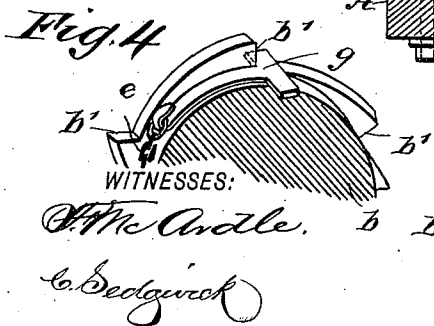
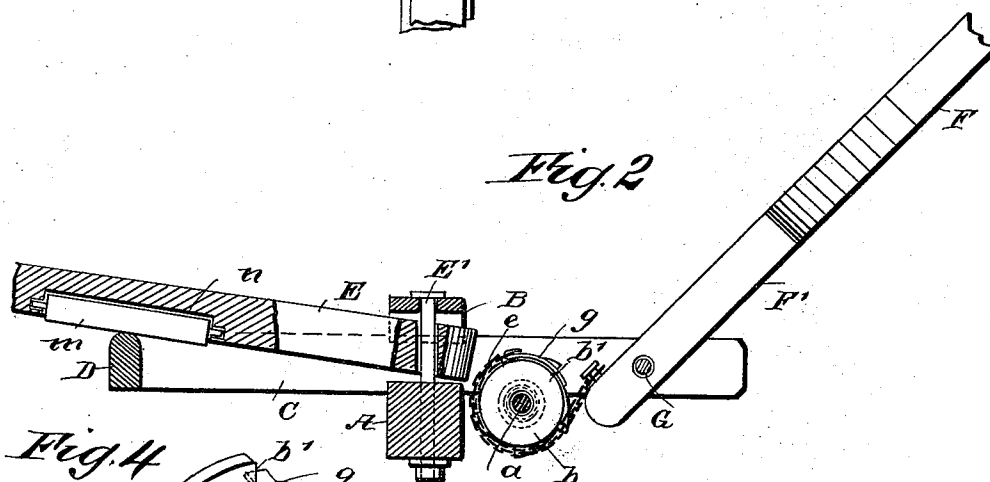
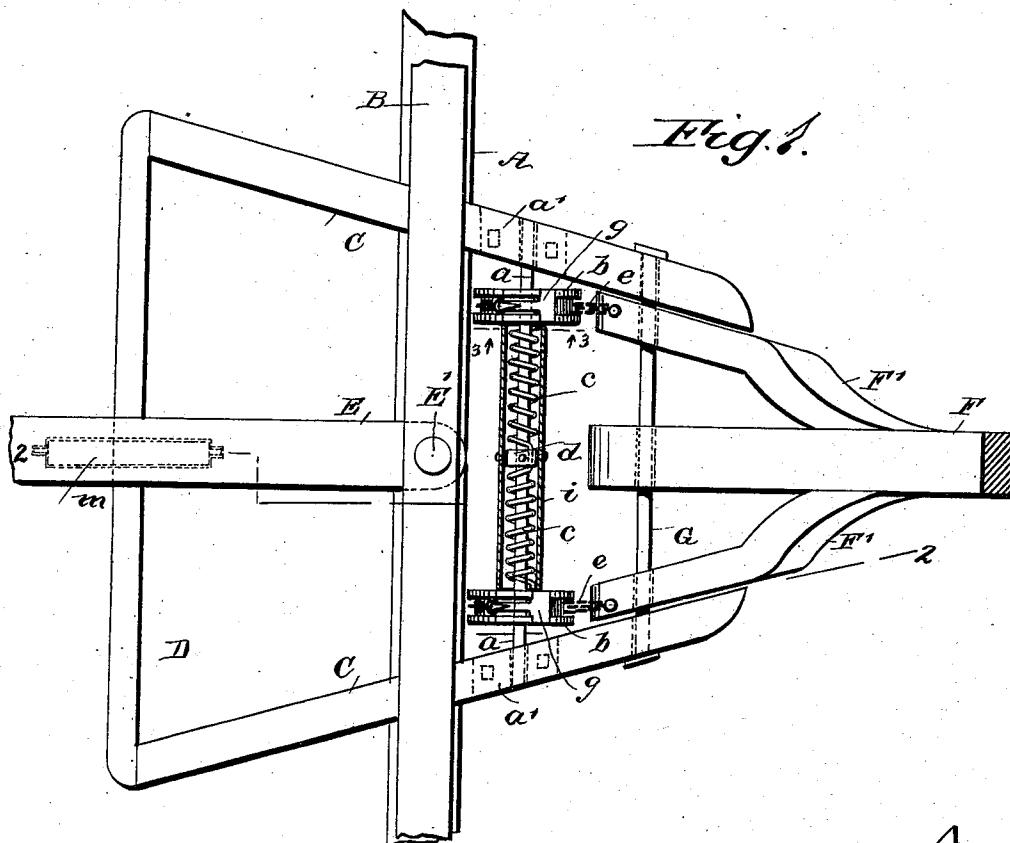


(No Model.)

J. F. TINER.
WAGON TONGUE SUPPORT.

No. 510,728.

Patented Dec. 12, 1893.



WITNESSES:
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WAGON-TONGUE SUPPORT.

SPECIFICATION forming part of Letters Patent No. 510,728, dated December 12, 1893.

Application filed March 8, 1893. Serial No. 465,102. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. TINER, of Sutherland Springs, in the county of Wilson and State of Texas, have invented new and useful Improvements in Wagons, of which the following is a full, clear, and exact description.

This invention relates to improvements in the running gear of draft wagons, and has for its objects to provide a novel, simple device for the support of the wagon tongue, and an improved means for obviating friction between the coupling pole of the vehicle, and the slide bar on the front hounds of the wagon running gear.

To these ends my invention consists in the construction and combination of parts, as is hereinafter described and claimed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improvements in position on a wagon running gear shown in part. Fig. 2 is a side view, partly in section on the broken line 2—2 in Fig. 1. Fig. 3 is a transverse sectional view of parts of the improvement on the line 3—3 in Fig. 1; and Fig. 4 is an enlarged detached partly sectional side view of an important feature of the improvement, shown only in part.

Figs. 1 and 2 show the application of the improvements to the forward portion of heavy wagon running gears, of which A, represents the front axle broken away at each end; B the bolster also broken away at its ends; C C the front hounds that pass between the axle and bolster as usual; D the transverse slide bar which connects the rear ends of the hounds C; E the front portion of the coupling pole pivoted at E' between the axle and bolster and below which the slide bar D is located, and in service as ordinarily constructed has a sliding contact; and F is the draft pole or tongue of the wagon, shown broken away, its bracket arms F', that are laterally and rearwardly extended from opposite sides of the draft pole or tongue, having a loose contact with the inner sides of the forward

ends of the hounds C, and pivotally secured thereto by the transverse coupling bolt G.

The parts of the running gear that have been briefly mentioned, are of the ordinary form for heavy draft wagons and are here presented to illustrate the construction and application of the improvements, which will now be described.

The novel device for the support of the heavy draft pole or tongue F, consists of a shaft *a*, clamped upon the lower face of the hounds C, by boxes *a'*, at a proper distance in advance of the front axle A, and parallel therewith. On the ends of the shaft *a*, near the hounds C, and directly in rear of the terminals of the bracket arms F', of the draft pole F, two similar ratchet wheels *b*, are loosely mounted, each consisting of a metallic disk having a series of evenly spaced teeth formed in two series on its periphery; these duplicate sets of teeth which are separated by a circumferential groove of a suitable width and depth, are oppositely arranged, so that the radial shoulders *b'*, on each opposite pair of teeth, will transversely align and thus adapt such pairs of the teeth to properly engage with another part that will be presently described.

The ratchet wheels *b*, are held spaced apart by the coiled springs *c*, that are of an equal length, and encircle the shaft *a*, bearing at their ends on a collar *d*, secured on the shaft at its longitudinal center, to which collar the adjacent ends of the springs are attached and the other ends of the springs which are in contact with the wheels *b*, are thereto affixed. The direction given to the coiled springs in their formation and arrangement on the shaft *a*, adapts them to coil more closely when the ratchet wheels *b* are rotatably moved toward the axle A.

Each ratchet wheel *b*, is engaged by a chain *e* which chains are of an equal length and similar formation. On one end of each chain a metallic T-shaped latch plate *g*, is secured by a hooked engagement of the ends of the chain and plate as shown in Fig. 4, the lateral projections on each plate being interlocked with two opposite shoulders *b'*, of

paired ratchet teeth when the parts of the tongue support are assembled and adjusted for service.

The chains *e*, are wrapped on the wheels *b*, in a direction toward the axle *A*, and thence around under and up forwardly, occupying the grooves in said wheels and are then secured upon the rear ends of the bracket arms *F'*, of the draft pole *F*.

It is essential for the effective operation of the tongue supporting device, that the length of the chains *e*, be so proportioned that the tongue *F*, will be maintained in an upwardly inclined position, when the parts are correctly adjusted, the weight of the tongue being thrown upon the torsion springs *c*, by their connection with the wheels *b*, collar *d*, and the fixture of the latter upon the shaft *a*.

If the strength of the springs *c*, should become weakened by continued strain, they should be coiled closer on the shaft *a*, to increase their tension, which may be readily effected by first elevating the draft pole *F*, to slacken the chains *e*, and then shifting the latch plates *g*, so as to take up the slackness, hooking the T-ends of said plates over other tooth shoulders *b'*, that are in advance of those previously engaged, which arrangement of parts, will adapt the springs *c*, to again sustain the draft pole *F*, at a proper angle of elevation.

A metal casing *i*, is preferably used in connection with the tongue support, for the protection of the springs *c*, which case is slid upon and removably secured to the collar *d*, whereby it is held in proper position with its ends loosely engaging the wheels *b*, as shown in Fig. 1.

The other feature of improvement provided by this invention consists in the rotatable support of a roller *m*, in a recess *n*, longitudinally produced in the body of the coupling pole *E*, from its lower side upwardly and at the transverse center of the pole. A proper length is given to the roller *m*, and its diame-

ter is so proportioned for service, that its peripheral surface will project slightly below the general surface of the coupling pole when the roller has its journal ends loosely engaged with socket holes oppositely produced in the end walls of the recess *n*.

It will be seen, that the provision of the roller *m*, and rounding of the upper surface of the slide bar *D*, as shown in Fig. 2, will adapt the latter to move longitudinally on the roller, and thus avoid wear and excessive friction usual to the contact of the slide bar with the coupling pole of heavy wagon running gears.

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

1. In a wagon tongue support, the combination with a transverse shaft secured to the hounds of the wagon in advance of the front axle, of a torsion spring on the shaft, loose ratchet wheels on the ends of the shaft, and an adjustable chain connection on each wheel, adjustably attached by one end to the wheel rim and by the other end to the tongue, substantially as described.

2. In a wagon tongue support, the combination with the front hounds of the wagon, and the tongue having its bracket arms pivoted to the hounds, of a transverse shaft secured by its ends upon the lower sides of the hounds rearward of the arms, a central fixed collar on the shaft, torsion springs on the shaft at each side of the collar, centrally grooved ratchet wheels on the ends of the shaft, latch plates for said wheels, adapted to hook on opposite pairs of teeth thereon, a chain fast on each latch plate, lying in the groove of the wheel and connected to the bracket arms, and a casing for the springs, substantially as described.

JOHN F. TINER.

Witnesses:

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A. D. EVANS.