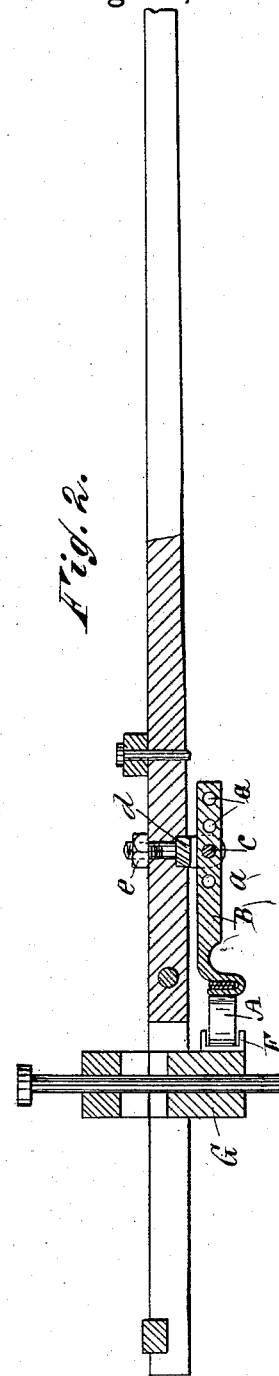


E. MOORE.
TONGUE SUPPORT.

Patented Aug. 22, 1882.



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ELA MOORE, OF WALLA WALLA, WASHINGTON TERRITORY.

TONGUE-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 263,194, dated August 22, 1882.

Application filed January 27, 1882. (No model.)

To all whom it may concern:

Be it known that I, ELA MOORE, of Walla Walla, in the county of Walla Walla and Territory of Washington, have invented a new and useful Improvement in Wagon-Tongue Supports, of which the following is a full, clear, and exact description.

The object of my invention is to provide a simple and inexpensive spring-support for wagon-tongues which may be adjusted to adapt the tongue for use with two horses or to support the rigging when three, four, or more horses are used, the device being so arranged that it will not in any manner interfere with the running-gear of the wagon nor project below the axle.

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 under side of a wagon-tongue and axle having my improved spring-support attached. Fig. 2 is a section of the same, taken on the line *xx* of Fig. 1; and Fig. 3 is a similar view, showing a modification.

The spring *A* is a curved flat metal spring like one-half of an ordinary elliptic spring, and may be made up of as many leaves as may be necessary to secure the required strength. To the center of the length of the spring is secured the spring-bar *B*, which extends forward under the tongue. This spring-bar is formed with the series of holes *aa*, and is held in place under the tongue in the split-headed bolt *d*, which is secured to the tongue by the nut *e*, and by means of this series of holes *a* in the spring-bar and the pin *c* of the divided bolt the tension of the spring may be increased or diminished, as desired. The ends of the spring are held in place against the face of the axle *G* by means of the flanged plates *F F*, which are secured to the axle in the proper place. These plates also serve the purpose of protecting the axle from the wear of the action of the spring.

If the wagon is to be used with only two

horses, the spring-bar will be set so as just to support the tongue in a horizontal position; but if four horses are to be used the spring-bar should be set back against the spring, so that its tension will be sufficient to support the rigging attached to the end of the tongue, and thus relieve the wheel-horses of the weight of the tongue and said rigging.

Instead of using the spring-bar shown in Figs. 1 and 2, formed with a hook for holding the springs, the springs may be provided with the plate *f*, having the perforated lugs *ee*, to be used with the spring-bar shown in Fig. 3, which is bent up at its forward end, and the upturned portion perforated for the passage of the pin *i*. This upturned portion may have a series of holes, as shown, so that that end of the bar may be adjusted vertically, if desired, for varying the tension and action of the spring.

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

1. In a tongue-support, the combination, with the front axle and tongue, of a spring having its ends resting against the axle, and a bar secured to the center of the length of the said spring and adjustably connected to the tongue, substantially as and for the purpose set forth.

2. In a tongue-support, the combination, with the front axle and tongue, of the spring *A*, having its ends resting against the axle, the bar *B*, secured to the said spring and provided at its outer end with perforations *a*, and the split-headed bolt *d*, substantially as and for the purpose set forth.

3. In a tongue-support, the combination, with the spring *A*, the bar *B*, and the bolt *d*, secured to the tongue, of the flanged plates *F*, secured to the axle, substantially as herein shown and described, whereby the ends of the spring are held in place and the axle protected from wear, as set forth.

ELA MOORE.

Witnesses:

C. T. THOMPSON,
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