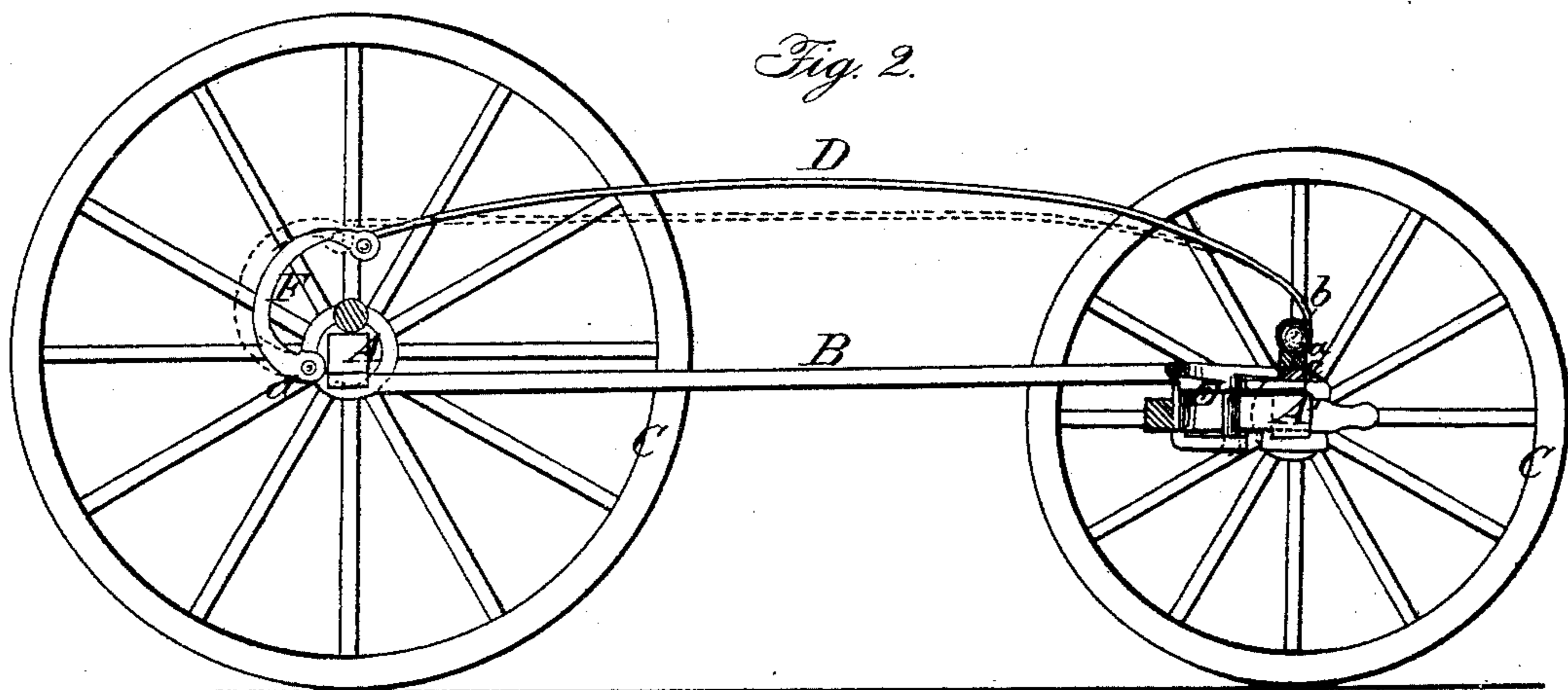
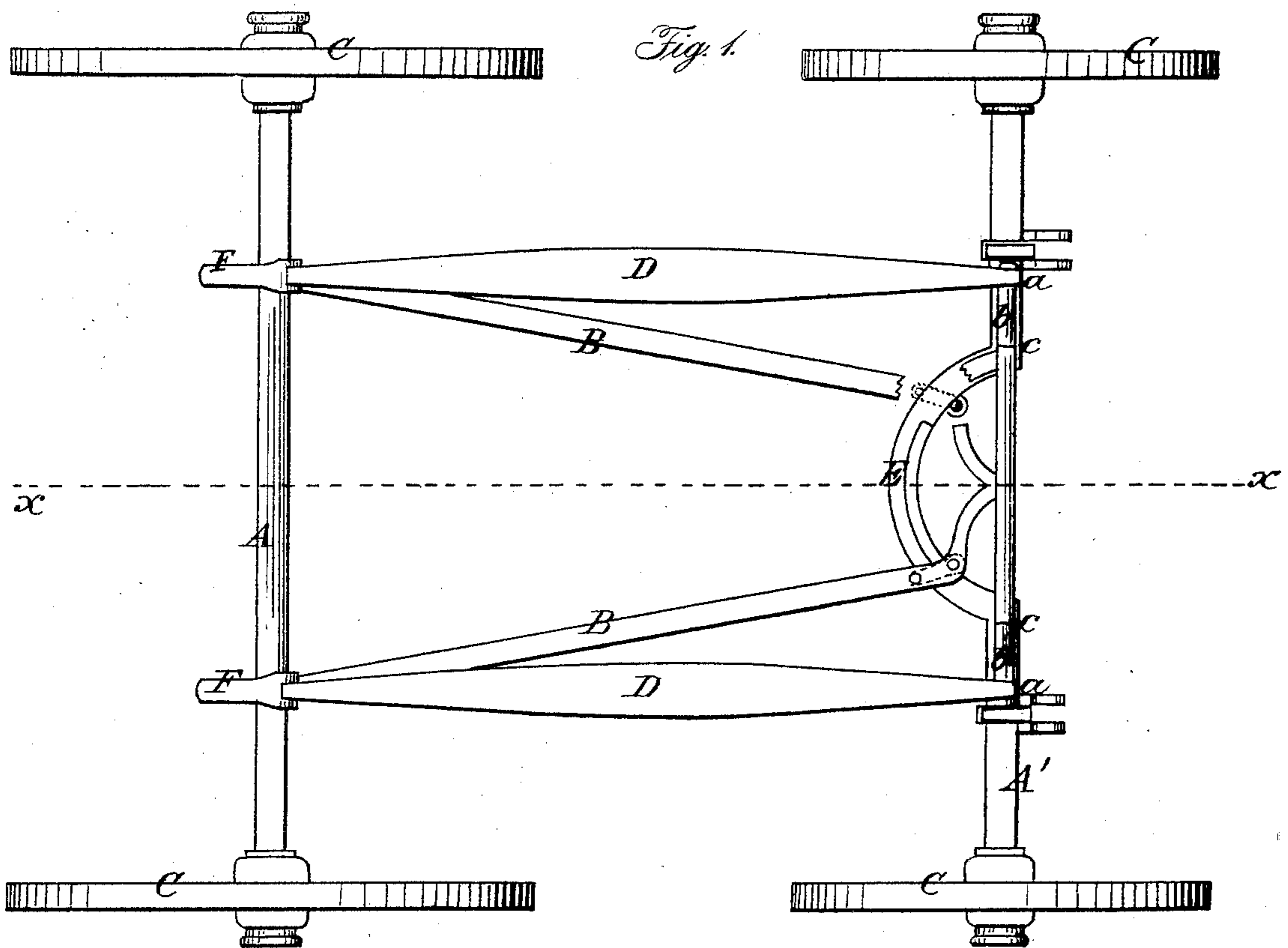


J. O. FARRELL.

Carriage-Spring.

No 34,858.

Patented Apr. 1, 1862.



Witnesses:

Wm. L. Mumford
J. W. Reed

Inventor:

Jos O Farrell
Per *Mum & Co* Atty's

UNITED STATES PATENT OFFICE.

JOSEPH O. FARRELL, OF BOSTON, ASSIGNOR TO HIMSELF, AND WM. VEAZEY,
OF CAMBRIDGEPORT, MASSACHUSETTS.

IMPROVEMENT IN WAGON-SPRINGS.

Specification forming part of Letters Patent No. 34,858, dated April 1, 1862.

To all whom it may concern:

Be it known that I, JOSEPH O. FARRELL, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Side-Spring Wagons; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a plan or top view of the running-gear of a wagon with my improvement attached to it. Fig. 2 is a side sectional view of the same, taken in the line *x x*, Fig. 1.

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

This invention relates to that class of vehicles known as "side-spring wagons," or those that have the body attached to horizontal springs extending longitudinally beneath the body, one at each side and parallel with each other. These springs have hitherto been rigidly attached to their axles, and have consequently caused the latter to be subjected to a great strain, a contingency which the within-described invention is designed to avoid.

Another objection that attends the employment of the common side-spring vehicle is that the body, when loaded, falls too low for convenient use.

In carrying out my improvement I attach one end of the springs rigidly to one axle, while the other ends are connected to the other axle by means of shackles, substantially as hereinafter fully shown and described.

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

A A represent the front and back axles of a light pleasure-wagon.

B B represent reaches; C, the wheels.

D D are the side springs, the front ends of

which are provided with eyes *a*, which are fitted on horizontal pins *b*, attached permanently to arms *c c*, which are connected with the fifth-wheel E of the wagon.

The side springs D D may be constructed in the usual or in any proper way. They are of bow form, and their back ends are attached to C-shaped bars F, the lower ends of which are connected by joints *d* to the back axle A. The bars F are rigid or non-elastic, but, being connected to axle A by joints, they allow the springs D D to yield or give without straining the axles A A'. This will be fully understood by referring to Fig. 2, in which one spring D is shown depressed, in red. The bars F do not admit of being forced outward or backward, except as the springs D are depressed. The bars therefore do not in the least detract from the efficiency of the springs, but only serve to allow them to yield or give under the load to which they are subjected without exerting any strain or lateral pressure against the axles, a contingency which occurs in the ordinary mode of construction, owing to the direct connection of the spring to both axles.

I do not claim, broadly, the use of shackles in connection with springs; but,

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

The construction of side-spring wagons with the rear ends of the springs D D jointed to curved arms F, which are also jointed to the hind axle, all as herein shown and described.

JOSEPH O. FARRELL.

Witnesses:

JAMES D. O. SULLIVAN,
WILLIAM VEAZEY.