

(No Model.)

2 Sheets—Sheet 1.

M CONRAD.

WAGON TONGUE SUPPORT.

No. 266,431.

Patented Oct. 24, 1882.

Fig. 1.

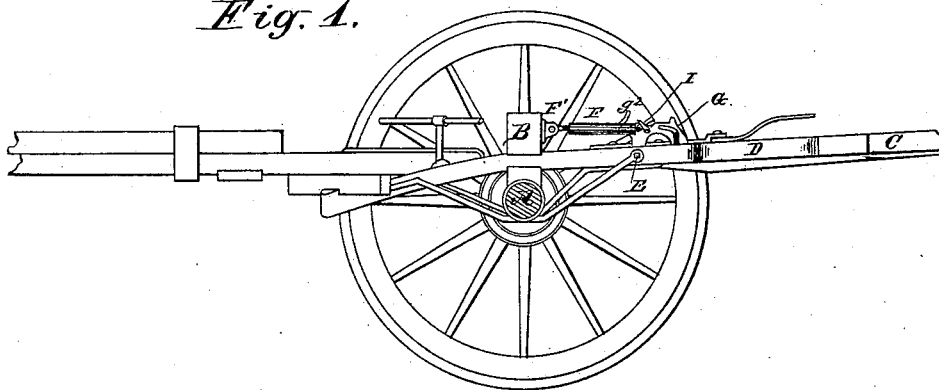
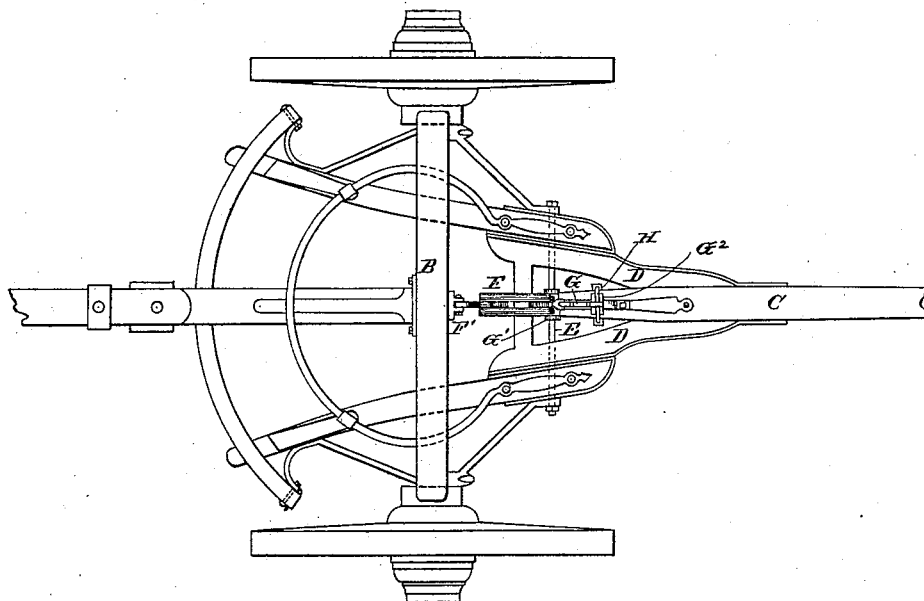


Fig. 2.



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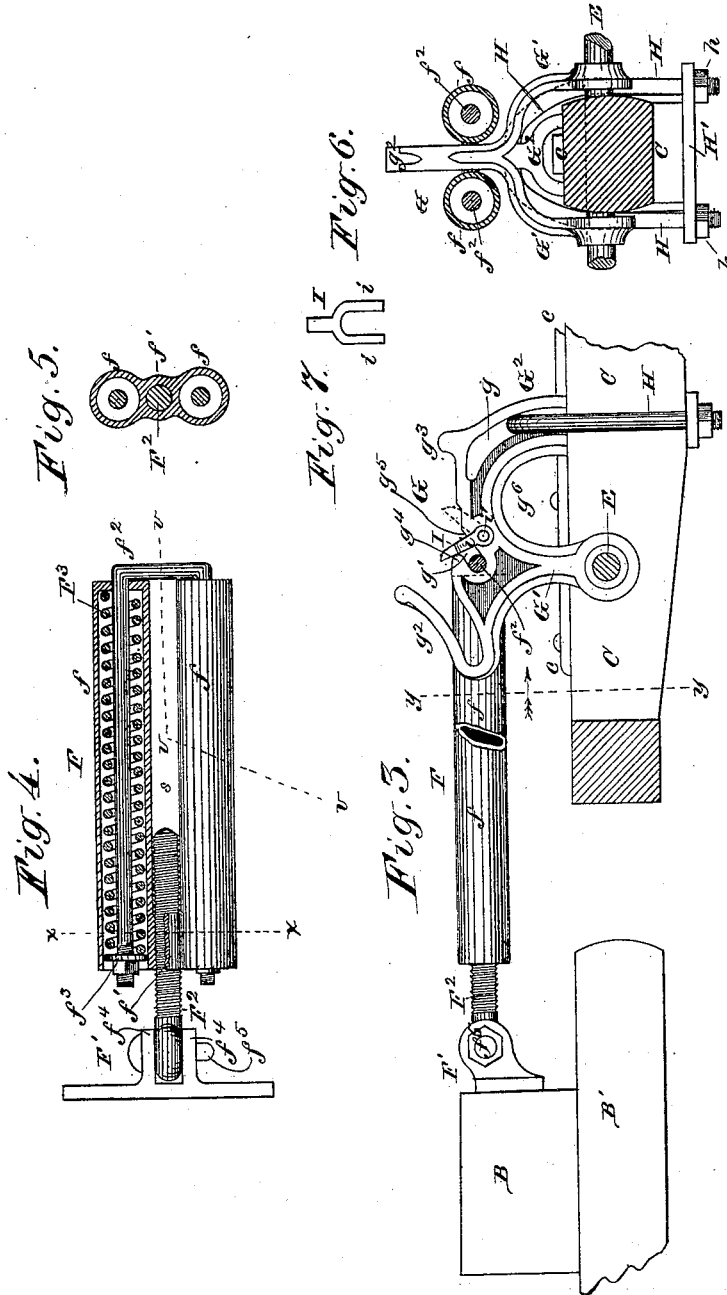
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UNITED STATES PATENT OFFICE.

MARTIN CONRAD, OF CHICAGO, ILLINOIS.

WAGON-TONGUE SUPPORT.

SPECIFICATION forming part of Letters Patent No. 266,431, dated October 24, 1882.

Application filed September 8, 1882. (No model.)

To all whom it may concern:

Be it known that I, MARTIN CONRAD, of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Wagon-Tongue Supports; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in the tongue-support for wagons described in Letters Patent of the United States No. 248,026, granted to me October 11, 1881, and has reference to the arrangement of the principal parts with reference to the sand-board and tongue, to the mode of attaching the hooked or notched member to the tongue, and to features of construction in both members, whereby the device may be more cheaply constructed and applied and its range of movement and mode of action sensibly improved.

In the drawings, Figure 1 is a side elevation of the forward gear of a wagon having my improved tongue-support applied thereto, the near wheel being removed. Fig. 2 is a top view of the same. Fig. 3 is an enlarged side elevation of the tongue-support, together with the parts of the gear to which the same is immediately applied, a portion of one of the spring-tubes being broken away in the indirect line *xx* of Fig. 4, to more perfectly illustrate the form of the hooked casting applied to the tongue. Fig. 4 is a top view of the adjustable spring-link detached, one of the barrels containing a spring being shown in horizontal central section. Fig. 5 is a section taken through *xx* of Fig. 4. Fig. 6 is a vertical section taken through the line *yy* of Fig. 3, looking forward. Fig. 7 is an elevation of the trip which is attached to the hooked casting, and by which the link is carried over one of the hooks thereof.

In my said former patent a link is pivotally secured to the front face of the sand-board, and the hook which engages said link and which is attached to the rear end of the tongue is provided with a spring housed in the chamber of the casting that is fixedly secured to the tongue. In order to provide for such housing in the former construction that member of the

device which is attached to the tongue is made objectionably large or long, and to avoid this a spring is employed that is shorter than is well suited to give a desirable scope of movement to the tongue. In the present form of the support the spring is applied in duplex form to the link, in which position it may be of greater length, and the hooked casting is thereby materially shortened and simplified in its construction. Said casting is also constructed to be held to the tongue in part by the queen-bolt, whereby its position is easily determinable by an unskilled person having occasion to attach the support to a wagon. Other modifications that are advantageous will be more fully explained in the following description.

A is the front axle, B is the sand-board, C is the tongue, D D are the tongue-hounds, and E is the queen-bolt, of a lumber-wagon. F is the linked member, and G the hooked member, of the tongue-support, applied respectively to the sand-board B and tongue C.

The link proper consists of the separated parallel cast barrels *ff*, rigidly joined at their rear ends by the neck *f'* and the bent rod *f''*, having its parallel parts arranged centrally of the barrels, as plainly indicated in Fig. 4. The barrels are open at their rear ends to admit the expanding coiled springs *F''*, one in each barrel, around the branches of the link-rod *f''*, and the latter are provided at their rear free ends with washers and nuts *f'''*, to engage the springs, so as to be retracted thereby, as also shown in Fig. 4.

F' is a plate adapted to be bolted to the front face of the sand-board B, and provided with lugs *f''*, between which is pivoted the eye of a bolt, *F''*, whose shank is threaded through the neck *f'* centrally between and longitudinally in line with the barrels *f*. By this construction the link may be raised and lowered on its pivoted connection at *f''*, and the distance from the sand-board to the outer end of the link may be varied at pleasure by revolution of the barrels about the threaded bolt *F''*.

The member G is a solid casting having its upper part of proper thickness to enter the space between the barrels *ff*, as seen in Fig. 6, and is adapted to engage the transverse part of the link-rod *f''* in two positions, to wit—by the notch *g'*, which holds the tongue ele-

vated, and by the retaining-hook g^2 . It is also provided with a stop-lug, g^3 , at its front upper end, and has the trip-block I for carrying the link over the notch g' , operating essentially as described in my aforesaid patent, but different in construction, as follows: In said patent the trip, corresponding in function with I in the accompanying drawings, is pivoted in a recess of the casting, while in the present case it is bifurcated at its lower end, as seen in Fig. 7, to embrace the plate G. The casting G has two points of attachment with the tongue. At its rear end it is provided with arms G' , which set one on each side of the tongue C, and which are apertured to receive the queen-bolt E. A third arm, G^2 , has its base spread so as to rest broadly on the top of the tongue in front of the queen-bolt, and is recessed to give room for the strap e , if present. A hole, g , in the front arm, G^2 , admits a bent clip, H, which, with the plate H' and nuts h , serves to fasten this end of the casting firmly to the tongue. By this construction of the part G it may be readily cast to form, and it presents no recess calculated to catch dirt or gravel. It is also in this form readily attached to the tongue without boring the latter, and in the required position as determined by the location of the queen-bolt E. The application of the spring to the body of the link, as shown, permits the part G to be made materially shorter, so as to never interfere with the hammer-strap, and at the same time allows longer springs to be employed, whereby an increased range of movement of the tongue is obtained, with diminished danger of breaking the spring. In the arrangement, as shown, of the threaded eyebolt F^2 with the spring-link, moreover, a wider range of adjustment is obtained without varying the tension of the spring, and by the application of the springs to the link the strain on said springs is always directly in the line of the axis of said springs, so that the resistance of the springs is unaffected by change in the elevation of the tongue. Of course this last feature insures minimum friction of parts moving in contact, and tends thereby to give durability to the device as a whole.

The notch g' , which retains the link-rod f^2 when the tongue is held in a horizontal position by the support, is preferably directly opposite or over the queen-bolt, (which is the axis of the tongue,) so as to insure the most favorable use of the necessarily limited leverage available in such a device.

The operation of the device, as fully explained in my former patent, may be briefly described as follows: The tongue is manipulated entirely at its forward or free end. When the latter rests on the ground, the link rod f^2 is in the hook g^2 . When the end of the tongue is lifted the proper distance, the link-rod f^2

drops into the notch g' and holds the tongue elevated. When it is desired to let the tongue down, its free end is raised still higher, pushing the tripping-block I forward into the position indicated by dotted lines, Fig. 3, and the elevation of the tongue is continued until the link-rod f^2 has passed over the end of the tripping-block, after which the tongue is lowered or let fall. In the descent of the tongue the link-rod draws the tripping-block backward into the position shown in full lines, Fig. 3, where it forms a bridge over the notch g' , and carries the link-rod back into the retaining-hook g^2 . The tripping-block projects sufficiently high, as shown, to be struck by the link-rod when the tongue is raised, and to be thereby pushed forward, so as to let the link-rod drop into the notch g' . When it is desired to change the elevation at which the tongue is to stand, the link is lifted off the part G and run farther on or off the threaded bolt F^2 , as the case may be.

It is understood that the link may be secured to the bolster, or other stationary part of the front gear, instead of the sand-board, though this, as wagons are usually constructed, is the natural point of attachment.

I claim as my invention—

1. In a tongue-support of the general character described, the stationary member G, provided with a notch, g' , and trip-block I, and secured to the tongue, in combination with a spring-link attached to the sand-board, substantially as described.

2. In combination with a stationary notched plate, G, secured to the tongue, the link F, pivotally secured to the sand-board, and consisting of two parallel barrels, f , twin springs F^3 , and bent link-rod f^2 , substantially as described.

3. In the tongue-support described, the combination, with the two spring-housings f , separated by a space and joined by a neck at f' , of the eyebolt F^2 , threaded through the neck f' , and pivoted to the sand-board, substantially as described.

4. In a wagon-tongue support, the combination, with a link pivoted to the sand-board, of a plate, G, adapted to engage said link, and provided with arms G' , engaged with the queen-bolt as a means of attachment of said plate to the tongue, substantially as described.

5. In the tongue-support described, the combination, with the tongue, of the member G, having apertured arms G' , and the arm G^2 , the queen-bolt E, and the clip H, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

MARTIN CONRAD.

Witnesses:

M. E. DAYTON,

PETER J. ELLERT.