

(No Model.)

M. F. CARROLL.
VEHICLE SPRING.

No. 422,048.

Patented Feb. 25, 1890.

Fig. 1.

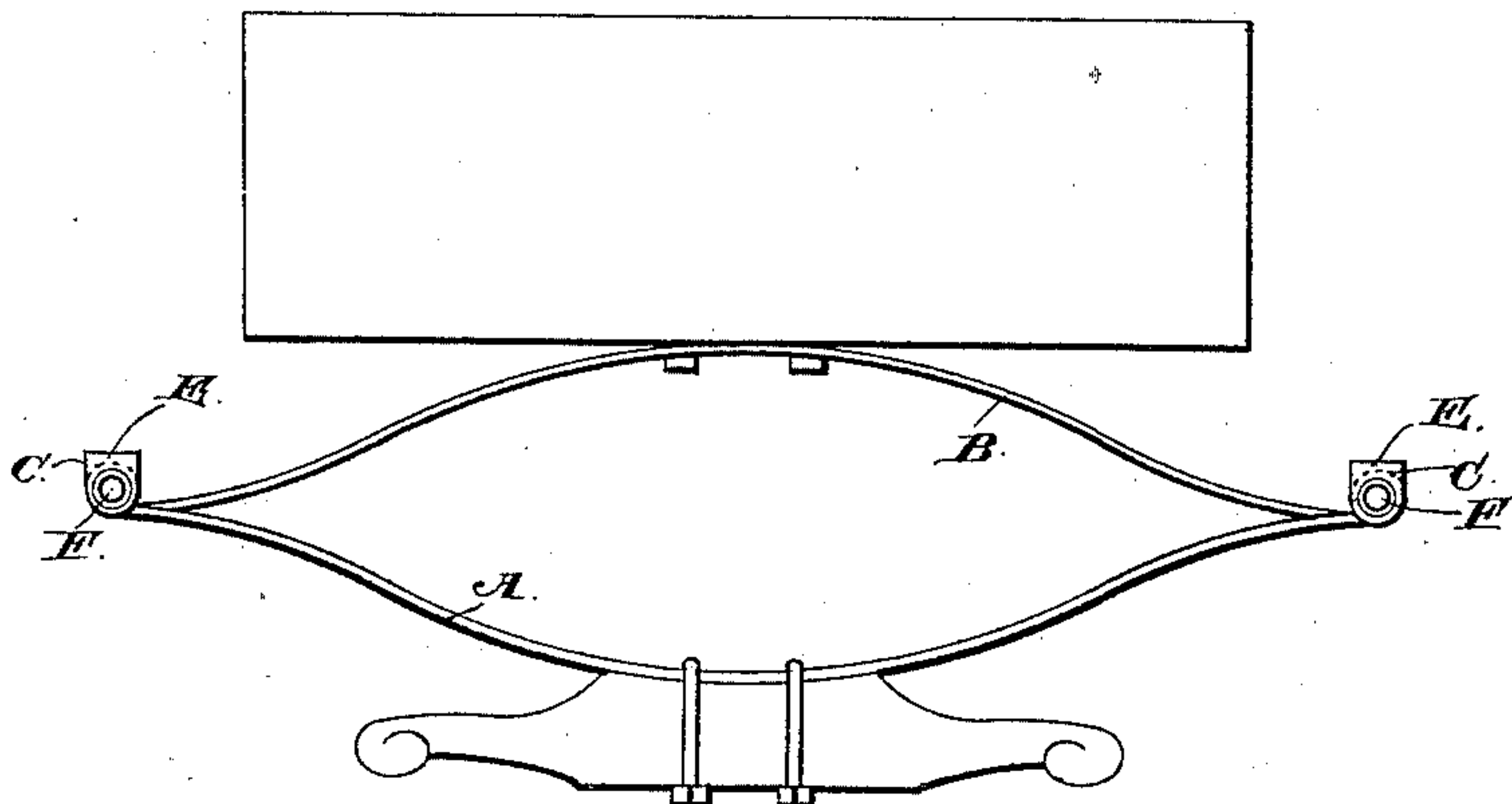


Fig. 2.

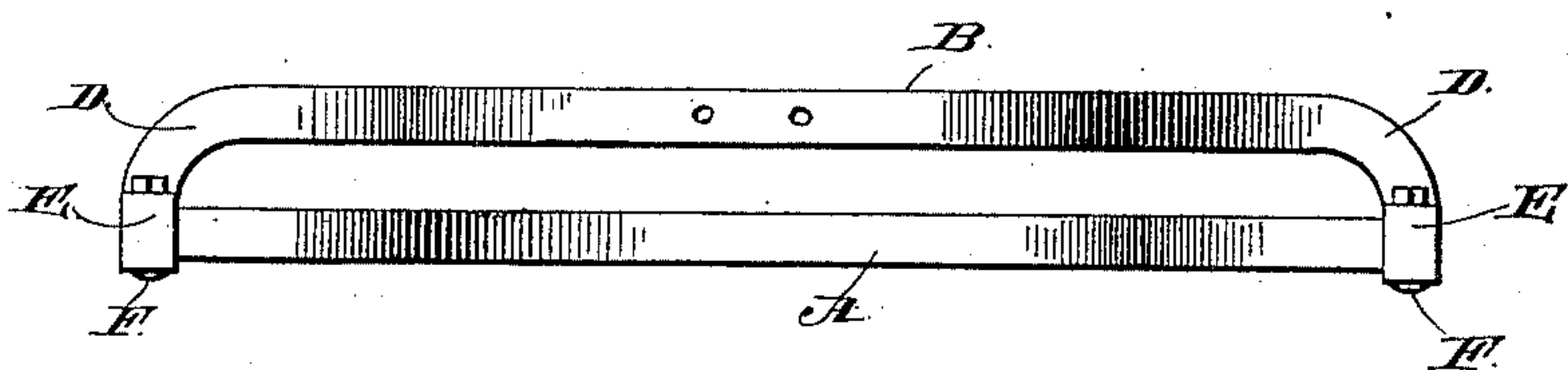
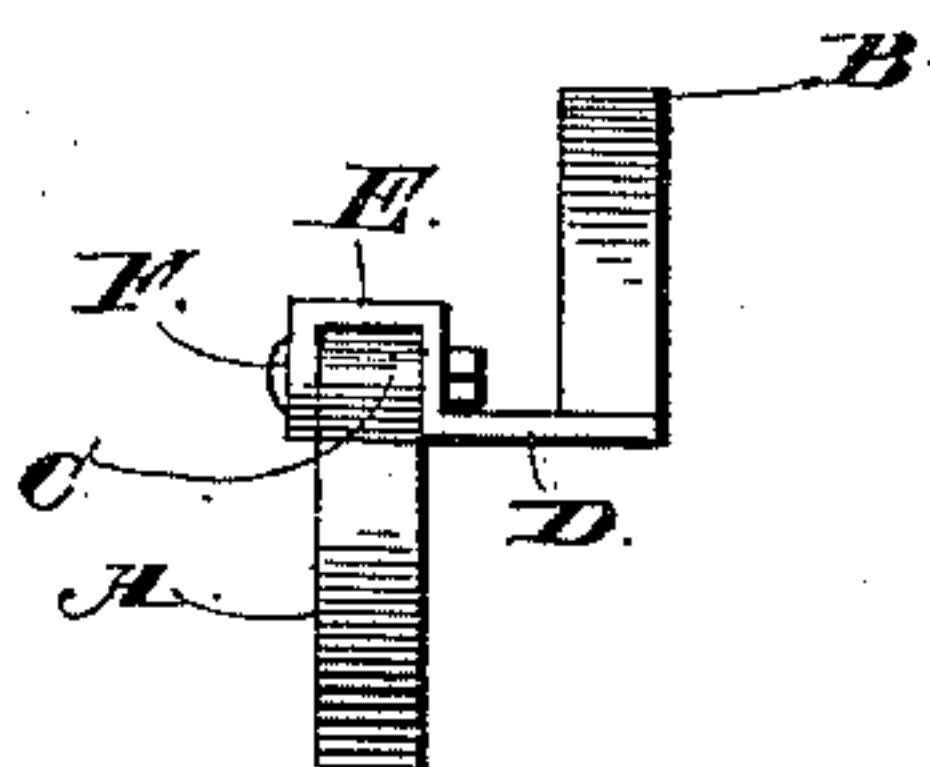


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

MICHAEL FRANCIS CARROLL, OF HILLSBOROUGH, OHIO, ASSIGNOR OF ONE-HALF TO A. W. DOWNHAM, OF SAME PLACE.

VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 422,048, dated February 25, 1890.

Application filed November 9, 1889. Serial No. 329,719. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL FRANCIS CARROLL, a citizen of the United States, residing at Hillsborough, in the county of Highland and State of Ohio, have invented a new and useful Vehicle-Spring, of which the following is a specification.

My invention relates to improvements in vehicle-springs; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side view of my improved spring, showing it applied to a vehicle. Fig. 2 is a plan view of the spring. Fig. 3 is an end view of the same.

My improved spring consists of two branches or members A B, whose bodies stand in parallel vertical planes, as shown. The lower branch A is provided at its ends with the eyes C, and the ends of the upper branch B are bent inward in an elbow, as shown at D, and are provided with the hooks E, fitting over the eyes C at the ends of the lower branch. Securing-bolts F are inserted through the eyes C and the hooks E to connect the two members or branches together.

My improved spring dispenses with the use of all side bars or shackles and can be manufactured at a trifling cost.

The body of the vehicle is secured to the upper member or branch, and the bent ends of said branch or member throw the said upper member out of the plane of the lower member, so that the body may oscillate freely without coming into contact with the said lower member.

When it is desired to disconnect the members of the spring, the bolts F are withdrawn and the upper branch B is lifted bodily from the lower branch.

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

1. The improved vehicle-spring consisting of the upper and lower members standing in parallel vertical planes, the upper member having its ends bent toward the lower member and provided with integral hooks fitting over the ends of the lower member, and the securing-bolts passed through the said hooks and the ends of the lower member, as set forth.

2. The improved vehicle-spring herein described, consisting of the upper and lower members B A, standing in parallel vertical planes, the lower member bent into transverse eyes C at its ends, the upper member bent laterally in elbows D near its ends, then carried upward, outward, and downward, forming hooks E', embracing the ends of the eyes C, and bolts F, passing through perforations in the vertical bends of said member B and through the eyes C, as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

MICHAEL FRANCIS CARROLL.

Witnesses:

D. LEADBETTER,
A. D. WIGGINS.