

E. J. GREEN.

Running-Gear.

No. 23,567.

Patented Apr. 12, 1859.

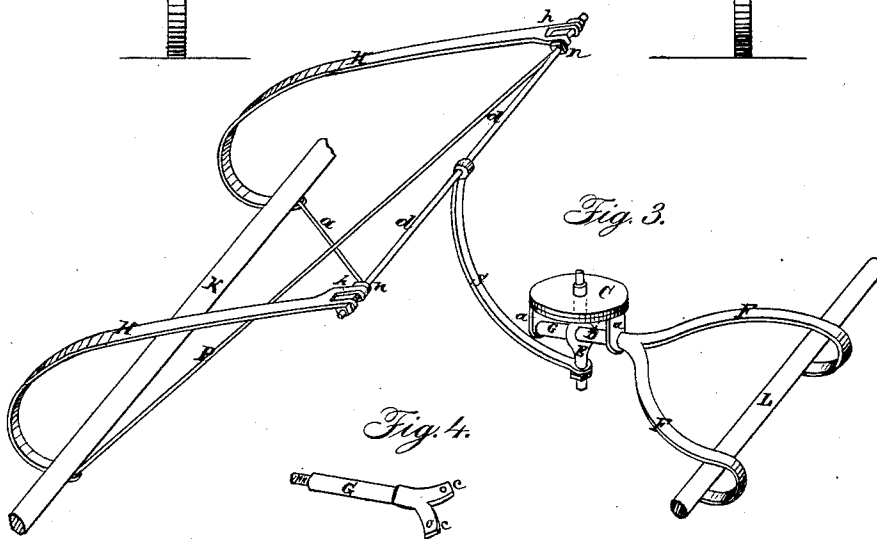
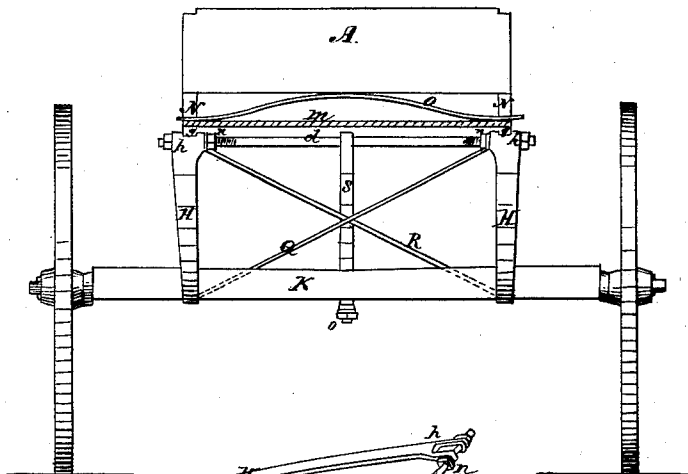
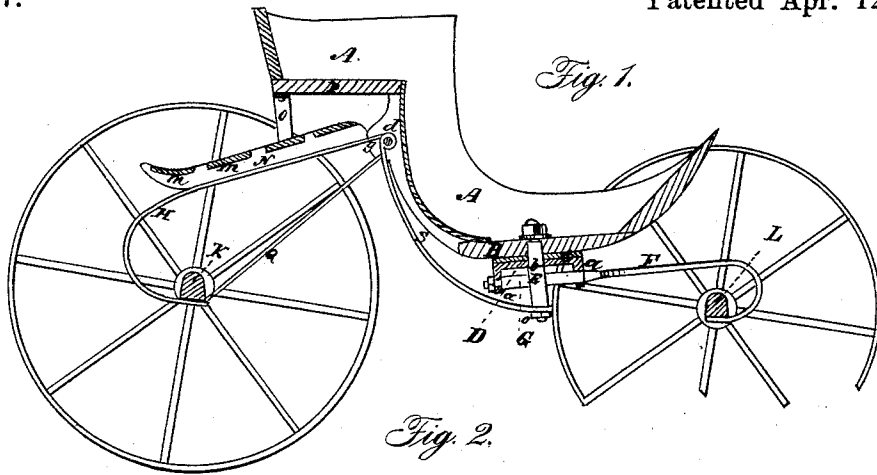
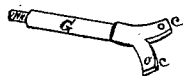


Fig. 4.



Witnesses:

Philo J. Potter
John W. Thompson

Inventor:

Edwin J. Green

UNITED STATES PATENT OFFICE.

EDWIN J. GREEN, OF VALPARAISO, INDIANA.

IMPROVEMENT IN JOINT-BODIED BUGGIES.

Specification forming part of Letters Patent No. 23,567, dated April 12, 1859.

To all whom it may concern:

Be it known that I, EDWIN J. GREEN, of Valparaiso, in the county of Porter and State of Indiana, have invented certain new and useful Improvements in the Combination of Joint-Bodied Buggies; 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, in which—

Figure 1 represents a longitudinal vertical section through said buggy. Fig. 2 represents an end view of the same from the rear end. Fig. 3 represents a perspective view of the axles and of the frame. Fig. 4 represents a detached portion, hereinafter to be described.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents the body of the buggy.

B represents the bottom piece of the body.

C represents a circular plate which is secured to the lower side of the bottom B.

D represents a circular plate which is fitted to the lower side of the plate C. The plate D is formed with two brackets *a*. The plates C and D are bolted to the piece B by means of the king-bolt E, but in such a manner that the plate D only can turn, while the plate C serves as the bearing for the plate D to turn on. The king-bolt E bears against the plate D by means of the shoulder *b*, and it is formed at its center with an eye for the admission of the shaft G, which is connected with the springs of the front axle. The shaft G has its bearings within the brackets *a*, and can turn therein freely.

F represents the two forward springs of the carriage. They are welded to the forward portion of the shaft G and diverge thence toward the front axle and partly around the same, and they are secured to the lower side of the front axle L by means of screw-bolts or otherwise, or they may connect with a spring-bar attached to the axle. The shaft G and springs F may be connected by means of screw-bolts or rivets. In that case the shaft G is formed as represented in Fig. 4 and the springs are secured to the two springs *c*. This method I make use of in the execution of full-sized carriages as being the better and cheaper way.

d represents a rod or shaft, which passes across and through the two sides of the carriage-body. To the ends of this rod are hinged the two rear springs H of the carriage, which embrace the projections *g* of the sides by means of their forked ends *h*. The lower ends of the springs H are secured to the rear axle K in a similar manner as those of the springs F are to the front axle L.

N represents two longitudinal pieces, which are secured to the straight parts of the springs H. They are connected together by means of the cross-pieces *m*.

O represents a semi-elliptic spring, which is secured to the under side of the seat P and the ends of which rest upon the pieces N, thus supporting the rear part of the carriage-body.

Q and R represent two diagonal rods the lower ends of which are secured to the axle K by means of the screw-bolts which serve to secure the springs H to said axle, while their upper ends are secured to the rod or shaft *d* and are pressed by the screw-bolts *n* against the springs H. The object of these rods is to keep the axle K constantly parallel to the rod *d* and to prevent said axle from being thrown angling when the load is placed on one side of the seat instead of in the center or equally over the whole length of the seat.

S represents a curved brace, which at one end is secured to the middle of the rod *d* and which at its other end is secured to the king-bolt E by means of screw-nut O. This brace is intended to hold the lower end of the king-bolt against any sudden jars or jerks which might tend to break the same.

From the foregoing description it will be seen that by attaching the circle on which the front axle turns directly to the body of the carriage, instead of securing it to the center of the axle, the carriage can be turned shorter, as by this construction the front wheels are farther removed from the carriage-body than heretofore; second, by using the two springs F the weight is removed from the center of the front axle, which can therefore be made considerably lighter; thirdly, by using the swivel arrangement in combination with the turning plate D the carriage can be driven over rough ground without straining any part of the springs or running-gear any more than it would on level ground.

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

1. Connecting the front axle of a carriage to the body by means of a swivel-joint composed of shaft G, king-bolt E, turning plate D, and stationary plate C, when the latter is secured directly to the body of the carriage, substantially in the manner and for the purpose herein described.

2. Connecting the front springs to the coupling or reach by means of the shaft G, which

is welded or otherwise secured to said springs, as herein represented.

3. In combination with a hinged carriage-body, the braces P and Q, for the purpose of preventing the rear axle from being thrown angling when the carriage is loaded heavier on one side than on the other, substantially in the manner herein described.

EDWIN J. GREEN.

Witnesses:

PHILO A. PORTER,
JOHN C. THOMPSON.