(No Model.)

A. O. SMITH.

WAGON SPRING.

No. 393,489. Patented Nov. 27, 1888.

Fig. 1.

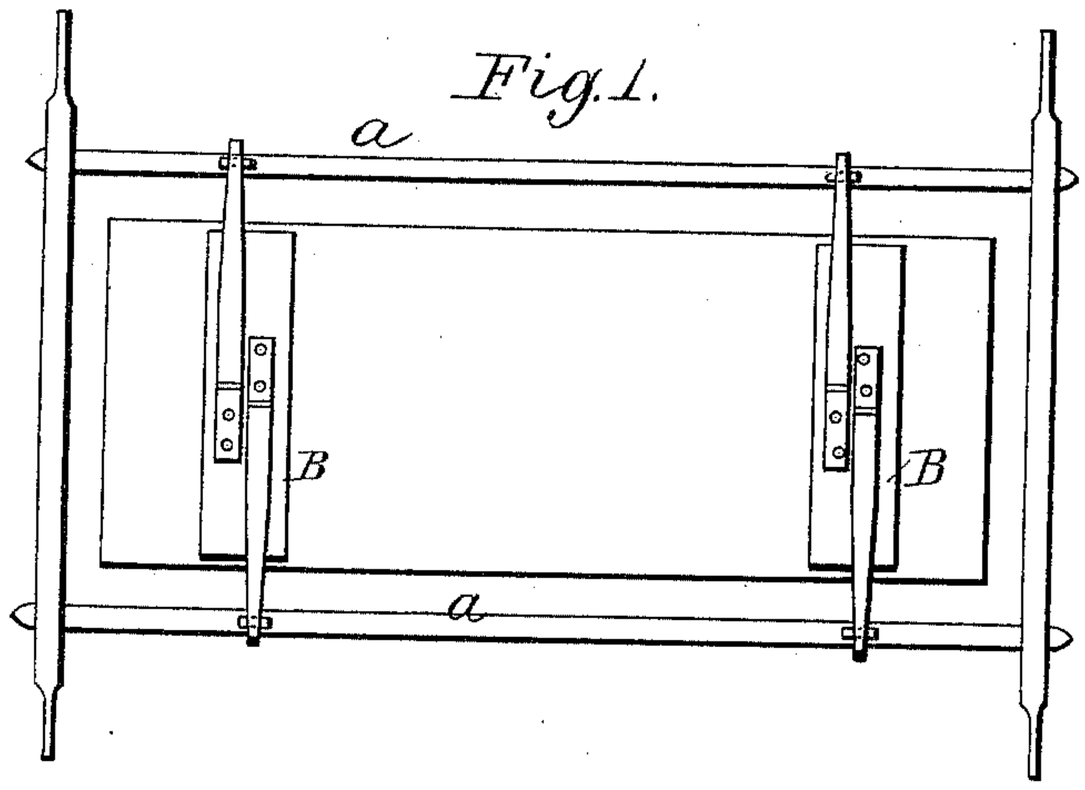


Fig. 2

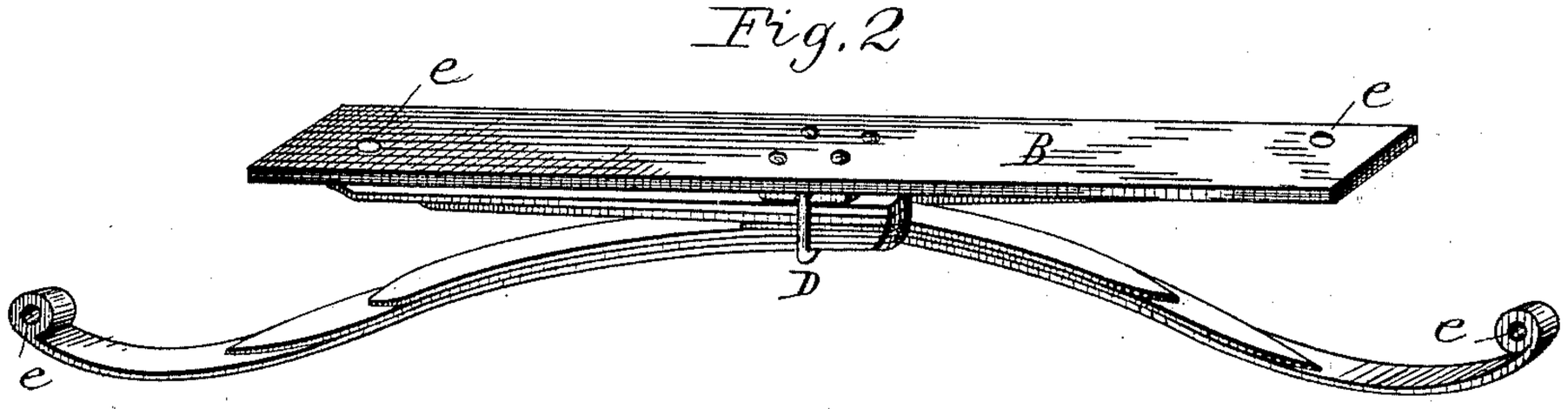
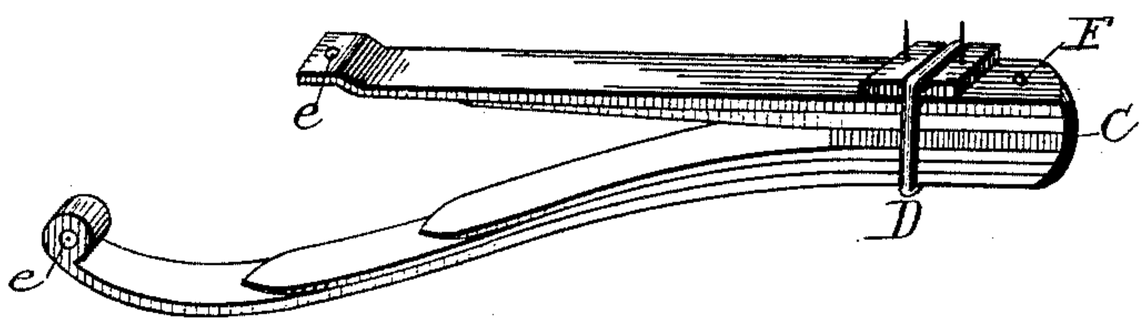


Fig. 3.



Witnesses.
E. M. Wooster.
M. H. Wooster.

Inventor:
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UNITED STATES PATENT OFFICE.

AI O. SMITH, OF NORTHFIELD, VERMONT.

WAGON-SPRING.

SPECIFICATION forming part of Letters Patent No. 393,489, dated November 27, 1888.

Application filed November 9, 1887. Serial No. 254,721. (No model.)

To all whom it may concern:

Be it known that I, AI O. SMITH, of Northfield, in the county of Washington and State of Vermont, have invented a new and useful Wagon or Vehicle Spring, of which the following is a full and complete description, reference being had to the annexed drawings and letters marked thereon.

Figure 1 of the drawings is a bottom view of a wagon, showing my springs attached thereto. A A are side bars to the wagon, and B B are spring-bars with my spring attached thereto and to the side bars of the wagon. The spring-bars form sectional portions of the floor of the wagon-body.

Fig. 2 is the spring-bar detached from the wagon with my spring secured thereto.

Fig. 3 is a double-acting spring having upper and under bearings, and represents one of the four double springs shown in Fig. 1. C is a divider secured to the upper spring member and to the lower spring in Fig. 3, separating the upper and under spring, preventing the springs from coming together, which device causes the spring to maintain its elasticity under light and heavy pressure. D is a spring-holder secured to the spring-bar in a firm manner by means of a plate having a raised slot or groove in which the holder is placed, and the plate is secured to the spring-bar by means of bolts. This construction allows the holder to move backward and forward as pressure is brought to bear on the springs. *e e e e* of the ends of the four double springs are secured, respectively, to the side bars and spring-bars, the upper free end of the springs to be secured to the spring-bar in a rigid manner and the lower spring to the side bar in any usual way.

The springs are composed of metal having a spring-temper, and are fastened together at F in a firm manner, preferably with bolts, and the ends *e e e e* of the springs are secured to the spring-bars and side bars at their respective ends, and held at F in a spring-holder located near the center of the spring-bar.

By moving the spring-holders on the spring-bars any desired length of spring can be secured, which regulates the elasticity of the springs to the load designed to be carried.

What I claim as new, and for which I ask Letters Patent to be granted me, is—

1. The combination, with the spring-bar and side bars of a wagon, of a double-acting spring having a divider rigidly secured to the upper and under spring, as and for the purpose set forth.

2. The combination, with the spring-bar and side bars of a wagon, of a spring having upper and under bearings, as hereinbefore described, the upper free ends of the springs to be secured to the spring-bar in a rigid manner, and the rear ends of the springs held to the spring-bar by means of a spring-holder constructed to move backward and forward as pressure is brought to bear on the springs, as and for the purpose set forth.

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

AI O. SMITH.

Witnesses:
E. M. WOOSTER,
M. H. WOOSTER.