

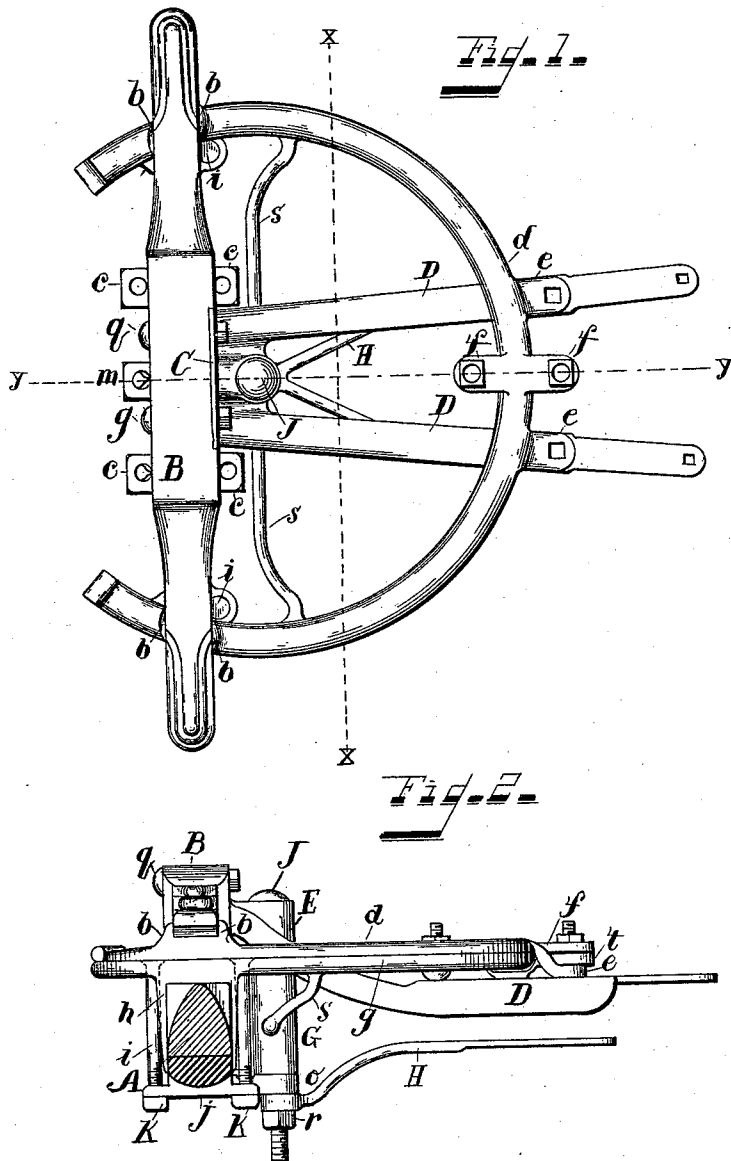
(No Model.)

3 Sheets—Sheet 1.

H. E. MORRILL.
FIFTH WHEEL.

No. 578,576.

Patented Mar. 9, 1897.



Witnesses.

Bernard J. Hausfeld.
William J. Peck.

Inventor.

Horace E. Morrill
by *Chas. M. Peck*
his Attorney.

(No Model.)

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Fig. 3.

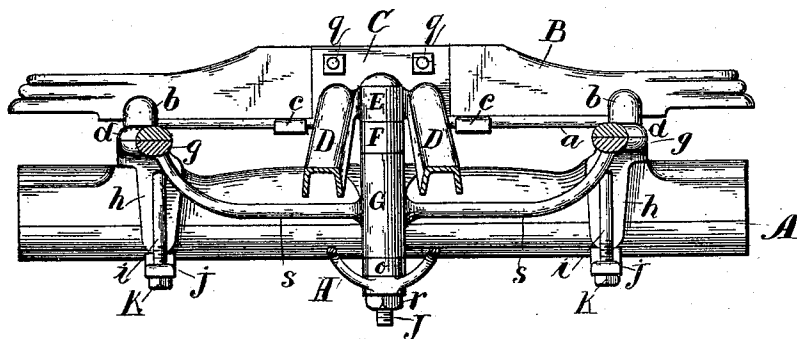
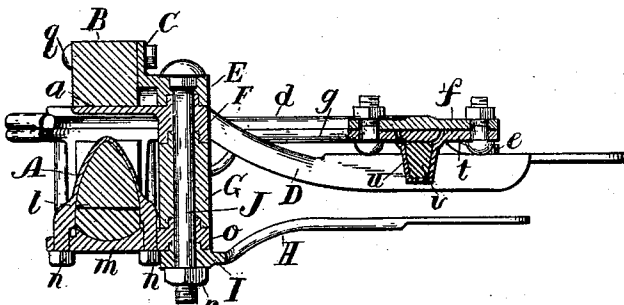


Fig. 4.



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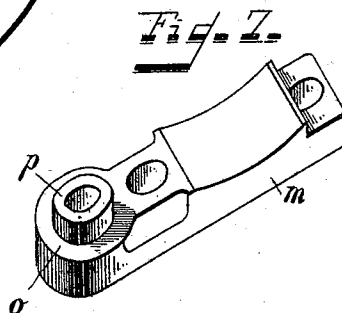
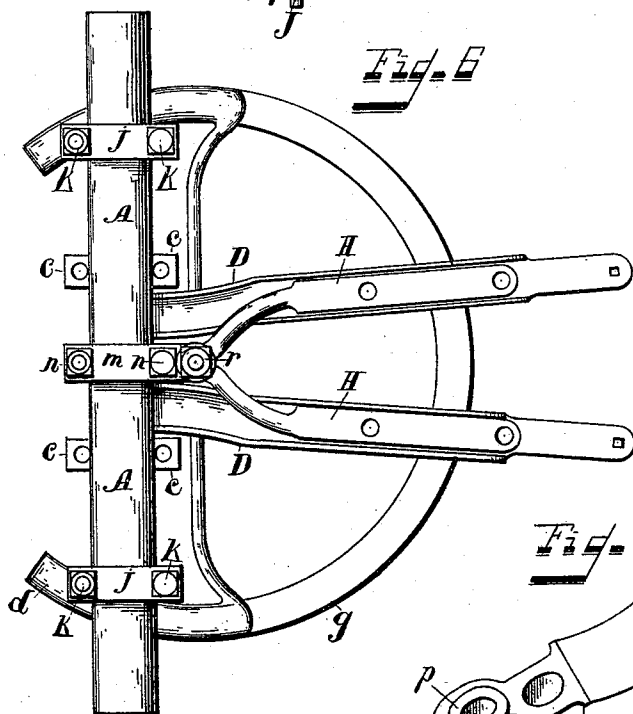
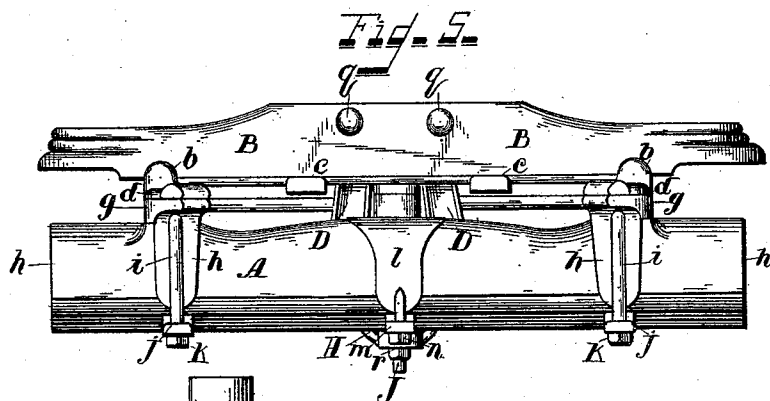
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UNITED STATES PATENT OFFICE.

HORACE E. MORRILL, OF DAYTON, OHIO, ASSIGNOR TO THE DAYTON
MALLEABLE IRON COMPANY, OF SAME PLACE.

FIFTH-WHEEL.

SPECIFICATION forming part of Letters Patent No. 578,576, dated March 9, 1897.

Application filed May 29, 1896. Serial No. 593,537. (No model.)

To all whom it may concern:

Be it known that I, HORACE E. MORRILL, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Fifth-Wheels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to that class of fifth-wheels for vehicles in which the king-bolt is located in the rear of the head-block and axle; and it has for its object an improved construction and uniting of the parts by which both lightness and increased strength to resist torsional strains of the axle are obtained.

The novelty of my invention will be hereinafter set forth, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1, Sheet 1, is a plan view of a fifth-wheel embodying my invention. Fig. 2, Sheet 1, is a side elevation of the same. Fig. 3, Sheet 2, is a sectional elevation on the dotted line *xx* of Fig. 1, looking to the left. Fig. 4, Sheet 2, is a sectional side elevation on the dotted line *yy* of Fig. 1. Fig. 5, Sheet 3, is a front elevation of the wheel. Fig. 6, Sheet 3, is a bottom plan view under a slightly-modified form of construction. Fig. 7, Sheet 3, is an enlarged perspective of the combined clip-tie and bearing.

The same letters of reference are used to indicate identical parts in all the figures.

In the drawings, A represents a portion of the front axle of a vehicle, and B the head-block or bolster directly above it, and these parts may be of the usual or any suitable construction.

The upper fifth-wheel member is composed of a flat plate *a*, secured by screws or otherwise to the under side of the bolster, and is provided at each end with lugs *b*, snugly embracing the front and rear sides of the bolster and with two intermediate projecting perforated lugs *c*, Figs. 1, 5, and 6, for receiving the threaded ends of clips, (not shown,) which serve both to secure the springs (not shown) to the bolster and the plate *a* to the bolster.

Integral with and extending rearwardly from the plate *a* is a circular-shaped upper fifth-wheel plate *d*, provided with perforated lugs *e* for attachment to the perch-irons, and intermediate of these is a perforated lug *f*, Figs. 1 and 4, for clipping together both members of the fifth-wheel.

The lower member of the fifth-wheel *g* lies directly under the upper member and is provided at its forward end on each side with pendent lugs *h*, straddling and snugly embracing the axle. Bolts *i* are passed down through perforations in the lower fifth-wheel member on each side of the lugs *h*, and their heads are countersunk, as shown by the dotted lines, Fig. 2, and their lower threaded ends pass through perforations in clip-ties *j* on the under side of the axle and receive clamping-nuts *k* to unite the parts. Intermediate of the lugs *h* and embracing the axle is a central clip *l*, secured in place by a clip-tie *m* and nuts *n*. This clip-tie, together with the ties *j*, conform to the shape of the under side of the axle, whether flat or swaged, so as to embrace the same snugly, and the tie *m*, as seen in Figs. 4 and 7, has a rearward perforated extension *o*, preferably with a counterbore on its under side and a boss *p* on its upper side.

Secured to the rear side of the bolster by means of bolts *q* is a plate C, from which the upper perch-irons D extend rearwardly and in line with the perforated lugs *e* of the upper fifth-wheel member. Also rearwardly extending from the plate C is a perforated lug or collar E, whose perforation is in vertical alinement with the perforation in the rear extension *o* of the clip-tie *m*. Directly under the collar E is a collar F, with a boss on its upper side engaging a counterbore in the collar E, as seen in Fig. 4, and interposed between collar F and perforated extension *o* is a collar G, with its under side counterbored to fit over the boss *b* of the extension *o*, and with its upper side provided with a boss fitting a counterbore in the under side of the collar F. The lower perch-irons H have at their forward end a collar I or a perforated lug, whose upper side is provided with a boss to fit into a counterbore in the under side of

the extension *o*. The king-bolt *J* is passed down through the interlocked collars *E F G* and *o* and *I*, and its lower threaded end is provided with a clamping-nut *r*, bearing
5 against the under side of the collar *I*.

The collar *G*, it is to be observed, in addition to being interlocked with collars *F* and *o*, is carried by brace-arms *s*, extending from the lower fifth-wheel member, as clearly seen
10 in Fig. 3.

It is to be further observed that the king-bolt is located sufficiently in rear of the bolster and axle so that the collar *G* does not in any way interfere with the clip *l*, which is immediately in front of it. A perforated clip-plate *t*, embracing the lower fifth-wheel member, is bolted to the under side of the lugs *f* of the upper fifth-wheel member, and is preferably provided with a pendent socket *u* to receive
15 a suitable device *v* (see Fig. 4) to prevent rattling.

In some instances, when desired, as seen in Fig. 6, the lower fifth-wheel member need not extend entirely around under the upper fifth-wheel member, but may terminate on each side just in rear of the brace-arms *s*, in which event the lugs *f* and clip-plate *t* would be dispensed with.
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By the above-described construction I produce a fifth-wheel the parts of which are securely interlocked and relieve the king-bolt of strain, while at the same time they can be made light and of malleable iron very nearly resembling in appearance wrought-iron work,
30 and by means of the central clip *l* the top of the axle need not be made flat, as heretofore,

but may be given a graceful contour, as seen in Fig. 5.

Having thus fully described my invention, I claim—
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1. A fifth-wheel for vehicles, having a king-bolt in rear of the axle, an upper fifth-wheel member secured to the bolster, a lower fifth-wheel member secured to the axle, brace-arms from said lower member, and a collar surrounding the king-bolt and held by said
45 brace-arms and interposed between a central clip-tie on the axle and a fixed bearing on the bolster, substantially as described.

2. A fifth-wheel for vehicles, having a king-bolt in rear of the axle, an upper fifth-wheel member secured to the bolster, a lower fifth-wheel member secured to the axle, brace-arms from said lower member carrying a collar surrounding the king-bolt, and a clip embracing
50 the axle directly in front of said collar and provided with a bearing for the king-bolt, substantially as described.

3. A fifth-wheel for vehicles, having a king-bolt in rear of the axle, a bearing-plate with a collar therefor, secured to the bolster, a collar therefor secured to the upper fifth-wheel member, a collar therefor secured to the lower fifth-wheel member by brace-arms, a clip embracing the axle directly in front of said last-named collar and having its tie extended to encircle the king-bolt, substantially as described.
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Witnesses:

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