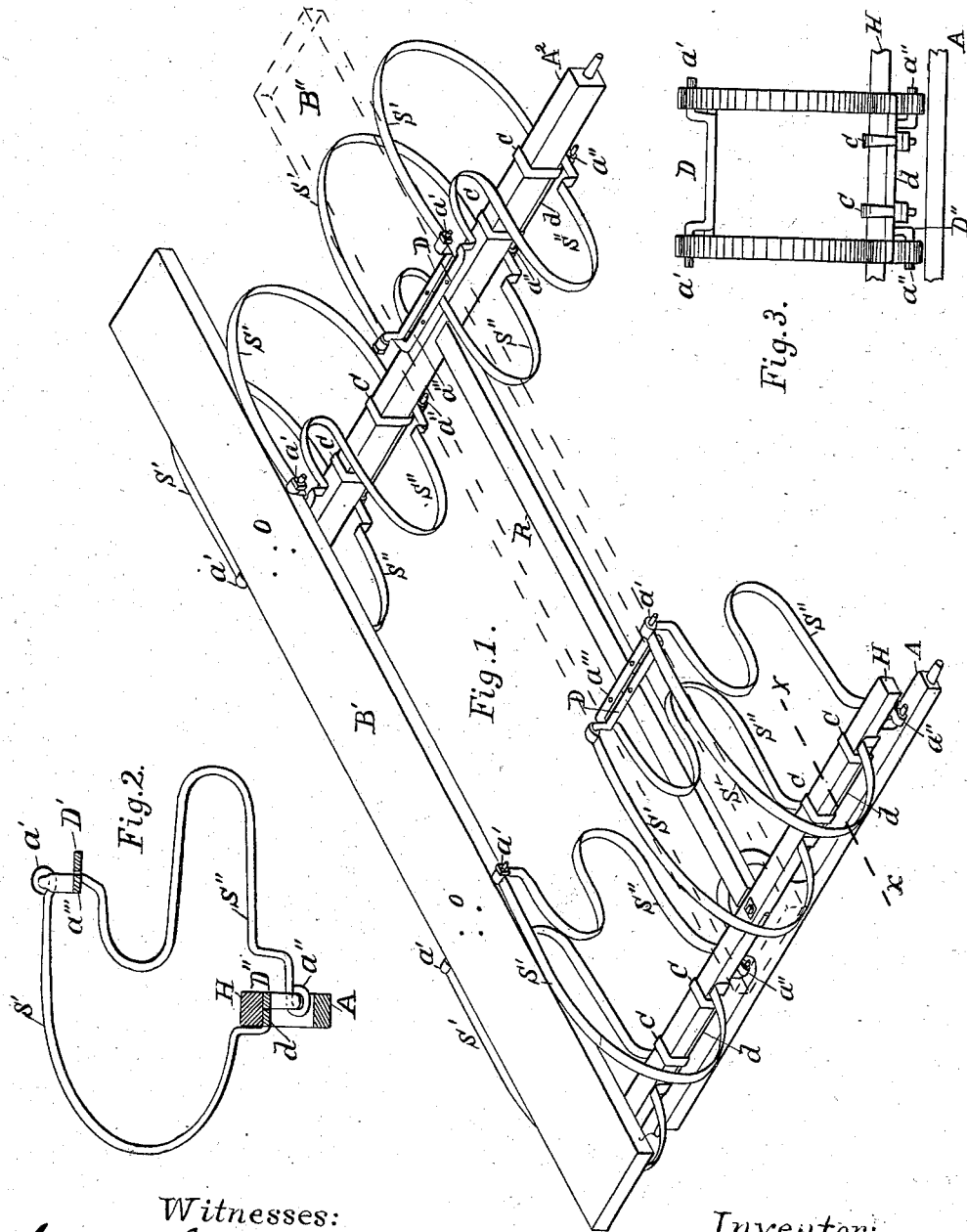


(No Model.)

W. H. VINES.
SPRING BOARD WAGON.

No. 264,911.

Patented Sept. 26, 1882.



Witnesses:
Charles S. Brintnall
Wm A. Sax.

Inventor:
William H. Vines
By W. E. Hagan his atty

UNITED STATES PATENT OFFICE.

WILLIAM H. VINES, OF MELROSE, NEW YORK, ASSIGNOR OF ONE-HALF TO
JOHN O. WING, OF SAME PLACE.

SPRING-BOARD WAGON.

SPECIFICATION forming part of Letters Patent No. 264,911, dated September 26, 1882.

Application filed May 8, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. VINES, of the village of Melrose, county of Rensselaer, and State of New York, have invented a new and useful Improvement in Spring-Board Wagons, of which the following is a specification.

My invention relates to improvements in spring-board vehicles or wagons; and it consists, as will hereinafter be more fully described, in the manner of constructing and arranging supporting-springs which are placed between the spring-boards and the head-block at the front ends of the boards, and between the rear ends of the latter and the rear axle.

In the accompanying drawings, forming a part of this specification, there are three figures illustrating my invention, the same letter-reference for the designation of the several parts being used in all of them.

Figure 1 shows in a perspective view the device and its parts containing my invention and as appearing with the position of one of the boards indicated by a dotted line. Fig. 2 shows a vertical section taken through one of the top and bottom springs, head-block, and front axle where the board attaches. Fig. 3 illustrates a front elevation of one set of the springs and, in part, the head-block and front axle.

The several parts of the device are designated by letter-reference, and their co-operating connection described as follows:

There are two upper springs and two lower springs attached to each of the ends of the spring-boards B'B'', the latter board being designated by a dotted line. The upper springs, S' S', are C-shaped, and their lower united ends are attached to the under side of the head-block H at *d* by means of the clips C C. The upper ends of the springs S' are eyeleted or journaled to receive the upwardly-projected arms of the stirrups D, to which latter the spring-boards B'B'' attach. The lower springs, S² S², are S-shaped, with the lower curvature vertically deeper and laterally more extended than the upper curve. These lower springs, S², are united at their upper ends by a flat bar connection, A''', which is arranged to be horizontally parallel with the stirrup-bars of the upper springs where the boards attach to the bar

A'''. Where the lower ends of the springs S² S² attach to the head-block they are eyeleted or journaled to receive the arms of the inverted stirrup D'', the bar of the latter and the flat bar connecting the lower ends of the springs S' S' being placed side by side beneath the head-block, and there secured to the latter by the clips C C. The rear upper springs, S', and the rear lower springs, S², of each set are connected to the rear axle in relatively the same manner as the springs S' and S² at the front are connected with the head-block, the upper springs in both cases projecting outwardly from their attachment to the boards and head-block and boards and axle, and the lower springs projecting inwardly from such attachment toward each other, with the head-block and rear axle connected by the reach R. The boards have thus a set of springs at each end, connected, as before described, with the head-block at the front and the back axle at the rear, and these springs are connected to the boards by means of the stirrups D on the upper springs and the flat bar connection A''' in the upper ends of the lower springs, as designated at O.

As the elastic spring-boards and the sets of double springs at each of their ends, which connect them with the head-block and with the rear axle, co-operate to produce an effect which in its kind and character is due to the construction and arrangement of the combined parts independently of the peculiar means by which the parts are mechanically attached, I do not limit my invention of this combination of elements as formed, and relatively placed to co-operate, to their further combination with the specific means by which they attach to each other, for by the use of any equivalent means they may be connected so as to perform the same office in the same manner. If desired, the stirrups D, placed in the upper ends of the upper springs, S', may be omitted and the bar-connection shown at A''' substituted therefor, and so, also, the inverted and clipped stirrup D'', connecting the lower ends of the spring S², may be dispensed with and the flat bar connection shown at A''' be used in its stead.

With the wagon-seat placed upon the boards thus combined and arranged with springs which connect the boards with the head-block

and the rear axle a very easy-riding vehicle is produced, which has all the advantages of a reach wagon and buckboard combined, and without some of the objectionable features of the latter.

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

1. In a spring-board wagon, the combination of the spring-boards B' B'' and the springs S' S' and S² S² at each end of the boards, and the said springs at the front connecting the boards with the head-block and at the rear connecting the boards with the back axle, substantially as herein shown and described.

2. In a spring-board wagon, the combination of the spring-boards B' B'' at each of their

ends connected with the upper springs, S' S', and the lower springs, S² S², by means of the stirrup D on the former and the flat connecting-bar a''' on the latter, and the upper springs, S' S', at the front having their lower united ends clipped to the head-block and at the rear to the back axle, with the springs S² S² connected with the head-block at the front and the back axle at the rear by means of the attached inverted stirrup D'', as herein shown and described.

Signed at Troy, New York, this 1st day of May, 1882.

WILLIAM H. VINES.

Witnesses:

W. E. HAGAN,

CHARLES S. BRINTNALL.