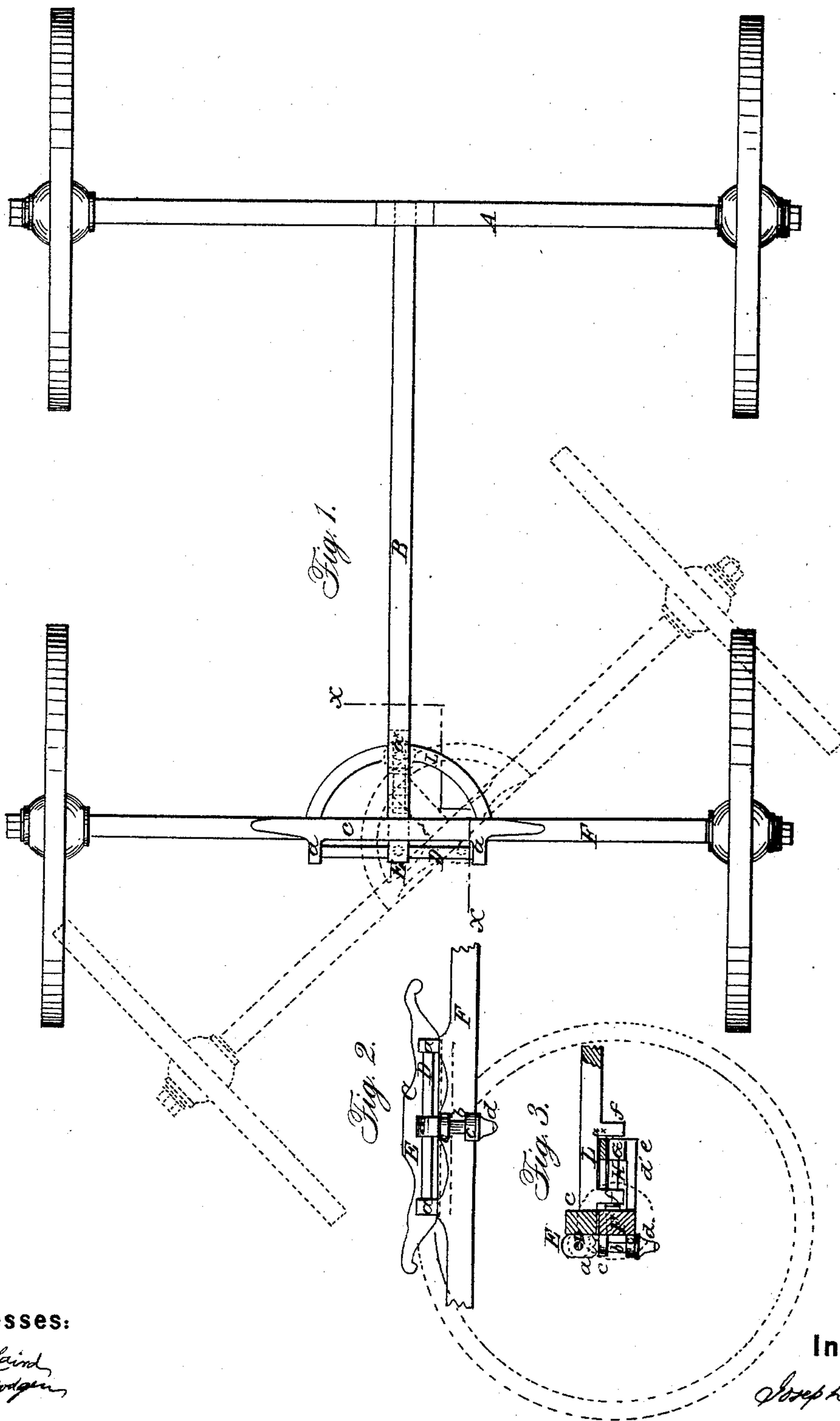


J. O. FARRELL.

Running-Gear.

No. 35,017.

Patented Apr. 22, 1862.



Witnesses:

James Caird
Edwin Hodgson

Inventor:

Joseph O. Farrell

UNITED STATES PATENT OFFICE.

JOSEPH O. FARRELL, OF NEW YORK, N. Y.

IMPROVEMENT IN WHEEL-VEHICLES.

Specification forming part of Letters Patent No. 35,017, dated April 22, 1862.

To all whom it may concern:

Be it known that I, JOSEPH O. FARRELL, of the city, county, and State of New York, have invented a new and useful Improvement in Wheel-Vehicles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan or top view of the running-gear of a wheel-vehicle with my improvement applied to it; Fig. 2, a front view of a portion of the same; Fig. 3, a vertical section of the same, taken in the line *xx*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improvement in the manner of attaching the front axle of the vehicle to the perch or to fixtures connected to the body, as hereinafter fully shown and described, whereby the vehicle may be turned within a small compass, the front wheels admitting of being so "cramped" or turned as to insure the result stated and still allow a requisite space between the front and back wheels for the attachment of proper steps to the body of the vehicle, and also admit of the front and back wheels being placed nearer together than usual without coming in contact when the front wheels are turned or cramped.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the back axle of a wheel-vehicle, and B the reach or perch, which is attached at its back end to the back axle, A, and at its front end to a bolster, C, as shown in Fig. 1. The bolster C has two lugs or projections, *a a*, extending from its front side at right angles, one near each end, and in these lugs or projection the ends of a shaft, D, are secured. The shaft D is at right angles with the perch B, and on said shaft there is placed a slide, E, provided with a pendent pintle, *b*, which passes loosely through the front parts of two eyes, *c c'*, and has a head, *d*, on its lower end, as shown in Figs. 2 and 3. The eye *c* is attached to the front axle, F, at its center, and the eye *c'* is in the front part of a bar, *d'*, which is secured transversely to the under side of the front axle, F, and has its back end fitted loosely on a pintle, *e*, attached to the under side of a slide, G, on a shaft, H, which is parallel with the perch B, and has

its ends secured in pendants *f f* of the perch. (See Fig. 3.) The upper end of the slide G is connected by a pivot, *a^x*, with a semicircular plate, I, which is attached to the upper surface of the front axle, F. (See Fig. 1.) The front axle has thills or a draft-pole attached to it in the usual or in any proper way.

From the above description it will be seen that when the vehicle is drawn along, the "pull" will be on the slide E and shaft D, the pintle *b* forming the connection between the front axle, F, and the slide E, and it will also be seen that when the front axle, F, is turned the slide E will move on the shaft D either to the right or left, while the slide G will move forward on its shaft H. This movement of the slides E G, as indicated in red in Fig. 1, produces a very important result. It causes the front axle, F, to turn from a back center, which is the pivot *a^x*, that connects the semicircular plate I with the slide G, and it also causes said center *a^x* to move forward while the axle F is turning. Consequently a quick cramping position of the front axle is obtained from a back center, while the disadvantage hitherto attending a fixed back center—to wit, the bringing of the front wheels suddenly in contact with the body of the vehicle—is avoided; and hence by my invention the front and back wheels may be placed nearer together than usual, where a fixed back center is used, without the front wheels coming in contact with the back wheels or with the body of the vehicle, and all necessary steps may be attached to the vehicle without the front wheels coming in contact with them.

I do not claim attaching the front axle of a vehicle to its perch or reach by a back center, or, in other words, by a king-bolt placed back of the axle, in order to obtain a quick cramping or turning movement of said axle, for this has been previously done; but

I do claim as new and desire to secure by Letters Patent—

The connecting of the front axle, F, to the perch or reach B by means of the two slides E G, placed, respectively, on the shafts D H, and connected with the axle F, substantially as shown, for the purpose herein set forth.

JOSEPH O. FARRELL.

Witnesses:

JAMES LAIRD,

EDWD. W. HODGSON.