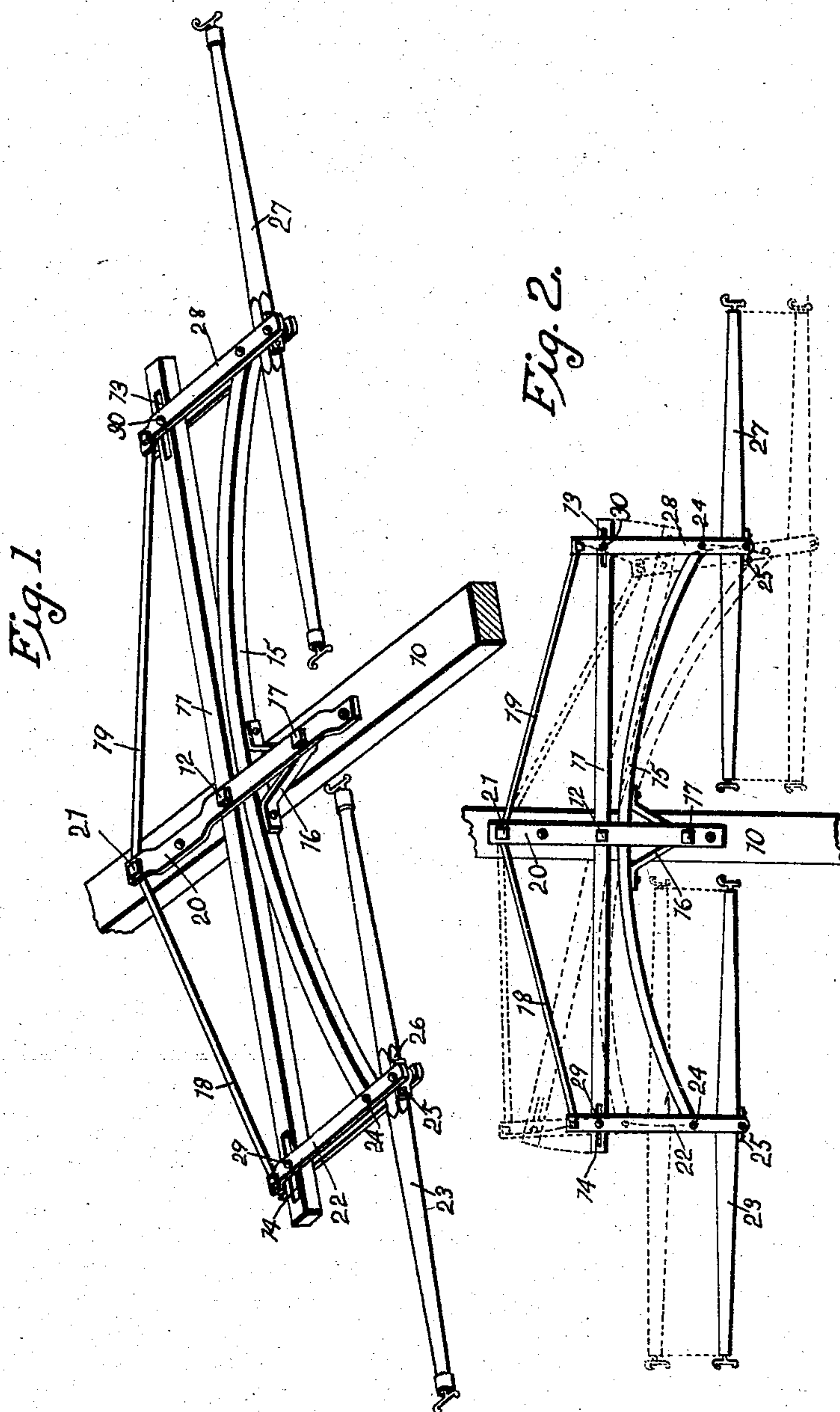


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H. D. LE SUER
DOUBLETREE.

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Witnesses,
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by Curig & Lane, Attys.

UNITED STATES PATENT OFFICE.

HERBERT D. LE SUER, OF GRIFFINSVILLE, IOWA.

DOUBLETREE.

SPECIFICATION forming part of Letters Patent No. 782,402, dated February 14, 1905.

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To all whom it may concern:

Be it known that I, HERBERT D. LE SUER, a citizen of the United States, residing at Griffinsville, in the county of Appanoose and State of Iowa, have invented certain new and useful Improvements in Doubletrees, of which the following is a specification.

The objects of my invention are to provide a new and useful doubletree which is of simple, durable, and inexpensive construction and which can be easily applied to the ordinary tongue by simply removing the doubletree which is already on. Of course it can be used when the tongue and doubletrees are constructed.

A further object is to provide a device whereby the swingletrees will be kept out of engagement with the tongue and by means of appliances I have adopted there will be no wear of the swingletrees upon the tongue.

A further object is to provide a device which is more durable than the ordinary doubletree and which will tend to make the horse which is ahead do more of the pulling than the horse which is behind, so that the horse which is behind will not have more than its share of the load to pull, as is customary in the use of the ordinary doubletree.

My invention consists in certain details in the construction, arrangement, and combination of the various parts of the device whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 shows in perspective a portion of the tongue with my doubletree attachment mounted on it; and Fig. 2 is a plan view of the doubletree, and in this view there is shown in dotted lines the position of the doubletrees when one of the horses is ahead of the other.

Referring to the accompanying drawings, I have used the reference-numeral 10 to indicate the ordinary tongue. Pivotally attached to the upper portion of the tongue is the main evener 11. This is pivotally connected with the tongue by means of the king-bolt 12. At the ends of the evener 11 are the slots 13 and 14. Mounted in front of the main evener 11 is the auxiliary evener 15, which is attached

to the tongue 10 by means of the V-shaped brace 16 and the bolt 17. This auxiliary evener is curved from the point of it which is nearest to the evener 11 outwardly and forwardly on both sides of its point of attachment. Pivotally attached to the tongue 10 and behind the point of attachment of the main evener are the stay-rods 18 and 19, which extend outwardly and forwardly from their points of attachment to a point adjacent to the slots 14 and 13, respectively, in the evener 11.

Extending over the auxiliary evener 15, the main evener 11, and the stay-rods 18 and 19 is a metal plate 20, designed to keep the bolts in position relative to the tongue and support the upper portions of these bolts. The stay-rods 18 and 19 are pivotally mounted on the bolt 21, which extends through the plate 20 and into the tongue 10. Pivotally attached to the outer end of the stay-rod 18 is a pair of connecting-rods 22, one of said connecting-rods extending above the stay-rod 18 and above the evener 11, while the other of said connecting-rods extends below the stay-rod 18 and below the evener 11. This pair of connecting-rods also extends forwardly from its point of attachment to the stay-rod 18 and substantially parallel with the tongue 10 and has mounted between the upper and lower one of said pair the auxiliary evener 15 and the swingletrees 23. The auxiliary evener 15 is pivotally attached to the pair of connecting-rods 22 by means of the bolt 24. The swingletree 23 is attached between said connecting-rods by means of the bolt 25, and said swingletree is preferably set immediately behind the bolt 25 and has a link 26 designed to admit the bolt and maintain the swingletree in position relative to the pair of connecting-rods. On the other side of the tongue and pivotally attached to the stay-rod 19 and to the auxiliary evener 15 and to the other swingletree 27 is the pair of connecting-rods 28, constructed exactly like the connecting-rods 22. Extending through the connecting-rods 22 and through the slot 14 is a bolt 29. Extending through the pair of the connecting-rods 28 and through the slot 13 is the bolt 30, said bolts 29 and 30 being designed to maintain the con-

necting-rods in position relative to the main evenner 11 and yet allow them to be moved longitudinally of the slots 13 and 14. The swingletree 27 is attached to the pair of connecting-rods 28 in exactly the same manner as the swingletree 23 is attached to the connecting-rods 22.

By the arrangement of the above construction it will be seen that after the device is attached to the tongue in the ordinary way and the horses are hitched to the swingletrees 23 and 27 and assuming that one of the horses is ahead of the other my device will take the position shown in dotted lines in Fig. 2, the result produced, which is shown in dotted lines, being accomplished as follows: The horse which is on the left side of the tongue from the driver's seat is ahead of the one at the right side of the tongue from the driver's seat, and the swingletree 27 is drawn ahead of the swingletree 23. The end of the auxiliary evenner 15 which is nearest the swingletree 27 will be drawn slightly forward, and the end of the main evenner which is adjacent to said swingletree 28 will also be drawn forwardly, and the outer end of the stay-rod 19 will be drawn forwardly, and as this operation takes place the rods on the opposite side of the swingletree, the other end of the auxiliary evenner, and the other end of the main evenner and the outer end of the stay-rod 19 will be forced rearwardly toward the driver's seat, and after the evenner 27 is moved forwardly the stay-rod will cause the rear end of the pair of connecting-rods 28 to be drawn inwardly, and thus draw the forward end of said connecting-rods 28 outwardly and cause the swingletree 27 to be maintained away from the tongue 10, thus preventing it from rubbing in any way. When the bolt 30 reaches the inner end of the slot 13, its movement will be stopped, and the horse which is ahead will pull the entire load until it has dropped back to allow the other horse to come up even with it. The operation on the opposite side of the tongue so far as the connecting-rods 22 are concerned will be exactly reversed from that of the connecting-rods 28, and the rear end of the connecting-rods 22 will be forced outwardly by the stay-rod 18 in the slot 14 until it reaches the outer end of said slot and is prevented from further movement in that direction by means of the bolt 29 coming in engagement with the end of the slot 14. The

forward end of the connecting-rods will be thrown inwardly a slight distance; but on account of the peculiar arrangement of the auxiliary evenner the swingletree 23 will be kept from being forced into engagement with the tongue 10, and thus the tongue will not be scraped in any way by the swingletrees in the use of my device. The great advantage, however, to get ahead will be prevented from doing so when it has to draw the entire load, and the tendency will be, as is shown by practical experience, to keep the horses when driving much more nearly abreast. Of course it is to be understood in this connection that I can change the arrangement of my device slightly provided the results are attained without changing the entire operation of the device, and either wood or metal may be used in the various parts of the device.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States therefor, is—

1. The combination of a tongue, with a main evenner, an auxiliary evenner, stay-rods pivotally attached to said tongue, and behind said main evenner, connecting-rods pivotally attached to said stay-rods and pivotally attached to said auxiliary evenner, the rear end of said connecting-rods being capable of longitudinal movement on the main evenner, swingletrees attached to each pair of said connecting-rods and in front of the auxiliary evenner, substantially as and for the purposes stated.

2. In a device of the class described, the combination of a main evenner having slots at each end thereof, an auxiliary evenner mounted in front of the main evenner, connecting-rods pivotally attached to the auxiliary evenner, a bolt extended through the slot adjacent to the connecting-rods, swingletrees attached near the forward ends of each pair of connecting-rods, stay-rods pivotally attached to the tongue and to the rear ends of said connecting-rods to force the rear end of one of the connecting-rods outwardly and the rear end of the other connecting-rods inwardly, as one of the swingletrees is drawn forwardly and the other allowed to move rearwardly, substantially as and for the purposes stated.

HERBERT D. LE SUER.

Witnesses:

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