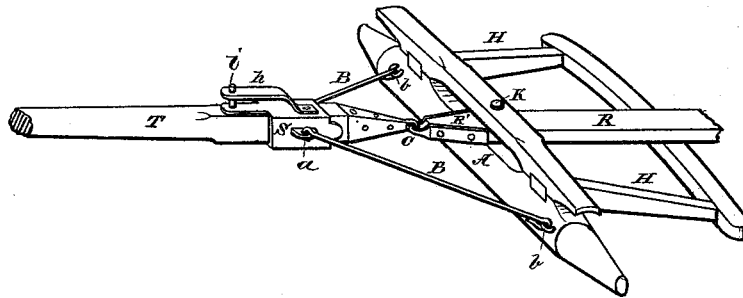


J. M. ORPUT.  
Wagon.

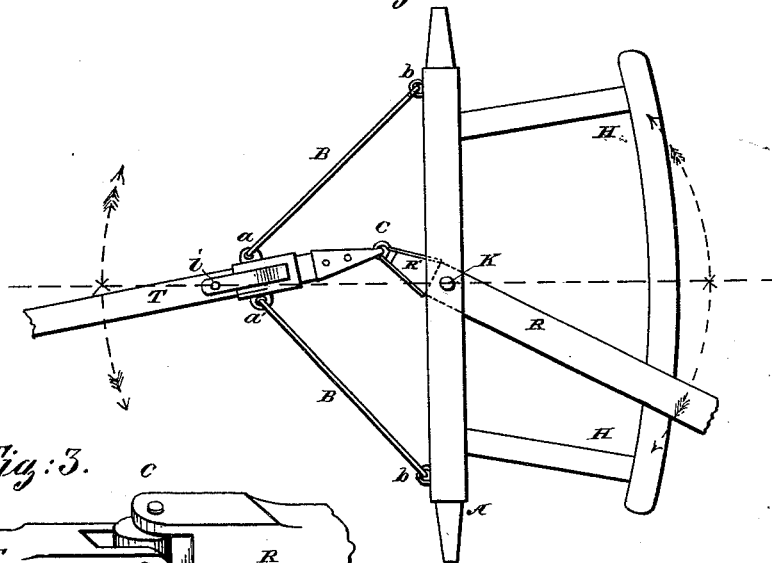
No. 218,828.

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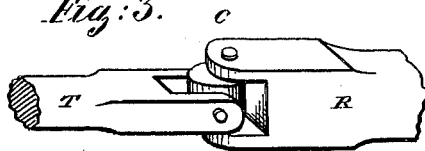
*Fig: 1*



*Fig: 2.*



*Fig: 3.*



WITNESSES  
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# UNITED STATES PATENT OFFICE.

JAMES M. ORPUT, OF MALTA, ILLINOIS.

## IMPROVEMENT IN WAGONS.

Specification forming part of Letters Patent No. **218,828**, dated August 26, 1879; application filed January 27, 1879.

*To all whom it may concern:*

Be it known that I, JAMES M. ORPUT, of the town of Malta, in the county of De Kalb and State of Illinois, have invented certain new and useful Improvements in Wagons; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to a novel mode of attaching a wagon-tongue to the gear, in connection with the device or medium through which the draft is applied, whereby the tongue is relieved of all draft and becomes a guide merely, whereby the efficiency of the tongue as a guide is greatly increased, and whereby the draft is at all times applied to the extremities of the axle, or to either extremity that is at the time being retarded by an obstruction to the adjacent wheel.

My invention consists, first, in locating the fixed fulcrum or rear attachment of the tongue at a point in advance of the forward axle, which point has a permanent relation to the main body of the wagon, for the purpose of shortening the rear arm of the lever formed of the tongue, and thereby lessening the power required to be applied at its free end to control the movements of the axle; and, second, in combining with a tongue so connected a sliding sleeve fitted to receive the tongue, provided with suitable devices for the attachment of the double-tree, and connected by rigid bars or braces to the extremities of the forward axle, for the purpose of giving effectiveness to the tongue-lever so attached, and also for the purpose of applying the draft to the extremities of the axle, and of shifting the draft mainly and directly to either wheel that may be obstructed.

Figure 1 is a perspective view of a portion of a wagon-gear embracing my invention. Fig. 2 is a top view of the same, showing the relative movements of the tongue and forward axle with reference to the remaining portion of the wagon, the direction of which remaining portion is represented by the central reach, R. Fig. 3 shows a preferred form of the universal joint by which the tongue is connected at its stationary or fixed fulcrum.

A in the drawings indicates the forward axle of a wagon, pivoted by the bolt K to the usual reach R. The reach is prolonged to form the forward extension, R', to the extremity of which the tongue T is attached by the universal joint U. S is a sleeve fitted to slide freely upon the squared tongue, provided with the side ears, *a a*, the hammer-strap *h*, and evener-pin *i*.

B B are stiff rods, formed with eyes at both ends, and connecting the sleeve S to the axle A by the ears *a a* and the eyebolts *b b*. The evener being attached by the pin *i* to the sleeve S, which is loose upon the tongue, it is plain that the draft will be communicated through the rods B B directly to the axle at the points *b b*, and it is also plain that when either wheel is obstructed the draft will be wholly or mainly diverted to the rod B, which is connected near the obstructed wheel.

The operation of my improved tongue to give more easy and prompt control over the movements of the axle is made plain by noting that the rear or short arm of the tongue, regarded as a lever, is shorter than in an ordinary wagon, while the long arm remains the same, giving increased advantage or leverage to the power applied to the long arm for the control of the forward axle; or my device may be otherwise regarded as a compound lever substituted in place of a simple bent lever of an ordinary wagon, in which the entire tongue, from its free extremity to the king-bolt, is the long arm, and the axle, from the king-bolt K to the wheel, is the short arm.

That the compound lever so substituted increases the advantage of the power applied at the free end of the tongue is proved by the fact that in my device said end of the tongue moves through a greater arc in producing a given movement of the axle than does the same point in an ordinary or rigidly-mounted tongue. This advantage is secured by flexibly connecting the rear extremity of the tongue at a point having fixed relation to the rear part of the gear or wagon, and located in advance of the king-bolt.

The forward extension, R', of the reach R obviously affords the most convenient means of providing and supporting such a point of attachment; but it may be otherwise provided and sustained—as, for example, from the bolster, which is held by the bed in the permanent

relation required with the rear or main portion of the wagon.

It is necessary in extending the reach for this purpose, as shown, that it be made stronger than usual against lateral strain at K, and that the connections at C be made strong and be firmly secured. The rods or bars B should also be heavy and rigid, as in turning the wagon one bar serves as a strut, and must not bend or buckle.

The sleeve or slide S is preferably of the form shown; but it may consist of a narrow ring loosely fitted to the tongue, and either rigidly or flexibly connected with the rods B. The eveners-pin *i* is preferably located in advance of the connections *a a*, as shown.

In a wagon thus constructed not only may the forward axle be more perfectly and promptly controlled through the tongue, but the tongue itself may, in the same proportion, and for the same reason, be more steadily and more easily held by the neck-yoke or breaststraps. As an incident to the greater sweep of the tongue in turning the wagon, the team and wagon may be turned about in less space

than is required by an ordinary wagon cramped to the same extent.

It would be the equivalent of the device shown and within my invention if the sleeve S be made fast to the tongue and a sliding hinge movement provided at C, and such device is intended to be embraced by my following claim.

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

A wagon-tongue, T, flexibly connected at a point, C, located in advance of the point K, and held in permanent relation to the rear portion of the wagon, or to the reach R, in combination with the slide S and the rods B, substantially as described, and for the purposes set forth.

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

JAMES M. ORPUT.

Witnesses:

ED. LEACH,  
SEWELL E. BUTLER.