April 9, 1946. H. G. HINIKER 2,397,964

DRAFT TONGUE FOR TRAILERS

Filed Aug. 30, 1944 2 Sheets-Sheet 1

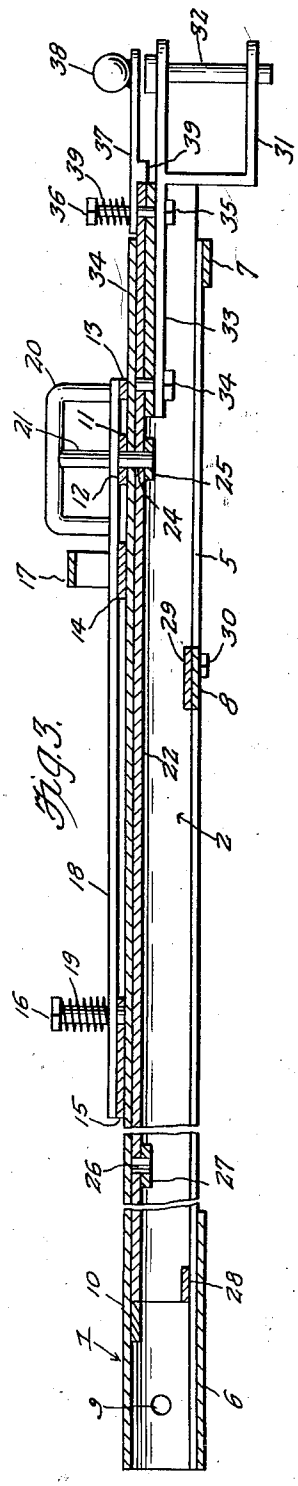


Fig. 3.

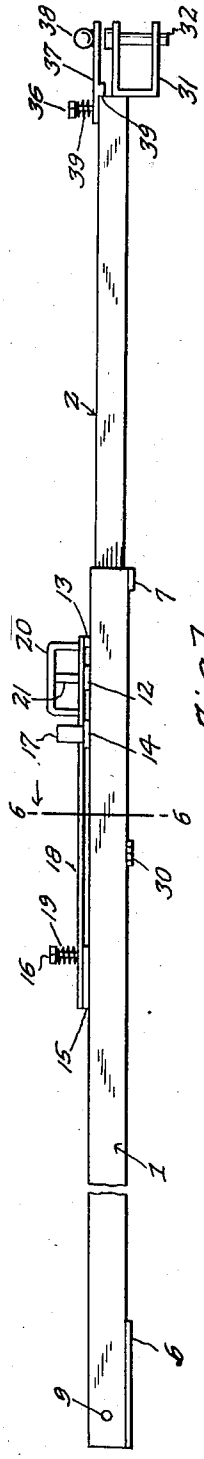


Fig. 1.

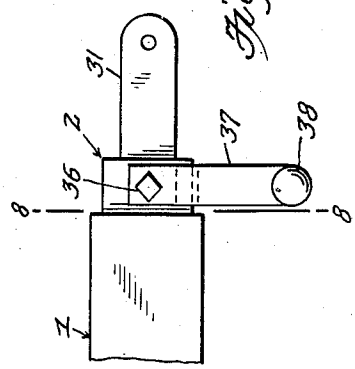


Fig. 7.

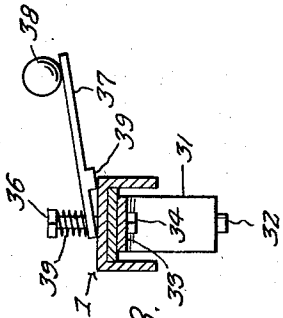


Fig. 8.

Inventor

Henry G. Hiniker.

By Clarence A. O'Brien and Harvey B. Jacobson

Attorneys

April 9, 1946. H. G. HINIKER 2,397,964

DRAFT TONGUE FOR TRAILERS

Filed Aug. 30, 1944 2 Sheets-Sheet 2

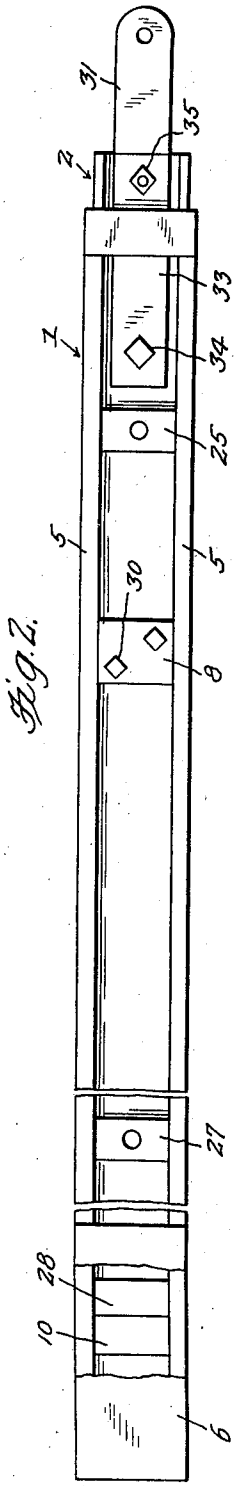


Fig. 2.

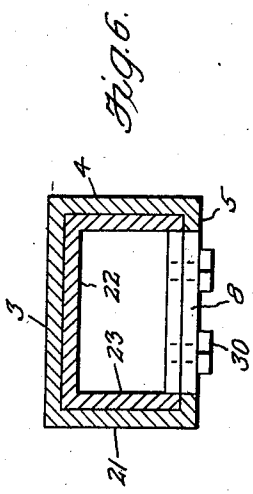


Fig. 6.

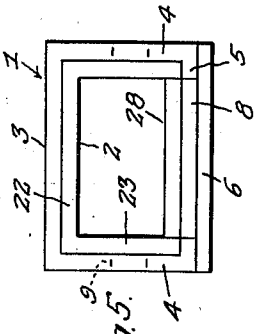


Fig. 5.

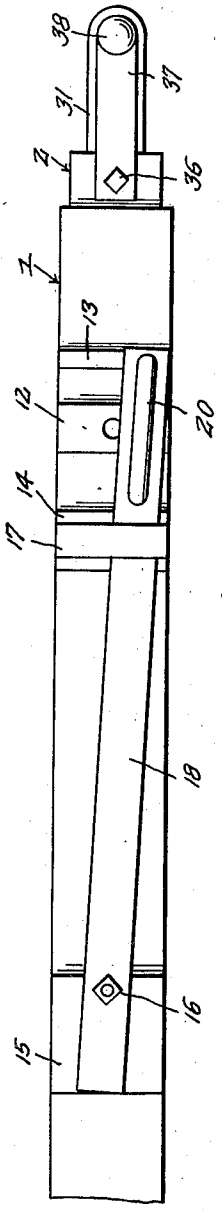


Fig. 4.

Inventor

Henry G. Hiniker.

By Clarence A. O'Brien and Harvey B. Jacobson

Attorneys

Patented Apr. 9, 1946

2,397,964

UNITED STATES PATENT OFFICE

2,397,964

DRAFT TONGUE FOR TRAILERS

Henry G. Hiniker, Mankato, Minn.

Application August 30, 1944, Serial No. 551,884

1 Claim. (Cl. 280—33.14)

My invention relates to improvements in draft tongues for hitching wagons, and other trailer vehicles, to tractors, trucks, or similar draft vehicles, the primary object in view being to provide an inexpensive, strong and simply constructed tongue that one man can handle for the purpose set forth and which is adapted to be extended, or contracted, and to automatically lock in either extended or contracted condition.

Other and subordinate objects are also comprehended by my invention, all of which, together with the precise nature of my improvements, will be readily understood when the succeeding description and claim are read with reference to the drawings accompanying and forming part of this specification.

In said drawings:

Figure 1 is a view in side elevation of my improved tongue in extended condition,

Figure 2 is a view in bottom plan drawn to an enlarged scale,

Figure 3 is a view in longitudinal section,

Figure 4 is a fragmentary view in top plan,

Figure 5 is a view in end elevation drawn to a further enlarged scale,

Figure 6 is a view in transverse section taken on the line 6—6 of Figure 1 and drawn to an enlarged scale;

Figure 7 is a fragmentary view in top plan,

Figure 8 is a view in transverse section taken on the line 8—8 of Figure 7.

Referring to the drawings by numerals, my improved draft tongue, in the preferred embodiment illustrated, comprises a female rear section 1 and a male front section 2, each of elongated channel iron form and telescoping relative to the other for extension and contraction of the tongue in a manner presently clear.

The rear female section 1 comprises a top 3, sides 4, is open at its bottom and ends and provided along the lower edges of the sides 4 with inturned longitudinal flanges 5. Rear and front strengthening plates 6, 7 extend across the bottom of the rear female section 1 for a suitable distance, and intermediate said plates 6 and 7 a cross plate 8 extends between the flanges 5 for a purpose to be explained. Adjacent to what constitutes the rear end of the rear female section 1, bolt apertures, as at 9, are provided in the sides 4 for use in bolting said section to a wagon, or the like, not shown. Also, adjacent said rear end of the rear female section 1 a transversely extending stop plate 10 is provided therein at the top of the section. Adjacent to the front end of the same, said female section 1 is provided in the longitudinal center thereof with an aperture 11 in the top 3, for a locking pin presently described, and at this point a similarly apertured wear plate 12 is extended across said top 3. A similar solid wear plate 13 is provided on said top 3 in advance of the plate 12, a third wear plate 14 in the rear of said plate 12, and a fourth wear plate 15 in the rear of said plate 14, the plate 15 having rising from the front edge thereof a headed stud 16 suitably secured in said plate 15. An upwardly arched transversely extending stop 17 rises from the wear plate 14.

Extending along the top 3 of said female section 1 is a locking bar 18 having the rear end thereof loosely pivoted on the stud 16 whereby said bar is swingable sidewise, or laterally, on said stud and also swingable vertically on the stud. A coil spring 19 interposed between the head of the stud 16 and said end of the locking bar 18 urges said bar into flat engagement with the wear plates 12, 13, 14 and 15. The locking bar 18 extends through the stop 17 and is limited in its swinging movement by said stop. Forwardly of the stop 17, the locking bar is provided with an upstanding bail-like hand grip 20 from which a locking pin 21 depends through said bar and is adapted to be inserted through the apertured wear plate 12 and the locking aperture 11.

The front male section 2 also comprises a top 22, sides 23, and is open at its bottom, said section 2, as will be understood, slidably fitting in the rear female section 1 with the sides thereof supported by the flanges 5. Adjacent the front end thereof, the male section 2 is provided in its top with a pin-receiving aperture 24 and a similarly apertured wear plate 25 in said section extending across the top thereof, the aperture 24 being located in said section 2 so as to register with the aperture 11 when the rear end of said male section 2 is engaged with the beforementioned stop plate 10. A similar pin-receiving aperture 26, and wear plate 27, are provided in said male section 2 adjacent the rear end thereof, the aperture 26 being located to register with the aperture 11 when a stop-forming cross plate 28 in the rear end of said section 2 engages a similar stop 29 bolted, as at 30, to the beforementioned plate 8.

Extending forwardly from the male section 2 is a clevis 31 having a coupling pin 32 therein for coupling the male section 2 to a tractor, or the like, not shown. The clevis 31 is provided with a shank 33 secured at its rear end to the top 22 of said section 2 by a stud bolt 34 extending through a wear plate 34 interposed between said

shank and said top 22. The shank 33 is further secured to said top 22 by a bolt 35 extended upwardly through said wear plate 34 and top 22 and provided above said top with a nut 36.

A coupling pin keeper is provided and which comprises a bar 37 loosely pivoted at one end on the bolt 36 above the top 22 of the section 2 to be swung laterally and vertically and having at its opposite end a hand grip knob 38, the arrangement being such that said bar 37 may be swung to position the knob end thereof over the coupling pin 32 to prevent said pin from becoming vertically displaced out of the clevis 31. A coil spring 39 interposed between the nut 36 and bar 37 urges said bar down flat against the top 22 of the male section 2. A lug 39 on the bottom of the bar 37 is provided for engagement with the front edge of the top 22 of said section 2 to prevent the bar from swinging out of overlying position relative to the coupling pin 32. Obviously, by lifting said bar 37 it may be swung upwardly to free the lug 39 so that the bar may be swung laterally into ineffective position, as shown for instance in Figures 7 and 8.

Referring now to the operation and use of the described invention, the described female and male sections 1, 2 may be slid inwardly, relatively, until the rear end of said male section 2 abuts the stop plate 10, to contract the overall length of the tongue and register the aperture 24 with the aperture 11 so that the locking pin 21 may be inserted in said apertures to lock said tongue in contracted condition. On the other hand, said sections 1, 2 may be slid outwardly, relatively, until the stop plate 28 engages the stop plate 29 to extend the overall length of the tongue and register the aperture 26 with the aperture 11 so that the locking pin 21 may be inserted through said apertures to lock the tongue in extended condition. The locking pin 21 may be lifted, by means of the hand grip 20 out of either aperture 24 or 26 and permitted to ride on top of the male section 2 while said sections 1, 2 are being slid and so that in either the contracted or extended condition of the tongue, said pin will drop, under the influence of gravity, and the spring 19, into whichever aperture 24 or 26 is registered with the aperture 11. By lifting or withdrawing the locking pin 21 and swinging the locking bar 18 laterally, said pin 21 may be positioned to one side of the aperture 11, as shown for instance in Figure 4, so that locking will not occur until the pin is moved into registration with the aperture 11. The manner in which the clevis 31, coupling pin 32, and the coupling pin keeper are operated and used will be clear from the foregoing description thereof.

All of the described reinforcing, wear and stop plates may be welded to the sections 1, 2 carrying the same, and the tops and sides of said sections 1, 2 may be formed of welded plates or angle iron. However, it has not been deemed necessary to illustrate such features, since the same form, per se, no part of the invention.

The foregoing will, it is believed, suffice to impart a clear understanding of my invention without further explanation.

Manifestly, the invention, as described, is susceptible of modification without departing from the inventive concept, and right is herein reserved to such modifications as fall within the scope of the appended claim.

What I claim is:

A draft tongue for hitching a trailer to a draft vehicle comprising a pair of telescopic female and male sections of channel iron form endwise slidable outwardly and inwardly, relatively, to extend and contract the overall length of the tongue, coacting stop devices on said sections, respectively, for limiting inward sliding of the sections, coacting devices on the sections for limiting outward sliding thereof, and means acting to lock said sections in either limit of sliding movement thereof comprising a locking bar on one section having a locking pin on one end thereof and being movable laterally and vertically into a disabled unlocking position, said bar being swingably mounted at its other end on the female section for such lateral and vertical movement and being provided with a manipulating handle on the first-mentioned end thereof, and a stop on the female section arching over said bar to limit swinging movement of the bar both laterally and vertically.

HENRY G. HINIKER.