

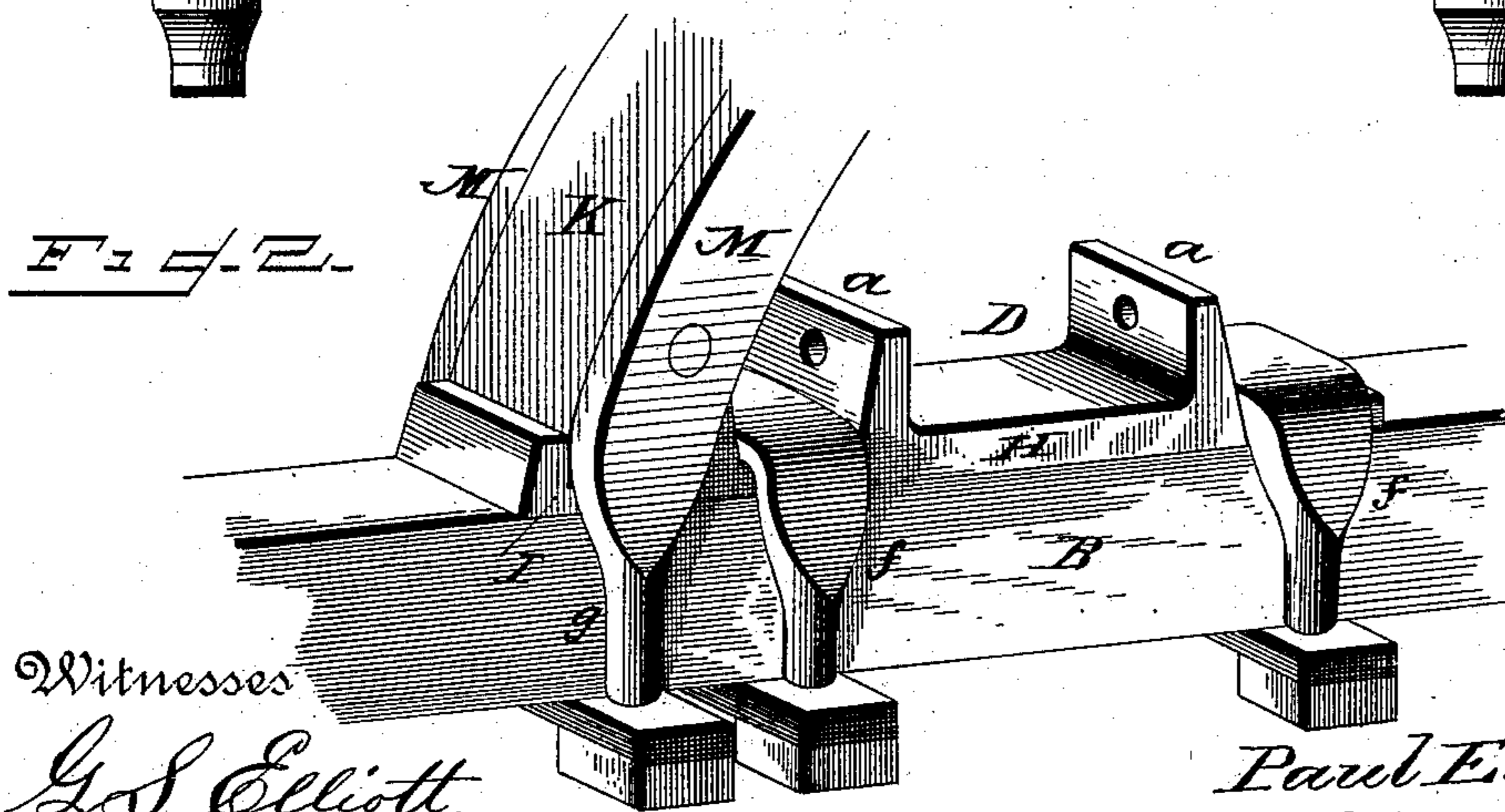
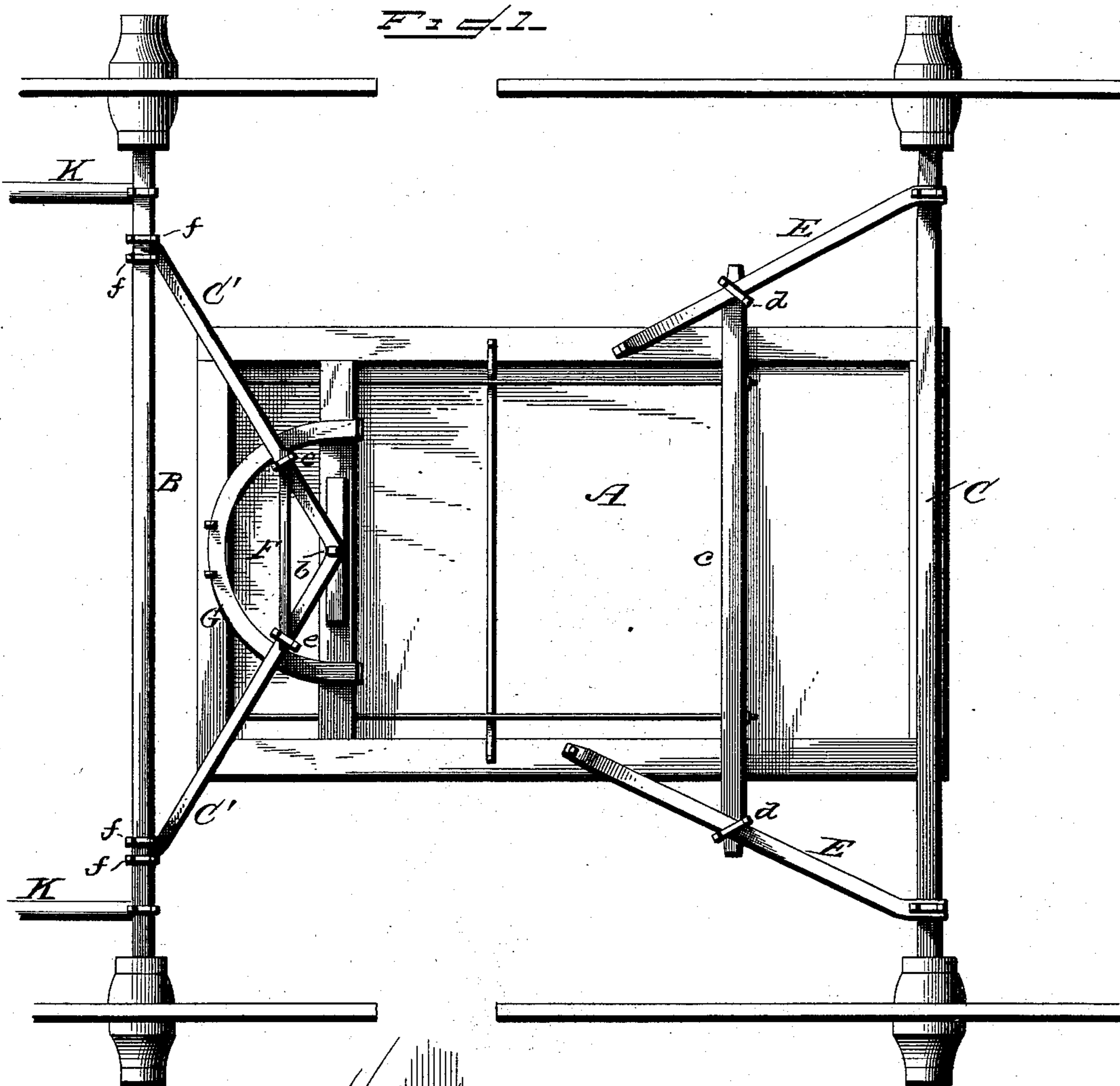
(No Model.)

P. EMERY.

RUNNING GEAR FOR VEHICLES.

No. 376,079.

Patented Jan. 10, 1888.



Witnesses

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# UNITED STATES PATENT OFFICE.

PAUL EMERY, OF OWEGO, NEW YORK.

## RUNNING-GEAR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 376,079, dated January 10, 1888.

Application filed July 21, 1887. Serial No. 244,892. (No model.)

*To all whom it may concern:*

Be it known that I, PAUL EMERY, a citizen of the United States, residing at Owego, in the county of Tioga and State of New York, have invented certain new and useful Improvements in Running-Gears; 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, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is an under plan view of a wagon, showing my improvement applied thereto; and Fig. 2, a detail view, in perspective, of a portion of the front axis, showing the clip devices and manner of connecting the thill thereto.

The present invention has for its object to provide a simple, light, and durable gearing for wagons, and also a practical means of connecting and supporting the spring without the necessity of the employment of any platform or spring bar; and it consists in the details of construction, substantially as shown in the drawings and hereinafter described and claimed.

In the accompanying drawings, A represents the body of a wagon, and B C the front and rear axles, respectively, to which the usual wheels are connected.

The springs C' are connected directly to the axle by means of suitable bolts extending through eye-flanges on a metal seat, D, said flanges being shown at a. The springs extend inwardly at an angle, and their opposite ends are connected to the under side of the wagon-body by means of a king-bolt, b, by which means any platform or spring-bar is dispensed with. The rear springs, E, are also connected to the under side of the wagon-body, and also to a cross-bar, c, by suitable clips, d, and to the rear axle, in the usual manner. It will be seen, therefore, that the wagon-body is connected directly to the axles solely by means of the springs, and as these springs extend from the body of the wagon in a direction outwardly and are connected to the axle some distance from the body, perfect braces are provided, and the

cross-bar c forms a rigid support for the rear spring. The springs C' are connected together near the apex of their angle by means brace F and of clips e, so as to strengthen the springs and render them more effective in bracing the wagon-body in a diagonal direction.

A semicircular bearing-plate, G, is provided, which serves as a friction-plate for the spring C' to work on when the front axle turns. The metal bracket H is cast with flanges a to form a seat, D, for the eye end of the spring C' to rest in, as hereinbefore stated, the fastening-bolts passing through the holes in the flanges and through the eye in the springs as a means of attaching the spring to the axle. This bracket H is held to the upper side of the axle B by means of suitable clips, f, said bracket having at one end a seat, I, for the end of the shaft K or thill. The thill-irons M, to which the shafts or thills are connected, terminate in bolts g, for convenience of attaching the shaft or thill-iron to the axle, as shown in Fig. 2.

I deem it important that the springs C' be so arranged that their apex shall be forward of the transverse center of the body A, and that the points of attachment of the springs E be to the rear of or at said transverse center. The king-bolt serves a double function, and the full benefit of the resiliency of the springs is utilized.

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

1. In a wagon-gear, the diagonal springs C', connected to the front axle by suitable clips and to the under side of the wagon-body at their point of intersection, which point is forward of the transverse center of said body, by a king-bolt, and also connected together near the apex of their angle by transverse brace F, in combination with the diagonal springs E, connected to the rear axle and to the wagon-body to the rear of the apex of the angle of the springs C', and also to the transverse brace c, by suitable clips and bolts, substantially as and for the purpose set forth.

2. The combination, with the axle B, of the

metal bracket H, secured to the upper side thereof and formed with flanges a, serving as a seat for the eye end of a spring, seats for the clips, and at one end with a seat for the  
5 end of the thill, all substantially as shown and described.

In testimony that I claim the above I have

hereunto subscribed my name in the presence of two witnesses.

PAUL EMERY.

Witnesses:

JOHN E. HANDREN,

LENA M. BROWN.