(No Model.)

W. ATKINS.

VEHICLE GEAR.

No. 584,125. Patented June 8, 1897.

Fig. 1.

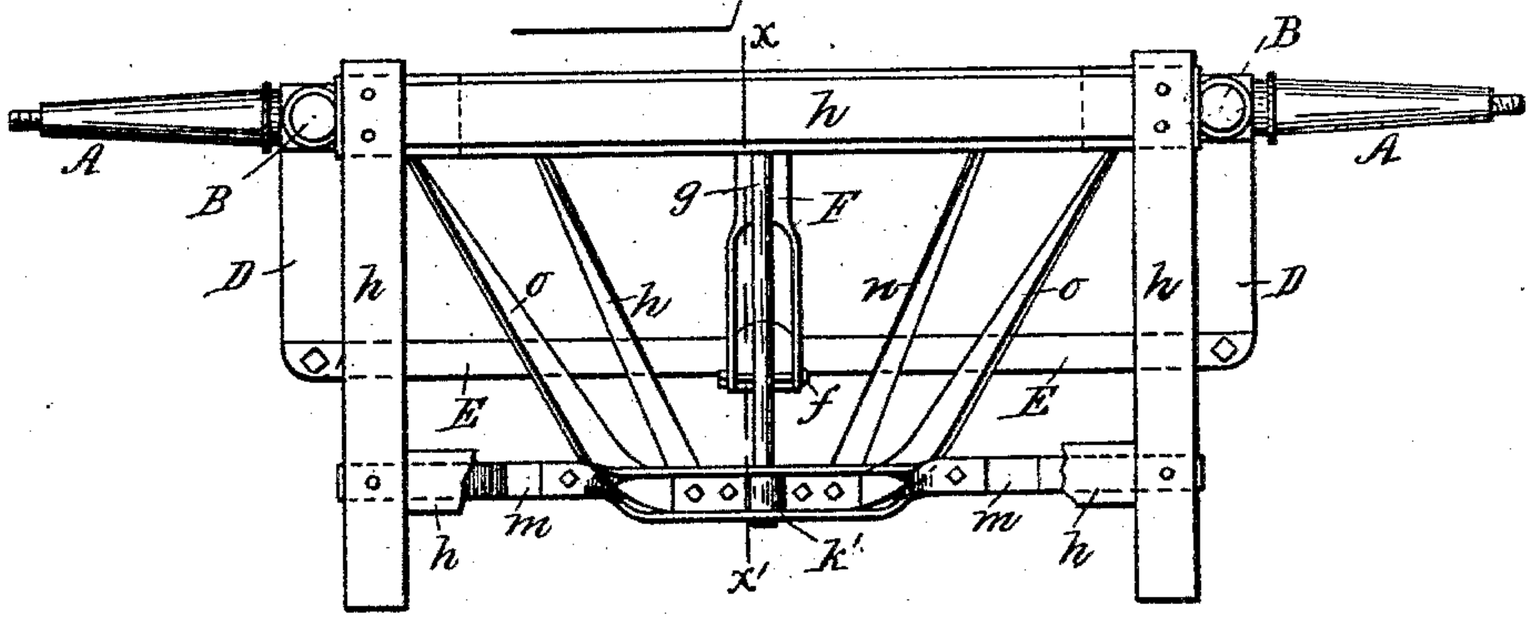


Fig. 2.

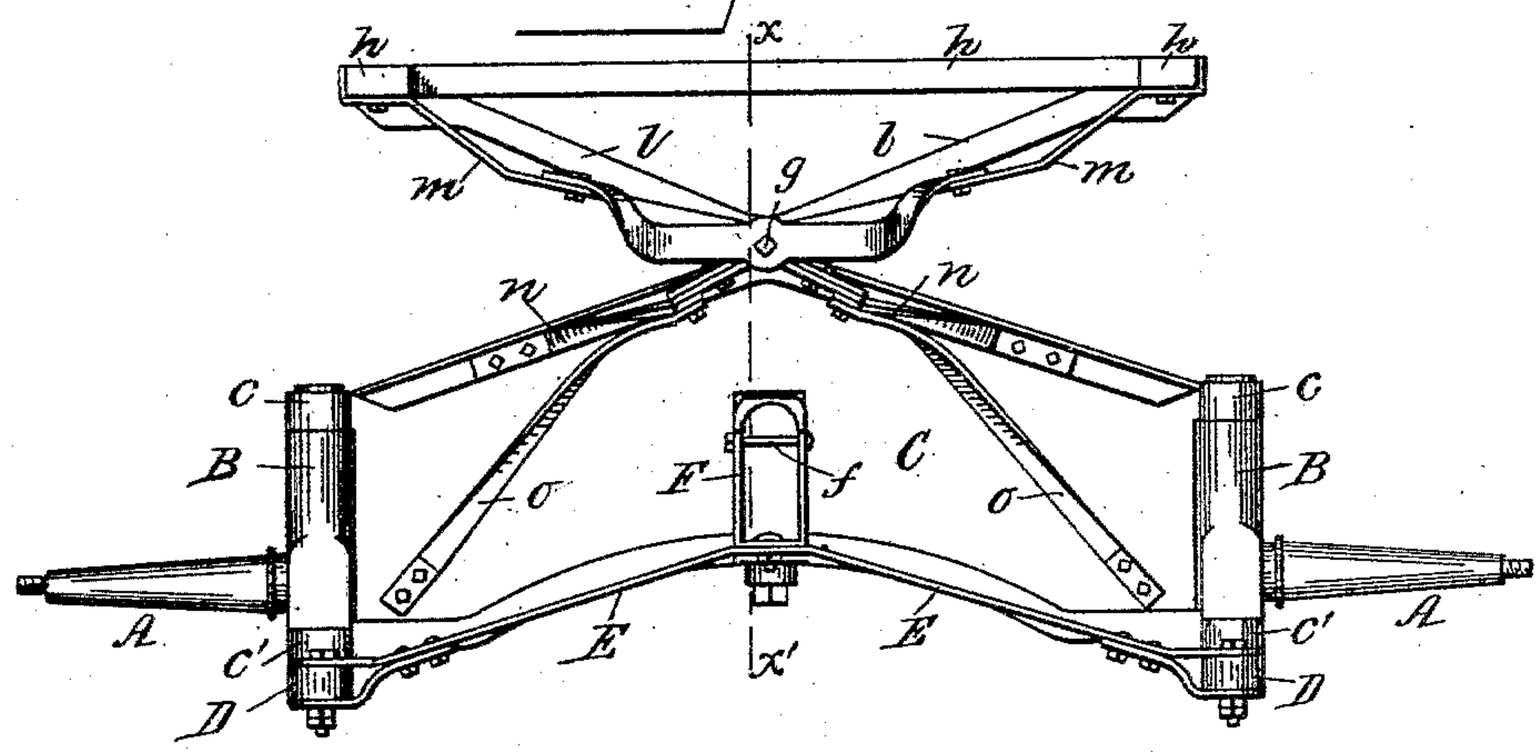
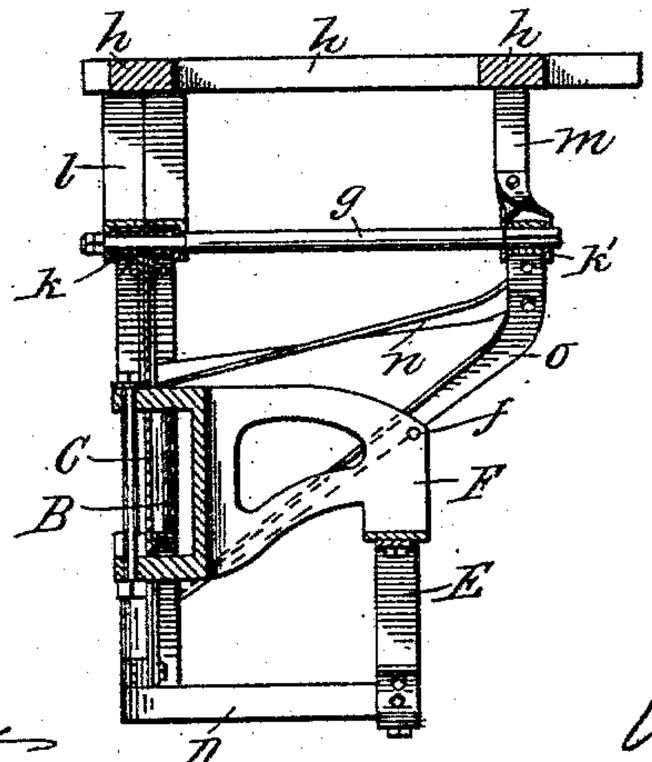


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM ATKINS, OF AUBURN, NEW YORK.

VEHICLE-GEAR.

SPECIFICATION forming part of Letters Patent No. 584,125, dated June 8, 1897.

Application filed February 17, 1896. Serial No. 579,489. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ATKINS, of the city of Auburn, State of New York, have invented certain new and useful Improvements in Vehicle-Gears, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

The object of my invention is to enable a vehicle-body to rock sidewise upon the "arch-bar" or connecting-beam in vehicles provided with "T-arm" front axles. I accomplish this result by the use of a longitudinal pivotal connection between the vehicle-body and the arch-bar, which pivotal connection is placed midway between the T-arms.

In the drawings, Figure 1 is a plan view of a device embodying my invention. Fig. 2 is a front view of the same; and Fig. 3 is a side view, partly in section, upon the line $x\,x'$ of Figs. 1 and 2.

A A represent a pair of axle-arms; B B, the standards to which they are secured, forming a pair of T-arm axles. These T-arm axles are secured in vertical position at the ends of a transverse plate or beam C, called an "arch-bar," by means of bearings $c\,c'\,c\,c'$, within which the standards turn. Guide-arms D D are secured to the standards B B, and their front ends are connected by the bar E. A draw-head F is secured to the centers of the arch-bar C and the connecting-bar E, and in this the pole is secured, as by the bolt *f*. By means of this construction the pole and wheels placed on the arms A A are kept in parallel position as they are moved laterally.

h h h h represent portions of the vehicle body or platform.

g is the longitudinal pivot, placed in bearings at *k k'*. This pivotal connection between the vehicle body or platform and the arch-bar should either have one long bearing or, as I prefer and as shown in the drawings, two bearings, the object being that the arch-bar shall be held in its proper position relatively to the body by means of its connections to these bearings. I prefer a pivotal connection about as long as the distance which it is placed above the axle-arms, as this admits of bracing at about forty-five degrees from *k'* to the arch-bar. The drawings illustrate a form which I have adopted for its lightness and strength, comprising a thin plate of iron or steel C, placed vertically transverse to the vehicle and with a set of light braces *n n o o* to the bearing *k'*, while the other end of the pivotal connection rests upon the arch-bar at *k*. Nevertheless a massive construction of wood, for instance, having a square section, one face of which equals the length of the pivot *g*, would accomplish the result desired. The bolsters *l l m m* are secured to the body or platform *h h h h* and to the pivot *g* at *k k'*.

Other forms of braces may be used, such as readily suggest themselves to the skilled workman, the essential features being simply a transverse connecting-bar between the axle-bearings *c c' c c'*, a longitudinal pivot, as *g*, and such powerful supports as shall keep these bearings and the pivot in fixed relation to each other. For certain purposes it may be desired to have the extended bearing *k'* project to the rear of the arch-bar instead of to the front. This may be accomplished by changing the T-arms and draw-head F in their bearings.

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

1. In a running-gear for vehicles, the combination with suitable axle-arms, of an arch-bar connecting said axle-arms, a platform or vehicle-body pivoted to the arch-bar by a longitudinally-placed pivot-rod, and braces to support the end of said rod.

2. In a running-gear for vehicles, the combination with suitable axle-arms, of an arch-bar connecting said axle-arms, and a vehicle-body mounted on said arch-bar and connected thereto by a long pivotal connection, and brace-rods for the remote end of said pivotal connection.

3. In a running-gear for vehicles, the combination with the T-headed axle-arms, A, of the arch-bar C mounted on said arms, a bearing for a vehicle body or platform on top of said bar at right angles to the same, braces extending upwardly from the lower part of said arch-bar, a second bearing carried by said braces, a vehicle-body and pivotal connections between said body and bearings.

4. In a running-gear for vehicles, the com-

bination with axle-arms A, of the T-heads B at the inner ends of said axle-arms, the arch-bar C mounted thereon, the bearing *k* midway the axle-heads at right angles to said arch-bar, the bracket-arms or brace-rods extending rearwardly and upwardly from said arch-bar C, a second bearing *k'* carried by said brace-rods, a vehicle body or platform, and a long pivotal connection *g* between said vehicle-body and bearings.

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