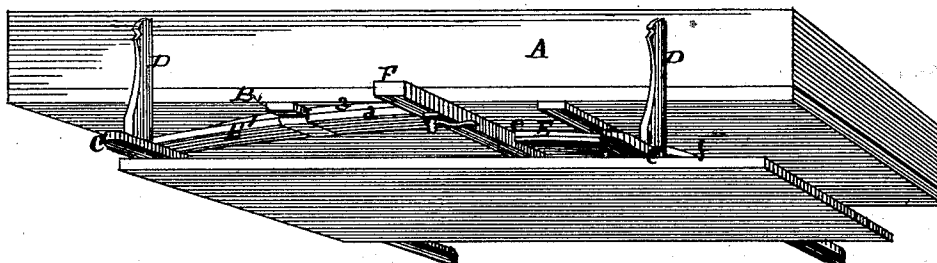


Fig. 2.

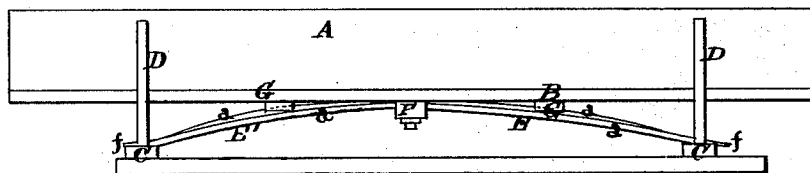


Fig. 3.

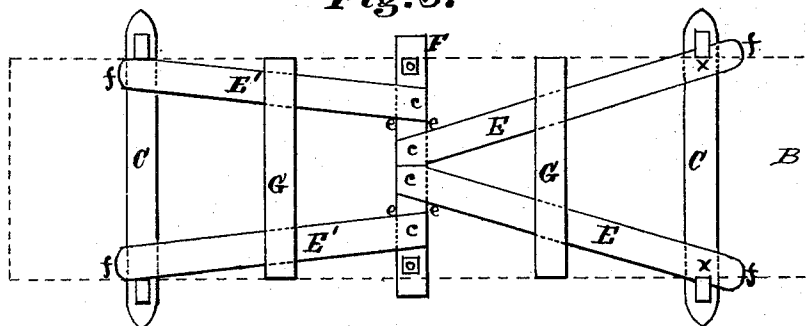
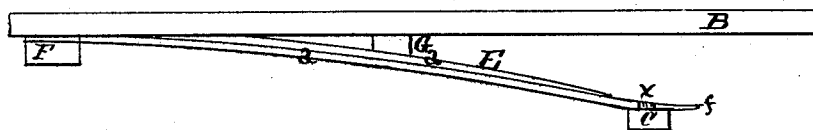


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN M. VANDERZEE, OF BETHLEHEM, NEW YORK.

IMPROVEMENT IN WAGON-SPRINGS.

Specification forming part of Letters Patent No. **156,071**, dated October 20, 1874; application filed January 9, 1874.

To all whom it may concern:

Be it known that I, JOHN M. VANDERZEE, of the town of Bethlehem, county of Albany, State of New York, have invented certain new and useful Improvements in Springs for Draft or Farm Wagons; and I do hereby declare that the following is a description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a perspective view of a body or box of a draft or farm wagon with the improved springs applied. Fig. 2 is a side view of the same. Fig. 3 is a vertical view of the arrangement of the springs and bars used with the same, with the body or bottom removed. Fig. 4 is a longitudinal sectional view of the spring and its bars on an enlarged scale.

My invention relates to certain improvements in the springs of wagons for carrying heavy loads; and consists in the peculiar construction and arrangements of springs and bars with the box, platform, or rack of a wagon and the bolsters of the same, which I will hereinafter fully describe to enable others skilled in the art to make and use the same, the same letters indicating like parts.

In the drawings, A represents the box of a wagon. B is the body. C C are the bolsters. D D are the stakes, all of which are old and well known.

It is well known that the springs of vehicles take from the load the shock of any concussion, and also relieve the wheels and gearing from the force of the shocks which otherwise would be given when moving over rough ground, and that the usual form of springs now employed is very expensive, and if made oil-tempered, to endure weight without flattening down, they will be liable to be broken in the rebound when lightly loaded. It is also well known that such springs cannot be applied to common farm-wagons without materially altering their manner of construction, and increasing their cost.

The springs E E' used by me consist of one or more strips of tough elastic hard wood, *a a*, made from hickory, ash, oak, or similar elastic timber, having a width of from four to six

inches, and a thickness of from one inch to one and one-half inch, more or less, according to the load the springs are to carry. When made of two or more pieces, *a a*, they are laid over each other, as shown in Fig. 4. The said springs consist of four, arranged as shown by full lines in Fig. 3, in which the springs E are made separately from the springs E', and constructed of short pieces, as shown in Fig. 4. I secure their ends *c c* against the under side of the body, bottom, or platform, as shown by the central supporting-bar F, and secure them from shifting by means of the notch *e* made in the said bar, and receiving the said ends, as shown in Figs. 1 and 4. I then place between the ends *c c* at the said central bar and their ends *f f* the bearing-bars G G, against the lower side of which the upper surface of the springs rest. The ends *f f* rest on the bolsters H H, and are not secured to the same, but lie loosely upon them. In the edges of each of the front springs E, I make a notch, *x*, as shown in Figs. 3 and 4, corresponding in width with the thickness of the stakes D they are to receive, which notches are to act with the stake to prevent the box or rack from being shifted longitudinally in either direction.

It is apparent that the springs may be made of steel, or steel and wood combined, as the use of such materials would not require any invention, but only change of manner in workmanship and skill.

By these improvements, an ordinary farm-wagon, whether carrying a box, platform, or rack for hay, wood, or farm-produce, can be made to have an elastic support above the gearing, so as to prevent the excessive shocks or jolts now incident to such wagons when drawn over rough roads, and that they can be constructed and applied by the farmer or a wagon-maker with but little expense.

It will be readily seen that with this form and arrangement of springs above described, having their inner ends supported by a central bar against the bottom of the body, and their centers of length supported by the bearing-bars, with their ends resting on the bolsters in a loose manner, that the springs may be made sufficiently strong to support a con-

siderable load without breaking down, and that they will not be liable to break in a rebound.

Springs have been applied to wagon-seats as follows: Strips of seasoned timber, or a combination of the same, each forming a spring, have been mortised to a beam at the center of the seat, or pivoted at said point, provided with leverage-bars in close proximity to the said beam, and connected by ties near their outer extremities, the entire strain coming near the inner extremities of the springs. I secure the inner extremities of the springs to the box or rack, &c., and provide them with bearing-bars at their longitudinal centers, which connect them to the box or rack, &c., and I entirely dispense with the ties at the outer extremities, thus distributing the strain

throughout the springs. I make no claim to the application of springs to the seat as heretofore known and practiced.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

In combination with the box of a wagon, the springs E E', having the bearing-bars G G interposed centrally between their upper surfaces and the bottom of the box, their inner ends supported by the supporting-bar F, and their outer ends resting loosely upon the bolsters H H, substantially as and for the purposes set forth.

JOHN M. VANDERZEE.

Witnesses:

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