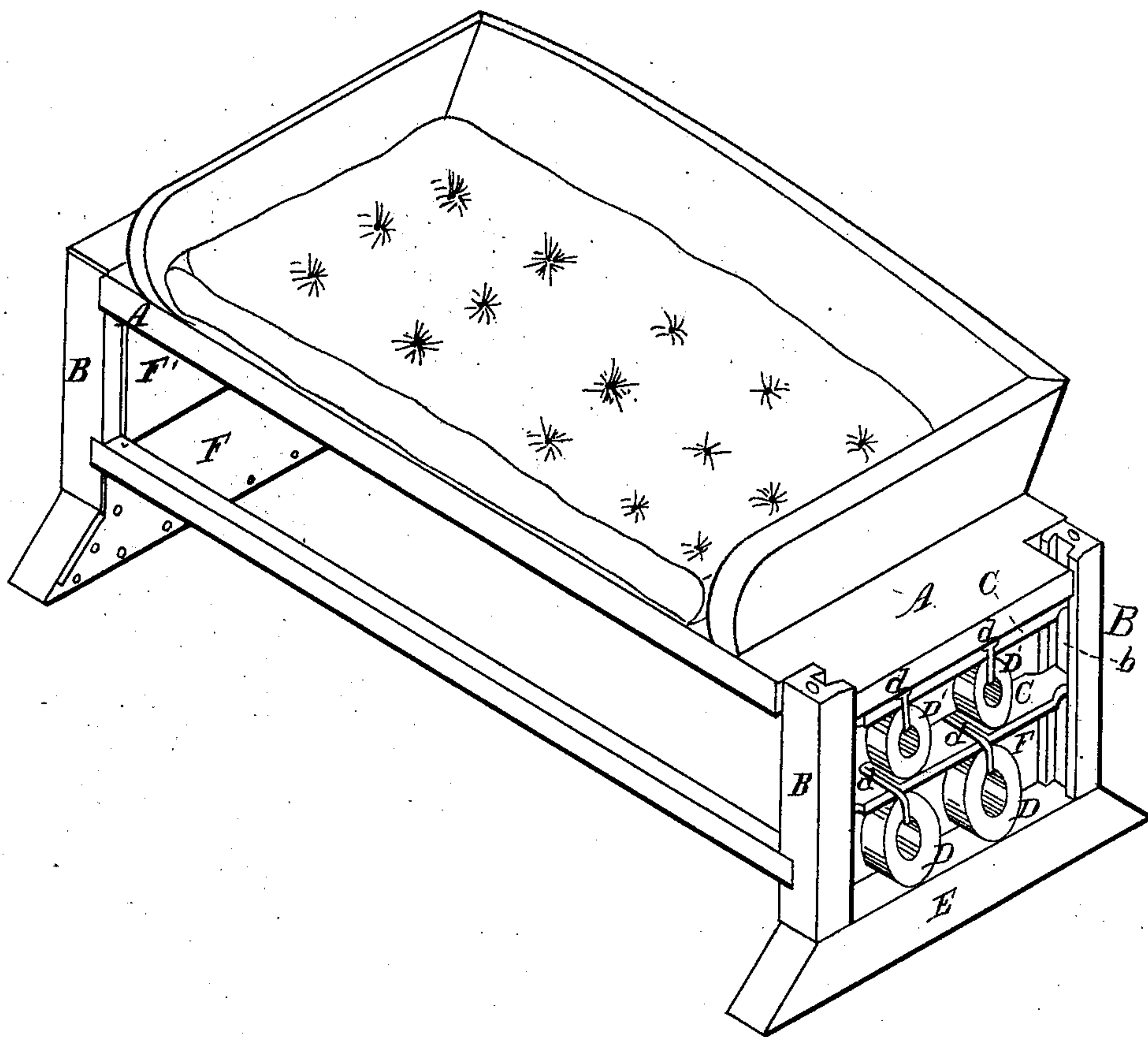


W. HUGHES.

Vehicle-Seat.

No. 69,565.

Patented Oct. 8, 1867.



Witnesses:

*Baltus Or Long*  
*J. L. Peyton,*

Inventor:

*Wm Hughes*  
*by his atty*  
*Robert M. H. H.*

# United States Patent Office.

WILLIAM HUGHES, OF BRANDON, WISCONSIN.

*Letters Patent No. 69,565, dated October 8, 1867.*

## IMPROVEMENT IN SPRING-SEAT FOR VEHICLES.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM HUGHES, of Brandon, in the county of Fond du Lac, and State of Wisconsin, have invented a new and useful Improvement in Spring-Seats for Vehicles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, which makes part of this specification, and which represents a view in perspective of my improved seat, with the outer casing of one end removed to show the details of my invention.

It is the object of my invention to secure a seat for vehicles, which, while free to yield vertically, is restrained from swaying too much laterally, and to this end my improvement consists in so arranging a seat between guides or ways that it shall be free to move vertically, and yet restrained in its lateral movements, while the seat rests upon springs formed of cylinders of rubber arranged sidewise between the guides.

The accompanying drawing shows one convenient way of carrying out my invention.

The seat-board A is notched at the corners to receive the standards or guides B, which have vertical grooves *b* on their inner sides. These grooves receive the ends of shelves C C', which move freely up and down in them. Cylinders D D', of rubber or gutta percha, are fastened to the under side of these shelves by wire *d* or other suitable means. The lower series of cylinders D rest on the bed-pieces E, which support the standards, and are in this instance made of larger size than the upper series D', which are fastened to the upper shelf C', but rest upon the lower one. The seat A rests directly on the upper shelves. This arrangement enables me readily to remove the seat, shelves, and springs, when required, without removing the inner casing F, which may be formed of tin or sheet-iron plates fastened to the guides so as to form a box or chamber, in which the springs and shelves work. The inner casing F only extends to the height of the lower shelf, the remaining portion of the springs being covered by a flap, F', attached to and moving with the seat.

When the springs are suddenly compressed by the jolting of the vehicle the upper springs are compressed first, and as the cylinders are small the seat sinks but a short distance before the upper cylinders are flattened; the impulse is then given to the lower springs, which are of larger diameter and greater range. The seat is thus rendered sufficiently elastic, while its range of motion is not too great for comfort.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, substantially as described, of a seat, capable of moving freely vertically between its guides, with a series of supporting cylindrical rubber springs arranged sidewise within their guides.
2. The combination, as described, of the rubber cylinders, with the shelves sliding vertically in their guides.
3. Making the lower tier of springs of larger diameter than the upper, as described, for the purpose set forth.

In testimony whereof I have hereunto subscribed my name.

WILLIAM HUGHES.

Witnesses:

R. C. KELLY,  
FRANK SAFFORD.