No. 628,230.

Patented July 4, 1899.

A. W. OGDEN.

RUNNING GEAR.

(Application filed Feb. 23, 1898.)

(No Model.)

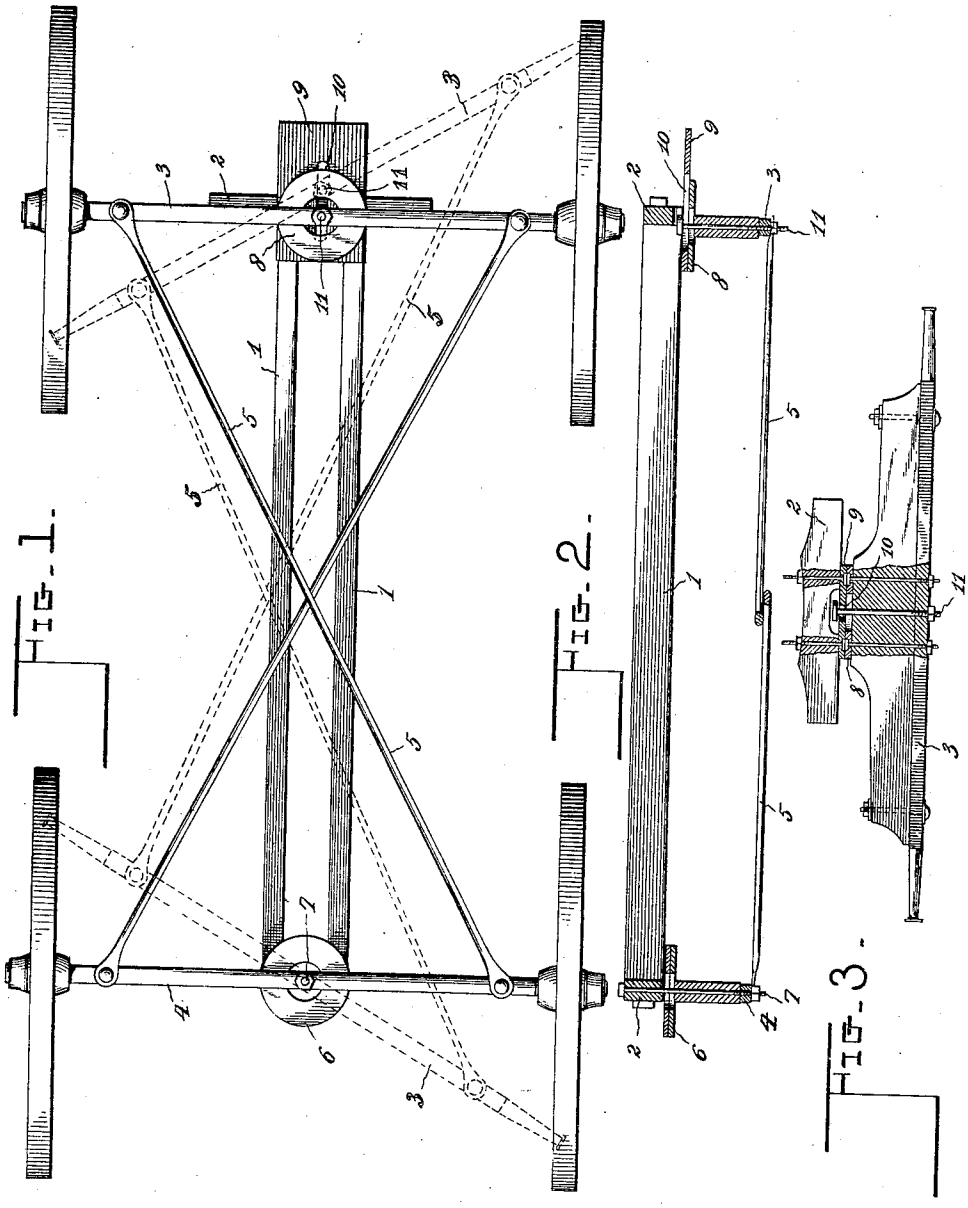


FIG. 1.

FIG. 2.

FIG. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

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RUNNING-GEAR.

SPECIFICATION forming part of Letters Patent No. 628,230, dated July 4, 1899.

Application filed February 23, 1898. Serial No. 671,320. (No model.)

To all whom it may concern:

Be it known that I, ALONZO W. OGDEN, a citizen of the United States, residing at Amesbury, in the county of Essex and State of Massachusetts, have invented a new and useful Running-Gear, of which the following is a specification.

This invention aims to improve that class of running-gear for vehicles in which the front and rear axles are adapted to turn, thereby enabling a four-wheeled vehicle to be turned with the same ease as a sulky or two-wheeled vehicle.

One of the objects of the improvement is to maintain the body of the vehicle in fixed relation with reference to the running-gear, whereby the weight will be evenly distributed upon the four wheels whether the wagon is making a short turn or is moving in a straight course.

An essential feature of the invention is a sliding connection between one of the axles and the perch or reach, whereby upon making a short turn the center of said axle will shift longitudinally to compensate for the varying distance between the two axles without moving laterally, whereby the load will be equalized upon the four wheels at all relative positions of the axles, as set forth.

For a full understanding of the merits and advantages of the invention reference is to be had to the accompanying drawings and the following description.

The improvement is susceptible of various changes in the form, proportion, and the minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and to a full disclosure of the invention an adaptation thereof is shown in the accompanying drawings, in which—

Figure 1 is a plan view of a running-gear for vehicles having the invention applied thereto, the dotted lines showing the relation of the parts when making a turn. Fig. 2 is in the views of the drawings by the same reference characters.

The perch or reach, to which the body of the vehicle is secured in any desired manner, is shown as consisting of longitudinal bars 1, disposed in parallel relation, and bolsters 2, secured in a substantial manner to the end portions of the longitudinal bars 1. The axles 3 and 4 have king-bolt connection with the bolsters and are connected by diagonally-disposed rods or bars 5, which cross intermediate of their ends and have pivotal connection at their extremities with the outer end portions of the axles, whereby the latter are caused to move in unison when the vehicle is turned from a direct course.

The plates, circles, or parts comprising the fifth-wheel 6 are secured, respectively, to the axle 4 and subjacent bolster, and the king-bolt 7 pivotally connects the parts to which the elements comprising the fifth-wheel 6 are attached. This construction admits of the axle 4 turning in the usual manner. The fifth-wheel between the axle 3 and the adjacent bolster 2 comprises a lower bearing-plate 8, secured to the top side of the axle 3, and an upper elongated plate 9, firmly attached to the lower side of the bolster 2, adjacent to the said axle 3. The plate 9 is formed with a longitudinal slot 10, through which passes the headed end of the king-bolt 11, which is secured in the axle 3 in such a manner as to move therewith without creating any binding of the plate 9. It will thus be seen that the fifth-wheel between the axle 3 and the adjacent bolster 2 simply consists of three parts—namely, the elongated plate 9, the bearing-plate 8, and the king-bolt 11. The plate 9 is elongated to provide an extended bearing for the plate 8, so that the said plate 8 will have a free sliding contact with the plate 9 as it moves longitudinally from end to end thereof, while the two plates are firmly held in sliding relation by simply extending the king-bolt 11 through the slot 10, with the

adapt itself to the varying distance between the front and rear axles when the vehicle is making a turn. This compound movement of the axle 3 is clearly indicated by the dotted lines in Fig. 1.

In carrying out the invention it is preferable that the front axle be adapted to turn and slide, inasmuch as the draft is directly applied thereto, and the sliding of the axle forward and backward will thereby be made much easier than if the sliding connection were made with the rear axle. In this connection it is to be observed that the plate 9, which is secured fast to the front end of the reach, is extended a material distance beyond and in front of the adjacent end of the reach and the front axle, so as to present an elongated bearing-surface for the plate 8, so that such plate will have a flat bearing or support even in extreme movements of the axle.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

In a running-gear for vehicles, the combination with the rigid reach carrying at its opposite ends the front and rear bolsters, the front and rear axles arranged respectively beneath the front and rear bolsters, and the diagonally-crossing rods pivotally connecting the ends of the axles; of an elongated plate 9 secured fast to the front end of the rigid reach and provided with a longitudinally-disposed slot, said plate extending a material distance beyond and in front of the adjacent reach end and the front bolster, so as to present an elongated bearing-surface, a bearing-plate 8 carried by the front axle and having a sliding contact with the under side of the elongated plate 9 from end to end of the latter, said bearing-plate 8 being of a shorter length than the elongated plate 9, and a king-bolt fitted to the front-axle bolster and projecting from the longitudinal slot of the elongated plate with its head slidably engaging the side edges of the slot at the upper side of the said plate, substantially as set forth.

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

ALONZO W. OGDEN.

Witnesses:
AMOS S. PATTEN,
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