No. 614,629. Patented Nov. 22, 1898.

M. L. SENDERLING.

FIFTH WHEEL FOR VEHICLES.

(Application filed Feb. 3, 1898.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

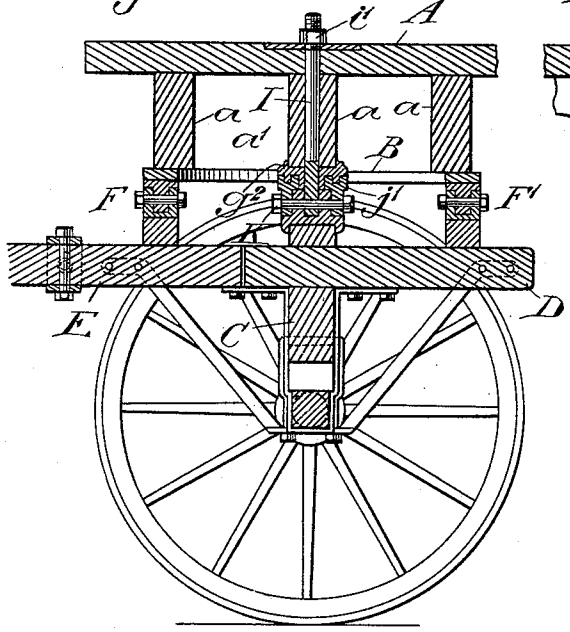


Fig. 2.

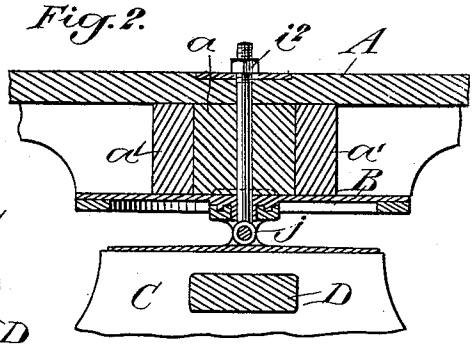
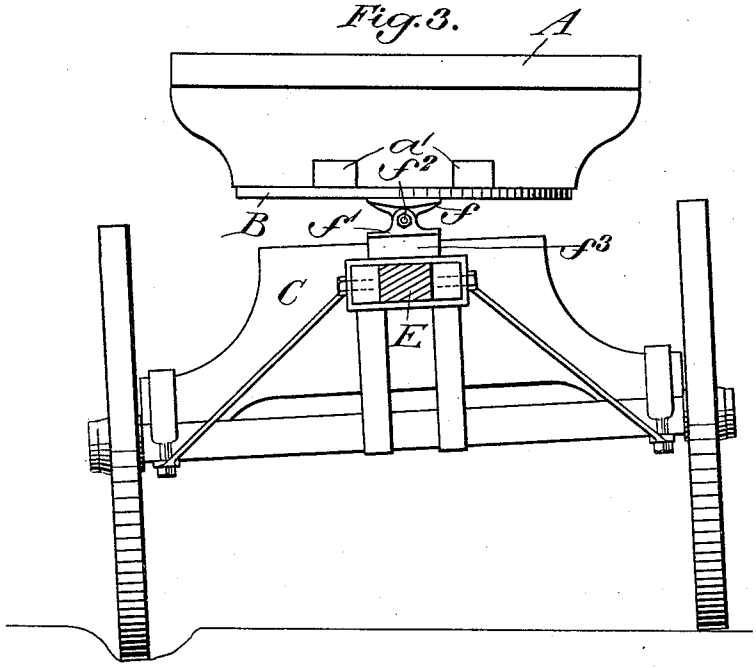


Fig. 3.



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Martin L. Senderling
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Fig. 6.

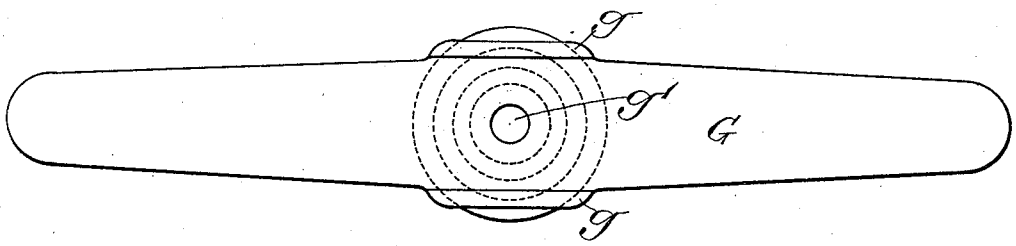


Fig. 7.

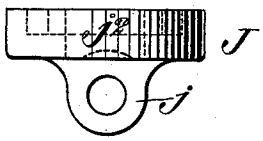


Fig. 4.

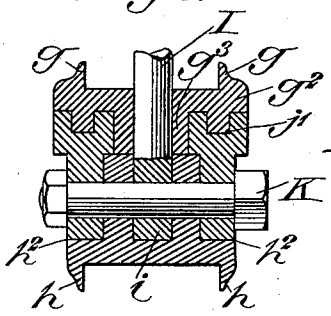


Fig. 8.

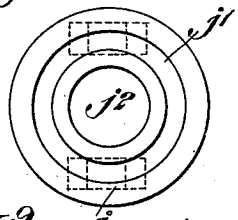


Fig. 5.

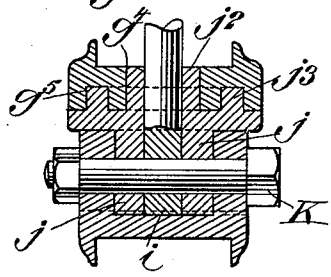


Fig. 9.

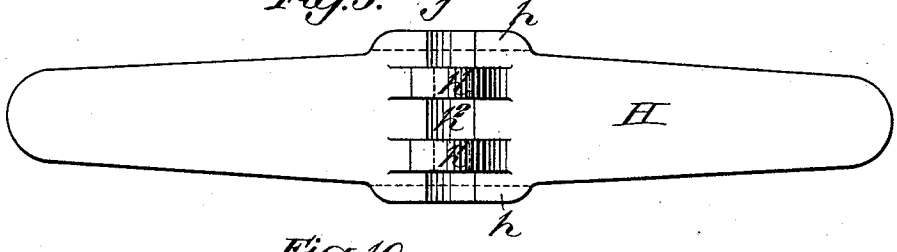
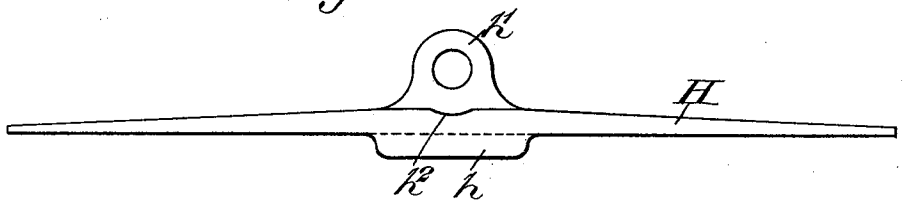


Fig. 10.



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UNITED STATES PATENT OFFICE.

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

FIFTH-WHEEL FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 614,629, dated November 22, 1898.

Application filed February 3, 1898. Serial No. 668,980. (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 new and useful Improvements in Fifth-Wheels for Vehicles, of which the following is a specification.

My invention relates to certain new and useful improvements in fifth-wheels for vehicles, the objects being to provide a structure in which the binding or sidewise strain upon the king-bolt is prevented when the vehicle passes over uneven surfaces and also to provide a structure in which the front running-gear may be easily removed from the vehicle.

A further object is to provide a fifth-wheel which shall be substantially reinforced around its king-bolt and in which the king-bolt is hinged directly to the bottom bolster on the running-gear.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 represents a vertical central section from front to rear through the fifth-wheel and its adjacent parts in the vehicle. Fig. 2 is a partial transverse vertical section taken in the plane of the king-bolt. Fig. 3 is a front view of the fifth-wheel and its adjacent parts. Fig. 4 is an enlarged vertical central section showing the parts adjacent to the head of the king-bolt. Fig. 5 is a similar section of a modified form. Fig. 6 is a top plan view of the upper bolster. Figs. 7 and 8 represent side and top plan views, respectively, of the central bearing-plate which is interposed between the upper and lower bolsters; and Figs. 9 and 10 are top plan and side views, respectively, of the lower bolster.

A designates the bottom or floor of the body of the vehicle. Directly beneath the floor A are located a plurality of transverse cross-bars a and longitudinal bars a'. The upper circle B of the fifth-wheel is suitably secured to the bottom of these bars a a'.

The head-block is denoted by C and the hounds which pass therethrough by D, the forward end of the said hounds being bifurcated to receive the vehicle-pole E. Front and rear bearings F F′ are mounted upon the hounds in position to engage the upper circle B of the fifth-wheel at points directly to the front and rear of the king-bolt. Each of these bearings comprises a tilting bearing-plate f, upon which the circle B travels as the running-gear is turned. This tilting plate is hinged to a suitable support f' by means of a pivot pin or bolt f^2, the support f' being spaced from the hounds by means of a suitable block f^3.

An upper bolster G extends transversely across the vehicle along the bottom of the middle cross-bar a. A lower bolster H extends along the top of the head-block C directly beneath the said upper bolster G. The upper bolster is provided with a pair of upwardly-extended flanges g, which embrace the sides of the middle cross-bar a, and the lower bolster H is similarly provided with a pair of downwardly-extended flanges h, which embrace the sides of the head-block C. The bolster G is further provided with a central opening g', through which the king-bolt I extends. The lower bolster H is provided with a pair of upwardly-extended lugs h', between which lugs the head i of the king-bolt is inserted.

A central bearing-plate J is inserted between the upper and lower bolsters, which bearing-plate serves to strengthen the connection between the two bolsters at this point. This central bearing-plate J is provided with a pair of downwardly-extended lugs or ears j, which rest upon the lower bolster H exterior to its uprising lugs h'. The central bearing-plate J is provided with a groove j', concentric to the king-bolt I, within which groove is seated a concentric flange g^2, projecting from the bottom of the bolster G. The plate J is further provided with a central opening j^2 of considerably greater size than the king-bolt I, within which central opening is extended an inner concentric flange g^3 of the bolster G.

A pivot pin or bolt K passes through the lugs j of the central bearing-plate J, the lugs h' of the lower bolster H, and the head i of the king-bolt, thus hinging the central bearing-plate and the king-bolt to the lower bolster.

In order to take the strain off the pivot pins or bolt K, the head of the king-bolt and the lugs of the central bearing-plate rest upon the top of the lower bolster, and in the pres-

ent instance the peripheries of the head and lugs are curved concentric with the pivot-pin and the lower bolster is provided with a transverse groove h^2 to receive the said head and lugs.

The pivot pin or bolt K is in alinement with the pivots f^2 of the front and rear tilting bearing-plates, so as to insure a perfect action of all of the parts of the fifth-wheel when the vehicle is passing over rough and uneven surfaces.

The king-bolt I extends upwardly through the middle cross-bar *a* and the floor A of the vehicle, and its upper end, exterior to the floor, may be screw-threaded for receiving a suitable fastening-nut i'.

A slightly-modified form of connection between the central bearing-plate J and the upper and lower bolsters is represented in Fig. 5. In this figure the downwardly-extended lugs j of the central bearing-plate are located upon opposite sides of the king-bolt and between the upwardly-extended lugs h' of the bottom bolster, instead of exterior thereto. In this form the bearing-plate is shown as provided with inner and outer concentric flanges j^2 j^3 and the upper bolster as being provided with a central opening g^4 for receiving the flange j^2 and a concentric groove g^5 for receiving the flange j^3.

When it is desired to remove the running-gear without lifting the body of the vehicle to a height sufficient to permit it to clear the end of the king-bolt, the pivot pin or bolt K is unfastened and removed, thereby permitting the king-bolt to be removed with the body portion from the running-gear. This may be done without in any manner disturbing the pivots of the front and rear bearings F and F'.

By this arrangement a very strong structure is provided at the center of the fifth-wheel, and at the same time it prevents any cramping of the parts at this point and insures a very easy-running structure.

It is obvious that slight 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. In a fifth-wheel for vehicles, an upper bolster carried by the body portion of the vehicle, a lower bolster carried by the running-gear, a central bearing-plate interposed between the two bolsters, a king-bolt engaged with the body portion, a pivot pin or bolt for hinging the said king-bolt and central bearing-plate to the lower bolster, the weight of the said king-bolt and bearing-plate being supported by the bolster and not by the pivot pin or bolt, substantially as set forth.

2. In a fifth-wheel for vehicles, an upper bolster carried by the body portion of the vehicle, a lower bolster carried by the running-gear, a central bearing-plate engaged with the upper bolster, the one being provided with a concentric groove and the other with a concentric flange located within the groove, a king-bolt engaged with the body portion and means for hinging the king-bolt and central bearing-plate to the lower bolster, 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 28th day of January, 1898.

MARTIN L. SENDERLING.

Witnesses:
FREDK. HAYNES,
EDWARD VIESER.