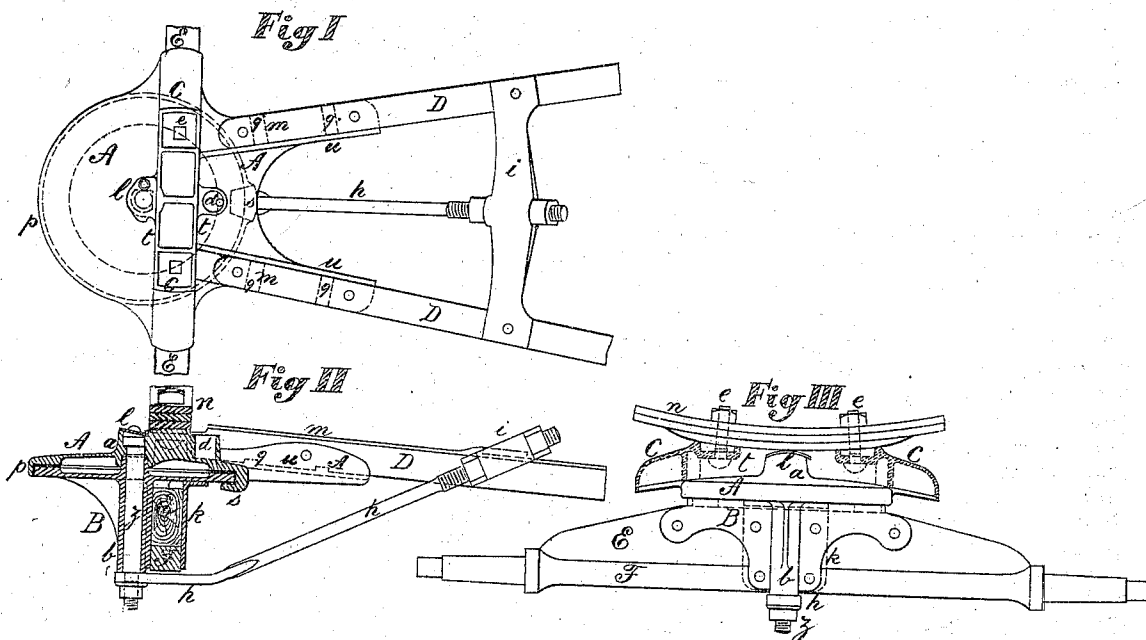


H. A. LUTTGENS.
Fifth-Wheel for Carriages.

No. 134,907.

Patented Jan. 14, 1873.



Witnesses:

E. D. Brooke
A. A. Lawrence

H. A. Luttgens.

UNITED STATES PATENT OFFICE.

HENRY A. LUTTGENS, OF PATERSON, NEW JERSEY.

IMPROVEMENT IN FIFTH-WHEELS FOR CARRIAGES.

Specification forming part of Letters Patent No. 134,907, dated January 14, 1873.

To all whom it may concern:

Be it known that I, HENRY AUGUSTUS LUTTGENS, of Paterson, in the county of Passaic, in the State of New Jersey, have invented a new and Improved Fifth-Wheel for Carriages; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing forming part of this specification, in which—

Figure I represents a top view of the fifth-wheel of a carriage secured to the axle, and with the reaches attached thereto; Fig. II is a section of a side elevation; and Fig. III represents a front elevation of the same.

My invention pertains to an improved construction of fifth-wheel for carriages, the main or upper part being cast in one piece, with sockets, arms, flanges, and projections, to adapt it to various connections and functions, and the lower plate being constructed to operate therewith; the whole being strong, durable, and compact, and produced at less cost than others of its class, as hereinafter fully described.

A is the upper plate of the fifth-wheel, being a continuous web with exception of the cavity formed by the head-block C. The plate A is provided with a rim, *p*, cast to the outer edge thereof, and fitting loosely around the lower plate B. A projection, *s*, is cast to rim *p*, clasping the lower plate B, and a central socket, *a*, projecting from the plate A, is bored and recessed to receive the head and upper end of king-bolt *z*. A thin metal plate, *l*, secured by a pin to the upper face of this socket, is placed in an inclined position toward head-block C, fitting closely over the cavity for the head of king-bolt *z*. The flanges *t t* cast to the upper plate A are shaped in a manner to form the head-block C, receiving spring *n*. The latter is secured by bolts *e*. An oil-cup, *d*, which may be filled with a sponge, is cast to the upper face of plate A. It is provided with an opening at its bottom, for admitting oil between the inner surfaces of the upper plate A and lower plate B of the fifth-wheel. Projections *u* on the inner portion of and forming part of the upper wheel A receive the reaches D. Ribs 9, Figs. I and II, cast to the upper face of projections *u*, are fitted into corresponding grooves formed in the bottom face of reaches D. The reach-irons *m* rest on

the top of reaches D. Two vertical bolts or rivets pass through each reach-iron *m*, reach D, and projection *u*, in addition to a horizontal bolt or rivet passing through the reach D and a flange of projection, *u*, formed at the inner side of reach D, secures the reaches to the upper fifth-wheel, plate A. The lower fifth-wheel plate B is formed in a continuous web, and is provided with a central socket, *b*, receiving the king-bolt *z*. This socket turns upon the king-bolt *z* with the movement of the front axle F of the carriage, and it projects below the axle F to insure the free movement of the king-bolt brace *h* below the axle F. The socket *b* is cast to the lower side of the plate B, and also projects beyond the upper face thereof, and may be made to enter a distance into the socket *a* formed in the center of plate A, as shown in section in Fig. II, thereby increasing the amount of wearing-surface. A flange forming part of the lower plate B, and the socket *b* containing king-bolt *z*, is firmly riveted or bolted to the bed-piece E and axle F. These bolts likewise secure a plate or washer, *k*, bent and riveted to the lower plate B. The lower end of king-bolt brace *h* is fitted and secured to the bottom of the king-bolt *z* by a nut upon the lower end of the latter. The hole in brace *h* for the reception of the king-bolt *z* may be round or square, since the flat side of the head of the king-bolt will prevent its turning while the nut is tightened to secure the brace *h* to king-bolt *z*. If the hole in brace *h* is round it must be made of less diameter than king-bolt *z*, and the king-bolt is reduced in diameter below the socket. The reach-irons *m*, secured to the top of the reaches D, receive, at a proper distance from the head-block C, the cross-bar *i*, which is secured to reaches D by bolts or rivets. The cross-bar *i* is provided with an inclined central socket, having a hole to receive the upper end of king-bolt brace *h*. The brace *h* is secured to the cross-bar *i* by two nuts fitted to the end of the brace *h*; these nuts tighten upon the upper and lower face of the inclined socket of cross-bar *i*. A thin ring of metal or leather may be interposed between the fifth-wheel plates A and B; it may also be fastened by rivets or otherwise to the upper or lower plate A or B; and in case of this ring being made of leather the face of either the upper or

lower plates may be roughened by small projections or ribs, to hold the leather in position by the weight resting upon it, while the plate A or B, not so provided, turns upon the face of the leather with the movements of axle F.

If the upper fifth-wheel plate A should be made of a lighter material than metal, it will require a metal ring to be riveted or fastened to the inner side thereof for wear and strength.

The operation of the fifth-wheel is as follows: The weight of the forward part of the carriage is supported by spring *n*, secured to head-block C above the upper plate A, and bearing upon the lower plate B, while the reaches D D, secured to projections U of plate A, firmly hold the latter, with the parts connected thereto, in their proper position. The lower plate B, secured to bed-piece E and axle F, turns by means of its socket upon king-bolt *z*, which latter is actuated, for nearly its whole length, by the weight necessary to move the carriage, and, being accessible at the top by the removal of the plate *l*, it can be readily oiled, while when in use it is entirely protected from dust. The vertical position of the king-bolt is insured by the king-bolt brace *h* passing through the central inclined socket of cross-bar *i*, to which it is secured by nuts upon brace *h*. The inclined position of plate *l* toward the head-block C causes the former to remain closed by its own weight. The strain of the king-bolt brace *h* is received by the reach-irons *m* placed upon reaches D. The interior surfaces of the fifth-wheel plates A and B, receiving oil through oil-cup *d*, are preserved from dust by the rim or flange *p* of upper plate A projecting over the outer edge of lower plate B; flange *p* fits loosely over the outer edge of plate B, and

is not intended to be in contact with the same, but to allow the lower fifth-wheel B to turn freely upon king-bolt *z*; its ability for excluding dust consists in the fact that it projects over and covers the whole depth of the lower fifth-wheel plate B. A thin ring of metal or of leather interposed between the upper and lower plates A and B will diminish the wear of the latter in case that the metal used in the construction of both plates should be of the same kind and quality. Projection S, cast to rim *p* of the upper fifth-wheel plate A, and clasping the lower plate B, is intended as a safe-guard; and by means of the same the carriage may move forward without the king-bolt *z* and its brace *h*. The ribs 9, cast to the upper face of projections *u* of plate A, and fitted into the bottom face of reaches D, materially assist the bolts or rivets to firmly connect the reaches P with the upper fifth-wheel plate A.

I do not claim, broadly, any individual feature of my invention; but

What I claim is—

The improved fifth-wheel, composed of the plate A, provided with sockets *a* and *d*, the flanges *p* *s*, the socket-arms *u* *u* *g* *g*, and the head-block C, all formed or cast in one piece, in combination with the lower plate B, provided with the king-bolt socket *b*, and with the recesses and flanges cast therewith, as specified, all constructed, arranged, and operating as shown and described.

H. A. LUTTGENS.

Witnesses:

JOHN H. QUAIN,
JNO. BRUSH.