L. SCHRUBEN.

Tongue-Support.

No. 163,264. Patented May 11, 1875.

Fig 1

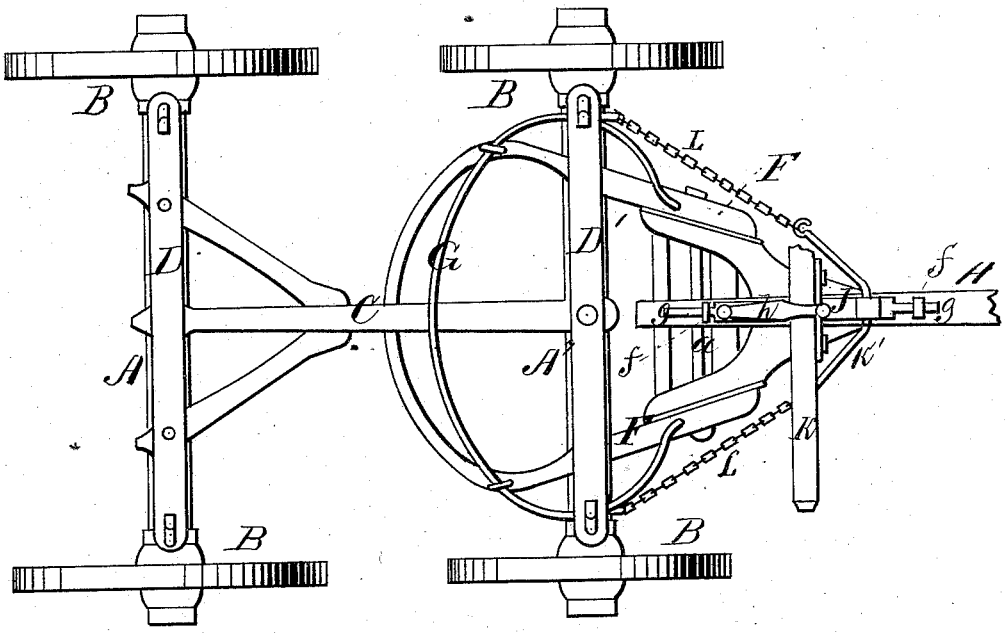



Fig 2

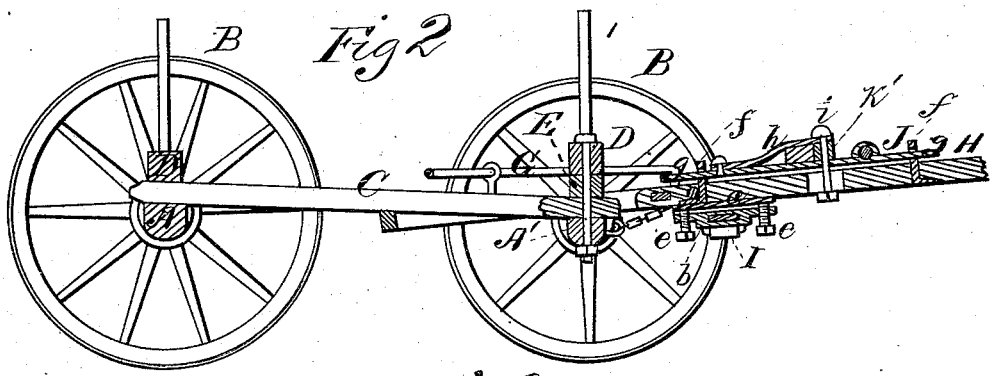
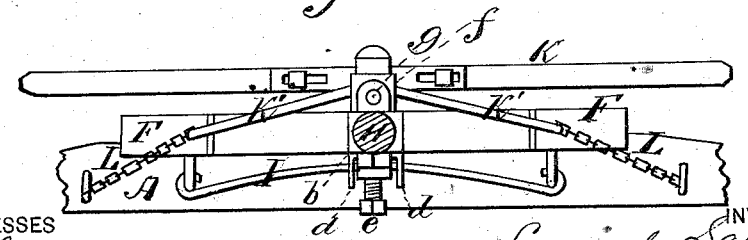



Fig 3




WITNESSES

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# UNITED STATES PATENT OFFICE.

LEONARD SCHRUBEN, OF LA FAYETTE, INDIANA.

## IMPROVEMENT IN TONGUE-SUPPORTS.

Specification forming part of Letters Patent No. **163,264**, dated May 11, 1875; application filed April 3, 1875.

*To all whom it may concern:*

Be it known that I, LEONARD SCHRUBEN, of La Fayette, in the county of Tippecanoe and State of Indiana, have invented a new and valuable Improvement in Wagon-Gears; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of my wagon-gear, and Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a detail view.

This invention has relation to improvements in wagon attachments. The object of the invention is to provide a means whereby the weight of the tongue and neck-yoke in double-harness will be taken off the necks of the animals, and whereby the team will be protected from the sudden jar consequent upon the commencement of the strain. To this end the nature of the invention consists in a spring suspended across the front opening of the hounds, upon which spring is applied an adjustable support, upon which the tongue is sustained, whereby the weight of the same is removed from the animals' necks, and a means is provided for raising or lowering the said tongue to suit the height of various animals. It also consists in an endwise-sliding double-tree clip, arranged in guides upon the said tongue, and connected, by a suitable yoke and chains, to the axle of a wagon, whereby the strain, when at its height, is removed from said tongue and transferred to the axle, thereby relieving the hounds of all undue strain, and allowing the draft to be applied gradually by the animals, and consequently preventing them from being strained and jerked about in their efforts to draw the load, as will be hereinafter more fully explained and claimed.

In the annexed drawings, A A′ represent the axles of a wagon, supported upon transporting-wheels B, and connected, in the usual well-known manner, by a reach, C. D D′ are, respectively, the rear and front bolsters, and E is the front sand-bar, bolster D′ and sand-bar E being attached to the front axle—the former by means of a king-bolt, and the latter by the usual bolts passing vertically through the said bar and axle, and secured in place by means of suitable nuts. F F′ represent the hounds, and G′ the guide-rails of rotating bolster D′. Between the outer ends of hounds F F′ is pivoted the furcated rear end of tongue H by means of a strong bolt, *a*, passing transversely through the hounds and the tongue, which latter is thus allowed to have vertical vibration with relation to the former. I represents a steel spring of suitable strength, which is arranged and secured, with its convexity upward, below and across the open ends of hounds F F′, upon which spring is applied, in a position transverse to its length, a metallic supporting-block, *b*. The upper surface of this block is received into and rests against a suitable metallic plate, *c*, rigidly secured to the under side of tongue H, and it is prevented from lateral displacement by means of lugs *d*, projecting downward from plate *c*, and inclosing supporting-block *b*. Spring I is in front of bolt *a*, and will consequently hold the tongue in a horizontal position, thus relieving the necks of the draft-animals of the weight of the said tongue and of the yoke; but as horses and draft-animals generally differ materially in height, it becomes necessary to raise or lower the outer end of the tongue to suit. This is done in the following manner, to wit: Set-screws *e* are passed through suitable threaded perforations in block *b*, one being in front and the other in rear of spring I, as shown in figure. By setting up screw *e* in front of spring I, the end of the shaft will be raised in proportion to the degree of action imparted to the said screw; and if the other screw be set up when the desired adjustment of the tongue has been obtained, the latter will be allowed to yield to vertical or lateral motion, but softly and gently, only preventing it from jerking about and fretting the horses. J indicates a slide-plate applied upon the upper surface of tongue H, and guided in its endwise movement, in staples *f*, through which are passed prongs *g* on the ends of the said plate, and *k* represents a double-tree secured thereon by means of a clip-iron, *h*, and a bolt,

*i*, passing through registering perforations in the said clip-iron, in a double-tree iron, *j*, and through a longitudinal slot-tongue, H. Plate J is connected with the front axle-tree by means of a spring-yoke, K′, and chains L, as shown in Fig. 1, so that when the draft animals are started to move the wagon, they will gradually and easily receive the full weight of the load, and will therefore be protected from injury consequent upon being required to overcome the full weight thereof at the start, owing to the yielding of spring-yoke K′. The advantage of this construction will be readily appreciated by wagoners and those using wagons, when it is known that most of the injuries to animals' legs are caused in the effort of overcoming the dead-weight of a load at the start.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a wagon, the combination of a sliding clip-plate, J, with a wagon-tongue and double-tree, substantially as set forth.

2. The combination of a sliding clip, J, double-tree K, spring-yoke K′, and chains L, substantially as and for the purpose set forth.

3. The combination, with a vibrating tongue, H, and the spring-supported block *b*, of the set-screws *e*, substantially as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

LEONARD SCHRUBEN.

Witnesses:

MICHAEL SCHRUBEN,

R. M. MEGNETTS.