

(No Model.)

A. C. FISH.
WAGON SPRING.

No. 248,926.

Patented Nov. 1, 1881.

Fig. 1.

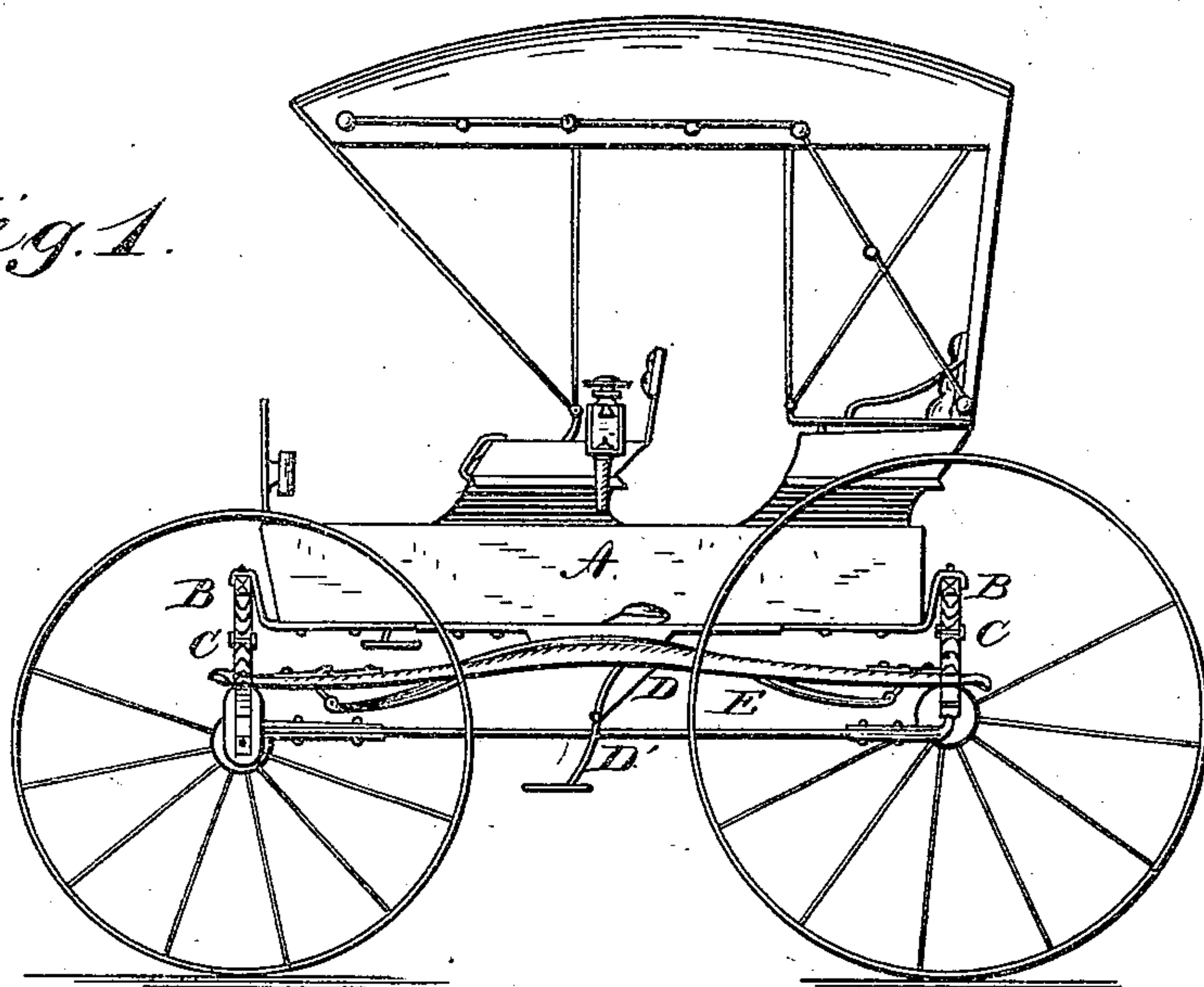


Fig. 2.

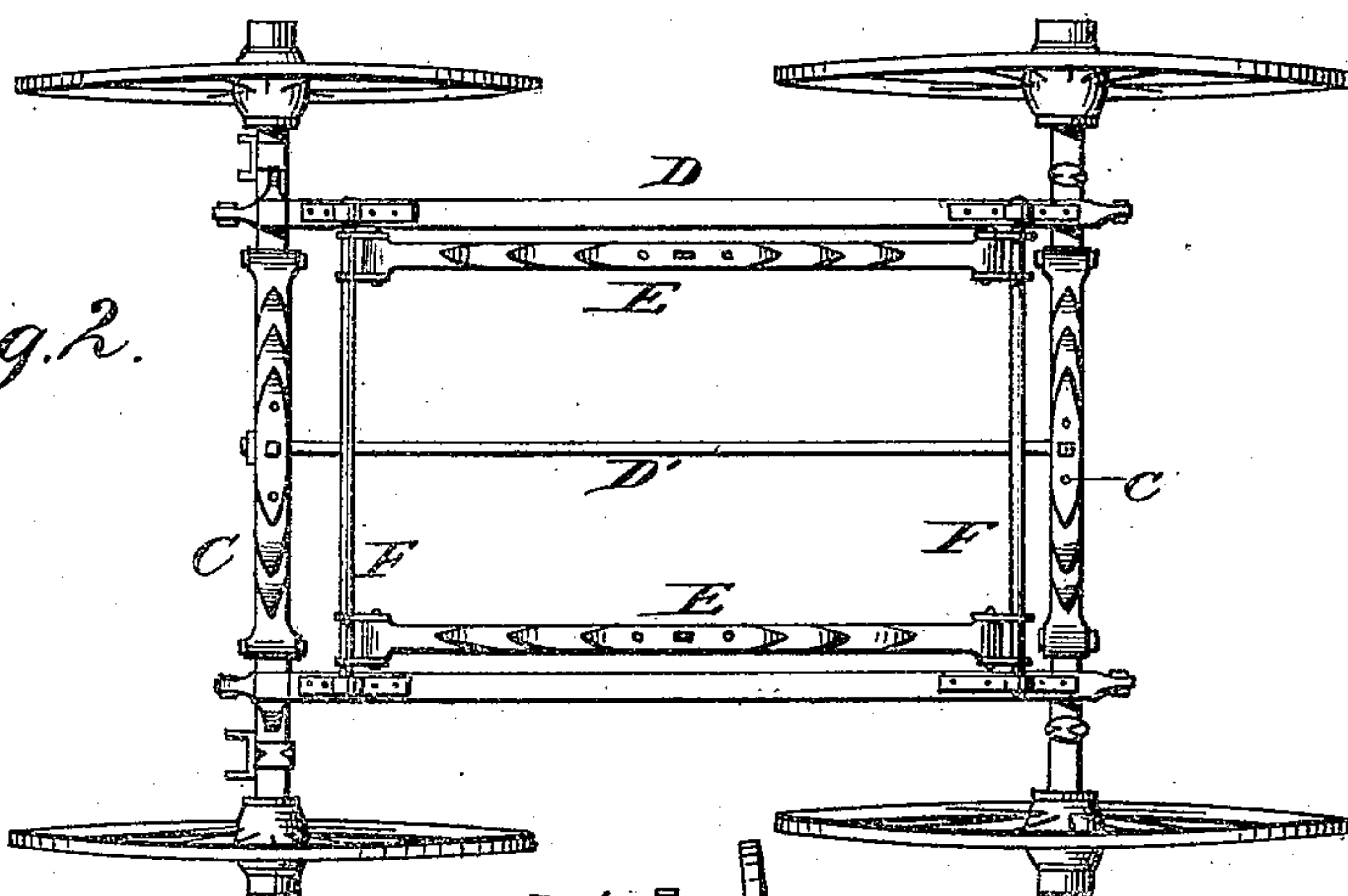


Fig. 3.

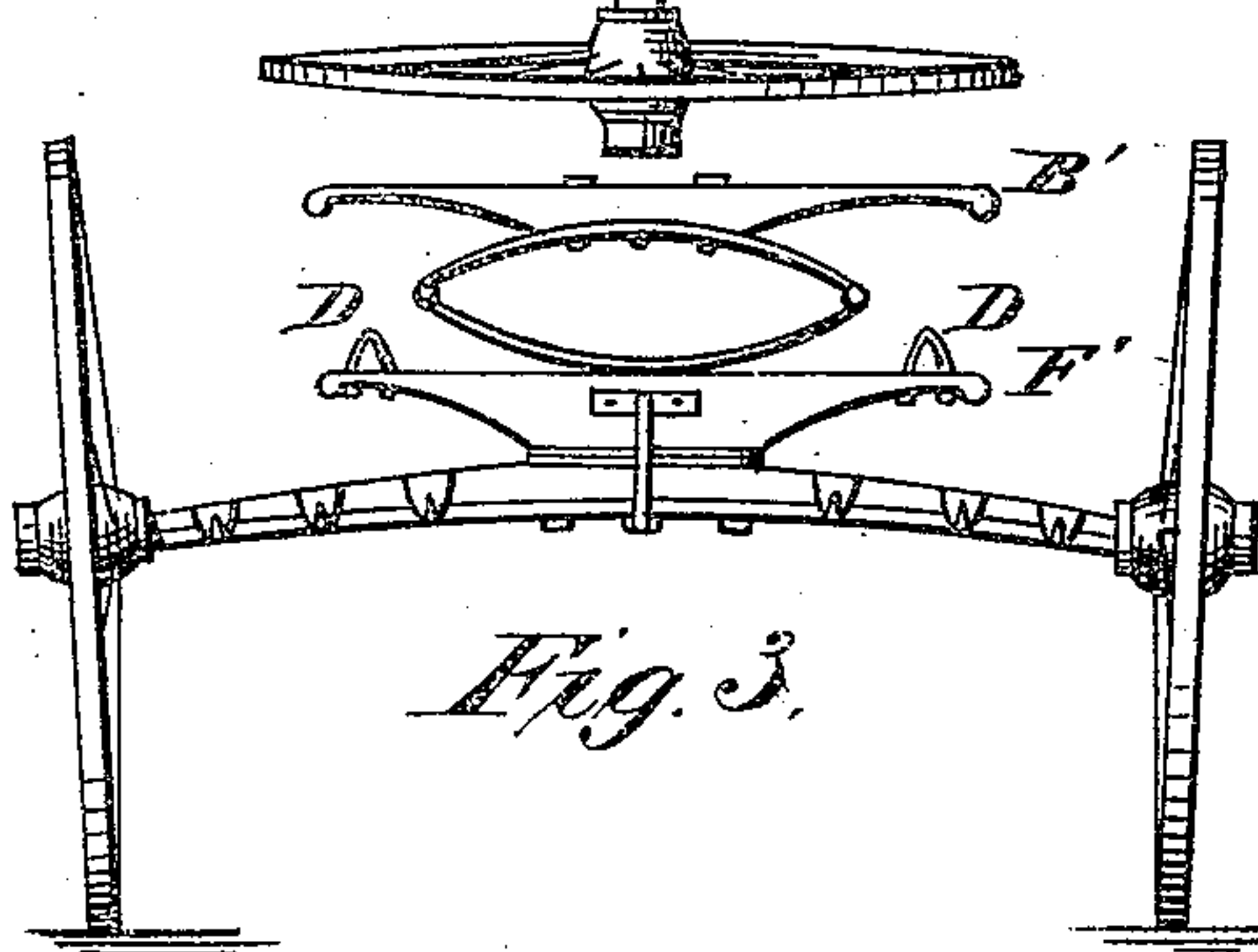
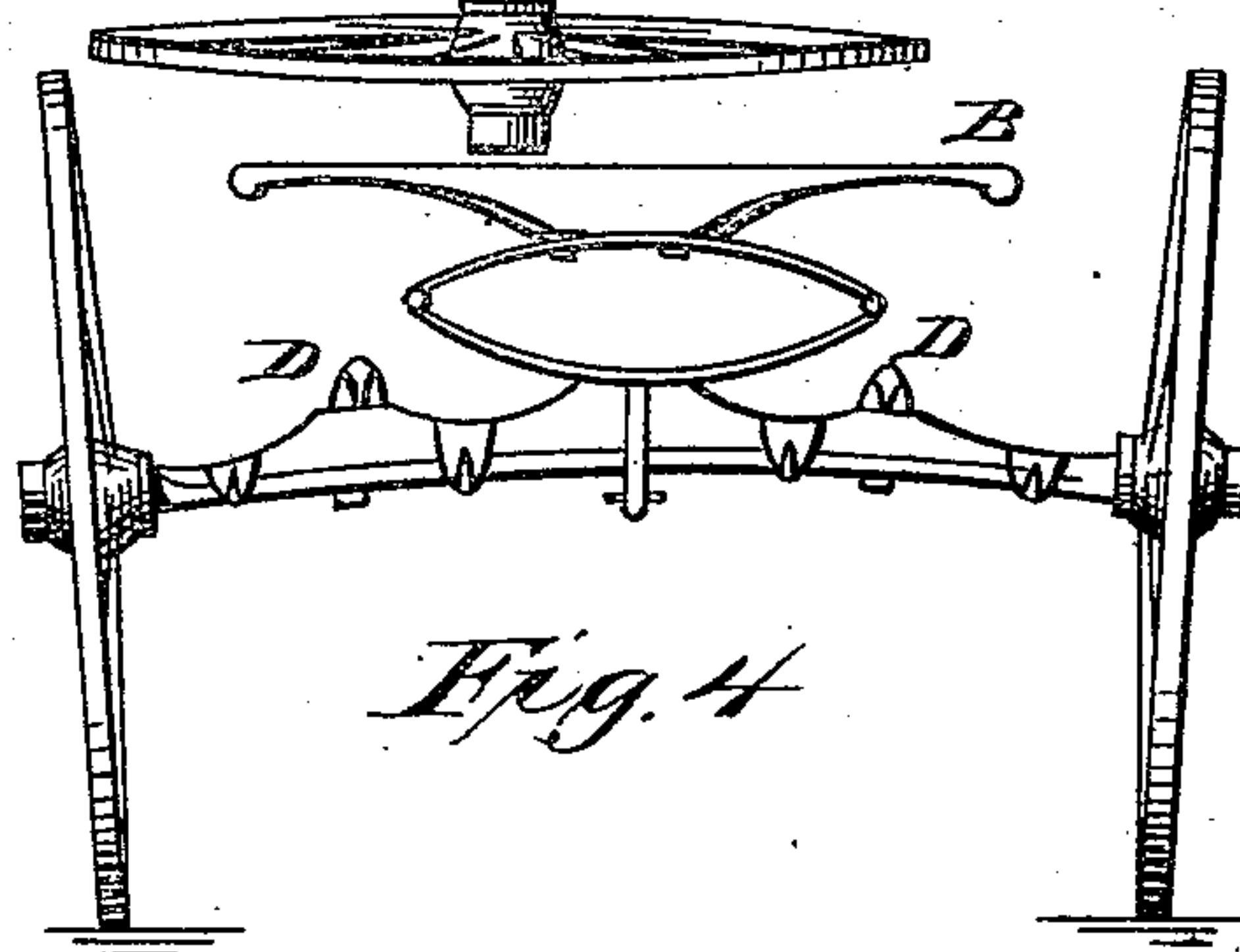


Fig. 4.



Witnesses.
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UNITED STATES PATENT OFFICE.

ABNER C. FISH, OF RACINE, WISCONSIN.

WAGON-SPRING.

SPECIFICATION forming part of Letters Patent No. 248,926, dated November 1, 1881.

Application filed August 24, 1881. (No model.)

To all whom it may concern:

Be it known that I, ABNER C. FISH, of Racine, in the county of Racine, and in the State of Wisconsin, have invented certain new and
5 useful Improvements in Four-Spring Wagons; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to four-spring wagons, the object being to so combine the springs with
10 each other that the body may hang quite as low as the body of a two-spring wagon, whether the springs in the latter be side or elliptic.

In the drawings, Figure 1 is a side view of a carriage embodying my invention. Fig. 2 is
15 a plan view with the body removed, and Figs. 3 and 4 are respectively a front and rear view thereof.

The body A is looped to spring-bars B B, that rest upon and are secured to the front and
20 rear elliptic springs, C C.

The front and rear axles are connected by side perches, D D, and a central reach, D', and between the perches C C, I hang the semi-elliptic side springs, E E, either to transverse rods
25 F F or to a head-block, F', in front, and to the rear axle behind; or I may find it expedient to attach either the front or rear ends of the springs, or both, to their support or supports by one or more equalizers; but in any case I
30 design hanging the side springs so low that when loaded they will permit the body to sink between the perches.

The side springs in my device act to prevent any end-thrust that would tend to wrench
35 the end springs from their seats, and the end springs serve to brace the side springs against any tendency to sag laterally.

My combination of springs not only permits

the body of the wagon to be hung low, so as to be easy to get into and out of, but give to
40 it an easy and comfortable motion, even on the roughest roads.

It is obvious that for the side perches a double bent reach may be substituted, in which case the side springs would have to be hung
45 from the head-block in front and from the rear axle behind.

The bars F F, as shown in Fig. 2, may turn in bearings in the side bars, so as to act as equalizers to make the dip of one side spring
50 coincide with that of the other.

I am aware that end elliptic springs in combination with side elliptic springs are old; also, a single central semi-elliptic spring in connection with end elliptic springs, and that semi-
55 elliptic end and semi-elliptic side springs have been combined, and such I do not claim; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, in a wagon running-
60 gear, of side perches or bars, semi-elliptic springs arranged between the bars, and end elliptic springs, as set forth.

2. The combination of a body, semi-elliptic side springs, equalizing-bars, and elliptic end
65 springs, as set forth.

3. In a road-wagon, the combination of the body, semi-elliptic side springs, central perch or perches, and elliptic end springs, as set forth.

In testimony that I claim the foregoing I
70 have hereunto set my hand this 18th day of August, 1881.

ABNER C. FISH.

Witnesses:

ERNEST D. W. DERRY,
STANLEY S. STOUT.