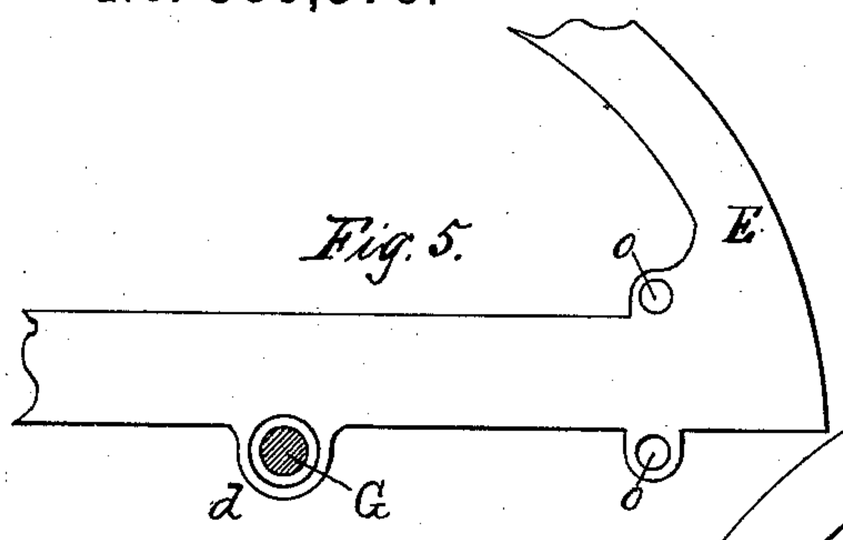
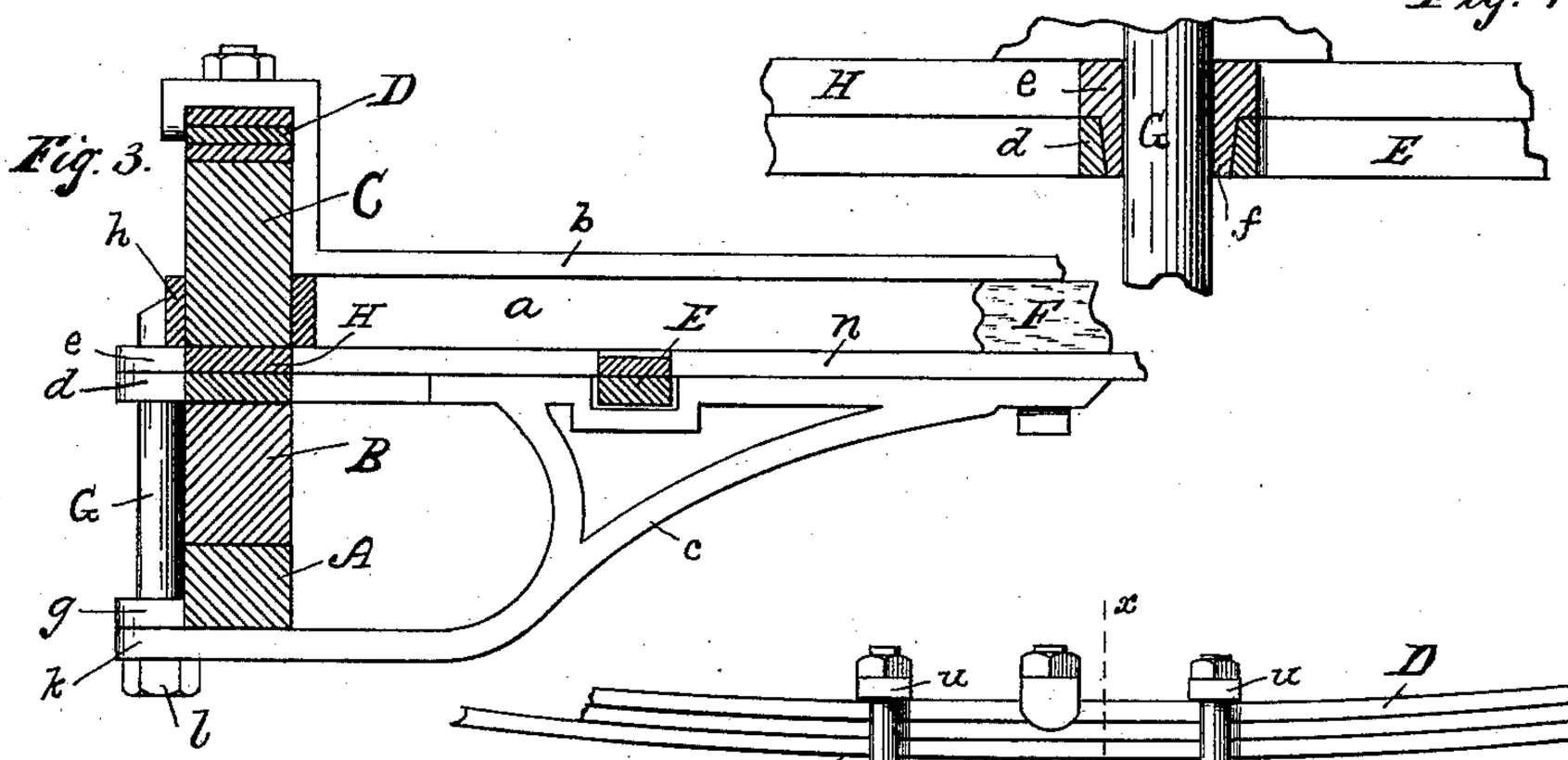
(No Model.)

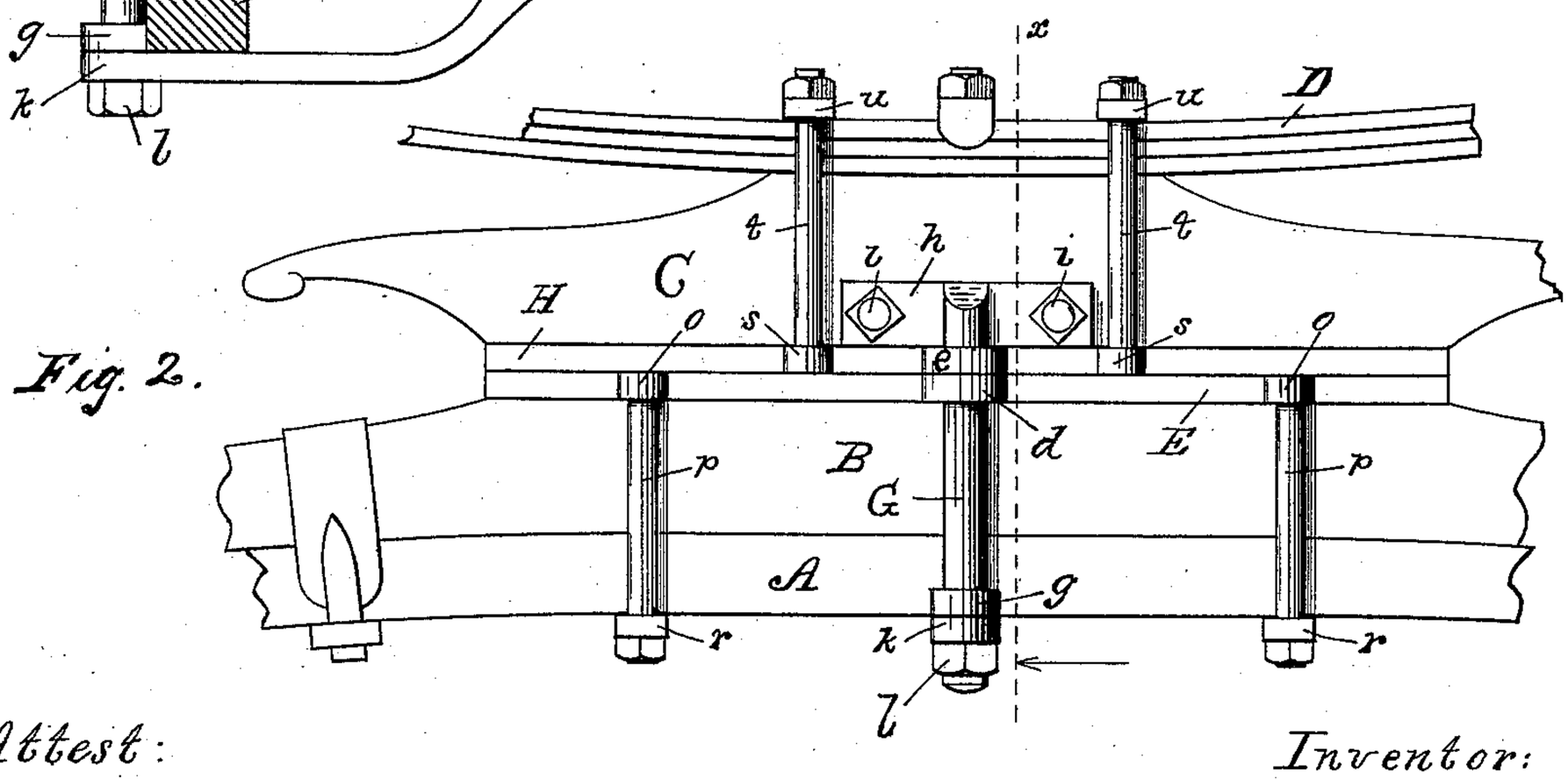
G. A. LANE.

FIFTH WHEEL.

No. 389,578. Patented Sept. 18, 1888.







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UNITED STATES PATENT OFFICE.

GEORGE A. LANE, OF ROCHESTER, NEW YORK.

FIFTH-WHEEL.

SPECIFICATION forming part of Letters Patent No. 389,578, dated September 18, 1888.

Application filed May 26, 1888. Serial No. 275,143. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. LANE, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Fifth-Wheels, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

The object of my invention is to improve the running-gear of a wagon by producing a novel fifth-wheel therefor, which feature, with the improved parts associated therewith, comprises the essential part of the invention, the whole being hereinafter fully described, and more particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a plan of some of the parts at the front end of a wagon-gear, including a portion of the reach and the fifth-wheel, the spring and other parts being omitted; Fig. 2, a front elevation of the same; Fig. 3, a vertical section taken on the dotted line *x* in Fig. 2, and viewed as indicated by the arrow pointed thereon. Fig. 4, drawn to a larger scale, is a front view of some of the parts, showing the telescoped eyes for receiving the king-bolt, vertically sectioned to better show their form and construction; and Fig. 5, a plan of a portion of the fifth-wheel, serving to more fully show the details of its form.

Referring to the parts, A is the front iron axle of a wagon; B, the wood part or stock thereof; C, the head-block, and D the spring. E is the fifth-wheel, it being of the D pattern; F, the reach; G, the king-bolt, and H the plate resting upon the fifth-wheel beneath the head-block. The reach is secured to the head-block by side irons, *a a*, to the spring by an upper iron, *b*, and to the axle by the safety hook or brace *c* beneath the fifth-wheel.

The fifth-wheel is formed with an eye, *d*, through which the king-bolt passes, projecting forward or beyond the front surface of the axle, and the plate H is formed with a similar eye, *e*, which is formed with a reduced part, *f*, extending downward to enter the eye *d*, as clearly shown in Fig. 4. The iron axle A is likewise formed with an eye, *g*, in line with the eyes *d* and *e*, to receive and hold the lower end of the king-bolt. The several eyes or rests for the king-bolt hold the latter wholly in front of the wooden and iron part of the axle. The upper end of the king-bolt is formed with a flat laterally-extended head, *h*, through which bolts *i* pass, the same extending through the head-block and the outward-bent ends of the respective side irons, *a*, of the reach. The lower end of the king-bolt extends below the eye *g* and passes through an eye, *k*, at the front end of the brace *c*, and is provided with a screw-nut, *l*, at its projecting end below the brace.

The fifth-wheel is also formed with minor eyes *o*, also reaching out beyond the front and rear surfaces of the axle to receive clamping bolts or ties *p*, to bend the fifth-wheel to the axle, ordinary cross-clips, *r*, being employed beneath the iron axle. The plate H beneath the head-block is likewise formed with eyes or loops *s*, extending laterally forward and backward beyond the respective front and rear faces of the head-block to receive clamping-bolts *t*, to bind said plate, the head-block, and spring together, cross-clips *u* being placed on top of the spring. In this construction the axle, fifth-wheel, and head-block are neither of them pierced to receive the king-bolt or the clamping-bolts. Thus they are rendered much stronger than if bored to receive the said bolts.

The extended part *f* of the eye *e* of the plate H is made conical, fitting a conical or tapered cavity in the eye *d*, the latter being separated from the king-bolt, which has a bearing only against the inner surface of the part *e*. Now, in the act of turning the vehicle, as there is no relative motion between the king-bolt and the plate H, there is consequently no wear upon the former, which is a matter of great importance. The wear that is commonly thrown upon the king-bolt at this point takes place at the tapered bearing between the parts *f* and *d*. The tapering of these parts serves to compensate for the wear between them, for, as the contiguous surfaces of the plate H and fifth-wheel wear away and let the former gradually move downward, the part *f* constantly fills the cavity in the eye *d*, on account of the taper.

What I claim as my invention is—

1. In combination with the axle of a vehicle formed with a loop, a fifth-wheel formed

with a corresponding loop, an upper plate for the fifth-wheel formed with similar loop, a head-block, a king-bolt held in said loops and formed with a head to meet the head-block, a reach having side irons bent in opposite directions to abut against said head-block, and clamping-bolts *i*, passing through said respective side irons, the head-block, and the king-bolt, substantially as shown and described.

2. In combination with the axle and head-block of a vehicle, a spring, a reach provided with side irons bent laterally to meet the head-block, and further provided with an upper iron bent vertically to have its face bear against said head-block and the spring, and turned to clasp the latter, a fifth-wheel formed with laterally-projecting loops, an upper plate for said fifth-wheel formed with similar loops, and clamping-bolts for said loops, with clips and clamping-nuts, substantially as shown and described.

GEO. A. LANE.

Witnesses:
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