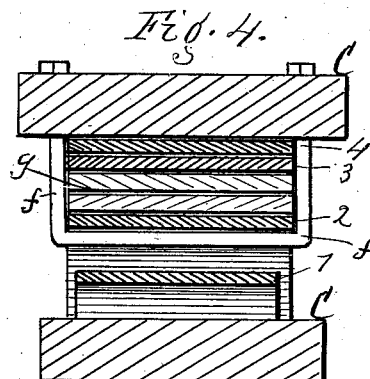
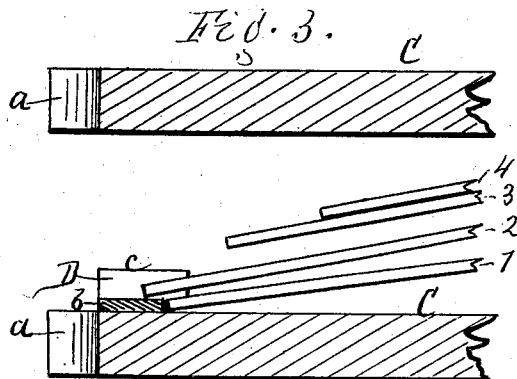
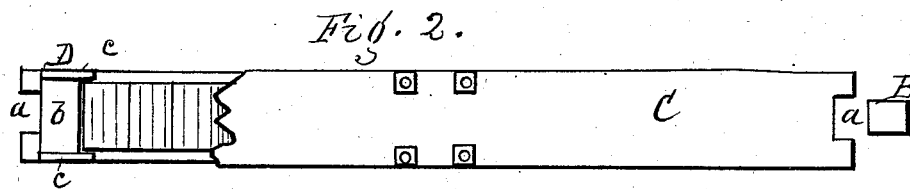
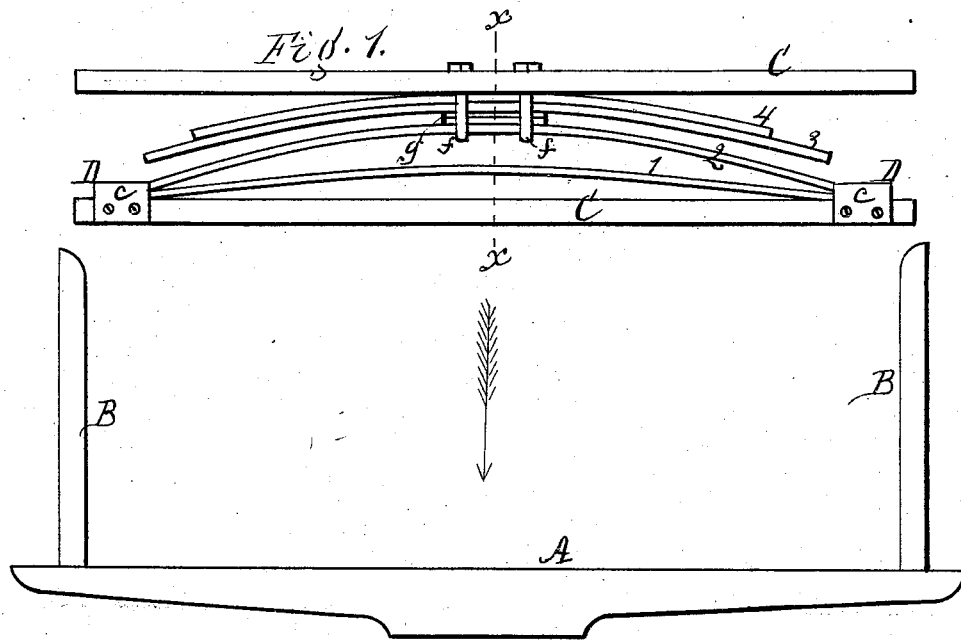


(No Model.)

S. IDE.
BOLSTER SPRING.

No. 261,611.

Patented July 25, 1882.



Attest.
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J. R. Patterson

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att'y

UNITED STATES PATENT OFFICE.

SAMUEL IDE, OF MEDINA, NEW YORK.

BOLSTER-SPRING.

SPECIFICATION forming part of Letters Patent No. 261,611, dated July 25, 1882.

Application filed December 1, 1881. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL IDE, of Medina, Orleans county, New York, have invented a certain new and useful Improvement in Bolster-Springs for Wagons; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation of the spring and the bolster upon which it fits. Fig. 2 is a plan of the spring, one end of the upper bar being broken away to show the ends of the several leaves. Fig. 3 is a sectional view of one end of the spring on an enlarged scale. Fig. 4 is a cross-section in line *x x*, also enlarged.

My improvement relates to a spring device made as an independent attachment applicable to the bolster of a common farm-wagon, and removable at pleasure, so that the wagon can be used either with or without springs. The invention consists in the peculiar construction of the spring, as hereinafter more fully described.

In the drawings, A indicates the bolster of an ordinary farm-wagon, and B B are the side stakes. The independent spring, which I will describe, fits down upon the bolster and is held in place by the stakes, and the wagon-body is placed between the stakes, resting on top of the spring. The construction of the spring is as follows:

C C are two flat wooden bars, one forming the bottom and the other the top of the independent spring. The ends of the bars are provided with square notches *a a*, which fit over the stakes, and by this means both bars are secured in place and held in line, while the upper bar plays up and down under the vibration of the wagon and the elasticity of the springs interposed between the bars.

D D are two metallic socket-pieces at the ends of the lower bar and firmly secured thereto. Each of these socket-pieces has a horizontal bar, *b*, and two side lugs, *c c*, which serve the double purpose of a stiffener to the bar and a guide and stop to the two lower leaves of the spring, as will presently be described.

Between the bars are interposed a series of half-elliptic springs, 1, 2, 3, and 4, the outer ends of which are entirely free, as shown in Fig. 1. The lower spring, 1, is narrower in cross-section than the others, and its loose ends rest against the bars *b* and between the lugs *c c* of the socket-pieces, as shown in Fig.

3, by which means it is kept in place, and has great stiffness and strength, with a certain degree of elasticity. The other three springs are all secured together and to the upper bar, C, by means of two encircling irons, *f f*, which form clips, the several springs having washers *g g* interposed between them, by which they are kept at proper distance apart. The spring 2, which is the lowest one of those clamped together, has a greater degree of convexity than spring 1 below, and its ends, which are free, simply rest upon the top of the bars *b b* and between the side lugs, *c c*, so that as the spring is borne down by the weight it will slide on the smooth bars *b b* and will be kept in place by the side lugs, *c c*. The spring 2 is longer and overlaps the ends of spring 1, and the other springs, 3 and 4, are of gradually decreasing length. A greater or less number of the springs may be used at pleasure. Under a very light load the spring 2 sustains the weight alone, its ends playing between the lugs *c c* and expanding and contracting under the vibrations. A still heavier load brings down spring 3, and a still heavier one spring 4, so that the weight is shared by all of them. The spring 1, being stayed at its ends, forms a bumper and stay to the vibrations of the upper springs, serving to receive the shocks, which it does by reason of its stiffness and strength, having, however, sufficient elasticity to break the concussions. When it is desired to use a stiff wagon the spring device is removed from the bolster.

Having thus described my invention, I do not claim broadly a series of half-elliptic springs clamped to the spring-bar and having free ends; but

I claim—

A bolster-spring consisting of the two spring-bars C C, fitting loosely between the stakes and upon the bolster of the wagon, the spring 1, resting upon the lower bar and against the stops *b b* at opposite ends, and the series of springs 2 3 4, attached to the upper spring-bar and having free ends, the lower spring being independent of the upper ones and serving as a bumper to the same, as herein shown and described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

Witnesses:

SAMUEL IDE.

FRANK CARPENTER,
ALFRED IDE.