No. 653,489. Patented July 10, 1900.

M. L. SENDERLING.

RUNNING GEAR FOR VEHICLES.

(Application filed Oct. 28, 1899.)

(No Model.)

Fig. 1.

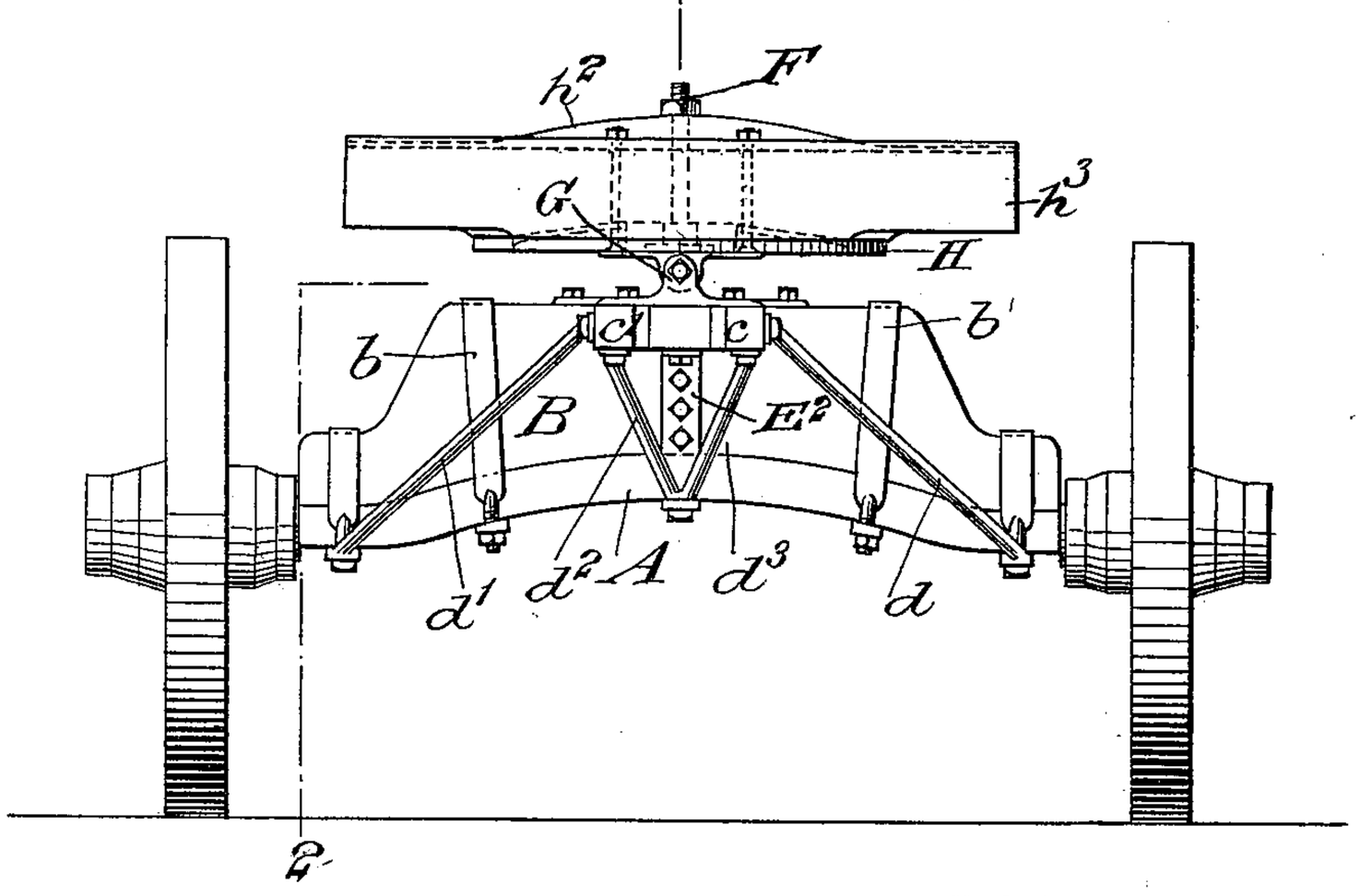


Fig. 2.

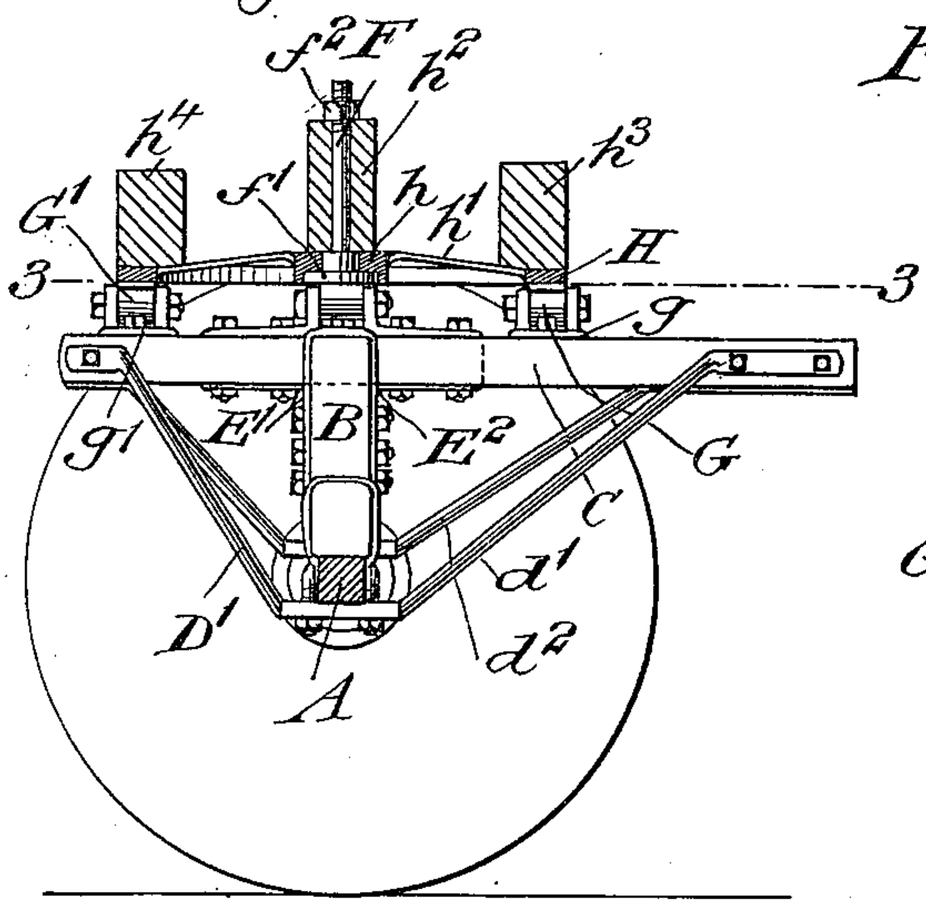
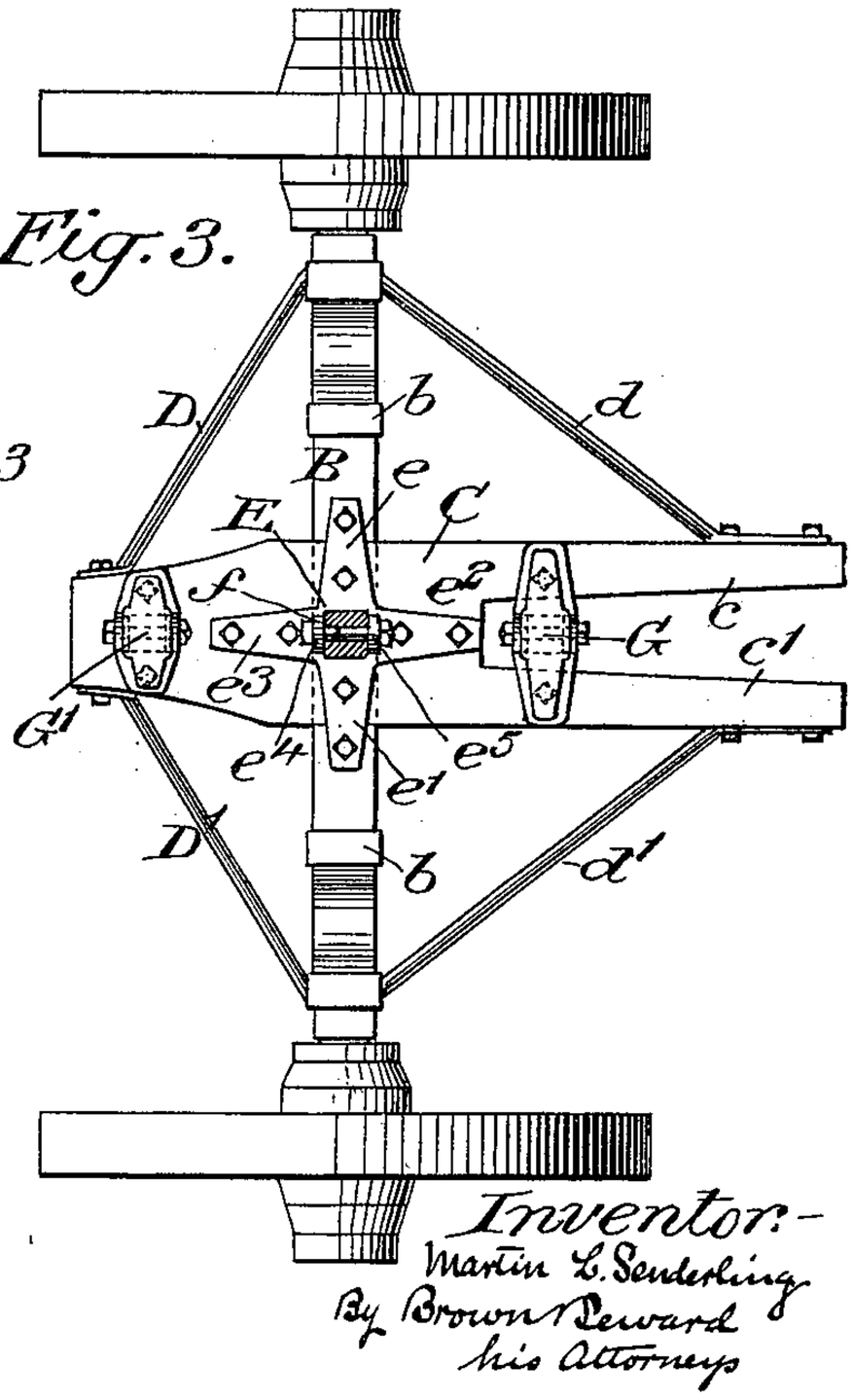


Fig. 3.



Witnesses:-
George Barry Jr.
Edward Dosser.

Inventor:-
Martin L. Senderling
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UNITED STATES PATENT OFFICE.

MARTIN L. SENDERLING, OF JERSEY CITY, NEW JERSEY.

RUNNING-GEAR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 653,489, dated July 10, 1900.

Application filed October 28, 1899. Serial No. 735,071. (No model.)

To all whom it may concern:

Be it known that I, MARTIN L. SENDERLING, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Running-Gear for Vehicles, of which the following is a specification.

My invention relates to running-gear for vehicles, and more particularly to the structure of what is commonly known as the "fifth-wheel" and the parts in proximity thereto.

In the accompanying drawings, Figure 1 represents a front view of so much of a vehicle as will suffice to show a practical embodiment of my invention. Fig. 2 is a vertical section in the plane of line 2 2 of Fig. 1, and Fig. 3 is a horizontal section in the plane of line 3 3 of Fig. 2.

The particular type of running-gear chosen to illustrate my invention is what is commonly known as the "cut-under," as distinguished from the reach structure—*i. e.*, the upper section of the fifth-wheel is intended to be connected with the rear axle (not shown) by a gear-frame instead of a reach. So far, however, as the fifth-wheel structure is concerned it is obvious that the reach might be employed instead of the frame, if so desired.

A represents the front axle of a wagon, and B the bed-piece, secured to the top of the axle A by means of clips *b*, as is common. The bed-piece B is in the present instance, however, carried laterally at its top to a considerable extent—far enough, in fact, to form a stop to the tilting movement of the body relative to the front axle by the engagement of the rim of the upper section of the fifth-wheel with the top of the bed-piece on either of its two opposite ends.

In practice I prefer to run a pair of clips *b* over the bed-piece B, near the ends of its top, where they will form bearing-plates for the rim of the fifth-wheel when the body is tilted sufficiently to bring the two into engagement on the one or the other side of the center.

Instead of providing hounds, as has heretofore been common, I substitute a tongue-piece C, bifurcated at its front end to admit the rear end of the tongue (not shown) between its branches *c c'*. The tongue-piece C is let into the top of the bed-piece B flush with the top of the bed-piece and projects rearwardly from the bed-piece to form a support for one of the fifth-wheel bearing-shoes and also to furnish a point of attachment for brace-rods. The tongue-piece C is braced by a pair of brace-rods D D', extending from opposite sides of its rear end downwardly and forwardly to the axle A, by a pair of brace-rods *d d'*, extending from the branches *c c'* downwardly and rearwardly to the axle A, and by a third pair of braces d^2 d^3, extending from the under side of the branches *c c'* downwardly and rearwardly to the axle. On the top of the tongue-piece C and extending laterally over it and over a portion of the bed-piece B adjacent thereto I locate a star-plate E, provided with a pair of laterally-extending branches *e e'* and a pair of forwardly and rearwardly extending branches e^2 e^3. The branches *e e'* of the plate E are bolted in position by bolts extending through the bed-piece B, and the branches e^2 e^3 of said star-plate are bolted in position by bolts which extend through the tongue-piece C and also through the horizontal arms of angle-irons E' E^2, the vertical arms of which are bolted in position upon opposite sides of the bed-piece B, immediately beneath the star-plate E, and the horizontal arms of which extend beneath front and rear arms e^2 e^3 of the star-plate. This structure forms an exceedingly stiff, compact, and convenient arrangement and at the same time one which is very light when compared with the structures of similar strength heretofore employed. The star-plate E also furnishes a bearing for the head of the king-bolt and for this purpose is provided with a pair of uprising ears e^4 e^5, between which the head of the king-bolt F is pivoted by a bolt *f*, extending fore and aft through the ears e^4 e^5. The tongue-piece C also forms a support for the lower section of the fifth-wheel, which in the present instance is a pair of hinged shoes G G', hinged in the vertical plane of the longitudinal axis of the wagon in such a manner as to tilt laterally, their faces being smoothed to receive the lower face of the upper section of the fifth-wheel. In the present instance I have shown the shoes G and G' pivotally secured between ears uprising from the plates *g g'*,

fixed to the top of the tongue-piece C, the one in front of and the latter to the rear of the position of the king-bolt.

The upper section of the fifth-wheel consists of an annular ring H, connected with a central hub h by a web or spokes h'. Extending laterally across the top of the upper section of the fifth-wheel is a bolster h^2. In the present instance, where the gear is adapted for a gear-frame instead of a reach, to connect it with the rear axle I provide it with a pair of bolsters h^3 h^4, the one at the front of the rim H and the other at the rear of the said rim, so that the side rails of the gear-frame (not shown) may be attached to the auxiliary bolsters as well as to the central.

The king-bolt F extends centrally through the hub h of the upper section of the fifth-wheel, where it is provided with an annular shoulder f' to receive the weight of the upper section of the fifth-wheel and the hub carried thereby, and thence extends upwardly through the bolster h^2 and is provided with a nut f^2 for holding the bolt in position.

When the parts are assembled, the upper fifth-wheel section will have a free laterally-tilting movement at three points in alinement—viz., the hinged head of the king-bolt and the hinged shoes G G'. At the same time the forward axle and its bed-piece, together with the shoes G G', may be swung to the right or left in a horizontal plane at pleasure, the faces of the shoes sliding along the under face of the rim H of the fifth-wheel.

The laterally-tilting movement of the body is limited by means of the high shoulders on the bed-piece B, and this amount of tilting before coming to a stop may be determined by building up the shoulders of the bed B to points normally nearer the level of the under face of the upper section of the fifth-wheel.

It is obvious that changes might be resorted to in the form and arrangement of the several parts without departing from the spirit and scope of my invention. Hence I do not wish to limit myself strictly to the structure herein set forth; but

What I claim is—

1. The combination with the axle and bed-piece thereon, of a tongue-piece let into the middle portion of the bed-piece substantially flush with its top, a star-plate located at the crossing of the tongue and bed-piece and serving to combine the parts together, the said star-plate being provided with a pair of ears for receiving the head of the king-bolt, bearing-shoes supported on the said tongue-piece in front of and to the rear of the said star-plate to form the lower section of the fifth-wheel, a fifth-wheel section comprising a hub and annular rim and a king-bolt hinged in said star-plate and extending through the hub of the upper section of the fifth-wheel, substantially as set forth.

2. The combination with the axle and bed thereon, of the tongue-piece extending across the middle point of the bed, braces extending from the front and rear portions of the tongue-piece toward the axle, bearing-shoes supported on the tongue-piece to the front and rear of the bed-piece and having a laterally-tilting movement, a king-bolt hinged to the tongue-piece at the crossing of the tongue-piece and bed-piece to tilt laterally and an upper fifth-wheel section arranged to bear upon the tilting shoes and to receive the king-bolt at its center, substantially as set forth.

3. The combination with the tongue-piece and a suitable support therefor, of the star-plate engaged therewith and constructed to form a bearing for the head of the king-bolt, an upper fifth-wheel section and a king-bolt bearing on the said star-plate and engaged with the upper fifth-wheel section, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 26th day of October, 1899.

MARTIN L. SENDERLING.

Witnesses:
FREDK. HAYNES,
EDWARD VIESER.