

D. HUTCHINSON.
Running-Gears for Carriages.

No. 146,593.

Patented Jan. 20, 1874.

Fig. 1

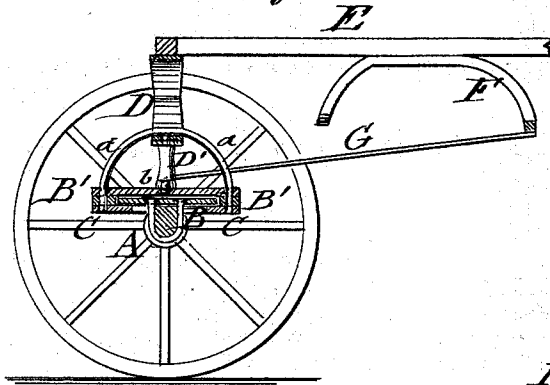


Fig. 3.

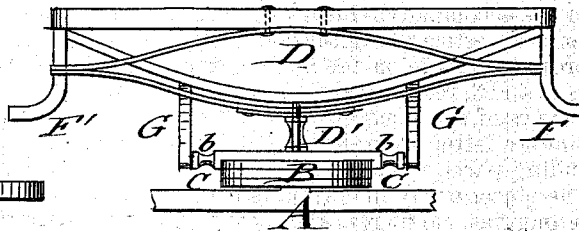
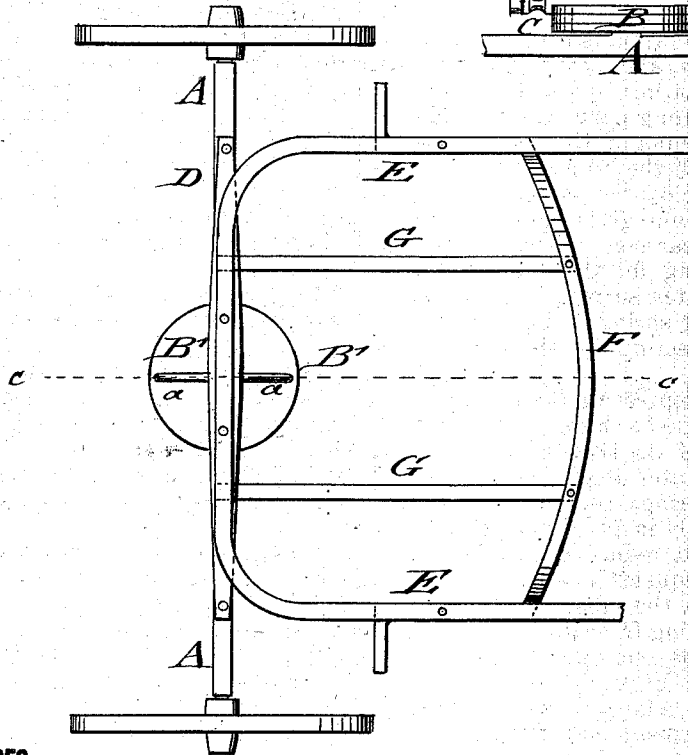


Fig. 2.



WITNESSES:

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DANIEL HUTCHINSON, OF HANNIBAL, MISSOURI.

IMPROVEMENT IN RUNNING-GEARS FOR CARRIAGES.

Specification forming part of Letters Patent No. **146,593**, dated January 20, 1874; application filed November 1, 1873.

To all whom it may concern:

Be it known that I, DANIEL HUTCHINSON, of Hannibal, in the county of Marion and State of Missouri, have invented a new and Improved Carriage, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section of my improved carriage on the line *c c*, Fig. 2; and Figs. 2 and 3, respectively, represent front and top views of the same.

Similar letters of reference indicate corresponding parts.

The object of my invention is mainly to provide buggies, carriages, and other light vehicles with a platform-gearing, by which the construction of the sustaining parts can be made lighter, and the upturning of the body of the carriage prevented, as the front wheels are made to turn freely below the same, preventing thereby accidents, and giving greater play to the motions of the carriage. My invention consists in substituting for the king-bolt a disk turning in an outer surrounding sleeve, which carries the front spring of the carriage, and the springs connecting the step-brace of the same.

In the drawing, A represents the front axle of the carriage or other vehicle, to which is applied, in the place of the king-bolt, the central disk B, which rotates freely in an outer sleeve, B', with flange-ring C being nicely fitted therein, and oiled freely in suitable manner to keep out the dust and reduce the friction of the disk B. The frequent breaking of the king-bolt is avoided by the substitution of this device. The front spring D, of the usual elliptical or other shape, is secured to a vertical standard, D', of sleeve B', and retained firmly in that position by an additional semicircular brace-rod, *a*. Spring D supports the frame or

body E of the carriage, to which the step-brace F is applied. Step-brace F is curved below the body E, bent forward at the side, and then downward to receive the steps. Springs G, connecting step-brace F, and cross-bar *b* of sleeve B, are arranged in longitudinal direction under the body of the carriage, jointed to turn on the cross-bar *b*, and rigidly attached to brace F, so as to take up part of the weight of the carriage. The rear part of springs G is higher than the fore part on cross-bar *b*. The steps are midway between them and the front spring, transferring thereby the weight, on entering the carriage, equally on the front spring and the brace-supporting springs. The front wheels can fully and freely pass around steps and step-brace, preventing thereby a great number of accidents which arise specially from the upsetting of the lighter kind of vehicles, while the lightness of the parts and the dispensing with the perch and stays equalize the additional weight of the step-brace and disk-pivot.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of the disk B secured to the axle A, the sleeve B', and the flange-ring C bearing against the under side of said disk around its entire edge, whereby a king-bolt is dispensed with and a firm connection formed between the axle and spring-support, as specified.

2. The combination of the disk-pivot B and sleeve B', having cross-bar *b* with longitudinal springs G G, and step-brace F, in the manner described, for the purpose set forth.

DANIEL HUTCHINSON.

Witnesses:

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