

(No Model.)

W. CRAGO.  
PLATFORM SPRING.

No. 317,095.

Patented May 5, 1885.

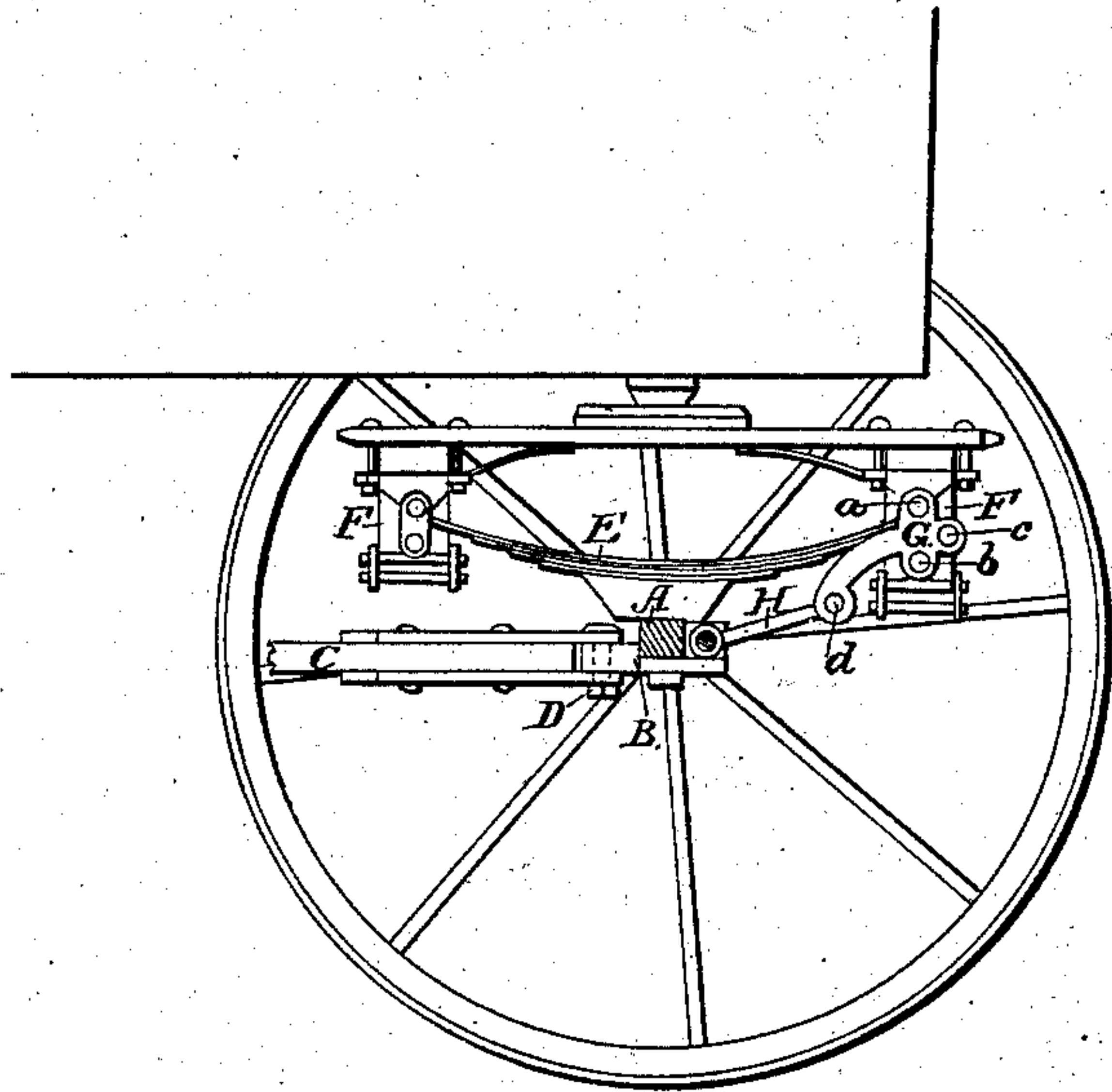


Fig. 2.

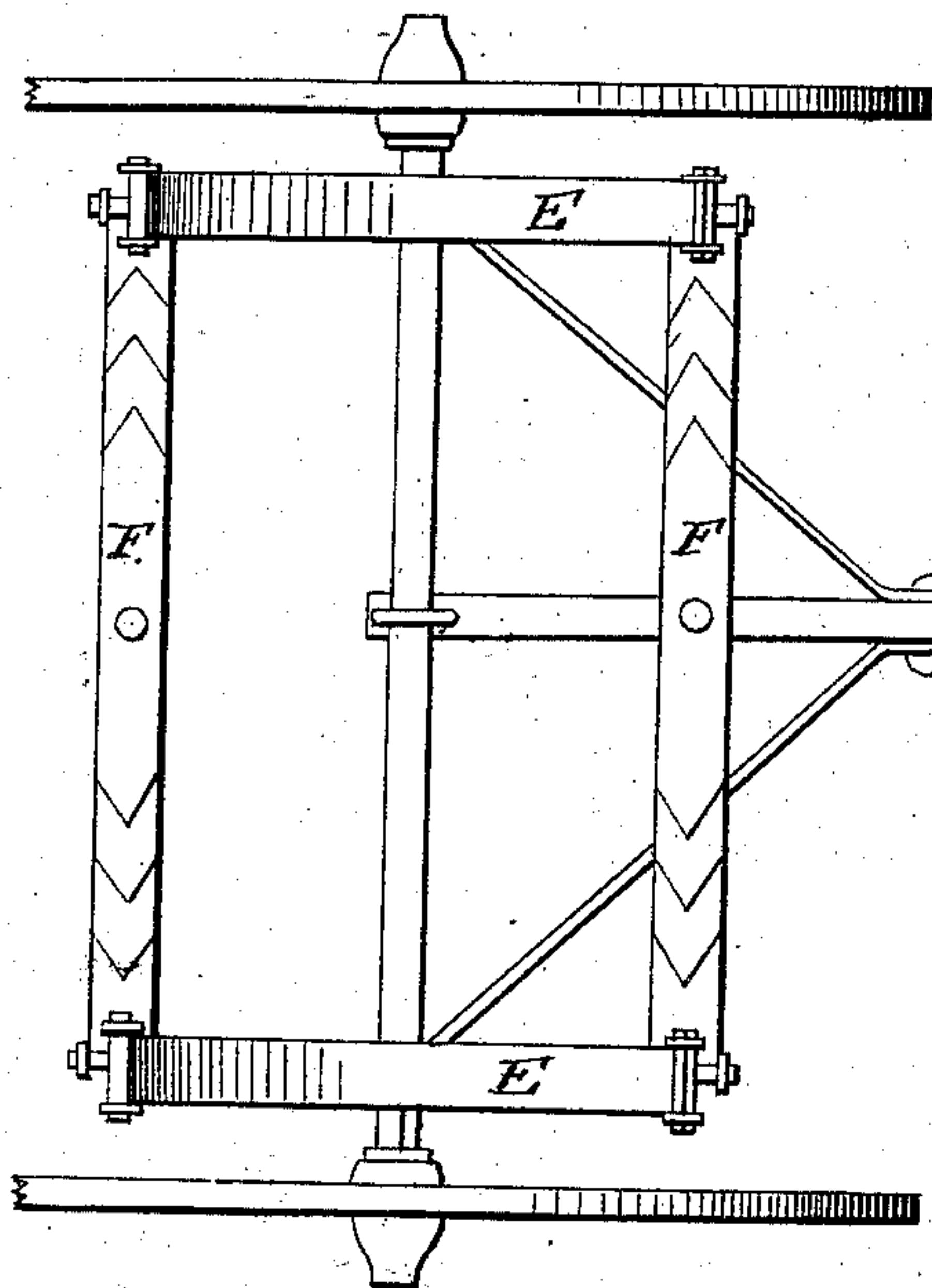
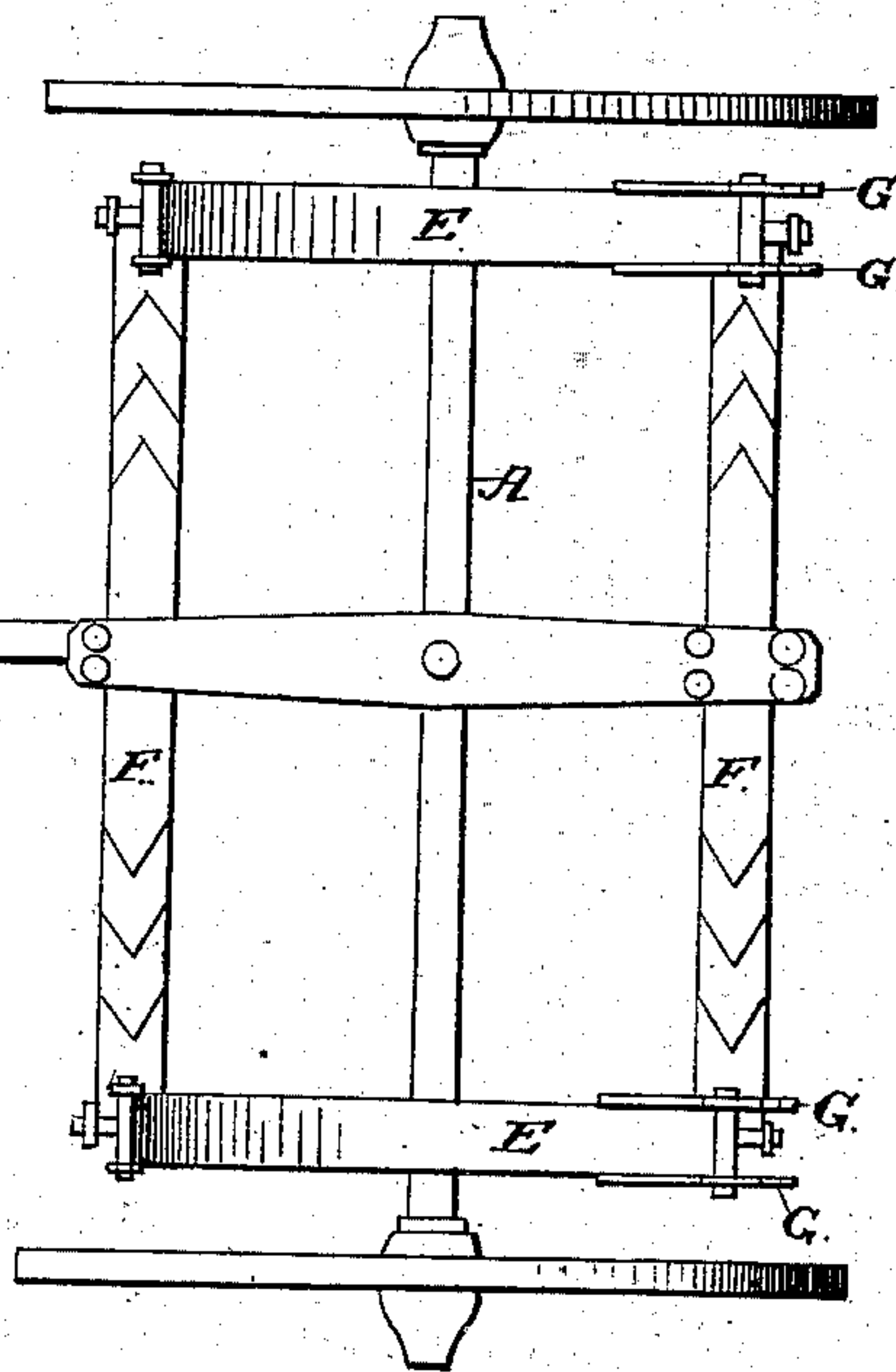


Fig. 1.



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# UNITED STATES PATENT OFFICE.

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## PLATFORM-SPRING.

SPECIFICATION forming part of Letters Patent No. 317,095, dated May 5, 1885.

Application filed February 12, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM CRAGO, a citizen of the United States, residing at Carbondale, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Platform-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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Figure 1 represents a top plan view of the springs and running-gear of a wagon or other vehicle to which I have applied my improvements. Fig. 2 represents a side elevation of the forward springs and running-gear embodying my invention.

My invention relates to carriages and wagons.

The object of my improvement consists in combining, with a platform-spring wagon, a pole or shaft attachment, whereby the said attachment may be made at the forward end of the springs on the fore axle, and at the same time having the draft direct from the axle.

The invention for this purpose consists in the following construction and arrangement of the springs and the pole and thill connections, all of which will be first fully described, and the points of novelty then indicated in the claims.

Referring to the drawings, A represents the forward axle. B represents a clip bolted thereon to the mid-length of the axle, and is provided with the pivotal bearing for the perch or reach C. The pivotal bolt D connects the clip B and perch C.

E represents four cushion side springs secured to the front and rear axle, respectively.

F represents four transversely-arranged half-springs, which pass in the line of the length of the axles and connect with the ends of the cushion-springs E, as clearly shown in the drawings. A set of rectangularly-arranged platform-springs are disposed under each axle, there being four springs in each set. The springs F are much longer than the side springs, E, the latter being intended to form a cushion for the transverse springs. The clip-connections between the ends of the connecting-springs are formed in the usual and well-known manner.

The connections for the coupling of the pole or thills to the wagon are made in a novel manner.

G is a casting or forging of the general shape shown in Fig. 2. It is designed not only to take the place of the usual connecting device at the forward end of the side springs, E, on the forward axle, but also provides for the attachment of the pole or thills and the pivoted draft-link H, which connects the clips G to the axle A.

a b represent the holes through which the bolt-connections pass in order to secure the forward ends of the springs E to the ends of the front transverse spring, F. The clip G has a rearwardly-extending arm, in the extremity of which the link H is pivoted by the bolt J.

c are the holes which receive the thill or pole couplings for their attachment.

The arrangement of the clip G and the pivoted link H admits of the springs being depressed without interfering with the draft action of the wagon. In this manner I am enabled to use a shorter pole or shafts than is possible where they are attached directly to the axle. At the same time I obtain a direct draft from the axle.

Having described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In combination with the springs of a wagon, clips connected thereto provided with rearwardly-projecting arms and having connections for a pole or shafts, and links pivoted at one end to the rearwardly-projecting arms of the clips and at the other to the axle, substantially as described.

2. In a spring-wagon provided with forward and rear side cushion-springs and transverse springs connecting the same, the combination of clips having rearwardly-projecting arms and connected to the forward ends of the front side springs, connections for the pole or thills, located in the front ends of the clips, and links pivoted at one end to the rearwardly-projecting arms of the clips and at the other to the axle, substantially as described.

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

WILLIAM CRAGO.

Witnesses:

P. S. JOSLIN,  
F. HOBAN.