A. COFFERS.

Running-Gear for Wagons.

No. 220,219. **Patented Oct. 7, 1879.**

Fig. III.

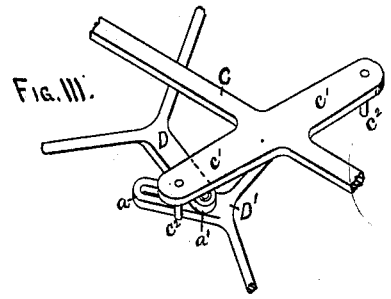


Fig. I.

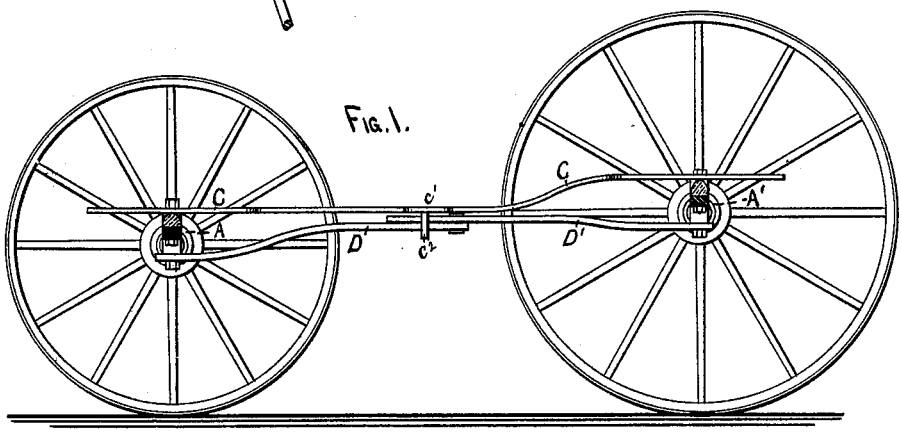
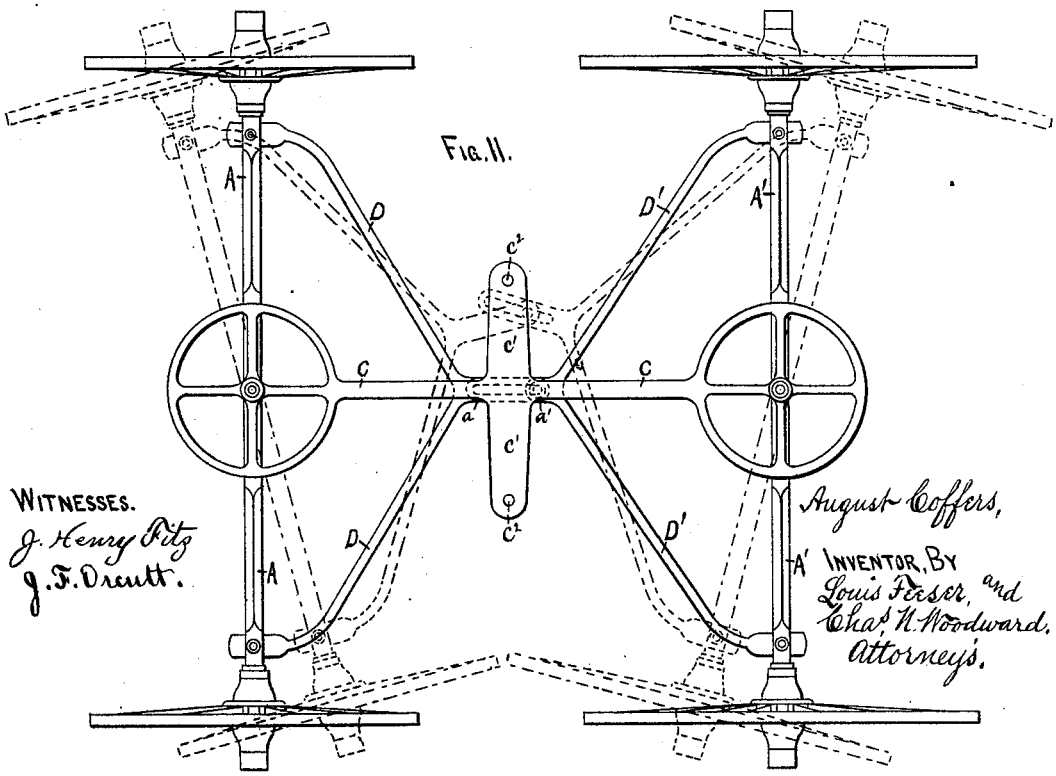


Fig. II.



WITNESSES.
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UNITED STATES PATENT OFFICE.

AUGUST COFFERS, OF ST. PAUL, MINNESOTA.

IMPROVEMENT IN RUNNING-GEARS FOR WAGONS.

Specification forming part of Letters Patent No. **220,219**, dated October 7, 1879; application filed August 11, 1879.

To all whom it may concern:

Be it known that I, AUGUST COFFERS, of St. Paul, in the county of Ramsey and State of Minnesota, have made certain new and useful Improvements in Running-Gears of Wagons, &c., which improvements are fully set forth in the following specification and accompanying drawings, in which—

Figure I is a sectional side elevation, and Fig. II is a plan view, of the running-gear of a wagon with my improvements attached thereto. Fig. III is a perspective view of a portion of the reach and forked rods detached and inverted.

This invention relates to the running-gears of wagons, &c.; and consists in the peculiar manner of connecting the axles independently of the reach, so that they both turn conjointly, as will be hereinafter and in detail set forth.

A A′ are the axles, both being pivoted to the ends of one reach, C. D D′ are two forked rods, attached rigidly to the axles A A′, as shown, and coupled to each other by a pin and slot, *a a′*. (See Fig. III.) By this means, if the forward wheels are "cramped" around, as in turning corners, &c., the forked rod D will act upon the forked rod D′ and cause the rear wheels to cramp around in the opposite direction from the front ones, thus causing them to assume the position shown in Fig. II in dotted lines. This enables the wagon to be turned about in a very small space without danger of upsetting or moving the rear wheels sidewise. It also enables me to back a wagon much more easily when turning around, as only one-half of the cramping sidwise is required, as the rear wheels will cramp equally with the front ones.

This arrangement will be found chiefly useful, however, in turning corners, as a corner can be turned on a very small sweep, and with no danger of the rear wheels sliding sidewise over the road, as is frequently the case with the rigid axle.

The reach C is provided with a cross-bar and stop-pins c^1 c^2, to prevent the forked rods from turning too far sidewise.

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

The forked rods D D′, overlapping each other and connected by a pin and slot, *a a′*, in combination with the reach C, having a central cross-bar, c^1, provided with stop-pins c^2, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

AUGUST COFFERS.

Witnesses:

C. H. WOODWARD,

LOUIS FEESER.