J. W. & L. S. TRUDELL.

Front Gear-Coupling for Wagons.

No. 207,916. Patented Sept. 10, 1878.

Fig. 1.

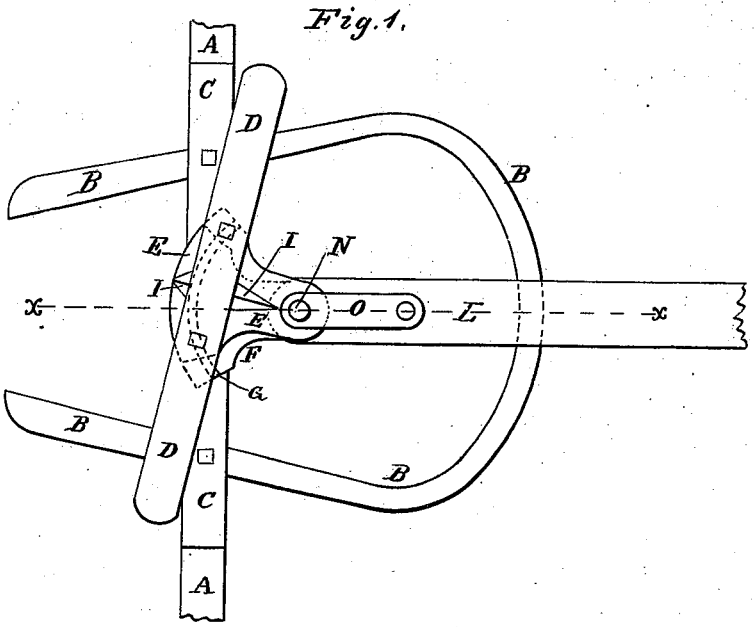


Fig. 2.

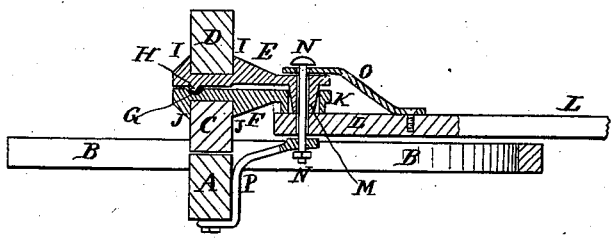


Fig. 3.

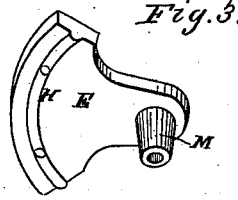
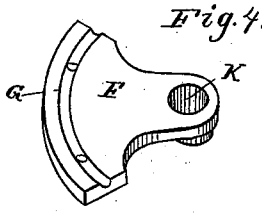


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOSEPH W. TRUDELL AND LOUIS S. TRUDELL, OF SIOUX CITY, IOWA.

IMPROVEMENT IN FRONT-GEAR COUPLINGS FOR WAGONS.

Specification forming part of Letters Patent No. **207,916**, dated September 10, 1878; application filed April 25, 1878.

To all whom it may concern:

Be it known that we, JOSEPH W. TRUDELL and LOUIS S. TRUDELL, of Sioux City, in the county of Woodbury and State of Iowa, have invented a new and useful Improvement in Wagon Front-Gear Coupling, of which the following is a specification:

Figure 1 is a top view of the forward part of a wagon-gearing to which our improvement has been applied. Fig. 2 is a detail vertical section of the same, taken through the line *x x*, Fig. 1. Fig. 3 is a detail perspective view of the upper bolster-plate. Fig. 4 is a detail perspective view of the lower bolster-plate.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved coupling for connecting the parts of the front gear of a wagon in such a way that they may play easily upon each other, and at the same time may be held securely in place, and which shall be simple in construction, and will allow the wagon to be turned in less space than is possible with the ordinary coupling.

The invention consists in the combination of the two plates provided with the tongue and groove, the flanges which form seats for the bolster and the sand-board, the tapering hub and the straight socket, the axle-brace, the reach-brace, and the bolt with each other, and with the bolster, the sand-board, the axle, and the reach, as hereinafter fully described.

A represents the forward axle of a wagon, to which the forward bounds, B, and the sand-board C are attached, in the usual way. D is the forward bolster, upon which the forward part of the wagon-body rests.

E F are two plates, the forward ends of which are made in the form of a section of a circle, as shown in Figs. 3 and 4. In the face of the lower plate, F, at a little distance from its curved edge, is formed a groove, G, to receive a correspondingly-shaped tongue, H, formed upon the face of the upper plate, E.

The tongue and groove H G prevent any longitudinal movements of the plates E F upon each other, and thus relieve their pivot from a portion of the strain.

Upon the outer sides of the plates E F are formed flanges or shoulders I J, to form seats for the bolster D and sand-board C, which are secured to said plates E F by bolts.

In the rear end of the plate F is formed a straight or cylindrical socket, K, projecting a little below the lower surface of the said end, to rest upon the upper side of the forward end of the reach L.

Upon the rear end of the plate E is formed a downwardly-projecting hub, M, to enter the socket K, and thus pivot the two plates E F to each other.

The hub M is made tapering, so that the plates E F may rock upon each other to enable either of the wheels to pass over an obstruction without twisting or wrenching the gear.

N is the king-bolt, which passes through the hub M, the socket K, and the reach L, and pivots said parts to each other. The connection is further strengthened by the reach-brace O and the axle-brace P.

The forward end of the reach-brace O rests upon the upper side of the rear end of the plate E, and has a hole formed through it, through which the bolt N passes. The rear end of the reach-brace O rests upon the reach L, and is bolted to it.

P is the axle-brace, the upper end of which rests against the lower side of the forward end of the reach L, and has a hole formed through it, through which the king-bolt N passes.

The brace P is made forked, and the ends of its branches pass beneath the lower side of the axle A, and are secured in place by the bolts that secure the plate F, the sand-board C, and the axle A to each other.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

The combination of the two plates E F, provided with the tongue and groove H G, the flanges I J, which form seats for the bolster D and the sand-board C, the tapering hub M and the straight socket K, the axle-brace P, the reach-brace O, and the king-bolt N, with each other, and with the bolster D, the sand-board C, the axle A, and the reach L, substantially as herein shown and described.

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Witnesses:
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T. RYAN.