A. J. WHITE.

SPRING-SEAT AND REACH FOR VEHICLES.

No. 194,201. Patented Aug. 14, 1877.

Fig. 1.

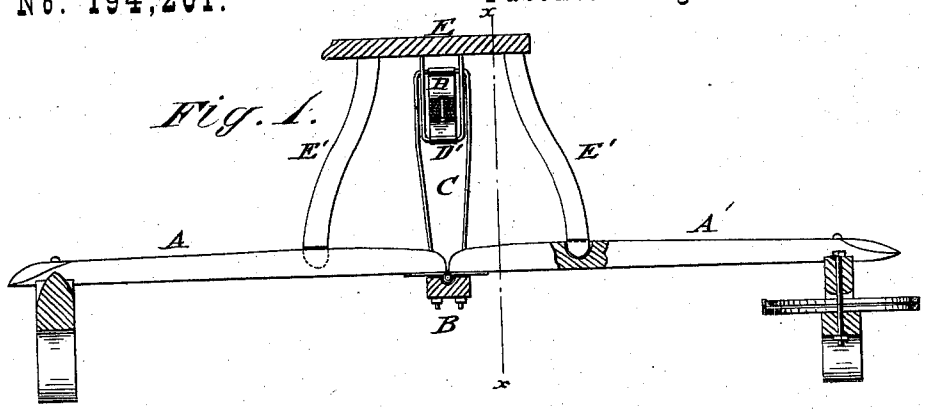


Fig. 2.

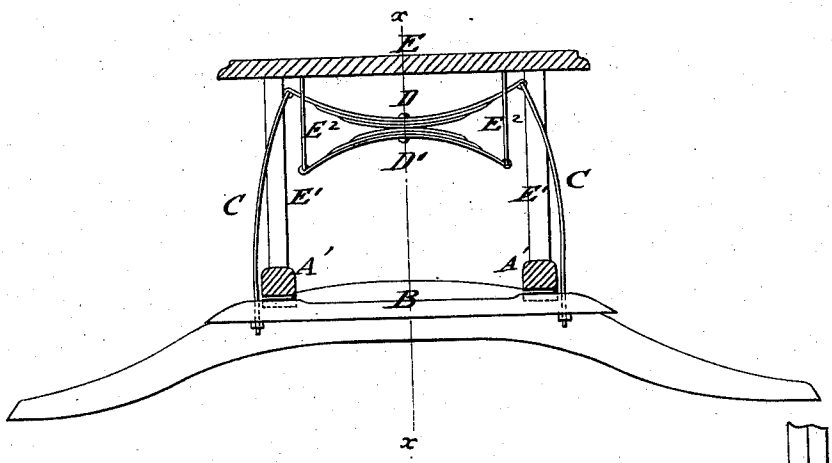
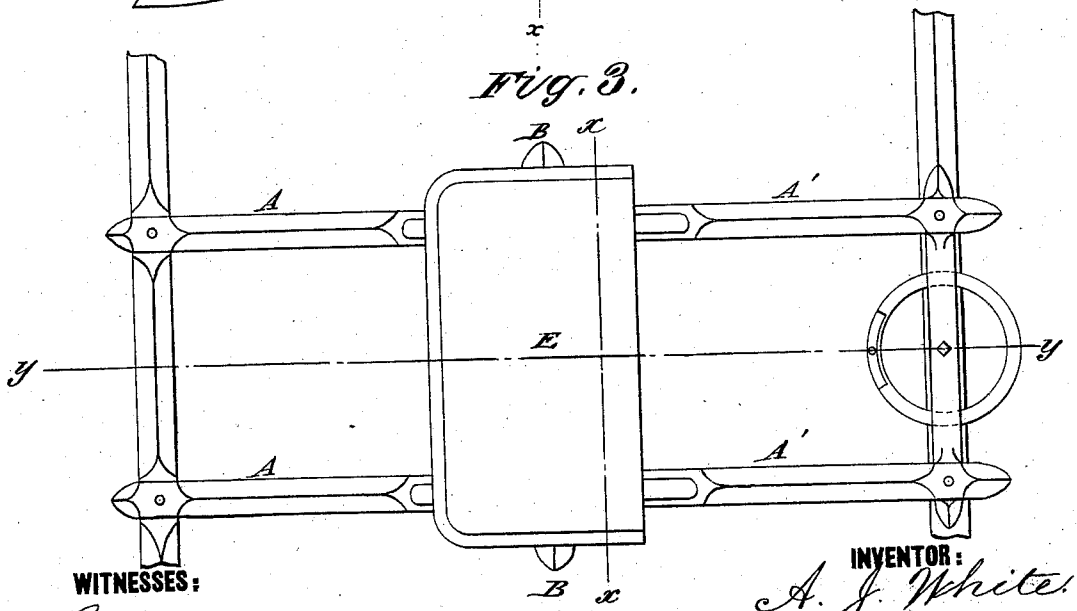


Fig. 3.



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ADONIJAH J. WHITE, OF CASTILE, NEW YORK.

IMPROVEMENT IN SPRING-SEAT AND REACH FOR VEHICLES.

Specification forming part of Letters Patent No. **194,201**, dated August 14, 1877; application filed May 28, 1877.

To all whom it may concern:

Be it known that I, ADONIJAH J. WHITE, of Castile, in the county of Wyoming and State of New York, have invented a new and Improved Spring-Seat and Reach, of which the following is a specification:

In the accompanying drawings, Figure 1 represents a vertical longitudinal section on line *y y*, Fig. 3, of my improved spring-seat and reach; Fig. 2, a vertical transverse section on line *x x*, Figs. 1 and 3; and Fig. 3, a top view of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to an improved spring-seat and reach for wagons which combines lightness and elasticity with a simple and cheap construction; and the invention consists of a centrally-hinged reach in connection with a cross-brace supported by rods from the upper section of an elliptic spring, which is centrally attached to a second elliptic spring arranged convexly to the former, and suspended from the bottom of the seat by means of rods or loops. The seat rests by tenoned arms in mortises of the reach-sections, in front and rear of the hinge-connection of the same.

In the drawings, A A′ represent the reach of my improved wagon, which is constructed somewhat in the nature of a side-spring wagon, the reach resting on the front and rear bolsters of the axles. The reach is made of two parallel pieces, which are each made of two separate reach-sections, A A′, of equal length, or nearly so, that are hinged together at the under side, so as to "give" at that point. The hinged joint of the reach-sections rests on a cross-piece, B, to the ends of which are bolted spring-rods C, of inverted-U shape, which are connected at the upper end to an elliptic spring, D.

The wagon-seat E is supported on four arms, E′, which rest loosely by their tenoned ends in mortises of the reach-sections, equidistant from the hinge-joint—two in front and two back of the same.

The seat E is provided with bottom U-shaped loops or rods, which serve to suspend a second elliptic spring, D′, that is centrally bolted to the upper spring D′, and arranged convexly to the same. The pressure on the seat is directly transmitted to the reach-section and cross-brace, which cross-brace is suspended from the springs D D′ and seat E.

The suspended springs, in connection with the flexible reach and cross-brace, impart to the seat the required elasticity, so that it does not raise or throw the rider on rough roads, but cushions the weight of the same in agreeable manner.

A pin on the rim of the fifth-wheel prevents the wheels from striking the side of the wagon when turning.

The wagon can, by the combined spring-seat and jointed reach, be made light, cheap, and durable, so as to exert less strain on the horse, and furnish an easy-going and comfortable wagon.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of the hinged reach-sections A A′, cross-brace B, rods C, spring D, convexly-attached spring D′, suspended from the seat E, which rests on the reach-sections, substantially as and for the purpose specified.

2. The combination of the jointed reach, having mortises for the seat-arms E′, seat E, and cross-brace B, secured below hinge-joint of reach, substantially as specified.

ADONIJAH J. WHITE.

Witnesses:

A. J. TALLMAN,

GEO. L. WASHBURN.