

(No Model.)

C. W. CANFIELD.
RUNNING GEAR FOR VEHICLES.

No. 419,315.

Patented Jan. 14, 1890.

Fig. 1.

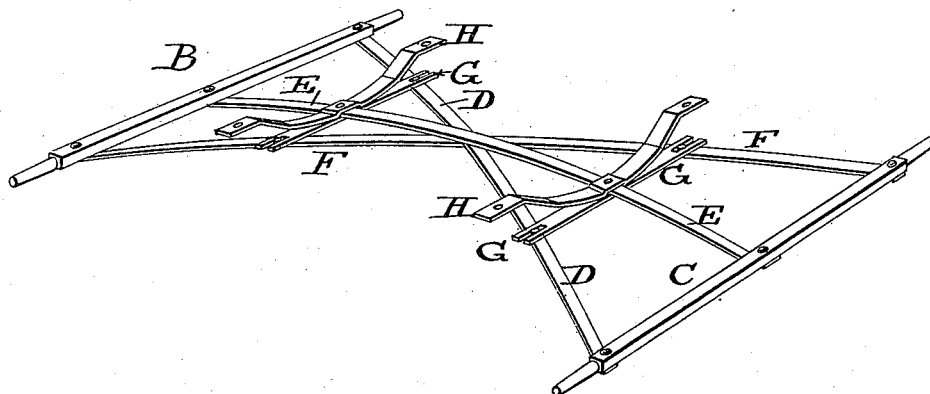


Fig. 2.

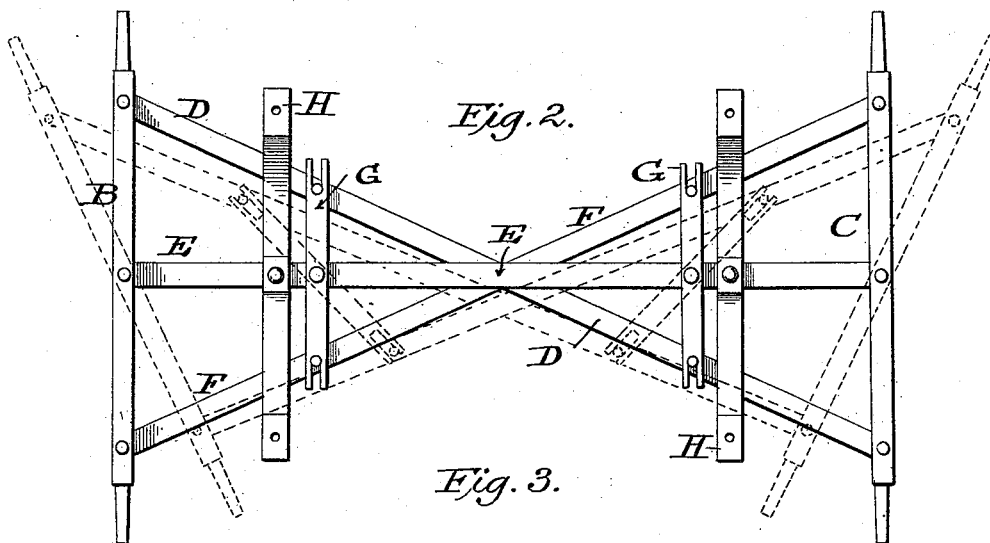
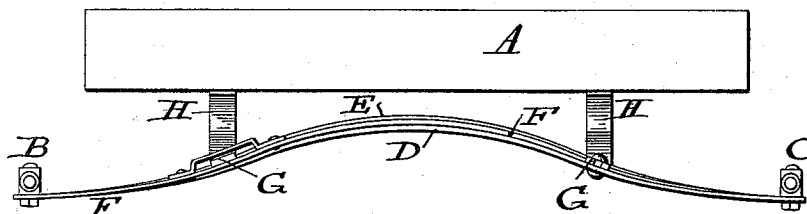


Fig. 3.



Witnesses:

James D. Duhamel
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Inventor:

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UNITED STATES PATENT OFFICE.

CARLTON W. CANFIELD, OF BROWNTON, MINNESOTA.

RUNNING-GEAR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 419,315, dated January 14, 1890.

Application filed September 27, 1889. Serial No. 325,310. (No model.)

To all whom it may concern:

Be it known that I, CARLTON W. CANFIELD, a citizen of the United States, residing at Brownton, in the county of McLeod and State of Minnesota, have invented certain new and useful Improvements in Running-Gear, of which the following is a specification.

My invention relates to carriages and wagons; and it consists in a novel construction and arrangement of the running-gear thereof, as hereinafter more fully set forth and claimed.

In the drawings, Figure 1 is a perspective view of my improved running-gear; Fig. 2, a top plan view, and Fig. 3 a side view.

A indicates the body, B the front axle, and C the rear axle, all of which parts may be of most any desired construction.

D, E, and F indicate springs or bars pivotally connected at opposite ends to the axles B and C, as shown. The shortest bar E extends from the center of one axle to the center of the other, while the bars D and F, which are longer than bar E, extend from the ends of the front axle to the diagonally-opposite ends of the rear axle. These springs or bars cross at the center and are arched or curved, as clearly shown in Fig. 3.

Pivoted to the bar E, so as to swing horizontally, are bars or springs G, which, as shown in Fig. 2, are loosely connected at their ends to the bars D and F. The form of connection between the bars G and D and F may be varied considerably. For instance, the bars G may be slotted at their ends, so as to engage pins or studs on the bars D F, or the latter may be provided with loops, as in Fig. 3, through which the ends of the bars G may project. Secured to the central bar E are brackets or supports H, to which the body is secured, these supports being arranged directly over the bars G, as shown in Figs. 1 and 3, or to one side thereof, as illustrated in Fig. 2.

The bars D E F G and the brackets or supports H, being elastic, make the gear in all its positions sufficiently yielding to render riding pleasant, and this, too, without weakening any particular part, as the strains are distributed evenly throughout.

The connecting of the bars G G with the crossed bars or springs D and F facilitates the turning of the vehicle, the positions occupied by the different parts in turning being indicated by dotted lines in Fig. 2.

The brackets H H may, if desired, be made in the form of rigid blocks, and it is likewise obvious that the bars G G may be omitted.

What I claim is—

1. In combination with the axles B and C, the crossed springs or bars D F, connected at their ends to the axles, the spring or bar E, connected at its ends to the axles midway between their ends, brackets or supports H H, secured to bar E, and a body carried by the supports, all substantially as shown.

2. In combination with the axles B C, the elastic or yielding bars D, E, and F, pivotally connected with the axles, substantially as shown, and a body mounted upon the bar E.

3. In combination with the axles B C, elastic bars D, E, and F, pivotally connected therewith, as shown, and elastic brackets or supports H H, secured to bar E and provided with a body.

4. In combination with the axles B C, elastic bars D E F, pivotally connected therewith, elastic cross-bars G G, and a body, all substantially as shown.

In witness whereof I hereunto set my hand in the presence of two witnesses.

CARLTON W. CANFIELD.

Witnesses:

H. G. CAMMICK,
F. F. MANSFIELD.