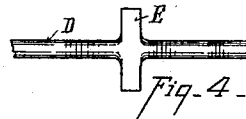
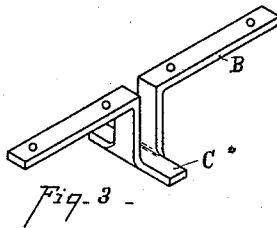
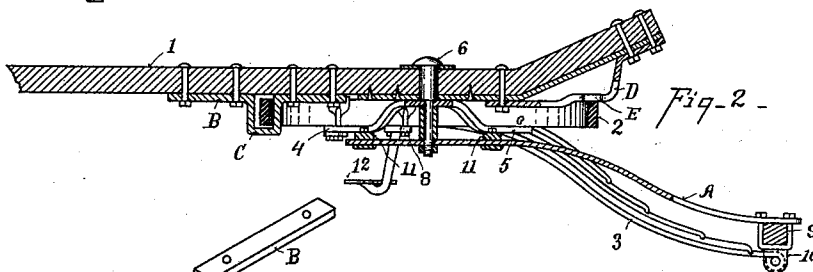
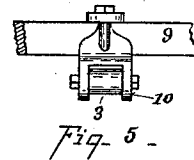
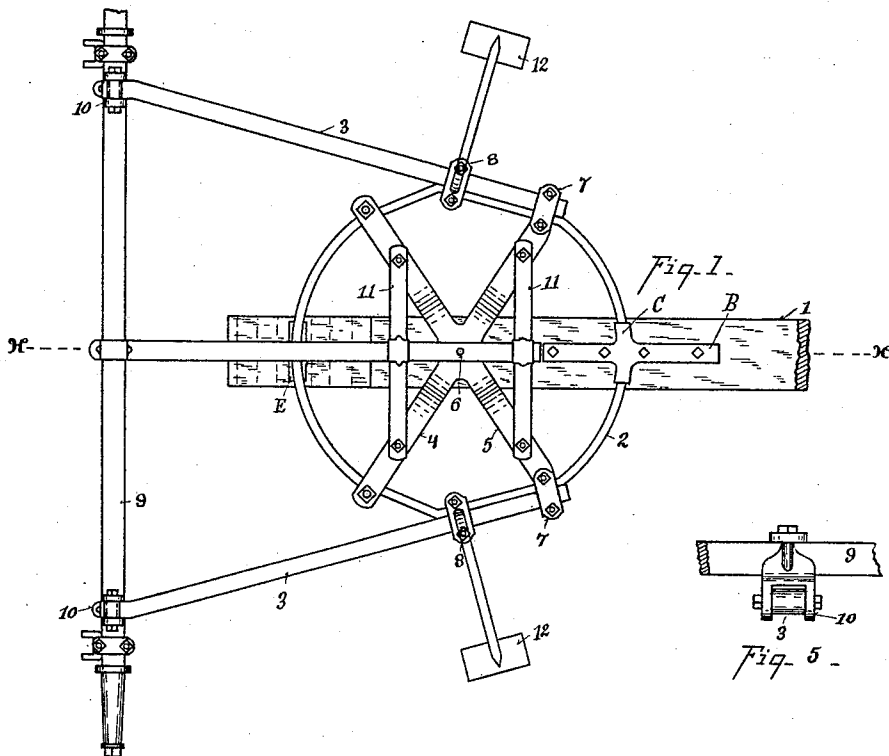


(No Model.)

J. W. LEEK.
RUNNING GEAR FOR VEHICLES.

No. 475,578.

Patented May 24, 1892.



WITNESSES:

C. W. Miles
Robert J. Smith

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UNITED STATES PATENT OFFICE.

JOHN W. LEEK, OF CINCINNATI, OHIO.

RUNNING-GEAR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 475,578, dated May 24, 1892.

Application filed November 18, 1891. Serial No. 412,314. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. LEEK, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Running-Gear for Vehicles, of which the following is a specification.

My invention relates to running-gear for wagons or other vehicles.

The object of my invention is, first, to provide a fifth-wheel which has a front and rear support for the wagon-bed and which is radially extended a long distance from the king-bolt, whereby a short turn is obtained as well as a firm support for the bed, side-rocking being obviated.

Another object of my invention is to employ the fifth-wheel as a support for the springs which connect it to the front axle.

The various features of my invention are fully set forth in the description of the accompanying drawings, making a part of this specification, in which—

Figure 1 is a top plan view. Fig. 2 is a sectional elevation on line *x x*, Fig. 1. Fig. 3 is a perspective view of the rear support. Fig. 4 is a top plan view of the front support. Fig. 5 is a rear elevation of the axle, one of the springs, and the shackle.

1 represents a coupling-bar on which the wagon body or bed is mounted.

2 represents a metallic ring forming the fifth-wheel. It is preferably made with a chord on two sides in a line parallel with the plane of the springs 3.

4 5 represent spider-arms, the outer ends of which are secured to the ring 2 and the inner ends crossed and braced to form a bearing for the king-bolt 6. The rear ends of the arms 4 and 5 are connected to the spring and fifth-wheel by the clip 7. The front ends of said arms are clipped to the ring.

8 represents secondary clips for securing the spring to the fifth-wheel. The springs 3 are coupled to the axle 9 by means of shackles 10.

A represents a central spring clipped to the axle 9 at its front end and the rear end extending back past the king-bolt. It is pierced to receive the same and it is clipped to the

cross-arms 11, which arms are bolted to the spider-arms 4 and 5. In the preferred form of construction these arms 4 and 5 are arched up at the center, as shown in Fig. 2, so as to form a seat for the coupling-bar round the king-bolt. By means of this arching of these rings a bolster-block is dispensed with, though the latter would be a sufficient mode of constructing the arms.

B represents a bracket having the stirrup C, in which the rear portion of the fifth-wheel rests and journals. Said bracket is rigidly secured to the under side of the coupling-bar.

D represents a curved bracket bolted to the forward end of the coupling-bar. This bracket is only employed when the front end of the coupling bar is upturned, as shown in Fig. 2. E represents a friction-bar, preferably made integral therewith, and forms the front bearing on the fifth-wheel of the coupling-bar. These parts D and E may be dispensed with when the coupling-bar is straight. This front support of the coupling-bar upon the fifth-wheel and the rear support of the fifth-wheel in the stirrup furnish a strong coupling support of the wagon-body with the front running-gear.

12 represents steps, which are connected to the springs and fifth-wheel by the clips 8. This mode of connecting the coupling-bar, fifth-wheel, springs, and steps obviates side motion when weight is placed upon the steps. It will be observed that the ring 2 is very large and furnishes an extended support in front and rear of the king-bolt, with the center correspondingly removed a long distance from the front axle, thereby allowing a very short turn of the wagon, securing all the parts in a firm substantial manner, and obviating side-rocking of the wagon-bed. As the fifth-wheel connection and its connections extend from spring to spring, the strain placed upon one side of the body is practically equalized upon all the springs. The central spring is attached to the top of the axle, while the side springs are attached to the under side of the axle. This mode of connecting the two springs prevents the axle from rolling and avoids undue cross-strain upon the springs.

I have shown the ordinary form of coup-

ling-bar. It is obvious that this may be variously modified and made part of the wagon-bed or may be separated and attached to the body without affecting the principles of construction herein shown and described. I have shown the center spring having but one leaf, so that it serves rather as a coupling-bar, being more flexible than the side springs and not liable to be broken or interfere with the action of said side springs, which support the major portion of the strain of the load.

Having described my invention, what I claim is—

1. In a vehicle running-gear, the combination, with an axle, a coupling-bar, and a fifth-wheel, of the spider-arms 4 5, crossing each other and secured at their ends to the fifth-wheel, side springs secured at their front ends to the axle and at their rear ends secured to the fifth-wheel and the rear ends of the spider-arms 4 and 5, the arms 11 11, secured to the spider-arms, and the center spring secured to the axle and at its rear end to the arms 11 11, and a king-bolt 6, passing through holes therefor in the spider-arms and the center spring, substantially as described.

2. In a vehicle running-gear, the combination, with the coupling-bar, of the bracket B,

connected to the coupling-bar and provided with a stirrup, of the fifth-wheel supported in said stirrup and a friction-bearing on the front of said fifth-wheel, side springs connected to the periphery of said fifth-wheel and to the axle, and cross spider-arms connecting with the periphery of said fifth-wheel and having a center bearing for the king-bolt in the center, substantially as described.

3. In a vehicle running-gear, the combination, with the coupling-bar provided with a rear stirrup and a front friction-bearing, of a fifth-wheel supported in said stirrup and bearing against said friction-bearing, an axle, springs connected to the extremities of said axle and to the fifth-wheel, cross-bars the front ends of which are connected to the fifth-wheel and the rear ends of which are connected to the said springs, and a central spring connected to said axle and to the coupling-bar, substantially as described.

In testimony whereof I have hereunto set my hand.

JOHN W. LEEK.

Witnesses:

T. SIMMONS,
C. W. MILES.