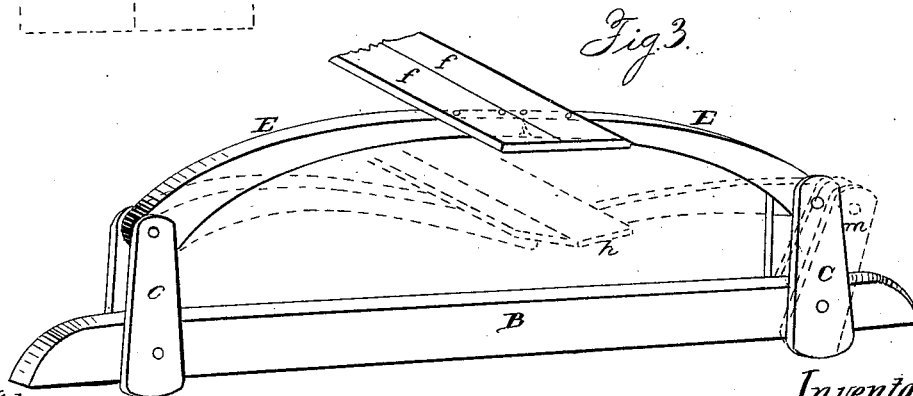
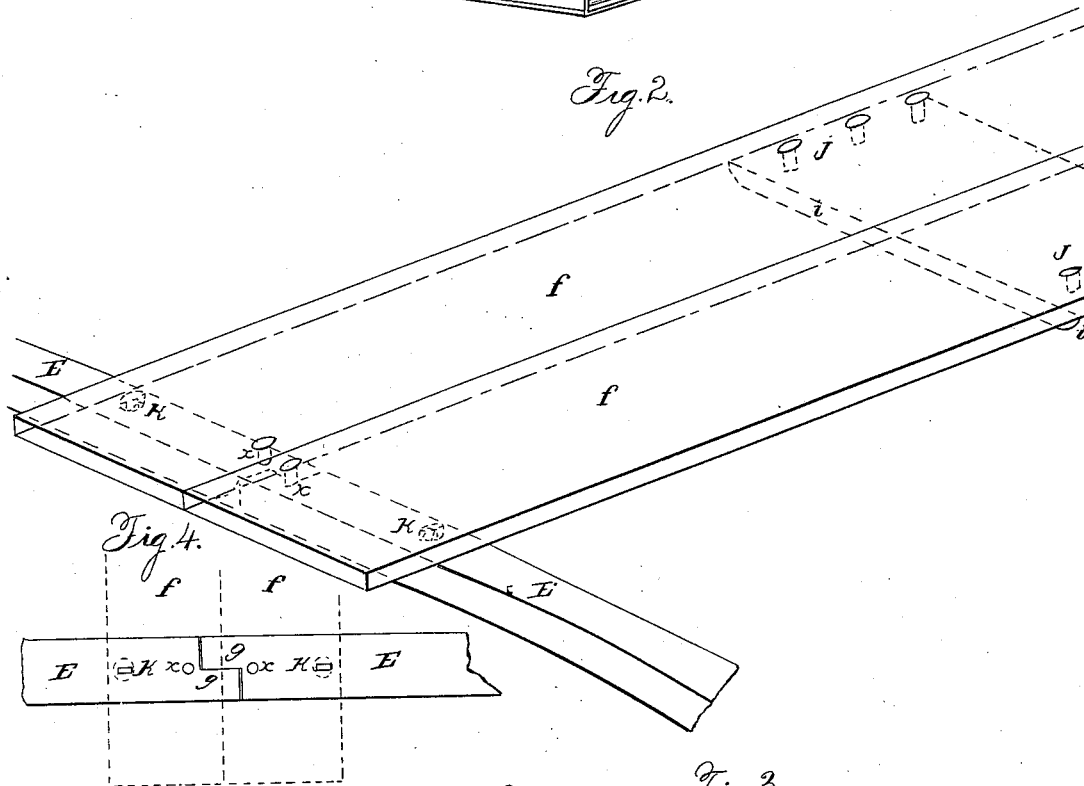
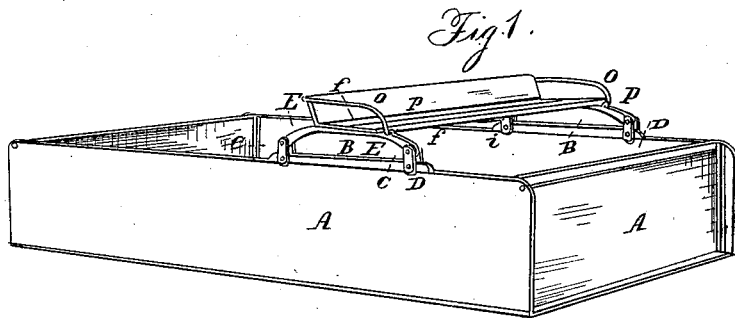


T. J. ALEXANDER.

Carriage-Seat.

No. 50,785.

Patented Nov. 7, 1865



Witnesses
R. B. Arnold
L. B. Goodspeed

Inventor
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UNITED STATES PATENT OFFICE.

THOMAS J. ALEXANDER, OF WESTERVILLE, OHIO.

IMPROVEMENT IN SPRING-SEATS FOR WAGONS.

Specification forming part of Letters Patent No. 50,785, dated November 7, 1865.

To all whom it may concern:

Be it known that I, THOMAS J. ALEXANDER, of Westerville, in the county of Franklin and State of Ohio, have invented a new and Improved Spring-Seat for Wagons; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view; Fig. 2, a longitudinal section; Fig. 3, a transverse or end view, and Fig. 4 an elevated transverse section.

The same letters refer to like parts in the different figures.

A A is a wagon-box, on which rests the slats B B. These slats are held to their proper place on the edges of the box by the links C C, which are riveted to the slats and pass down the sides of the box, as shown in Fig. 1 at D D. These links also support the knees E E E E by loose rivets passing through the lower end of the knees and the upper end of the links. These knees meet and (notch) pass each other in the center under the seat-board *ff*, as shown in Fig. 4 at G G. By thus passing each other the edge of each board rests on both irons, thereby keeping them in their relative positions when depressed, as shown in Fig. 3 at H.

The seat-boards F F are firmly bolted to the under cleat, I I, at their outer edge at *ii*, and at their inner edge to the knees at H H. These knees are provided with spurs K K in Figs. 2 and 4, which pass part way up. Through the boards is a round or square hole (see K K in Fig. 4) sufficiently large to let the knees have a lateral or spreading motion. The boards *ff*, which form the seat, also form the spring by the peculiar action of the knees, giving a twisting motion to the ends of the seat-boards, while the center are held by the cleat I, which is shown in Fig. 3 at H. The knees, within themselves, have no spring; but by the peculiar attachment to the links they yield to the flexibility of the seat-boards by the rocking or vibrating motion of the links, as shown at *m* in Fig. 3, while the links at the other end of the slat are not allowed to move, but retain their

vertical position by being firmly attached to the slat.

The seat can have a back attached, as shown in Fig. 1, by end rods, *o o*, which work loosely in the raised eyelet on the knees at the edge of the seat, as shown at *p p* in Fig. 1. The back-board may be attached by like eyelets on the back knees or by a strap or brace in the center to the under cleat, I. By thus attaching of the back the seat-board has its free flexible action:

This seat possesses many advantages. It is simple and cheap in construction, and durable, and not liable to get out of order. It rests firmly on the wagon-box, and is easily removed while loading and unloading.

It is well known that the elliptic spring being composed of several stratum, which, rubbing on each other, create a large percentage of friction. While this seat is free from any rubbing parts leaves it free of friction, and is therefore very sensitive, which readily relieves the rider from that disagreeable jar or tremor while passing over comparatively smooth roads with its lumber or farm wagon.

It is well known to mechanics that light pressure will give quite a perceptible twist to a board, yet to increase that twist it requires a large increase of force. Therefore a seat constructed thus, free from friction and flexible to light pressure, will readily yield to the weight of one man, while at the same time it will readily carry two or three over rough roads without danger of breaking under heavy concussion, and thereby possessing all the requisite qualities of convenience, ease, strength, simplicity, cheapness, and durability.

Thus having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The spring-seat consisting of the boards *ff*, united by the cleat *i* and attached to the knees E E, combined with the links C C and slats B B, arranged and operating substantially as and for the purpose set forth.

THOS. J. ALEXANDER.

Witnesses:

L. R. GOODSPEED,
R. R. ARNOLD.