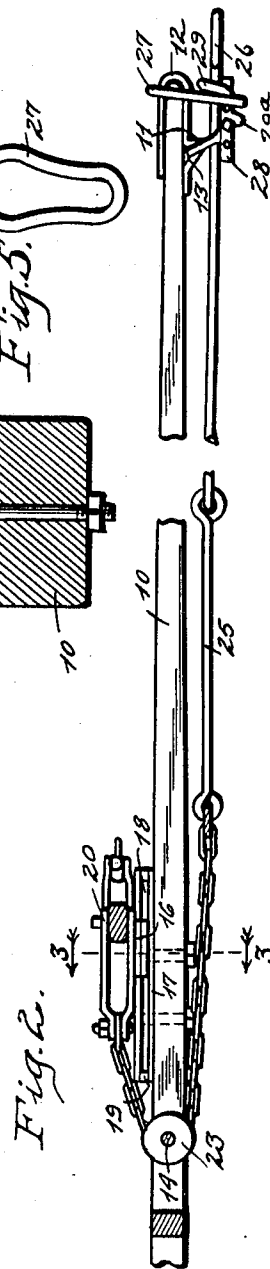
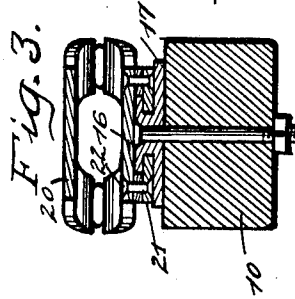
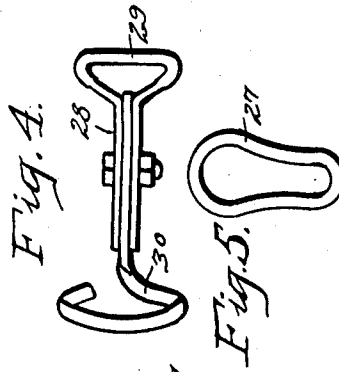
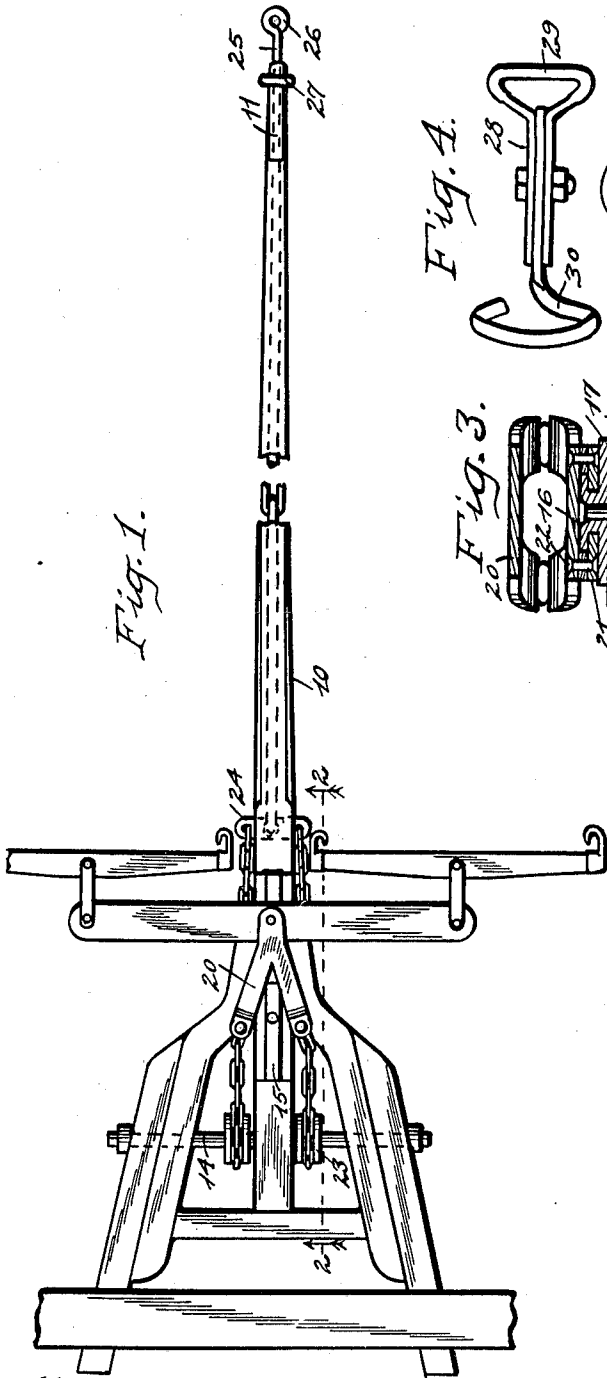


H. G. KLEIHAUER.
DRAFT EQUALIZER.
APPLICATION FILED MAY 8, 1912.

1,040,352.

Patented Oct. 8, 1912.



Witnesses:
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L. C. Palay.

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UNITED STATES PATENT OFFICE.

HENRY G. KLEIHAUER, OF AKRON, IOWA.

DRAFT-EQUALIZER.

1,040,352.

Specification of Letters Patent.

Patented Oct. 8, 1912.

Application filed May 8, 1912. Serial No. 695,887.

To all whom it may concern:

Be it known that I, HENRY G. KLEIHAUER, a citizen of the United States, residing at Akron, in the county of Plymouth and State of Iowa, have invented a new and useful Improvement in Draft-Equalizers, of which the following is a specification.

My invention relates to that class of draft equalizers whereby the draft is equalized between four horses having two in the rear and two in the front, and has for its object a device of this class of simple, durable and inexpensive construction.

A further object of my invention is to provide means for slidably mounting the rear double trees on the tongue, and so designed that the double trees may be quickly and easily removed.

A further object of my invention is to provide means for preventing the neckyoke from being disengaged from the tongue and for holding the connection to the lead team in place.

The above and other objects and advantages of my invention will become apparent from a detailed description of the accompanying drawings in which—

Figure 1 is a plan view of a device embodying my invention. Fig. 2 is a side view of the same partially in section taken substantially on the line 2—2 of Fig. 1. Fig. 3 is an end view of the same taken on the line 3—3 of Fig. 2, and Figs. 4 and 5 are enlarged detail views showing the means for preventing the neckyoke from being disengaged from the tongue and for supporting the connection to the front team.

Referring to the accompanying drawings in detail, I have used the reference numeral 10 to designate the tongue which is of the ordinary construction and is provided at its outer end with the usual neckyoke stop 11 which forms an eye 12 at the outer end of the tongue, and an opening 13 on the under side near the end. The opposite end of the tongue is of the ordinary construction which is secured to the wagon in the usual manner by means of the pin 14. A casting 15 is securely mounted on the tongue near the rear end and is provided with bearing surfaces 16 and 17 and longitudinal grooves 18 formed in the casting 15.

The grooves 18 in the casting are provided at either end with stops 19 for limiting the sliding movement of the clevis 20 presently to be described. The clevis 20 is constructed

of two parts. The upper part has rearwardly and downwardly diverging arms, the lower part has rearwardly and upwardly diverging arms. The said arms are secured together at their rear end, by means of bolts. However, my clevis may be made in one piece instead of two, and therefore I do not wish to limit myself to the specific form shown. The lower or under part of the clevis is provided on its under side with inwardly extending longitudinal strips 21, and are designed to engage the grooves 18 for slidably mounting the clevis on the casting 15. The strips 21 are secured to the under side of the clevis by any suitable means, such as the rivets 22, or may be cast in one piece with the clevis. A pair of pulleys 23 are rotatably mounted on the pin 14. A pair of chains are secured at one end to the rearward end of the clevis by any suitable means, such as the bolts shown. The opposite ends of said chains are then passed rearwardly over the pulleys 23 and thence forwardly to any desired point. The ends are then attached to a short bar 24 in any suitable manner. The bar 24 is provided with an opening intermediate its ends, to which is secured a rod 25 which extends forwardly beyond the end of the tongue, and is provided at its outer end with an eye 26 to which is secured in any suitable manner the double-tree of the front team.

By the construction and arrangement of the parts as herein shown and described it will be seen that a sliding movement is given to the rear double-tree, so that any sudden forward or backward movement from the rear double-tree will not break any of the parts or appreciably affect the draft of either team.

To prevent the neck-yoke of the rear team from being disengaged from the tongue by a sudden forward movement and for supporting the connecting rod 25 in place, I provide means consisting of a link 27 designed to fit over the end of the tongue through which is inserted a retaining member 28, having parallel side arms provided with a series of openings in alinement and an outwardly and upwardly bent portion 29 at one end, which prevents the link 27 from being forced outwardly over the end of the tongue, and on the under side of the arms of said retaining member I provide lugs 29^a designed to prevent the link 27 from being forced backwardly at its lower end. A

hook shaped member 30 is hooked into the opening 13 of the neck-yoke stop at one end, and is secured to the retaining member near its opposite end by means of a bolt. I provide the retaining member with a series of openings in alinement so that it may be adjusted to fit various tongues as the distance of the neck-yoke-stop from the end of the tongue varies with different tongues. When it is desired to use the means for holding the neck-yoke and connecting rod in place, and assuming the parts are assembled as heretofore described, the neck-yoke is first placed over the end of the tongue, the link is then placed over the end of the tongue, and the retaining members then inserted through the link, and the hooked member hooked into the opening in the neck-yoke-stop, the connecting rod is then passed through the retaining member, the link, and hooked member.

When it is desired to use only one team, all that is necessary is to unhook the front double-tree from the eye 26 and insert a pin through the tongue and short bar 24.

While I have herein shown only one specific embodiment of my invention, it is to be understood that various changes and alterations may be resorted to by those skilled in the art without departing from the scope of my invention as defined in the appended claims.

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

1. The combination of a four horse equalizer, a tongue, a rear double tree slidably mounted on said tongue, means for connecting said rear double tree to a front double tree, and means attached to the front end of said tongue, and adapted to hold said connecting means and a neck yoke in place, said means comprising a link designed to fit over the end of said tongue, a retaining member designed to be inserted in said link and provided with lugs on its under side and an out-

wardly and upwardly bent portion at one of its ends, both said lugs and bent portions being designed to engage said link, and a hooked member secured to said retaining member at one end and attached to said tongue at its opposite end.

2. The combination of a four horse equalizer comprising a tongue, a rear double tree slidably mounted on said tongue, means connecting with said rear double tree, and adapted to connect with a front double tree, and means provided at the outer end of said tongue, and adapted to hold said connecting means and a neck yoke in place, said means comprising a link designed to fit over the end of said tongue, a retaining member designed to be inserted through said link and provided with lugs on its under side, and an upwardly and outwardly bent portion at one of its ends, and a hooked member secured to said retaining member and attached to said tongue.

3. The combination of a four horse equalizer comprising a tongue, a rear double tree slidably mounted on said tongue, means connecting with said rear double tree and adapted to be connected to a front double tree, and means adapted to hold said connecting means and a neck yoke in place, said means comprising a link designed to fit over the end of said tongue, a retaining member designed to be inserted through said link and provided with lugs on its under side, and an upwardly and outwardly bent portion at one of its ends said lugs and bent portion being designed to engage said link and a hooked member secured to said retaining member at one end and attached to said tongue at its opposite end substantially as, and for the purpose described.

In witness whereof, I hereunto subscribe my name this 22nd day of April A. D. 1912.

HENRY G. KLEIHAUER.

Witnesses:

A. G. YEATON,
L. BARINGTON.