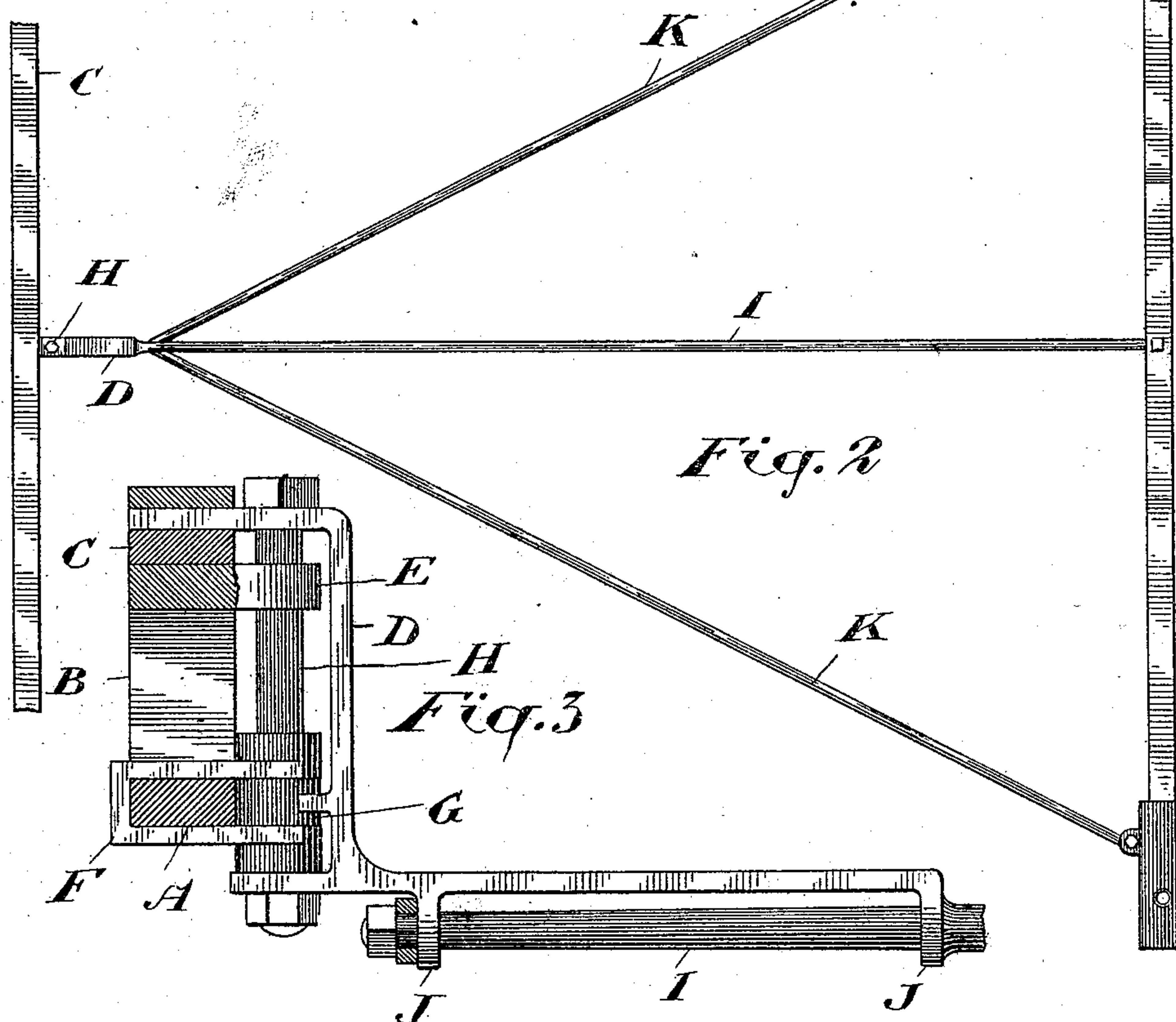
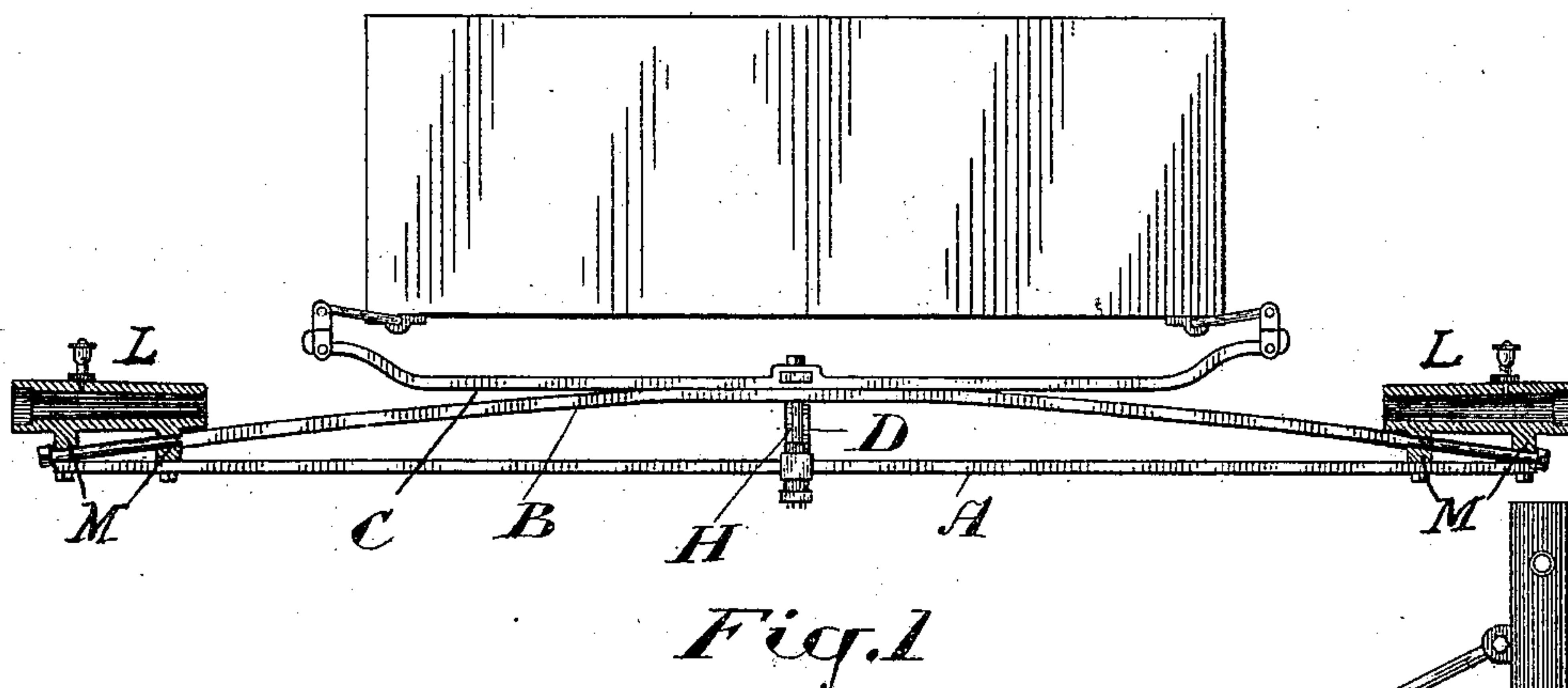


(No Model.)

W. BONNAR.
RUNNING GEAR FOR VEHICLES.

No. 503,032.

Patented Aug. 8, 1893.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM BONNAR, OF BOLTON, CANADA.

RUNNING-GEAR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 503,032, dated August 8, 1893.

Application filed November 25, 1892. Serial No. 453,003. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BONNAR, of the village of Bolton, in the county of Peel, in the Province of Ontario, Canada, have invented
5 a certain new and useful Improvement in a Running-Gear for Buggies and other Vehicles, (such as shown in my United States Patent No. 477,401,) of which the following is a specification.

10 The object of the invention is to devise a simple and effective fifth wheel specially adapted to a trussed axle, and which will admit of the front wheels turning in both a vertical and horizontal plane, and to provide a
15 strong and simple connection between the bearing box and trussed axle; and it consists, essentially, of a hammer-brace fast to the bolster and on which both the axle and reach are pivoted, and of lugs formed on the bearing-box to which the axle and truss are connected; substantially as hereinafter more particularly explained.

Figure 1, is a front elevation of a buggy provided with my improved fifth wheel. Fig.
25 2, is a plan view of the running gear of a buggy provided with my improved fifth wheel. Fig. 3, is a sectional elevation of my improved fifth wheel.

In the drawings, A, is the front axle, B, the
30 arch or truss and C, the bolster resting upon the truss B. The hammer brace D, is rigidly connected to the bolster C. A lug E, is formed on the truss B, and a clip F, encircles the axle A. One or more lugs G, are formed on the
35 hammer brace D, and the king bolt H, passes through the hammer brace D, lugs E, and G, and clip F.

The end of the reach I, is pivoted in lugs J, formed on the under side of the hammer brace
40 D. The reach I, extends to the rear axle to which it is connected in a suitable manner.

Side braces K, extend from the front end of the reach to the bearing boxes of the rear axle. It will readily be seen that from this construction the axle and brace have free movement in
45 a horizontal plane about the king bolt H, and in the vertical plane about the end of the reach so that in going over uneven ground, the running gear is not subjected to any twisting strain.

In my former patent the truss B, extended only to the inner end of the bearing box L, leaving a weak spot there. I now extend the truss through the lugs M, as shown and hold it with a nut, the curve of the truss starting
50 from the outer lug. The lower portions of the lugs M, form bolts by means of which the axle A, is connected to the bearing-box as shown.

What I claim as my invention is—

1. The hammer brace D, fast to the bolster C, and supporting in suitable bearings the king bolt H, in combination with the axle A, and truss B, pivoted on the king bolt H, by suitable lugs or clips; substantially as and
65 for the purpose specified.

2. The hammer brace D, fast to the bolster C, and pivoted on the end of the reach I, in combination with the king bolt H, and the axle A, and truss B, pivoted on the said king
70 bolt H, by suitable lugs and clips; substantially as and for the purpose specified.

3. The axle A, connected by the lugs M, to the bottom of the bearing box L, in combination with the truss B, extending from the end
75 of the axle through the lugs M; substantially as and for the purpose specified.

Toronto, October 29, 1892.

WILLIAM BONNAR.

In presence of—

J. EDW. MAYBEE,
W. G. McMILLAN.