

(No Model.)

3 Sheets—Sheet 1.

M. HALFPENNY.

GEAR FOR PLATFORM WAGONS.

No. 282,455.

Patented July 31, 1883.

Fig 1.

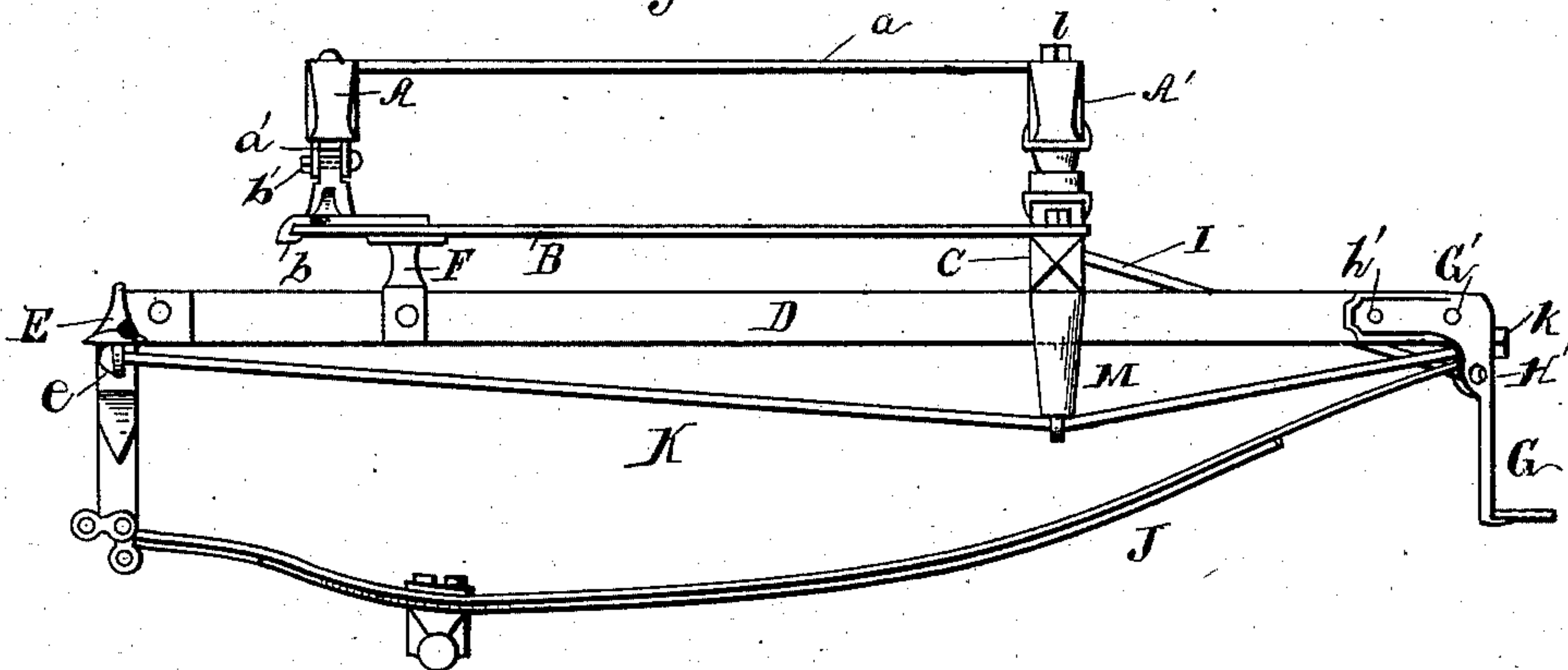


Fig 2.

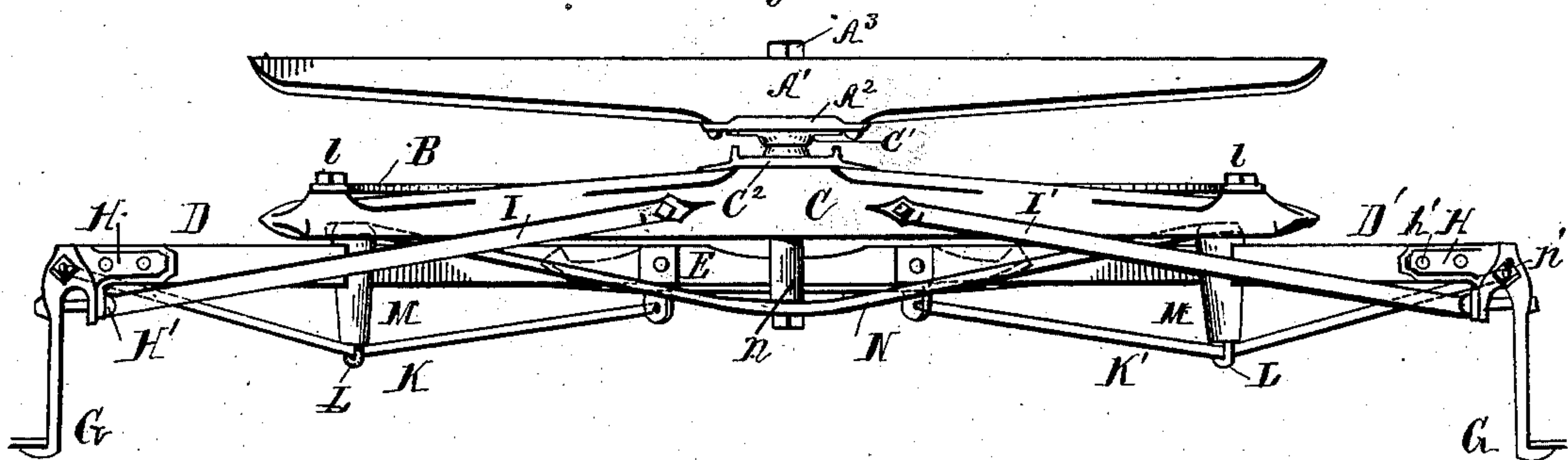
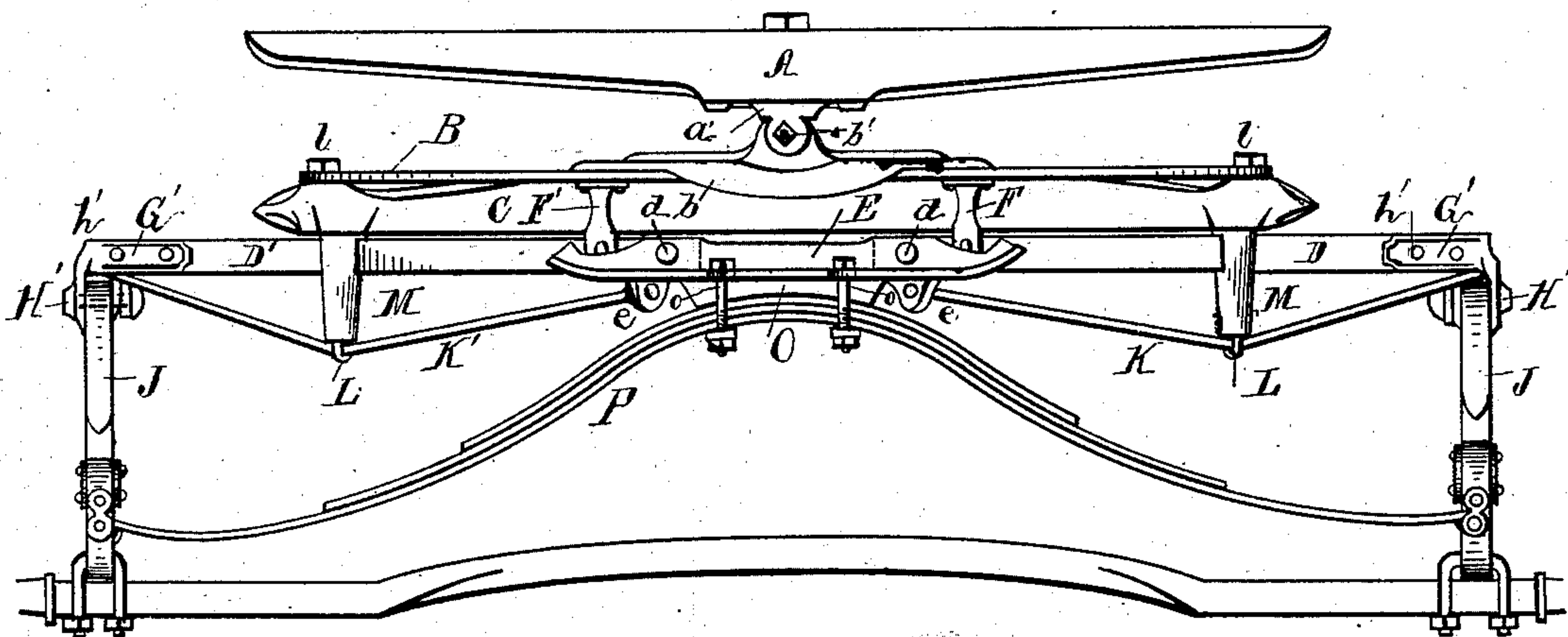


Fig 3.



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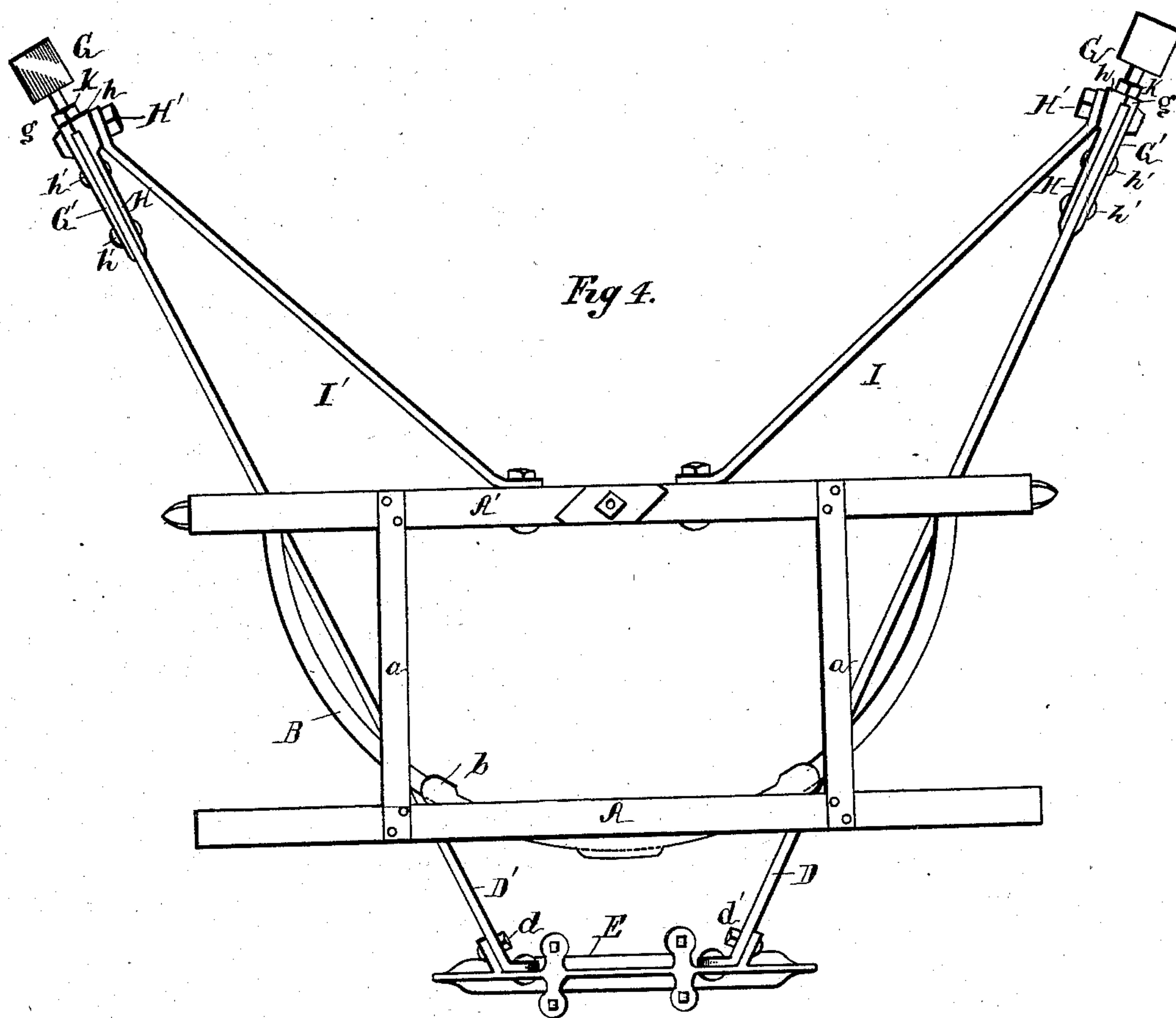
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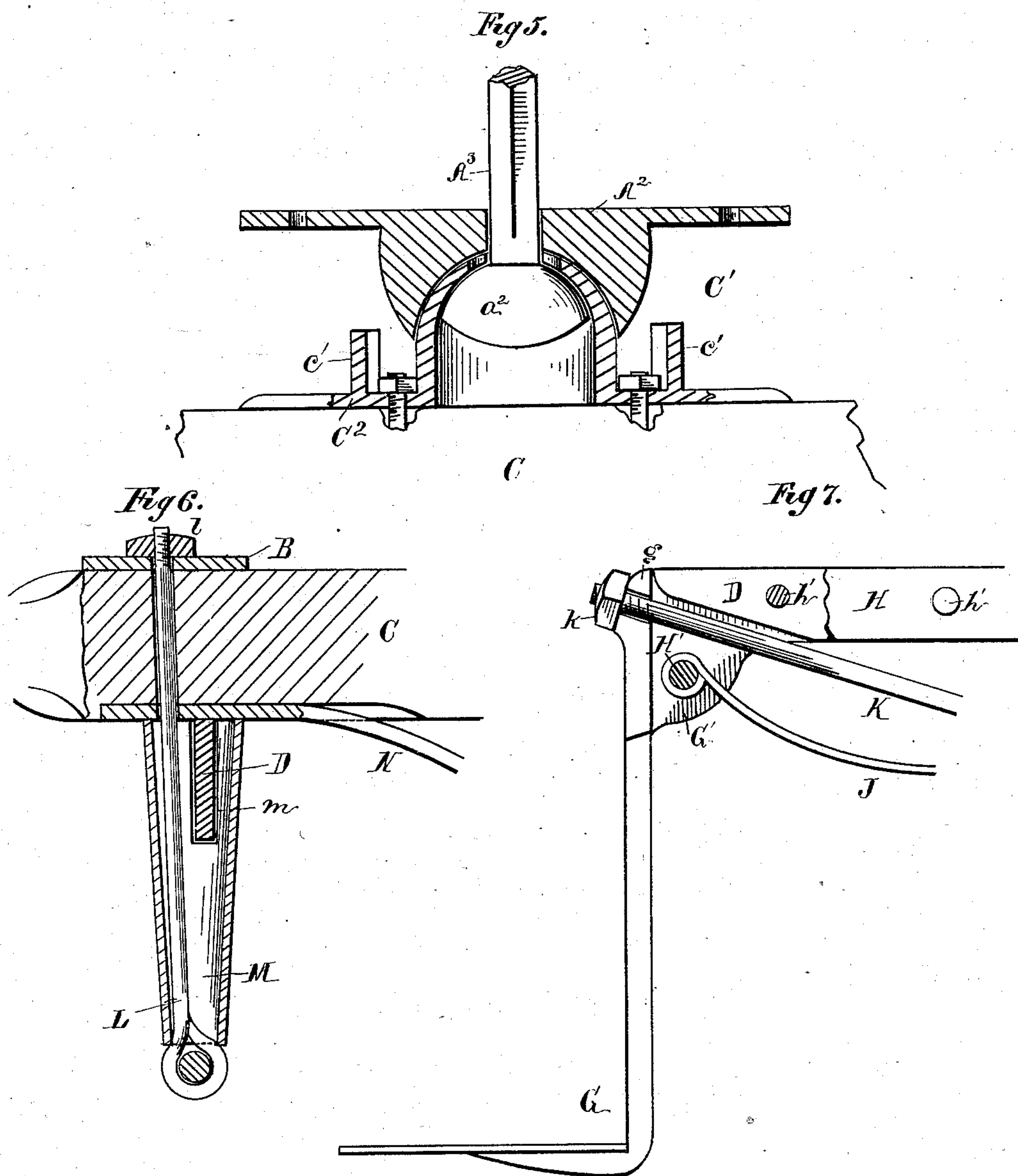
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# UNITED STATES PATENT OFFICE.

MARTIN HALFPENNY, OF PONTIAC, MICHIGAN.

## GEAR FOR PLATFORM-WAGONS.

SPECIFICATION forming part of Letters Patent No. 282,455, dated July 31, 1883.

Application filed June 12, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, MARTIN HALFPENNY, of Pontiac, county of Oakland, State of Michigan, have invented a new and useful Improvement in Gears for Platform-Spring Wagons; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form a part of this specification.

My invention consists in the combinations of devices and appliances, hereinafter specified, and more particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a device embodying my invention. Fig. 2 is a rear elevation of the same. Fig. 3 is a front elevation. Fig. 4 is a plan view. Fig. 5 is a separate view of the ball-and-socket joint. Fig. 6 is a separate view of the construction and location of the eyebolt. Fig. 7 is a separate view of the attachment of the end of the side spring.

My invention relates to gears for platform-spring wagons, and has for its object an improved construction of the oscillating bolsters, the trusses, and the general arrangement of the several parts.

In carrying out my invention A is the front bolster, and A' is the rear bolster, united by suitable braces, *a*.

B is the circle, united to the front bolster by means of a clip, *b*, having a hinged or pivoted connection with the front bolster, as shown at *b'*, said bolster provided with a plate, *a'*, secured thereto, by means of which this hinged or pivoted connection is accomplished.

C is a cross-bar connecting the ends of the circle, and connected with the rear bolster by means of a ball-and-socket joint, as shown at C'. For this purpose the cross-bar is provided with a suitable plate, C<sup>2</sup>, the rear bolster being also provided with a plate, A<sup>2</sup>, to correspond therewith, the two plates being connected by a king-bolt, A<sup>3</sup>, having a rounded head, *a*<sup>2</sup>.

D and D' represent the hounds, secured at their forward ends to a metallic head-plate, E, by means of suitable rivets or bolts, *d* and *d'*, the ends of the hounds being preferably

constructed angular in form, as shown in the drawings, for this purpose.

F and F' represent supports riveted or bolted to the hounds and to the circle.

G represents the steps, preferably constructed with an angle plate or arm, G', riveted or bolted to the rear end of the hounds, and provided with a flange, *g*, extending over the end of the hounds.

H is a plate similar in construction to the plate or arm G' of the step, riveted or bolted to the rear end of the hounds on the opposite side from the arm of the step, and provided with a flange, *h*, extending over the end of the hounds, the same rivets or bolts *h'* securing both of said plates to the hounds.

I and I' represent rear braces secured at one extremity to the cross-bar C, and at the other extremity secured by a bolt, H', said bolt passing through the plates H and G', as shown; said bolt also serving to hold said plates more firmly together. By means of the same bolt H' the side spring, J, is secured to the rear end of the gear.

K and K' represent truss-rods extending longitudinally with the hounds. These rods are headed at their forward ends and passed through suitable shoulders, *e*, upon the head-plate E. At the rear ends these truss-rods are passed through suitable orifices constructed in the flanges of the plates H and G', and secured therein by means of a nut, *k*. Intermediate of their ends these truss-rods are secured by means of an eyebolt, L, passing through a strut, N, said eyebolt passing through the cross-bar C and the ends of the circle, and secured by a nut, *l*. The bolt L, passing through the strut M, extends upward upon one side of the hounds, as shown in Fig. 6. The strut M is also slotted, as shown at *m*, to receive the hounds.

N is a cross-truss secured beneath the cross-bar C, the ends of said truss being secured to the cross-bar by means of the eyebolt L. Intermediate of its length the cross-truss is secured to the cross-bar by means of a suitable supporting-bolt, *n*.

O is a head-block secured in any suitable manner, preferably by bolts *o*, beneath the head-plate E, and to which is attached the cross-spring P.

Instead of making the step G integral with



the plate or arm G', it is evident that the two may be separated, if desired.

I prefer to provide the plate C<sup>2</sup> upon the cross-bar with upwardly-extending flanges c', to prevent the tilting of the bolsters too far when they are oscillated from side to side, and so prevent the bolsters catching at the rear end of the circle-bar.

It will be seen that in the gearing as thus constructed there is no necessity of welding the trusses to any portion of the gearing, and that the process of welding is dispensed with throughout the entire device. By this construction also the bolster may be oscillated from side to side in either direction upon the circle, and be tilted up or down in any position, the ball-and-socket joint (shown at C') and the pivoted connection of the front bolster (shown at b') permitting a perfectly-free oscillating and tilting movement. With this device the bolsters may be tilted as readily when the vehicle is cramped as when the line of motion is straight forward.

What I claim is—

1. In a platform-gearing, the combination, with the circle united at its ends by a cross-bar, of a front bolster, having a hinged or pivoted connection with a clip, adapted to travel upon said circle, and a rear bolster having a ball-and-socket connection with said cross-bar, suitable hounds secured to a front head-plate, the circle, and the cross-bar, trusses extending longitudinally with said hounds, said trusses connected at their forward ends to said head-plate, and at their rear by means of a nut to suitable connecting-plates, H and G', secured upon the rear ends of the hounds, said trusses connected also, intermediate of their lengths, by means of a suitable bolt to the cross-bar, substantially as described.

2. In a platform-gearing, the combination, with the hounds and front head-plate connected therewith, of longitudinal trusses secured to said head-plate, thence passing through an eyebolt extending upward through struts M, slotted to receive said hounds, said trusses secured at their rear ends by means of nuts in connecting-plates secured upon said hounds, substantially as described.

3. The combination, in a platform-gearing, of a circle united at its ends by a cross-bar, hounds secured by suitable supports to the circle and by struts to the cross-bar, a front head-plate uniting the forward ends of said hounds, longitudinal truss-rods secured in said head-plate, and by an eyebolt through said struts, said trusses also secured at their rear ends by means of a nut in the connecting-plates H and G', braces uniting the cross-bar

with the hounds, and a cross-truss beneath the cross-bar, suitably connected therewith, substantially as described.

4. In a platform-gearing, the combination, with a circle united at its ends by a cross-bar, of a front bolster having a hinged or pivoted connection, with a clip adapted to travel upon the circle, a rear bolster having a ball-and-socket connection with the cross-bar, hounds secured in a front head-plate and rear connecting-plates, trusses extending longitudinally with said hounds connected with said head-plate and rear connecting-plates, a cross-truss located beneath the cross-bar, and, in addition thereto, struts M, provided with suitable bolts, connecting the longitudinal trusses, the hounds, the cross-truss, and the ends of the circle to the cross-bar, substantially as described.

5. In a platform-gearing, the combination, with the circle united at its ends by a cross-bar, of hounds secured to a front head-plate, to the circle, and cross-bar, said hounds provided at their rear ends with connecting-plates H and G', trusses longitudinal with the hounds, secured at their forward ends in said head-plate and at their rear ends in said connecting-plates, braces connected with the cross-bar at one end and at the other by a bolt passing through said connecting-plates, said bolt adapted also to receive the rear end of a side spring, substantially as described.

6. A platform-gearing consisting of a circle united at its ends by a cross-bar, a front bolster having a hinged or pivoted connection, with a clip adapted to travel upon the circle, a rear bolster having a ball-and-socket connection with the cross-bar, hounds secured by suitable supports to the circle, and by struts M to the cross-bar, a front head-plate uniting the forward ends of said hounds, longitudinal truss-rods secured in said head-plate, and by an eyebolt to the cross-bar, said trusses also secured at their rear ends, by means of a nut, in connecting-plates H and G' upon the rear ends of the hounds, braces uniting the cross-bar with the hounds, a cross-truss beneath the cross-bar, and, in combination therewith, a head-block secured to the head-plate, a cross-spring secured to said head-block, and side springs connected with said cross-spring with the rear ends of the hounds, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

MARTIN HALFPENNY.

Witnesses:

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SAMUEL E. THOMAS.