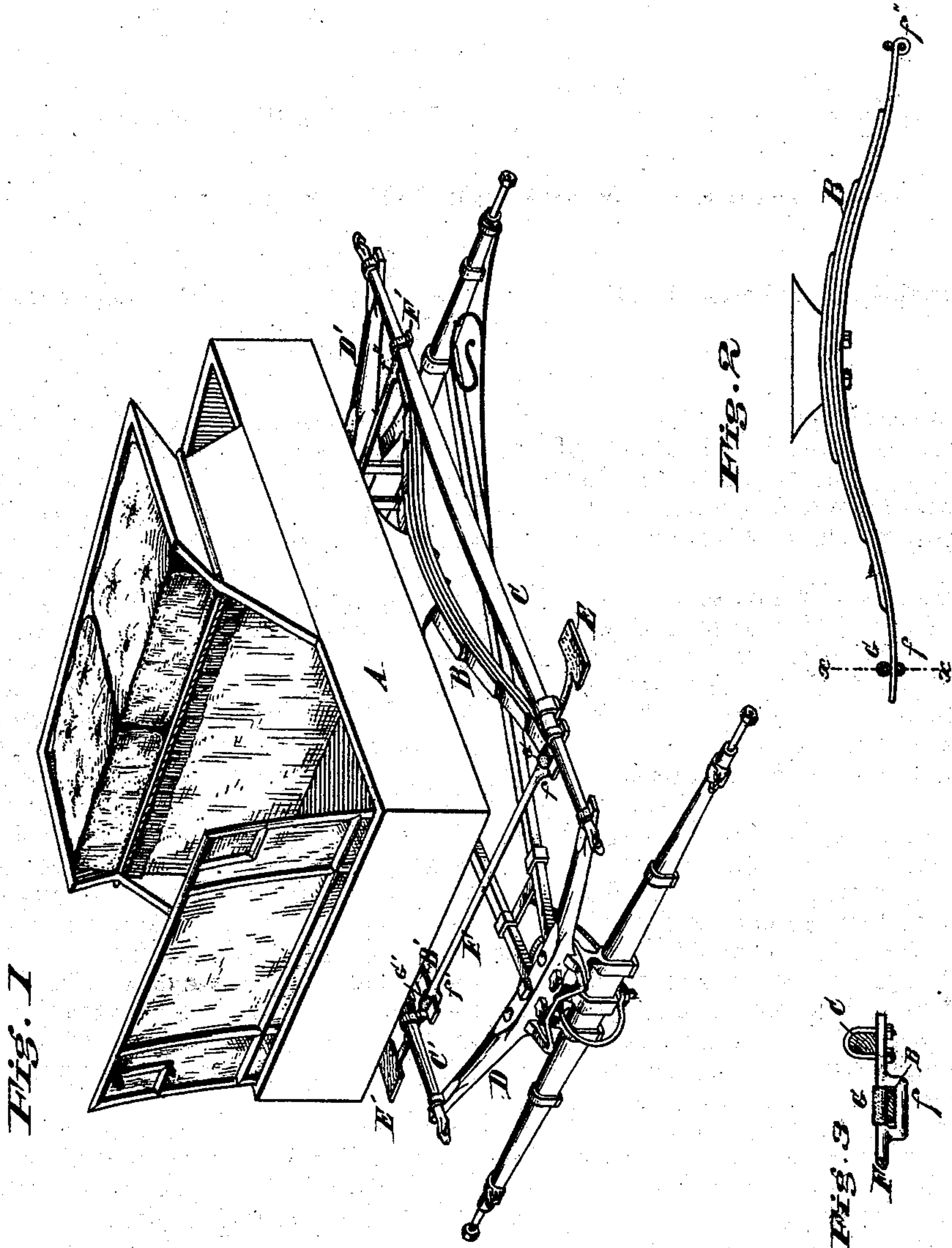


**J. W. GOSLING.**  
**Springs for Vehicles.**

No. 155,649.

Patented Oct. 6, 1874.



Attest

*Edgar J. Gross*

**Inventor**

*John W. Gosling*  
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# UNITED STATES PATENT OFFICE.

JOHN W. GOSLING, OF CINCINNATI, OHIO.

## IMPROVEMENT IN SPRINGS FOR VEHICLES.

Specification forming part of Letters Patent No. **155,649**, dated October 6, 1874; application filed July 17, 1874.

*To all whom it may concern:*

Be it known that I, JOHN W. GOSLING, of Cincinnati, Hamilton county, State of Ohio, have invented certain new and useful Improvements in Carriages, of which the following is a specification:

My invention relates to the class of flexible carriage-frames designed to connect the body of a carriage with its axles; and my invention consists of an improvement upon my Letters Patent No. 148,208, patented March 3, 1874, which also relates to said class.

Above-mentioned improvement consists, in the first place, of doing away with the end springs, which rested upon the perch-frame and back axle, and were a continual source of annoyance to persons getting in and out, from allowing the bed of the carriage to dip sideways in a disagreeable manner, and introducing in their stead rigid end bolsters to uphold the side bars, thereby overcoming said difficulty, and at the same time cheapening the cost of construction. My invention consists, in the second place, of a device for securing the side springs to the side bars, so that one end shall be fixed and the other free to travel back and forth with the motion of the carriage, instead of both ends being fast.

Figure 1 is a perspective view of the bed and running-gears minus the wheels of a carriage having my improvements attached. Fig. 2 is a side view of one of the springs and its bearings in cross-section. Fig. 3 represents the bearing of the loose end of the spring and the manner of its attachment to the side bar.

A is the bed of the carriage, resting upon semi-elliptical side springs B B', which are secured to side bars C C' by my improved method. D D' are end bolsters or bars introduced in place of springs, (which were formerly

used similar to those on the side,) for the purpose of rendering the body of the carriage more firm on the axles when persons are entering or leaving the same, and for the same reason the steps E E' are secured to the bars c c' instead of the carriage-bed. The bearings for the springs B B' are rods F F', having stirrups f f' formed below them for the springs to engage in, and are secured transversely between the side bars C C', thus strengthening the frame C C' D D', and at the same time transmitting the weight on the springs to it. The springs B B' are secured at their after ends by being curled round the stirrups f'' f''' on the rod F' in a fixed manner, while the front ends extend loosely through the space between the stirrups f f' and the rod F, resting on the stirrups, and draw back and forth, as the springs ease the motion of the frame C C' D D' to the bed of the carriage. To take up needless play and prevent shackling I provide the rods F with rollers G, made of leather or other flexible material, above the stirrups f f'.

I claim—

1. In combination with side rods C C', springs B B', the rods F F', having stirrups f f', and yielding rollers G G', all to operate substantially in the manner and for the purpose specified.

2. In combination with side bars C C', rods F F', and springs B B', the end bolsters D D', to act substantially in the manner and for the purpose specified.

In testimony of which invention I hereunto set my hand.

JOHN W. GOSLING.

Witnesses:

EDGAR J. GROSS,  
R. M. HUNTER.