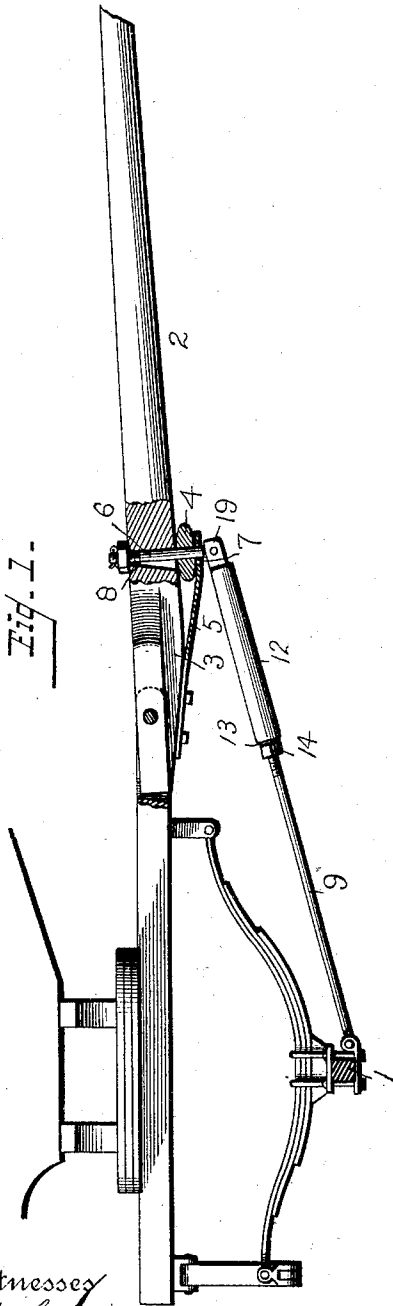


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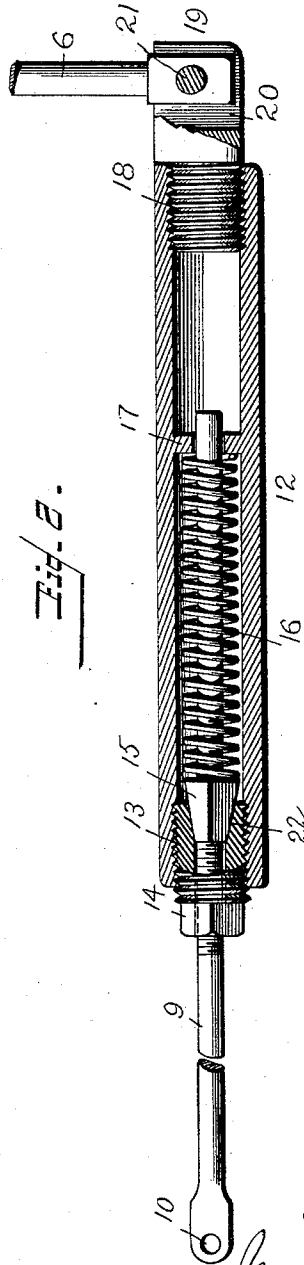
J. M. BARR.
TONGUE SUPPORT.

No. 469,531.

Patented Feb. 23, 1892.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES M. BARR, OF DENT'S RUN, PENNSYLVANIA.

TONGUE-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 469,531, dated February 23, 1892.

Application filed November 16, 1891. Serial No. 412,007. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. BARR, a citizen of the United States, residing at Dent's Run, in the county of Elk and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Tongue-Supports; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of devices employed to support the tongues of wagons and other wheeled vehicles.

It is the purpose of said invention to provide a simple device of this kind so constructed and arranged relatively to the tongue and doubletree or evenner that it will support the tongue at a normal height and remove its weight from the neck-yoke when the team is not in motion or when there is no draft strain exerted, the parts being capable of an easy adjustment to adapt the supporting device to tongues of different weight.

It is a further purpose of my invention to so arrange the doubletree or evenner with relation to the tongue that the draft of the team shall sustain the latter and remove its weight from the neck-yoke, it being a further object to so connect the tongue with the hammer-strap and hammer-bolt that it shall be permitted to rise to a limited degree without disturbing the position of the evenner and without affecting the draft strain or the action of the tongue-support.

It is my purpose, finally, to provide a simple construction and combination of parts whereby the tongue may, if necessary, be raised above its normal position and above the position to which it is raised by the draft of the team or by the action of the supporting device without moving the evenner or doubletree.

My invention consists to these ends in the several novel features of construction and new combinations of parts hereinafter fully described, and then more particularly pointed out and defined in the claims which conclude this specification.

To enable others skilled in the art to which my invention pertains to make, construct, and use the same, I will describe said invention in detail, reference being had for such purpose to the accompanying drawings, in which—

Figure 1 is a vertical section taken substantially in the same plane with the axis of the tongue of a wheeled vehicle, the forward axle of the latter being shown. Fig. 2 is a detail view showing upon a somewhat larger scale the devices for adjusting the spring-tension of the tongue-support.

In the said drawings the reference-numeral 1 indicates the forward axle of a wheeled vehicle of any usual construction, and the numeral 2 denotes the tongue, which is connected to the hounds in substantially the well-known way. The tongue shown differs from those in common use in being provided upon its lower face with a rib or longitudinal portion 3, by which it is thickened at its rearward end throughout that portion to which the doubletree or evenner is attached, for a purpose explained hereinafter.

The reference - numeral 4 indicates the doubletree or evenner, which is of any preferred form. Instead of being arranged above the tongue it is placed beneath it, the rib 3 resting upon its middle part. The hammer-strap 5 is bolted to the rearward part and lower face of the tongue, which is preferably beveled for this purpose, and its end extends forward to lie beneath the doubletree, which is secured by the hammer-bolt 6, the lower end of which lies in an elongated opening or slot 7 in the hammer-strap, the forward end of said slot being located at such a point that when the tongue is in a normal position the lower end of the hammer-bolt will lie in the forward end of the slot. The aperture in the tongue 2, which receives the hammer-bolt, is elongated rearwardly at its lower end, the elongated opening 8 thus formed being constantly diminished in length toward the top of the tongue, where the elongation disappears, this construction permitting the lower end of the hammer-bolt 6 to swing toward the rear, but preventing any longitudinal or lateral movement of the upper end. By the construction already mentioned it will be seen that when the tongue is in its normal

position the hammer-bolt 6 will occupy the position in its aperture in the tongue (substantially shown in Fig. 1 of the drawings) with its lower end, which drops below the tongue, lying in the extreme forward end of the slot 7 in the hammer-strap. The doubletree or evenner 4 being arranged beneath the tongue instead of above it, the draft upon the former will raise the tongue, the hammer-bolt, upon which the strain is exerted, having practically the function of a lever of the second order, its upper end having a fulcrum upon the rearward edge of the bolt-aperture in the tongue, and its power being exerted upon the forward part of the wall of said aperture at the lever end of the latter. The strain upon the doubletree or evenner cannot raise the tongue beyond the height at which it lies when the lower end of the hammer-bolt 6 is arrested by the forward extremity of the slot 7 in the hammer-strap. Nevertheless the tongue may be lifted, if necessary, to a higher point by raising its forward end, since the triangular slot 8 will permit its upward movement without disturbing the hammer-bolt or the doubletree.

To the central portion of the axle 1, either upon its lower face or at any other suitable point, is secured the end of a rod or bar 9, having an eye 10 for its convenient attachment. This rod, which is of iron or other suitable metal, extends forward, passing beneath the hammer-strap and enters a tube or sleeve 12, the rearward end of which is provided with a female thread and receives an externally-threaded plug 13, having an angular extremity 14 to receive a wrench. The rod or bar 10 passes loosely through this plug and extends usually more than half-way through the tube. That portion of said rod lying forward of the plug 13 is provided with an extended thread, and upon the threaded part is placed a nut 15 of square or angular form and adapted to enter a correspondingly-shaped seat 22 in the forward end of the plug 13. The outer or front face of the nut 15 is preferably flat and bears against the end of a strong spiral spring 16, coiled within the tube or sleeve 12 and around the rod or bar 9, which passes entirely through said spring and through a septum or partition 17, rigid within said tube and adapted to receive the forward thrust of the end of the spiral spring 16. In the forward extremity of the tube 12 is screwed a plug 18, provided upon its outer end with a bracket 19, having a central slot 20 cut from its end toward the end of the tube, and of such width as to readily receive the lower end of the hammer-bolt, which is preferably flattened to enter said slot, in which it is pivotally secured by a bolt 21, which passes through openings in the walls of the slot 20 and through a similar opening in the end of the hammer-bolt. The thrust of the spring 16 thereon may be regulated or varied by adjusting the position of the nut 15 upon the interior threaded portion of the rod 9. The

tension of the spring 16 is regulated by turning the plug 13, which carries with it the nut 15 and causes the same to increase or lessen the tension of the spring as it may be adjusted one way or another. This avoids the necessity of moving the plug or detaching the parts to get access to the nut and allow the tension of the spring to be regulated without disturbing the position of the tongue. If it is desired to change the position of the tongue, the rod 9 will be detached from the axle and turned so as to adjust it into or out of the tube, and thus regulate its length so as to raise or lower the tongue, as may be desirable or necessary. If the tongue of the vehicle is light and a greater adjustment is desired than is permitted by turning the plug 13, the spring-tension may be decreased by removing the plug 13 and exposing the angular interior nut 15, which is turned upon the threaded portion of the rod 9 and moved toward the rear end of the tube.

It is evident that the supporting device described can only raise and maintain the tongue at the fixed point determined by the position of the forward extremity of the slot 7 in the hammer-strap in relation to the position or angle of the forward portion of the aperture in the tongue receiving the hammer-bolt. The tongue will thus be sustained at the same point when draft strain is applied to the doubletree or when the team is at rest or removed from the vehicle.

The advantage of the construction described is apparent. In many of the devices used before my invention for the purpose springs having sufficient tension to support the tongue when the draft-animals were removed would yield to the downward pressure upon the tongue produced by the strain upon the doubletree arranged over the tongue. On the other hand a spring strong enough to resist the downward pressure produced by the draft was much too powerful when no strain was applied to the doubletree. Moreover, it has been found in use that many of the sustaining-springs used before my invention wear the reach of the wagon badly at the point where the hounds come in contact therewith, besides injuring the hounds themselves in a similar manner. All these objections are wholly avoided by my invention, which is simple, of comparatively inexpensive construction, capable of being applied to vehicles of any construction and size, and of a quick and easy adjustment.

Having described my invention and set forth its merits, what I claim is—

1. The combination, with the tongue, of the evenner or tree applied to the underside thereof, the oscillating bolt passing through the tongue and connecting the tree thereto, a tube having a plug secured in one end thereof and said bolt secured thereto, a rod entering said tube and connected to the wagon, a spring within the tube, an adjustable plug secured to said tube at the end next to the wagon-

body, and a nut bearing against said spring and acted on by said adjustable plug to move the same to regulate the pressure of said spring, substantially as and for the purposes set forth.

2. The combination, with the tongue, of the evener or tree applied to the under side thereof, the oscillating bolt passing through the tongue and connecting the tree thereto, a tube having said bolt connected to a part thereof, a rod entering said tube and connected to the wagon, a spring in the tube for acting thereon, and an adjustable plug closing the end of said tube and serving to increase or lessen the tension of said spring, substantially as and for the purposes set forth.

3. The combination, with the tongue, of the evener or tree applied to the under side thereof, the oscillating bolt passing through the tongue and connecting the tree thereto, a tube having said bolt connected to a part thereof, a rod entering said tube and connected to the wagon, a spring in the tube for acting there-

on, a plug entering said tube and encircling said rod, and a nut on said rod to act on said spring, said nut entering and engaging said plug, so as to be turned by adjustment of the plug, substantially as and for the purposes set forth.

4. A tongue-support for wheeled vehicles, consisting of a rod adapted to be connected to the wagon, a spring coiled on said rod, a bearing for one end of said spring adjustable on said rod, a tube entered by the rod and enclosing the spring, a rigid bearing in said tube for the other end of the spring to bear against, and plugs closing the ends of the tube, one of which plugs is adapted to be connected to the wagon - tongue, substantially as and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES M. BARR.

Witnesses:

ABARM STRONG,
H. B. ESTERLINE.