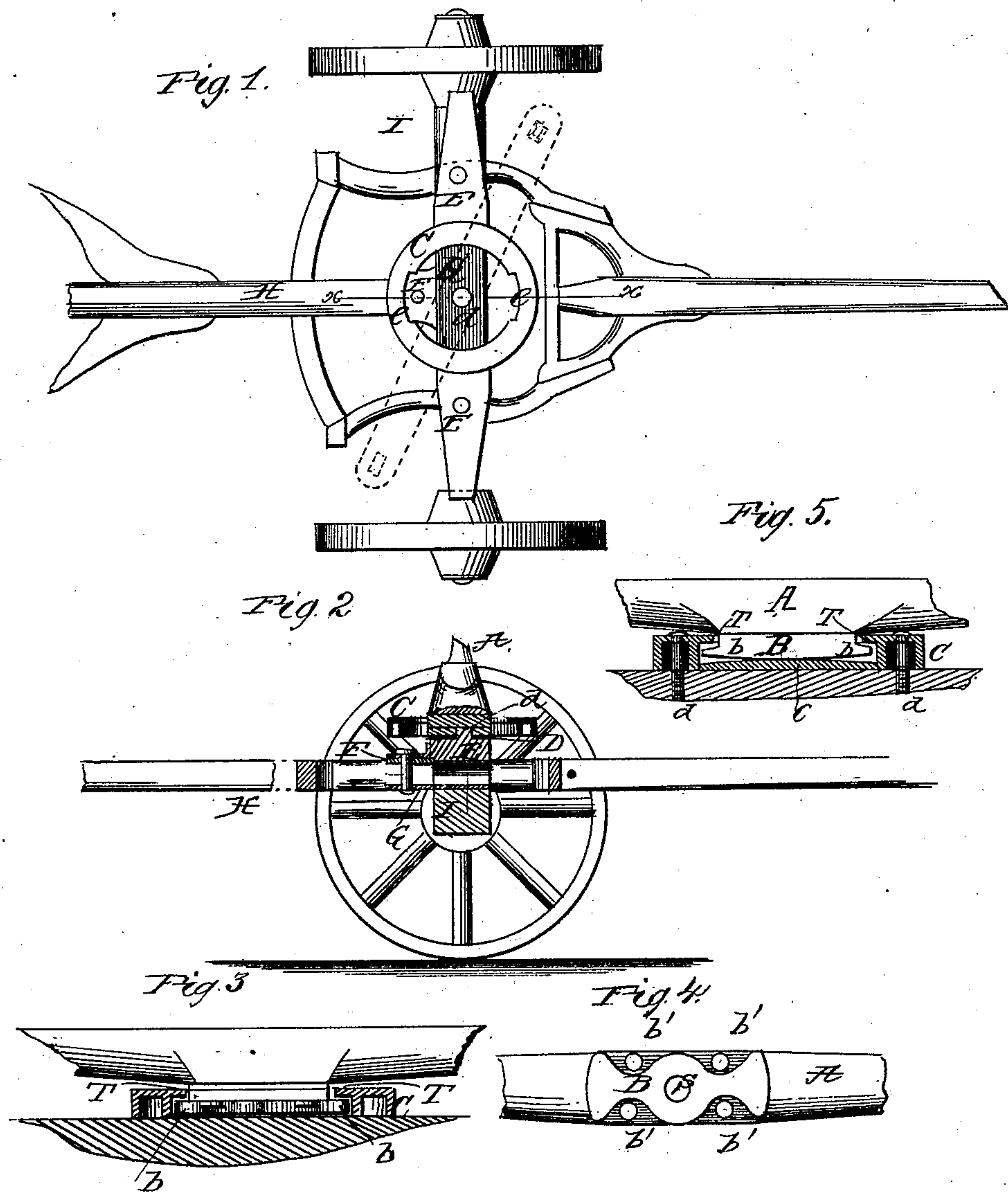


W. R. PORTER.  
Wagon-Coupling.

**No. 199,860.**

**Patented Jan. 29, 1878.**



Witnesses  
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# UNITED STATES PATENT OFFICE.

WILLIAM R. PORTER, OF DOYLESTOWN, OHIO.

## IMPROVEMENT IN WAGON-COUPPLINGS.

Specification forming part of Letters Patent No. **199,860**, dated January 29, 1878; application filed September 7, 1877.

*To all whom it may concern:*

Be it known that I, WILLIAM R. PORTER, of Doylestown, in the county of Wayne and State of Ohio, have invented certain new and useful Improvements in Wagon Couplings and Bolsters; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

In the accompanying drawings, Figure 1 is a top view of part of the running-gear of a farm-wagon with my fifth-wheel thereon and the bolster removed. Fig. 2 is a vertical section of the same. Figs. 3, 4, and 5 are detached views.

The bolster, sand-board, and wooden axle of farm-wagons are most liable to break in the center, at the hole of the king-bolt or coupling-bolts; and the chief object of my invention is to overcome this difficulty and yet allow a rocking motion to the bolster.

My invention consists of a novel construction of fifth-wheel and bolster-plate, allowing a rocking motion; and also in a strengthening-plate upon the axle, in combination with another strengthening-plate on the under side of the sand-board, both plates being provided with holes, for the purpose of coupling and uncoupling the reach without removing the bolster.

On the top of the sand-board E is fastened a plate, D, which is curved on the top so as to give proper play to the bolster as it rocks from side to side. This plate has a central stud, *d*, which engages with a hole in the bolster-plate, yet to be described. This plate D is held in place by means of end bolts, which also fasten the fifth-wheel C and the coupling-plate on the under side of the sand-board. Thus the sand-board is not weakened by a bolt-hole in the center, but is strengthened by a plate on its top and another plate on its under side.

The fifth-wheel C is made of malleable iron, and is cast with a recess to fit projections or flanges at the ends of plate D, and thus give

a strong joint. This fifth-wheel has two strong flanges, T, to bear the strain of the bolster-plate, yet to be described, and also two recesses, *e*, for allowing the ends of the bolster-plate, when the bolster is turned properly, to be inserted or removed at pleasure.

The bolster-plate B is cast with strong lips *b* at the ends. These lips fit loosely under the flanges T of the fifth-wheel, and allow a free rocking motion of the bolster before there is any strain between the bolster-plate and fifth-wheel. This rocking motion is essential in a farm-wagon, and therefore my construction of the fifth-wheel and bolster-plate is very important.

The hole S of the bolster-plate (shown in Fig. 4, which is a bottom view) engages with the stud *d* of plate D, and thus gives a central pivot for the bolster while the severe rocking strain is thrown upon the fifth-wheel, as above explained.

It will be noticed that neither my axle, sand-board, nor bolster has any central hole or bolt to weaken the same.

As already mentioned, the sand-board has a plate, F, on its under side. This plate has a rear projection, with a hole therein for the coupling-pin of the reach H, and on the top of the wooden axle is a corresponding plate, G, which strengthens the center of the axle, where the king-bolt hole usually weakens the same. This plate G also has a hole for the coupling-bolt of the reach. Both of these plates prevent the reach from wearing either the axle or the sand-board, and they allow the reach to be uncoupled without the usual trouble of removing the bolster. They are both cast from the same pattern, and have a flange embedded into the wood of the axle and the sand-board, in order better to hold them in place.

My coupling is not only strong, but it can be made cheaper at first, and is far less expensive, on account of the little repairs required, than others in common use.

Another advantage of my coupling-plates F and G is the long bearing they give to the reach, and thus prevent the hounds from playing up and down and wearing the center of the hounds in striking against the reach.



Having thus described my invention, I claim—

1. The bolster A, provided with rocking plate B, in combination with the wheel C, substantially as described.

2. In combination with the rocking bolster and fifth-wheel, the plate G on the top of the axle, the plate F on the under side of the sand-board, and the reach H coupled to said plates, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WM. R. PORTER.

Witnesses:

A. K. LANE,

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