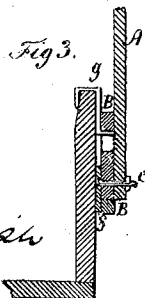
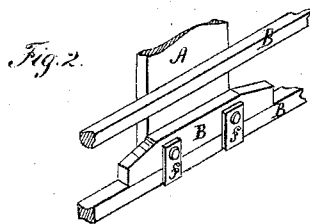
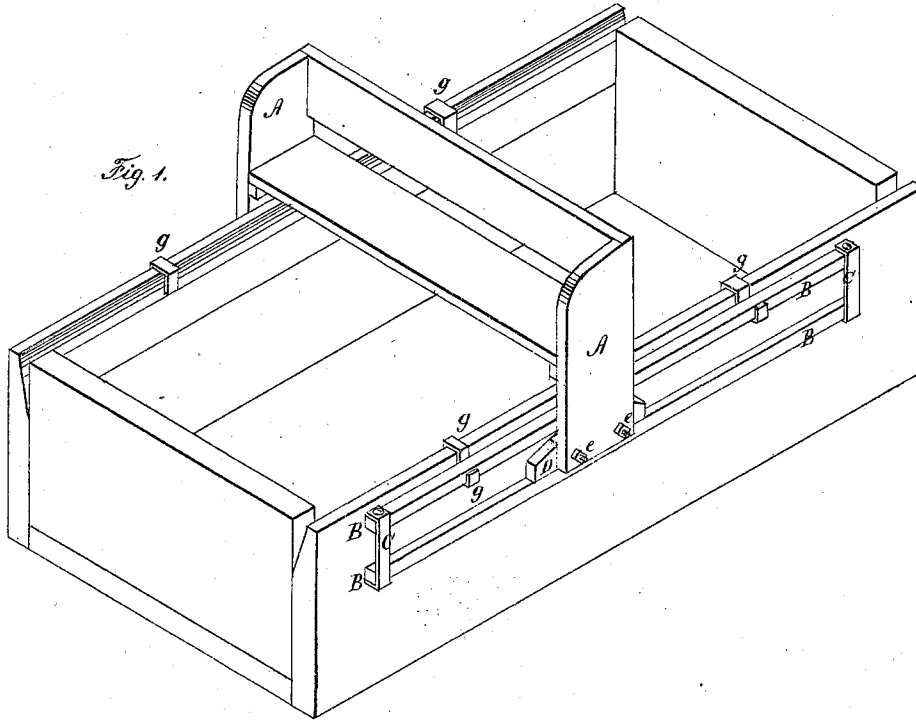


J. R. RUDULPH.

Wagon Spring-Seat.

No. 133,596.

Patented Dec. 3, 1872.



WITNESSES:

Henry Lauter
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UNITED STATES PATENT OFFICE.

JOAB R. RUDULPH, OF HOLLAND, OHIO.

IMPROVEMENT IN WAGON SPRING-SEATS.

Specification forming part of Letters Patent No. 133,596, dated December 3, 1872.

To all whom it may concern:

Be it known that I, JOAB R. RUDULPH, of Holland, county of Lucas, State of Ohio, have invented a new and Improved Wagon-Seat Spring; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawing which forms a part of this specification.

My invention relates to making a spring adjustable, removable, and cheap and substantial, using the most simple and obvious forms of wood and iron, as hereinafter set forth.

Figure 1 is a side view of the wagon-bed with this spring attachment for the seats, in which A is the end board of one of the seats. B B are wooden springs; C C, iron retaining-pieces; D D, blocks of wood attached to end board A, which bear upon the lower spring. *ee* are bolts that pass through the board A, blocks D D, and iron plates *ff*, (shown in Fig. 2;) *g g*, iron hooks.

Fig. 2 shows a view in cross-section by a vertical plane through the seat lengthwise, in which *ff* are plates of iron to hold the seat on the lower springs, and similar letters representing similar parts.

Fig. 3 is a view of the iron retaining-pieces C C and iron loops or sustaining-pieces *g g*, and also plan of iron plates *ff*.

My invention consists as follows: I take two pieces of wood, of suitable elasticity and of sufficient size in cross-section to sustain the strain upon the same, of, say, six to eight feet in length. I attach these together at the extreme ends in such manner that they will be parallel to each other and about twelve inches, more or less, apart. I then take two pieces of metal, shaped substantially as shown in the drawing, *g g*, which I hang upon the edge of the wagon-bed, projecting outward, one near each end of the spring, into which the top bar of this wooden rectangle is suspended. The seat is made with end boards extending below the top of the wagon-box, as shown in the drawing; and to the bottom of these end boards, on the inside, are attached long blocks D D, of wood, which give a broad bearing to

the seat. These blocks sit squarely on the lower spring, and the spring is prevented from leaving the blocks by the interposition of plates of iron *ff*. These iron plates, the blocks D D, and the end boards A A are securely bound together by the bolts *ee* and nuts.

It will thus be seen that the seat passes outside of the upper spring and rests on the lower, but is sustained by the upper one in the band-hooks *g g*. The degree of elasticity may be adjusted for different weights upon the seat by simply sliding the hooks *g g* nearer to or further from the seat A; or the degree of elasticity may be regulated by making one bar larger in cross-section than the other. Thus, if the top bar were the larger in cross-section the spring could be made more elastic and weaker by simply removing the seat and changing the relative positions of the bars; or in this way one side of the seat could be made capable of bearing a heavy person and the other side a light person, the hooks being all at equal distances from the seat. The seat may pass inside the upper spring by changing to the outside of the end board the blocks D D and retaining-pieces *ff*; or, by an obvious change, the springs may operate within the wagon-box.

I do not limit myself to the materials mentioned in this specification, as others may be used to fulfill a similar purpose.

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

1. The wagon spring-seat herein described, consisting of bars or springs B B, coupling-bars C C, hooks *g g*, blocks D D, side board A, plates *ff*, and bolts *ee*, all arranged and operating in the manner substantially as set forth and described.

2. The combination of bars B B, coupling-bars C C, and hooks *g g*, when the same form a part of a wagon-seat spring.

JOAB R. RUDULPH.

Witnesses:

H. J. RAFFENSPERGER,
CH. C. DOOLITTLE.