

(No Model.)

2 Sheets—Sheet 1.

F. W. MILLER.
FIFTH WHEEL.

No. 499,791.

Patented June 20, 1893.

Fig 1.

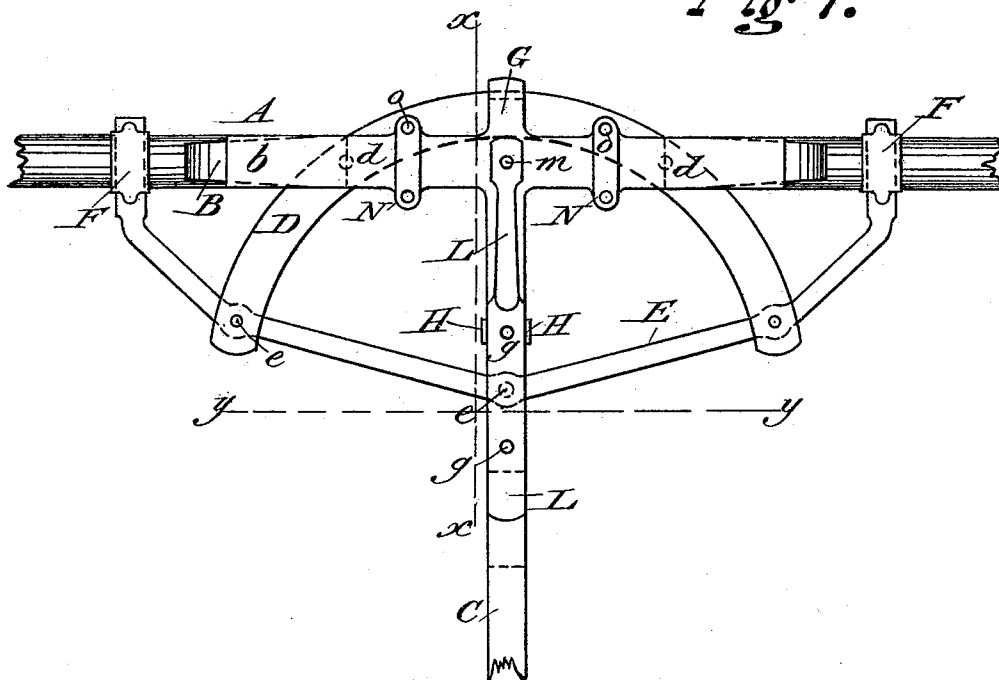
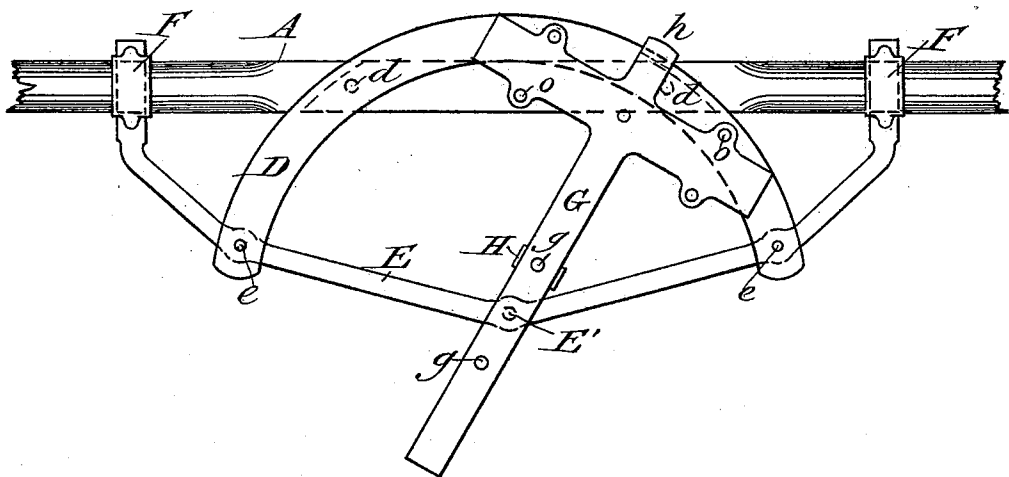


Fig 2.



Witnesses.
Wm L. Boyden
F. D. Snow

Inventor.
Fredrick W. Miller
per Fred E. Asker, Atty

(No Model.)

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Fig 3.

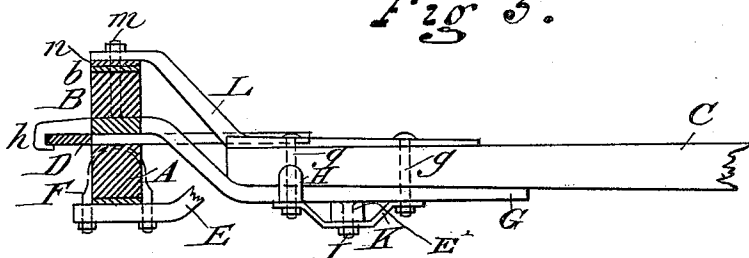


Fig 4.

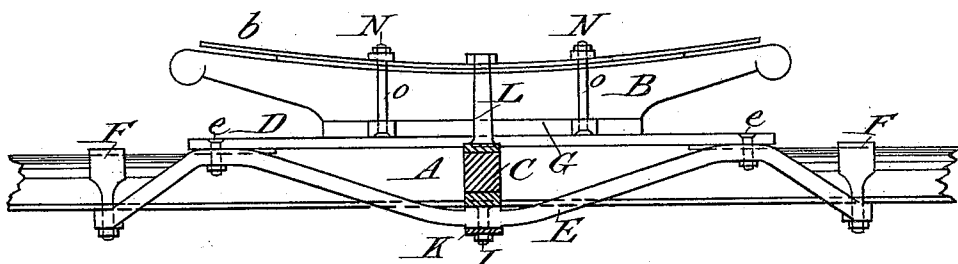


Fig 5.

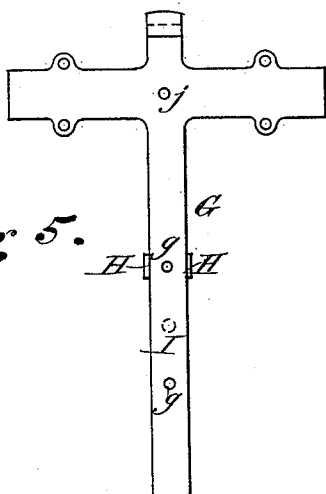
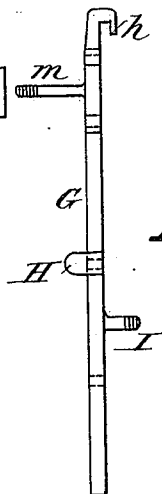


Fig 6.



Witnesses.
Am L. Joyday
F. B. Brock

Inventor.
Fredrick W. Miller
per Fred Blaker,
Atty

UNITED STATES PATENT OFFICE.

FREDRICK W. MILLER, OF MUSKEGON, MICHIGAN.

FIFTH-WHEEL.

SPECIFICATION forming part of Letters Patent No. 499,791, dated June 20, 1893.

Application filed November 24, 1891. Renewed May 13, 1893. Serial No. 474,145. (No model.)

To all whom it may concern:

Be it known that I, FREDRICK W. MILLER, a citizen of the United States, residing at Muskegon, in the county of Muskegon and State of Michigan, have invented certain new and useful Improvements in Fifth-Wheels or Circles for Buggies and Wagons; and I do hereby 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.

This invention relates to an improvement in fifth wheels for vehicles of various kinds, the object being to diminish the careening of the carriage to the lowest minimum by changing the position of the king bolt and arranging the other parts so as to achieve the best results by a new combination, and the invention therefore consists in the construction, arrangement and combination of parts, substantially as will be hereinafter described and claimed.

In the annexed drawings illustrating my invention: Figure 1 is a plan view of my improved fifth wheel showing the reach in a position nearly at right angles to the fore-axle of a carriage. Fig. 2 is a similar plan view showing the reach occupying a position at nearly its largest angle to said axle. Fig. 3 is a sectional side elevation on the line xx of Fig. 1. Fig. 4 is a sectional elevation on the line yy of Fig. 1. Fig. 5 is a plan view of the metallic casting belonging to a straight reach. Fig. 6 is an edge view of the same.

Similar letters of reference designate corresponding parts throughout all the different figures of the drawings.

It is a common thing in carriages and wagons as now ordinarily constructed, to have the king bolt or central pin on which the fore-axle oscillates, located in the center of the axle. With this construction it is found in practice that in the course of time, the hole through the axle wears larger than the king bolt, and consequently in such cases the fifth wheel or segment will tip from side to side and endanger the safety of the vehicle. Accidents also frequently happen by reason of the king bolt nut becoming detached from the bolt and the parts of the vehicle are liable to come apart. This invention is intended to overcome all these defects and avoid all these dangers. The pri-

mal idea of my invention is to locate the king bolt or fix it to the reach at some considerable distance behind the fore-axle, allowing by this construction a shorter curve to be turned than is possible with the ordinary construction, and always obtaining a level position or bearing for the head block in whatever position the reach may stand relative to the axle.

A denotes the fore-axle, B its head block, b a portion of the springs thereon and C the reach of any ordinary vehicle.

D denotes the fifth wheel segment. It is fastened to the axle by the bolts d —see Figs. 1 and 2—or by some other suitable securing means.

E denotes a brace, the ends of which are secured to axle A by clips F F. This brace extends rearwardly from the axle, and the ends of the fifth wheel segment D are secured thereto, as shown, by means of bolts e . Further this brace is provided at its middle point with a hole or perforation E' for the reception of the king bolt.

In the construction of my improved fifth wheel, I employ also a metallic plate G, preferably made in the shape of a cross, although it may be made in any other form or conform to the circle of the fifth wheel segment. In Fig. 3 this plate is shown having a bent form as this shape is required for use with what is known as a drop reach. In Figs. 5 and 6 the plate is shown as straight, for use with a straight reach. The plate G has its long portion secured to the reach by means of bolts g . Plate G is also provided with lugs H which project on each side of reach C and hold it securely between them. The other part of the plate G which is at right angles to the part of which I have just been speaking, rests upon the segment D and whatever position the reach may occupy with relation to the axle, the contact of circle D with plate G will remain constant. Plate G also has at its shorter end a lip h —see Fig. 6—which engages the edge of segment D and is sufficiently loose to slide nicely thereon during the movements of the axle. Its function is to keep plate G from lifting off circle D.

I denotes the king bolt. It is preferably made solid with plate G, see Fig. 6. This bolt passes through hole E' of brace E and also through the bracket K—see Figs. 3 and 4—

which is fastened to the reach C and plate G by bolts *g*, said bolt I being screw-threaded and provided with a nut on its lower end. I also employ another brace L which is likewise
5 fastened to the reach C by bolts *g*.

On the plate G is an integral bolt *m* projecting on the opposite side of plate G and at the other end thereof. This bolt *m* passes through the head block B and spring *b*, and
10 then through the upper end of brace L and a nut on the end of bolt *m* keeps the several parts in proper position—see Fig. 3. The transverse plates N N—see Figs. 1, 3 and 4—
15 extend across the upper surface of the spring and are used for the purpose of clamping the head block and spring to the plate G by the bolts *o*.

Many changes may be made in the exact arrangement and form of the parts and in
20 their details of construction without departing from my invention.

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

The combination with the axle A, head 25 block B, springs *b* and reach C, of the fifth wheel segment D secured to the axle by suitable means, the brace E extending rearwardly from the axle and having the ends of the fifth wheel segment secured thereto, said brace be- 30 ing provided with a perforation for the reception of the king bolt, the plate G having a cross shape and secured to the reach by bolts, said plate being provided with lugs H projecting on each side of the reach and said 35 plate having its right angled part resting upon the segment D and being also provided with a lip *h* which engages the edge of segment D and slides nicely thereon and the king bolt I integral with plate G and passing through 40 brace E, substantially as described.

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

FREDRICK W. MILLER.

Witnesses:

ROBERT WEIR,
EDWARD FLEISCHER.