R. DUDLEY.

WAGON TONGUE SUPPORT.

No. 189,344. Patented April 10, 1877.

Fig. 1.

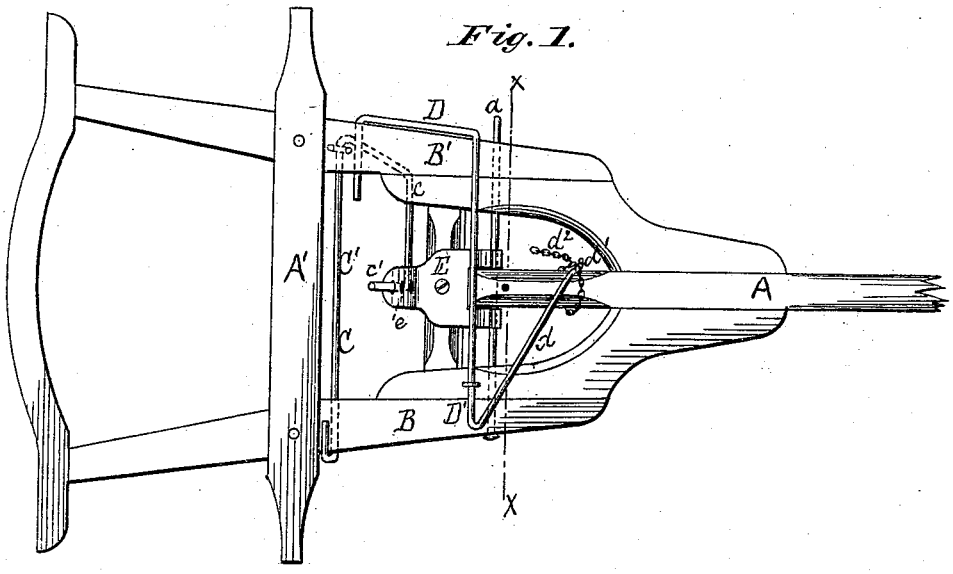


Fig. 2.

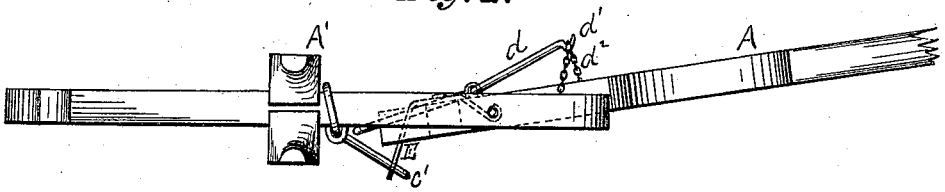
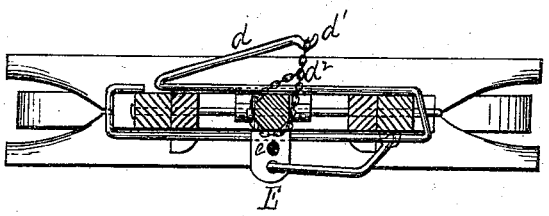


Fig. 3.



Witnesses:
John Dennisy.
John H Jones.

Inventor
Richard Dudley
per Edwin James,
Attorney.

UNITED STATES PATENT OFFICE.

RICHARD DUDLEY, OF ERIE, PENNSYLVANIA.

IMPROVEMENT IN WAGON-TONGUE SUPPORTS.

Specification forming part of Letters Patent No. **189,344**, dated April 10, 1877; application filed March 21, 1877.

To all whom it may concern:

Be it known that I, RICHARD DUDLEY, of the city and county of Erie and State of Pennsylvania, have invented an Improved Wagon-Tongue Support, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, and the letters of reference marked thereon, making part of this specification, in which—

Figure 1 is a top-plan view. Fig. 2 is a side view. Fig. 3 is a cross-section on the line *x x*, Fig. 1.

The nature and object of my invention is to provide, in a wagon-tongue support, torsional springs of such construction that one, being secured to one of the hounds, may be applied to the lower side of the hounds of the wagon near its axle, and in such manner that its working end shall take hold of the extreme rear end of the tongue and draw downwardly, the tongue-bolt acting as a fulcrum for the lever end of the spring, while the other, being attached to the opposite hound, may be applied to the upper side of the hounds, its working end being connected by chain or hook to the tongue, in front of the tongue-bolt, lifting up the tongue, its bolt acting as a fulcrum.

It will be observed that by extending the springs across both hounds the length of the rods give more torsional action than if the springs only extended partly across the distance between the hounds, as is the case with other wagon-tongue supports in which torsional springs are used.

One of the advantages of this arrangement is, that more actual movement is given to the springs without straining their elasticity. Besides, both ends of the torsional rod of the springs being supported, a manifest advantage in their action is gained.

In case of light tongues, or of employing springs constructed of heavier steel, one of the springs may be omitted; still, as they act in opposite directions, and on opposite sides of the tongue-bolt, the same acting as a fulcrum, the use of the two will, in most cases, be advisable.

The construction and operation of my invention are as follows:

A is the wagon-tongue; *a*, its tongue-bolt; B B′, the hounds, and A′ the axle, all constructed in the usual manner. C is the rear torsional spring, one end of whose torsional rod, C′, is attached to the hound B. This rod C′ passes under both of the hounds near the axle A′, and in front of the same.

The lateral lever-arm *c* of the spring C terminates in a hook, *c′*, which passes through a hole, *e*, in a bent plate, E, secured to the rear of the tongue A, and also secured to the tongue-bolt *a*. This arrangement causes the spring C to have a constant tendency to raise the tongue by depressing its rear end, the fulcrum of the lever being the tongue-bolt *a*. D is the front torsional spring, one end of whose torsional rod, D′, is secured to the hound B′. This rod D′ passes over both hounds immediately in rear of the tongue-bolt *a*. The lateral lever-arm *d* of the spring D is attached to the tongue A, in front of its bolt *a*, by means of a chain, d^2, its end terminating in a hook, d^1. Instead of the chain d^2 being used, a hook, bolted or otherwise secured to the tongue, could be employed. By this arrangement it will be seen that this spring D has a constant tendency to raise the tongue, the tongue-bolt *a* acting as a fulcrum.

I am aware that torsional springs have been employed in wagon-tongue supports before, and therefore I do not claim their use, in this connection, broadly; but

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a wagon-tongue support, a torsional spring whose rod passes clear across both hounds, and is connected to the tongue, substantially as described.

2. The torsional spring C, passing under both hounds, and connected to the rear of the tongue, substantially as described.

3. The torsional spring D, passing over both hounds, and connected to the tongue by means of the chain d^2, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of February, 1877.

RICHARD DUDLEY.

Witnesses:

B. HERSHEY,

J. F. WALTHER.