

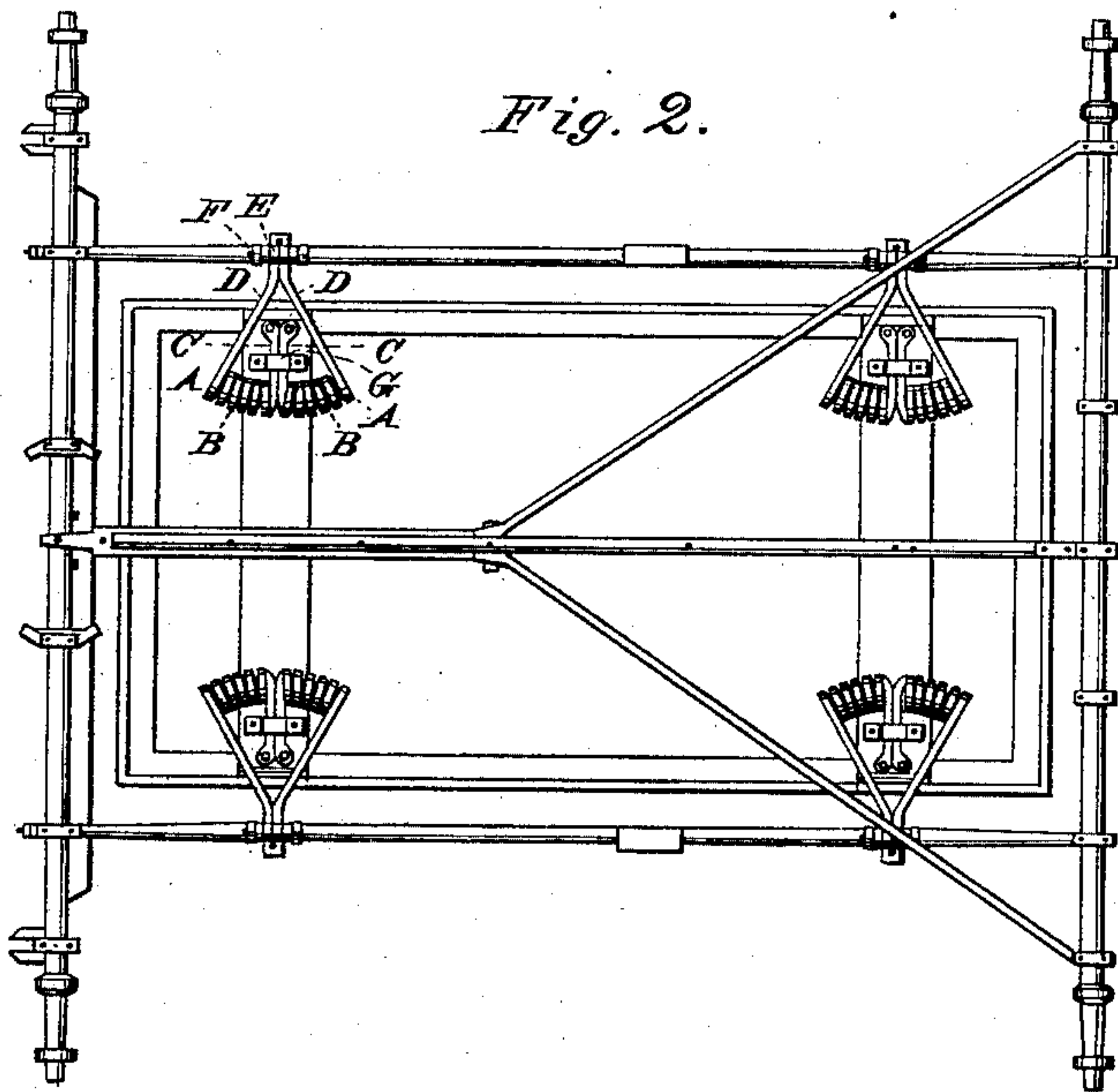
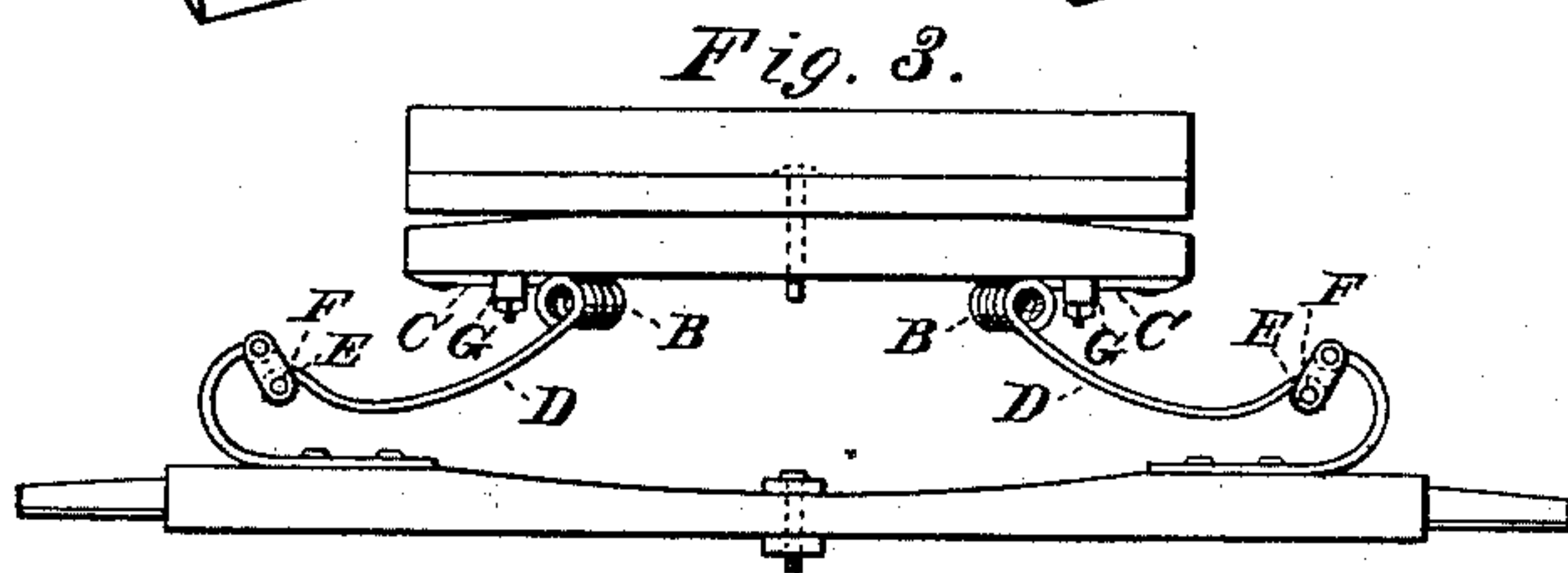
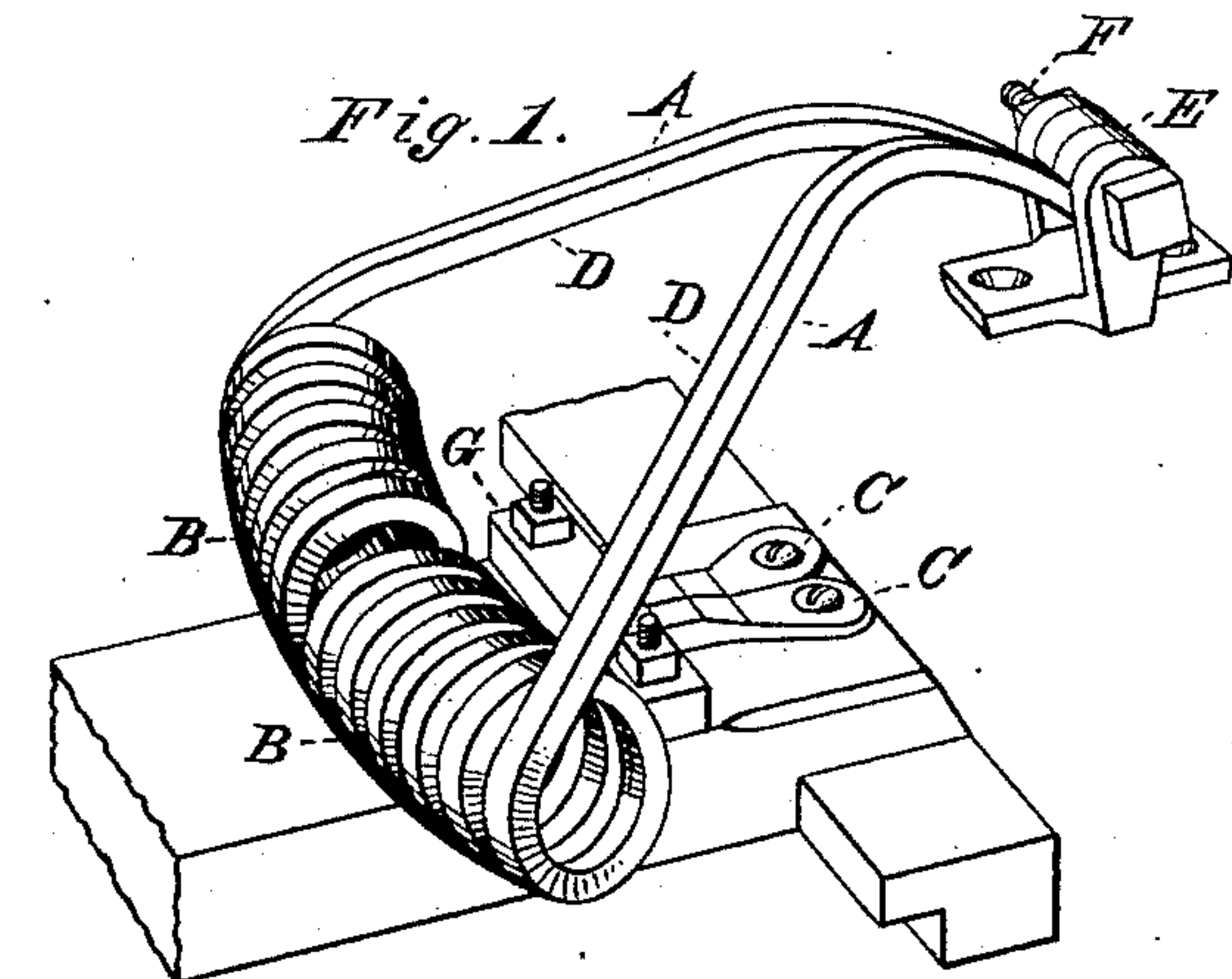
(No Model.)

T. J. MAGNER.

VEHICLE SPRING.

No. 328,238.

Patented Oct. 13, 1885.



WITNESSES

*Villette Anderson.*  
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# UNITED STATES PATENT OFFICE.

THOMAS J. MAGNER, OF WELLSVILLE, NEW YORK.

## VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 328,238, dated October 13, 1885.

Application filed July 12, 1884. Serial No. 137,570. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS J. MAGNER, a citizen of the United States, residing at Wells-ville, in the county of Allegany and State of New York, have invented certain new and useful Improvements in Vehicle-Springs; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-  
10 pertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention, and is a perspective view of the under side of the spring. Fig. 2 is a bot-  
15 tom view. Fig. 3 is an end view of a vehicle, showing the springs attached.

This invention has relation to vehicle-  
20 springs; and it consists in the construction and novel arrangement of devices, as herein- after set forth, and pointed out in the ap- pendended claims.

The object of the invention is to provide a  
25 simple and strong spring for use between the bolster and axle or between the body and side- bar of a vehicle.

The spring consists, essentially, of twin spiral portions extending horizontally and termin-  
30 ating at their inner ends in short contiguous arms adapted to be attached to the body or bolster, and at their outer ends in longer arms extending obliquely toward each other and terminating in bearings or eyes, whereby con-  
35 nection is made to shackles or other connect- ing devices of the axle or side-bar.

In the accompanying drawings, the letters A A designate the branches of the spring. Each branch consists of a horizontal spiral  
40 portion, B, the inner end of which is extended in the form of an arm, C, which is designed to be secured to the bolster or body of the vehicle by a clip-plate or other common fast- ening, as indicated at G. Usually the arms C  
45 C of the two branches are set to abut against each other throughout their length, so that they mutually aid in sustaining the inward thrust to which each arm C is subjected when the spring is under strain. The outer ends of  
50 the spiral portions B are extended to form free or movable arms D, which are longer than the fixed arms C. These long arms are formed with a graceful curvature, and are directed obliquely toward each other, their

terminal ends being joined together. The end of each arm D is provided with an eye or bearing, E, through which the pivot-bolt F passes, which connects the arms D to the shackle or attachment of the side-bar or axle, as the case may be. In this construction the oblique direction of the arms D allows the eyes E to be brought into contiguous position or close together, so that a single pivot-bolt will serve for both.

In making these springs the spiral portions B B are curved from end to end, so that the entire spiral portion of the spring will have a graceful arc shape, and in order that the long arms D will extend truly from the end whirls of the spirals in the oblique direction in which they are designed to run.

I am aware that it is not new to form a vehicle-spring with two spiral branches hav- ing an intermediate crank portion for the at- tachment of a pivoted lever which connects with the side-bars, and each spiral having a parallel arm for connecting with the body of a vehicle.

I am also aware that it is not new to form a spring with two spiral portions having con- tiguous arms connecting with the side-bars of a vehicle and outer parallel arms connecting with the body thereof, the arms connecting with the side-bar being curved and the arms connected with the body provided with a clip, and therefore do not claim such devices, broadly.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. A vehicle-spring composed of the spiral portions extending horizontally in arc shape, the attachment arms extending from the in- ner ends of the spiral portions, and the ob- lique arms extending from the outer ends of said spiral portions, substantially as specified.

2. The vehicle-spring consisting of the spiral portions B, having their inner ends terminating in short engaging parallel arms and their outer ends obliquely directed to- wards each other and clipped together, sub- stantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS J. MAGNER.

Witnesses:

PHILIP C. MASI,  
M. P. CALLAN.