(No Model.)

J. H. CASSIDY.

WAGON TONGUE SUPPORT.

No. 564,590. Patented July 28, 1896.

Fig. 1.

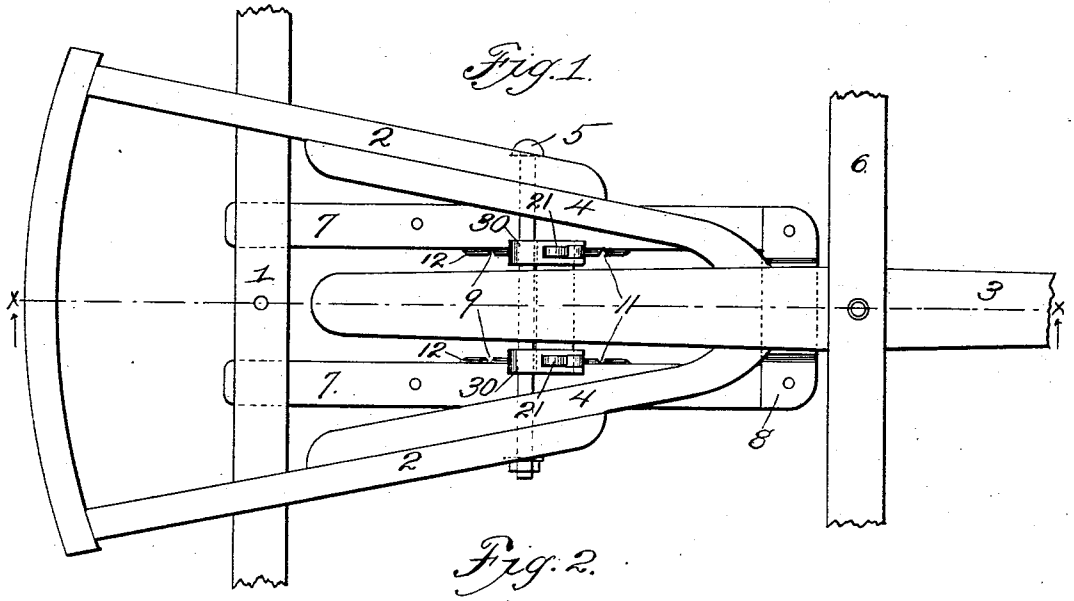


Fig. 2.

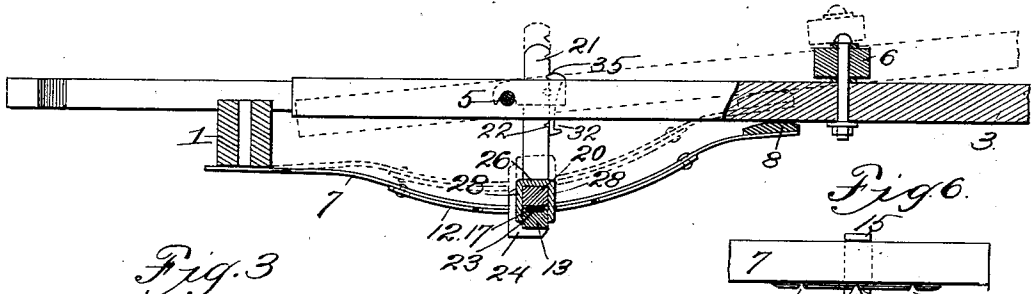


Fig. 3

Fig. 6.

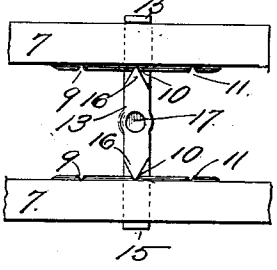


Fig. 7.

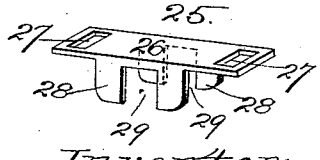


Fig. 4.

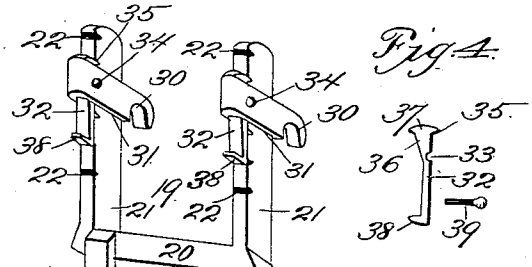
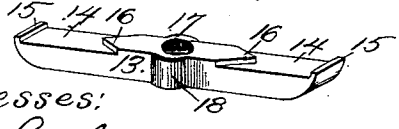


Fig. 5.



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UNITED STATES PATENT OFFICE.

JACOB H. CASSIDY, OF LEAVENWORTH, KANSAS.

WAGON-TONGUE SUPPORT.

SPECIFICATION forming part of Letters Patent No. 564,590, dated July 28, 1896.

Application filed April 8, 1896. Serial No. 586,762. (No model.)

To all whom it may concern:

Be it known that I, JACOB H. CASSIDY, of Leavenworth, Leavenworth county, Kansas, have invented certain new and useful Improvements in Wagon-Tongue Supports, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to tongue-supports for vehicles, and my object is to produce a device of this character which may be easily, quickly, and reliably arranged in operative position relative to or detached from a vehicle.

A further object of the invention is to produce a tongue-support whereby the tongue may be easily and quickly adjusted up or down upon its pivot, and which may be adjusted to accommodate the tongues of vehicles of varying distances between the tongue-pivots and the doubletrees, as the distance between such points differs in wagons of different makes.

A still further object of the invention is to produce a tongue-support which combines in an eminent degree simplicity, strength, and durability, and cheapness of manufacture, with efficiency of operation.

With these objects in view the invention consists in certain novel and peculiar features of construction and combinations of parts, as will be hereinafter described and claimed.

In order that the invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 represents a plan view of the front gear of a wagon provided with a tongue-support embodying my invention. Fig. 2 represents a vertical section taken on the line *x x* of Fig. 1. Fig. 3 represents a detail perspective view of the inverted stirrup forming a part of my invention and the tongue-rod bearing-hooks carried thereby. Fig. 4 is a side view of one of the keys for securing said hooks at the required point of adjustment upon the stirrup. Fig. 5 is a perspective view of the supplemental tongue-rod or spring rest-bar. Fig. 6 is a plan view of a portion of the twin spring and of the supplemental tongue-rod or spring-rest engaging the same. Fig. 7 is a perspective view of my improved locking-clasp.

Like reference-numerals designate corresponding parts throughout the several views, wherein—

1 designates the axle, and 2 the hounds, of a wagon.

3 designates the tongue, and 4 the tongue-hounds, which extend divergently rearward from the opposite sides of the tongue and are pivotally mounted with the tongue upon the pivot-rod 5.

6 designates the doubletree, mounted upon the tongue in advance of the pivot-rod 5 in the customary manner.

Referring now to the detail construction of the tongue-support, 7 7 designate a pair of parallel flat springs which are bowed downwardly at their middle and are united rigidly at their front ends by means of a cross-bar or head 8, so as to constitute practically a twin spring, one of the objects and advantages of which is that a much stronger and stiffer tongue-support is provided, and one that can be used in connection with any style of wagon, because, as will hereinafter appear, it engages the axle at opposite sides of its middle, and therefore does not interfere with the fifth-wheel, king-bolt, and other parts of the gear found at such point. Said springs or spring, as it is practically one in function, is provided at its opposing inner edges with three or more series of oppositely-disposed notches 9, 10, and 11, or said notches may be formed in the auxiliary spring-plates or reinforcements 12, secured by rivets or in any other suitable manner to the spring 7, as shown.

13 designates my improved supplemental tongue-rod or rest-bar, and it is provided at opposite sides of its center and in its upper surface with similar recesses 14, so as to form at the outer and inner ends of said recesses shoulders 15, to embrace the outer edges of the twin spring, and V-shaped tongues or lugs 16, to engage one set or another of the notches 9, 10, or 11, as illustrated clearly in Fig. 6. Said segmental bar is also provided with a circular cavity 17 in its upper side and at its middle, and to strengthen such point the bar is preferably enlarged or swelled outwardly at 18.

19 designates my improved inverted stirrup, and it comprises, essentially, a horizontal or cross bar 20 and two vertical standards or arms 21 projecting upwardly from opposite ends of said bar, which standards or arms are provided in their front edges with a series of notches 22. The cross-bar 20 at its middle is provided with a depending cross-piece or lug 23 of length to fit snugly within the circular cavity 17, and is also provided at its opposite ends and sides with the depending and oppositely-disposed hooks 24.

25 designates my improved locking-clasp for securing the spring rest-bar and the stirrup in their proper relative positions, and it consists of a body portion 26, provided with elongated openings 27 in its opposite ends to embrace the standards 21 of the stirrup, and the depending arms 28 at its opposite sides to embrace the sides of the cross-bar 20 of the stirrup and the segmental bar 13. Said depending arms 28, however, are bifurcated, as at 29, so as to accommodate the clasp to the swelled portions 17 of said supplemental bar, and thereby fit snugly and firmly against the same.

30 designates a pair of adjustable bearing-hooks, which are mortised upon the standards 21, or, in other words, are provided with longitudinal openings 31, through which said standards loosely project, and 32 designates keys or pins which extend also through said openings and bear squarely against the front edges of said standards. In their opposing edges they are provided with notches 33, which register with openings 34 in the bearing-hooks, and with one or another of the notches 22 of said standards—the object of such construction being hereinafter explained—or said keys or pins may be and preferably are provided with a tooth 35 at their upper ends to engage one of said notches 22, and at their opposite sides are formed with an inclined surface 36, terminating at its upper end in a shoulder 37 to overhang and rest upon said hooks. The beveled surface 36 constitutes in effect a wedge, whereby the tendency of said pins to gravitate or drop downward upon said standards only the more tightly secures the bearing-hooks at the point of adjustment at which they are set. Said keys are provided at their lower ends with outwardly-projecting lugs 38 to provide handholds, whereby they may be grasped to facilitate and make more convenient their adjustment. If desirable, the tooth 35 may be dispensed with and the pin 39 projected through registering openings formed by the notch 33 and the opposing notch 22 and the openings 34 of the bearing-hooks, as will be readily understood.

Having described the detail construction of the parts, I will now assemble them properly in relation to the vehicle, or the part thereof illustrated in Figs. 1 and 2.

The twin spring is first placed upon the spring rest-bar in the recesses 14, and with one set or another of the notches 9, 10, or 11 engaging the V-shaped tongues 16 of said bar, as illustrated in Fig. 6. The notches which engage said V-shaped tongues will be determined according as the distance is greater or less between the pivot-rod and the doubletree of the vehicle to which it is to be attached, as will be readily understood. The inverted stirrup is then grasped and arranged at right angles to said supplemental bar and lowered upon the same until the depending lug 23 projects into guide or pivot cavity 17 and the hooks 24 depend at opposite sides of said bar. The stirrup is now rotated upon said bar for a distance of ninety degrees or until its rotatable movement is arrested by the engagement of said depending hooks with the opposite sides of said supplemental bar, and because said hooks project below and fit snugly against the bottom of said bar it is obvious that said parts cannot be separated from each other until said rotatable movement of the stirrup has been reversed. The bearing-hooks 30 are then removed from said stirrup and the clasp fitted upon it, with the arms or standards projecting through the openings 27 of the same, and it is lowered until the body portion 26 rests upon the cross-bar 20 of the stirrup and the depending bifurcated arms 28 embrace the opposite sides of the same and of the spring rest-bar. This arrangement obviously locks the stirrup from rotatable movement, and thereby absolutely prevents the accidental disconnection of the same with the supplemental bar and springs. The bearing-hooks are now slipped upon the standards and secured at the required point of adjustment by the engagement of the tooth 35 of the keys with the required notches of said standards, or by means of the pins 39 engaging the registering apertures, as hereinbefore explained.

The tongue-support as a whole is now complete, and to secure it in operative position relative to the wagon it is only necessary to arrange it with the free ends of the spring 7 bearing against the under side of the axle at the opposite sides of the king-bolt and with the head or cross-bar 8 bearing against the under side of the tongue rearward of the doubletree, thus projecting the standards of the stirrup upwardly through the spaces formed between the tongue and the tongue-hounds in advance of the pivot-rod 5 and causing said bearing-hooks to engage over said pivot-rod in the manner clearly illustrated. It will thus be seen that the support may be easily and quickly hung in position, and that by simply pressing upwardly and forwardly upon the stirrup it may be as easily and quickly detached therefrom. In case it is desired to raise or lower the front end of the tongue, the bearing-hooks are adjusted downwardly and upwardly upon said standards, and this consequently causes the front end of the spring to rise, due to its resiliency, and consequently elevate the tongue in advance of the pivot, or to be depressed and

permit the front end of the tongue to be lowered, as will be readily understood.

From the above description it is obvious that I have produced a tongue-support which embodies the various desirable features enumerated in the statement of invention, and it is to be understood, of course, that slight changes in the form and detail construction of the parts will not be a departure from the spirit and scope of my invention.

I am aware that there exists a patent embodying a stirrup the arms of which are screw-threaded and upon which are adjustably mounted bearing-hooks to engage the tongue rod or pivot, but this structure is objectionable in that the threads rust and make the hook-bearing rods so difficult to turn thereon to adjust them up or down that the stirrup itself is often broken in such attempt. With my invention this difficulty will never be encountered.

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

1. The combination with a wagon, of a tongue-support, consisting of a twin spring bearing at its opposite ends against the under side of the axle and the under side of the tongue, an inverted stirrup carried by said spring and projecting upwardly between the tongue and the tongue-hounds, and provided with notches at its front side, bearing-hooks slidingly mounted upon said stirrup and hooked over the pivot-rod of the tongue, and toothed keys extending through said hooks and engaging certain notches of said stirrup, substantially as described.

2. The combination with a wagon, of a tongue-support, comprising a twin spring bearing at its opposite ends against the under side of the axle and the under side of the tongue in rear of the doubletree, and provided with longitudinal series or sets of notches, a supplemental rest-bar arranged below said spring and provided with V-shaped tongues engaging one set of said notches, an inverted stirrup mounted upon said supplemental spring rest-bar and projecting upwardly between the tongue and the tongue-hounds in advance of the pivot-rod thereof, and bearing-hooks adjustably carried by said stirrup and loosely engaging said pivot-rod, substantially as described.

3. The combination with a wagon, of a tongue-support, comprising a twin spring bearing at its opposite ends against the under side of the axle and the tongue of the vehicle, a supplemental tongue or spring rest-bar arranged transversely of and below said twin spring and provided centrally with a circular cavity, an inverted stirrup, provided with a depending lug engaging said cavity and with depending oppositely-disposed hooks which embrace the opposite and under sides of the supplemental bar, a clasp embracing said stirrup and the supplemental bar to lock them together, and bearing-hooks mounted upon said stirrup and pivotally or loosely engaging the tongue-carrying rod at opposite sides of the tongue, substantially as described.

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

JACOB H. CASSIDY.

Witnesses:
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M. R. REMLEY.