(No Model.)

P. ANDERSEN.

FIFTH WHEEL.

No. 480,901. Patented Aug. 16, 1892.

Fig. 1.

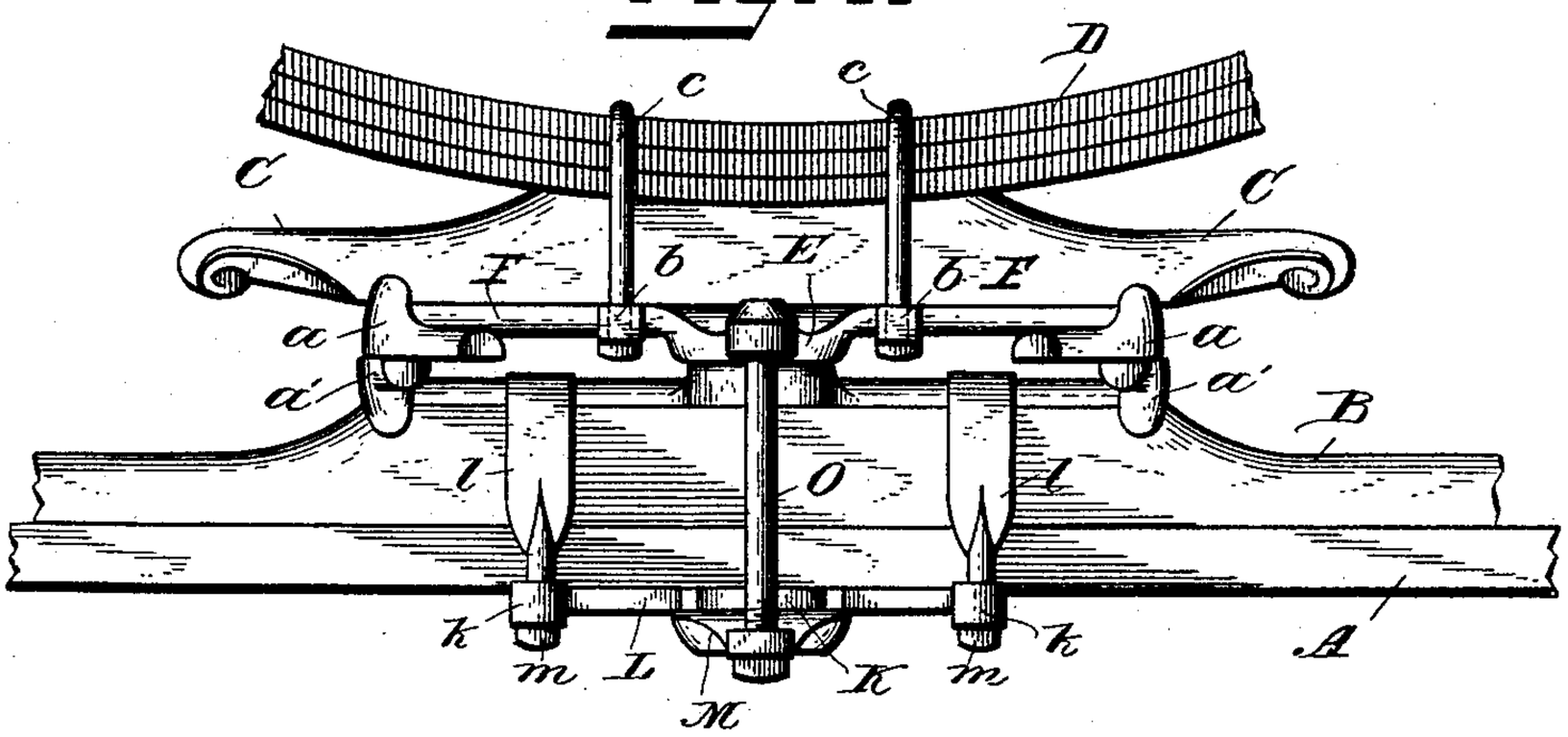


Fig. 2.

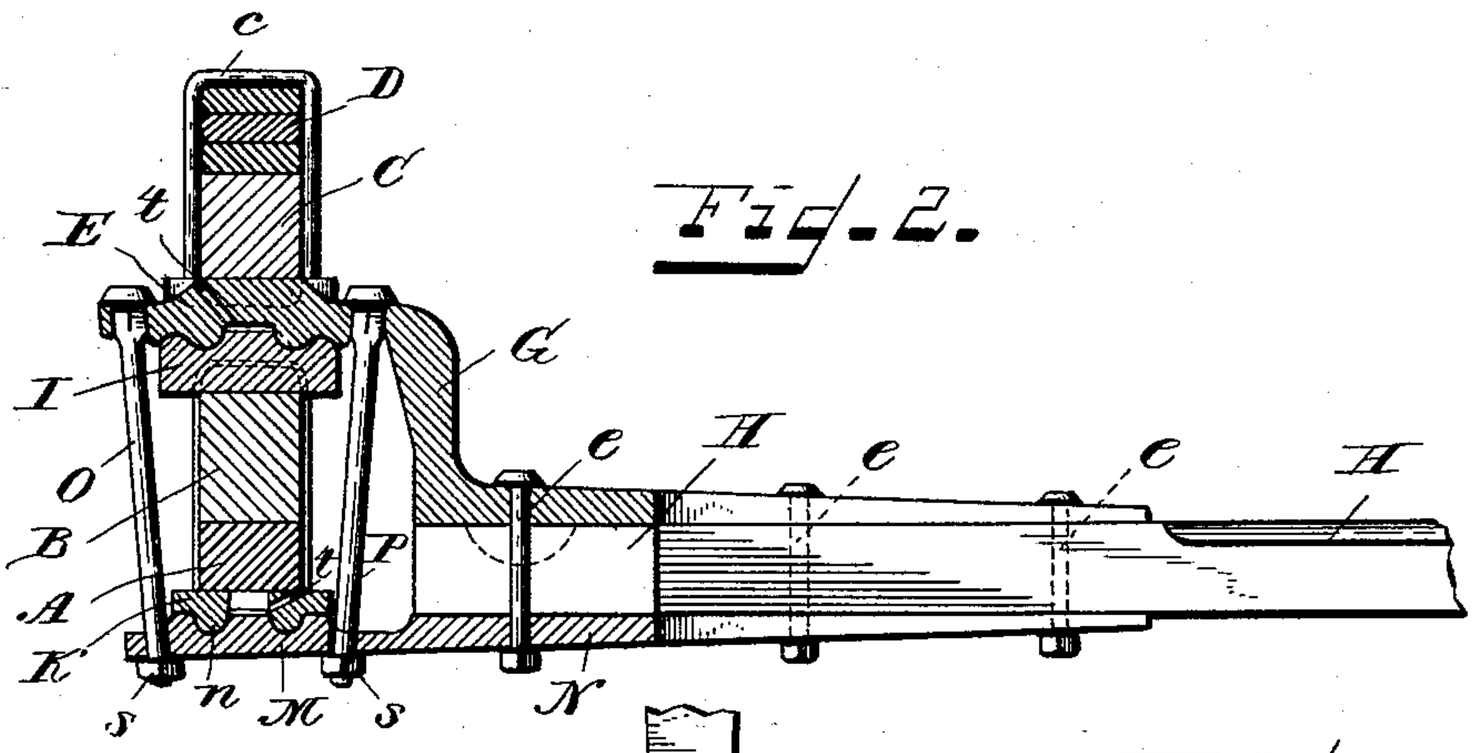


Fig. 3.

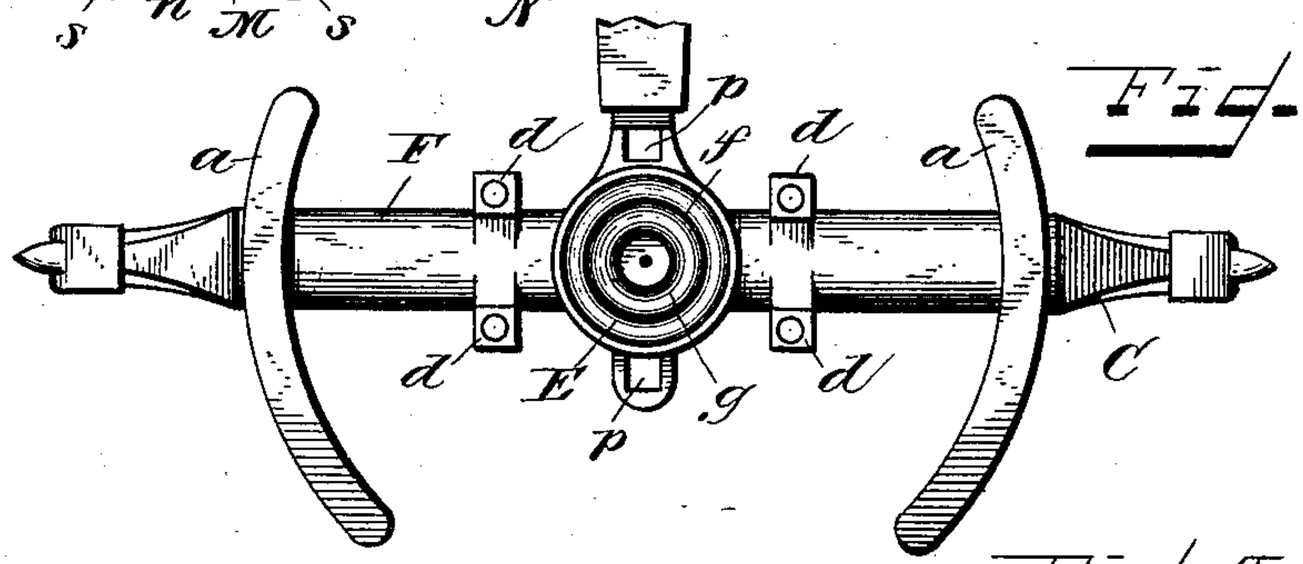
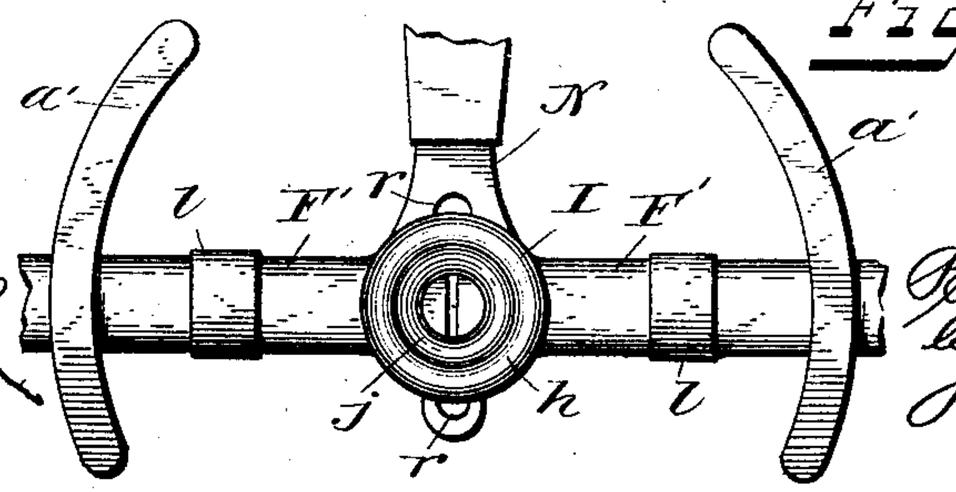


Fig. 4.



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UNITED STATES PATENT OFFICE.

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FIFTH-WHEEL.

SPECIFICATION forming part of Letters Patent No. 480,901, dated August 16, 1892.

Application filed December 4, 1891. Serial No. 413,982. (No model.)

To all whom it may concern:

Be it known that I, PETER ANDERSEN, a citizen of the United States, residing at Fort Wayne, in the county of Allen and State of Indiana, 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 in which the head-block and bolster are flexibly connected without the use of the ordinary king-bolt; and my improvements consist in the novel construction and arrangement of parts to be hereinafter more particularly pointed out and claimed.

In the accompanying drawings, Figure 1 is a front elevation of my improved fifth-wheel. Fig. 2 is a vertical cross-section taken at right angles to the axle. Fig. 3 is a bottom plan of the fifth-wheel plate attached to the head-block. Fig. 4 is a top plan view of the lower fifth-wheel plate attached to the bolster on the axle.

A is the axle of a buggy or light wagon, usually a square steel bar.

B is the bolster of wood placed on top of the axle at the middle to receive the fifth-wheel connections.

C is the head-block, to which the vehicle-springs D are attached.

Bolted to the under surface of the head-block C is the upper fifth-wheel plate, made up of a central circular plate E and the usual segmental bearing-plates *a a*, the parts being integrally connected by the arms F F. These arms are provided with lugs *b b* and clips *c c*, extending over the springs D down on each side of the head-block, and through these lugs *b* on the fifth-wheel plate, where the clips are secured by the nuts *d d*, thus firmly securing together the springs, head-block, and upper fifth-wheel plate. Extending out back from this upper fifth-wheel plate and integral therewith is the bracket-arm G, curved downwardly and extending so as to be firmly secured by the bolts *e e* to the reach H on its upper side.

Secured to the upper face of the bolster B is the lower fifth-wheel plate, which, like the upper fifth-wheel plate, is made up of a central circular plate I and segmental bearing-plates *a' a'*, the parts integrally connected by the arms F' F'. The upper disk E is provided with an outer annular groove *f* and an inner annular flange or ridge *g*, which fit within a corresponding annular flange *h* and groove *j* on the lower disk I, the two disks being thus flanged and grooved in order to be more readily held in place and still to allow a free rotary movement of the two disks, the segmental bearing-plates *a* corresponding with and fitting upon the segmental bearing-plates *a' a'*, as in the ordinary fifth-wheel construction.

Secured to the under surface of the axle A is another plate or casting L, provided with a central circular plate K and having lugs *k k* at each end of this plate. Clips *l l* pass over the top of the lower fifth-wheel plate and down along each side of the bolster and axle and through the lugs *k k* on this lower casting L, where the clips are secured by the nuts *m m*, and thus the lower fifth-wheel plate, the bolster, axle, and lower plate L are firmly secured together. The lower circular plate K is provided with an annular flange *n* to receive the annular groove on the circular plate M, the parts K and M fitting together and being capable of a free rotary movement in the same manner as the disks E and I are. Extending back from this lower plate M, integral therewith, is the arm or bracket N, which is securely bolted to the under surface of the reach H by the bolts *e e*, and thus the same bolts which secure the upper fifth-wheel plate to the reach secure the lower plate M to the under surface of the reach.

In order to hold the parts securely together, two bolts O P are provided, which pass down through openings *p p* in the upper disk E—one in front and the other in the rear of the axle—and through small openings *r r* in the lower plate M, where nuts *s s* secure the bolts firmly in place.

t t are oil-openings in the plates E and K, in order that the disks may be properly lubricated.

In the construction above set forth it will

be noted that the bolts O P take the place of the ordinary king-bolt, that the upper fifth-wheel disk E and the lower plate M are rigidly secured to the reach, while between these plates the bolster and axle are free to rotate, the disk I and segmental plates a' a' bearing against the disk E and segmental bearing-plates a a, while the lower circular plate K bears against the circular plate M.

I am aware that it is old to construct a fifth-wheel in which the ordinary king-bolt is omitted; but in such constructions hitherto it has been found necessary to provide circular plates or disks not rigidly secured to the reach or axle, but secured together so as to rotate within chambers on the head-block and axle, thus multiplying the number of parts, increasing the cost of manufacture, and rendering them much more liable to get out of order, while in my fifth-wheel four castings are all that are necessary to make up the parts—an upper and a lower plate, with arms to be rigidly secured to the reach and to the body of the vehicle, and two other plates, one for the upper surface of the bolster and the other for the lower surface of the axle, the two latter plates, and with them the bolster and axle, rotating freely between the two others, which are secured to the reach.

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

In a fifth-wheel, the combination, with separate bearing-plates, one on the upper surface of the bolster and the other on the lower surface of the axle and formed with an annular flange to fit a corresponding groove in the lower bearing-plate and provided with oil-openings and clips to bind said parts together, of corresponding bearing-plates having bracket-arms integral therewith, bolts to secure the same rigidly to the reach, clips or equivalent devices to secure the upper of said plates to the vehicle-body, and bolts, one in front and the other in the rear of said axle, connecting said plates together, whereby free rotation of the axle may be obtained without the use of a king-bolt, substantially as shown and described.

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