

M. HALFPENNY.  
FIFTH WHEEL.

No. 458,549.

Patented Aug. 25, 1891.

Fig-3.

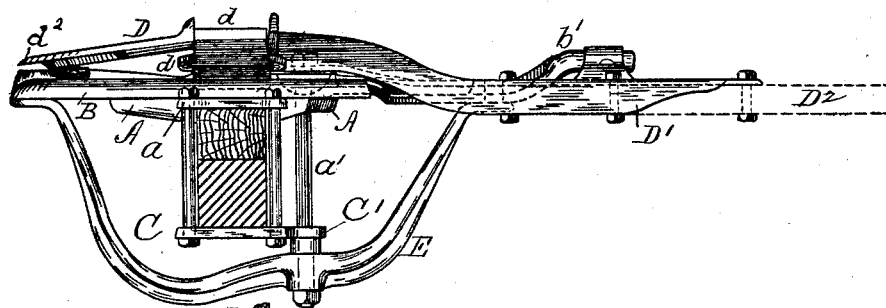


Fig-1

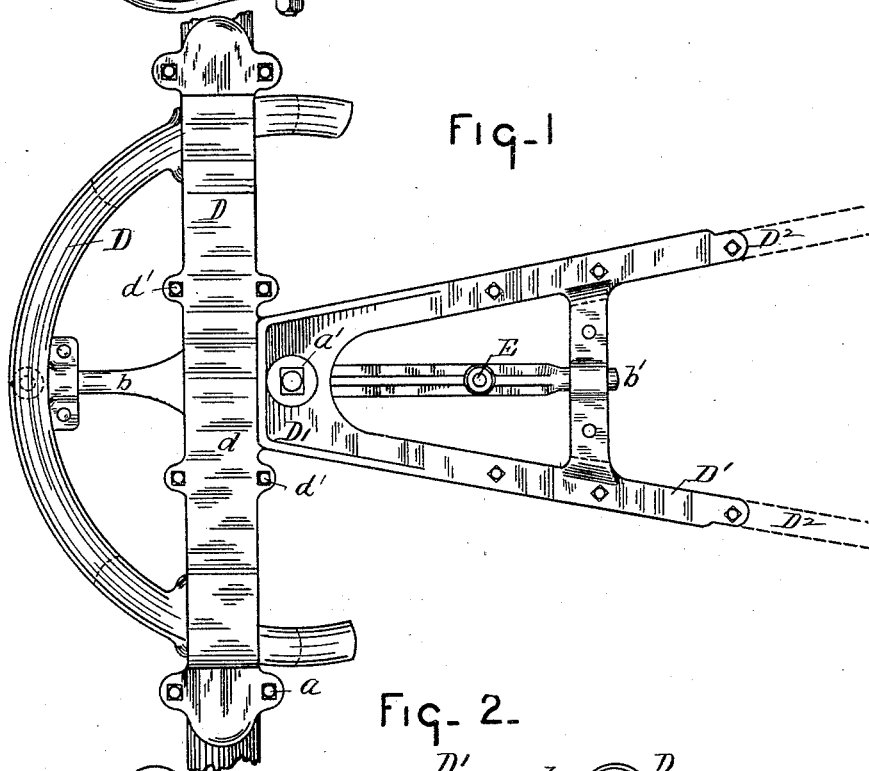
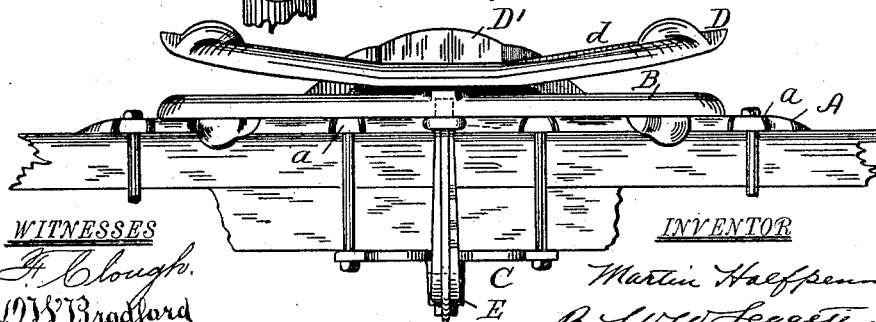


Fig-2.



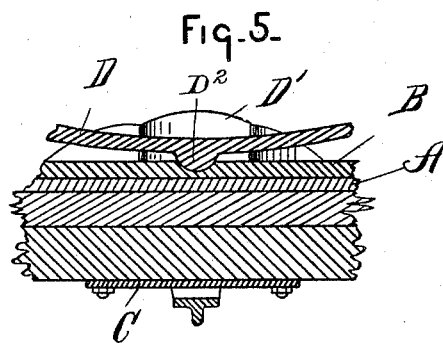
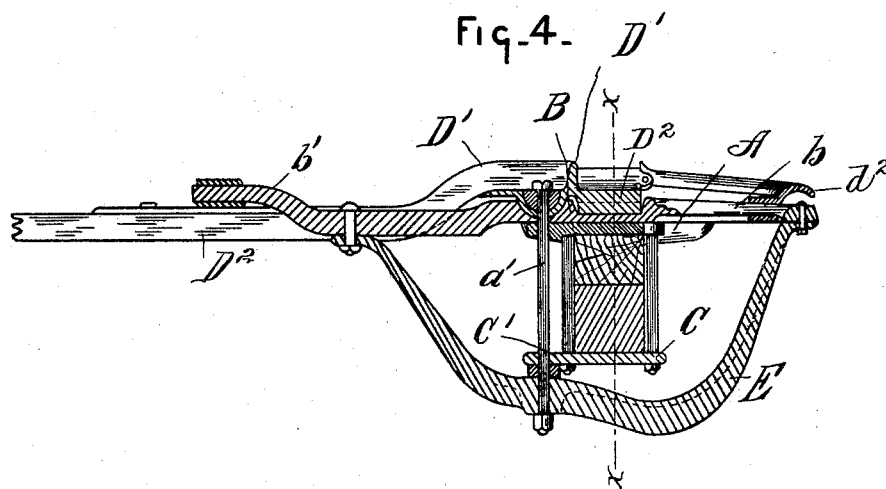
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# UNITED STATES PATENT OFFICE.

MARTIN HALFPENNY, OF PONTIAC, MICHIGAN, ASSIGNOR TO C. V. TAYLOR & CO., OF SAME PLACE.

## FIFTH-WHEEL.

SPECIFICATION forming part of Letters Patent No. 458,549, dated August 25, 1891.

Application filed March 12, 1891. Serial No. 384,702. (No model.)

*To all whom it may concern:*

Be it known that I, MARTIN HALFPENNY, a citizen of the United States, residing at Pontiac, county of Oakland, State of Michigan, have invented a certain new and useful Improvement in Oscillating Fifth-Wheels; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

In the drawings, Figure 1 is a plan view. Fig. 2 is a front elevation, and Fig. 3 is a side elevation. Fig. 4 is a vertical section. Fig. 5 is a vertical section through line *xx* of Fig. 4.

It is the purpose of my invention to produce a fifth-wheel construction for buggies, light wagons, and similar vehicles which employ a reach, the fifth-wheel being so constructed that the tilting of either the front or rear axle with respect to the other, due to inequalities of the ground, will not, as heretofore, result in a corresponding springing of the reach or reaches, but in which the upper segment of the fifth-wheel will rock or oscillate freely to compensate for said distortion without springing the said reach or other parts.

In carrying out my invention, A represents the lower segment of the fifth-wheel, adapted to rest upon the axle or its bed wood and to be clipped thereto by the usual clip-bolts passed through the orifice *a*.

B is the segment of the fifth-wheel, which rests immediately upon the segment A, and is engaged therewith in any usual way by the king-bolt *a'*. This segment B has pivot-arms *b b'*, projecting to the front and rear, respectively.

D represents the top section of the fifth-wheel construction engaged with the segments A and B by the king-bolt. This top section is also journaled on the pivot-arms *b b'*, as shown. The section D is made integral with the reach plate or frame *D'*, to which the reaches *D<sup>2</sup>* are suitably bolted or fastened, and is of equal size with the plate B, but not in a parallel plane, but rises gradually from the point in front to each side to permit it to rock a limited distance without resting at the sides

on plate B. I prefer to make this circle D concave on the under side to fit the upper face of circle B; but this form is not essential. The circle D rocks on the portion *D<sup>2</sup>* in front of the king-bolt, and the king-bolt being back of the axle permits the part *D<sup>2</sup>* to rest directly over the axle, where the weight is sustained.

C is a plate extending beneath the axle adapted to receive the lower ends of the clip-bolts at *a*, and an arm *C'* receives and braces the lower end of the king-bolt and maintains in proper position the fifth-wheel brace.

E is the fifth-wheel brace, secured at its front and rear extremities to the plate B. The cross-piece *d* of the section D is adapted to receive the bolster, which supports the spring, and is provided with suitable bolt-holes *d'* for the reception of clip-bolts at these points for clipping the spring and its bolster to the said section D.

This device having been applied to a vehicle, it is apparent that should the forward or rear axle be tilted with respect to each other this derangement of their parallel position is compensated at once by the section D rocking or oscillating upon the section B and without any wrenching strain being thrown upon the body or reaches. It is manifest that the sections D and B will maintain their fixed relation with each other, so as to rotate in common about the king-bolt; but that the top section D has at all times the rocking or oscillating movement above explained with respect to the plate B, regardless of the position that may be occupied by the forward axle. It is also manifest that the wearing-plates A and B never have any tendency to be separated the one from the other; but they always rest in contact, and any tilting of the axles with respect to each other does not result in any strains tending to separate these two sections or to spring them apart. The result is a fifth-wheel in which the wearing-surfaces are uniformly worn and which is in use not liable to the usual accidents due to the springing or wrenching of the body-reaches and the parts of the fifth-wheel.

What I claim is—

1. A fifth-wheel consisting of the combination of a circle-plate A, circle-plate B, pivoted

to the king-bolt back of the axle, and reach-plate D, held to the circle-plate B by the king-bolt and having its bearing-point forward of said king-bolt and directly over the axle, 5 whereby the pivotal point of the reach is back of the axle and the load directly over the axle, substantially as described.

2. A fifth-wheel consisting of the combination of the circle-plates A B, pivoted back of 10 the axle, and rocking reach-plate D, provided with circle of equal size with plate B for limiting the movement of the rocking plate and having its bearing forward of the pivotal point of the reach and directly over the axle, sub- 15 stantially as described.

3. A fifth-wheel consisting of the combination of the circle-plates A B, pivoted back of the axle, the rocking reach-plate D, held to plate B by the king-bolt and having its bearing-point forward of said king-bolt and directly over the axle, and the re-enforcing frame E, engaged in front to circle-plate B and pivoted in the rear to the reach, substantially as described. 20

In testimony whereof I sign this specification in the presence of two witnesses. 25

MARTIN HALFPENNY.

Witnesses:

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W. W. LEGGETT.