

No. 654,792.

Patented July 31, 1900.

M. HEATON.
DRAFT EQUALIZER.

(Application filed Jan. 9, 1900.)

(No Model.)

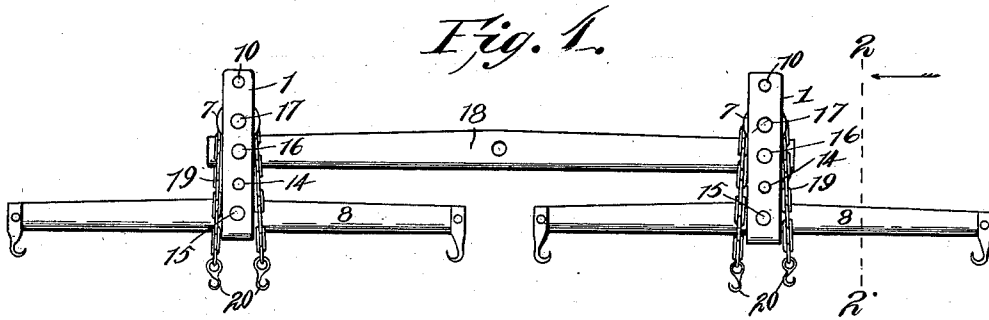


Fig. 2.

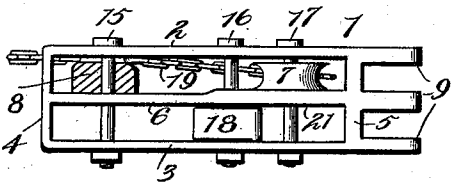


Fig. 3.

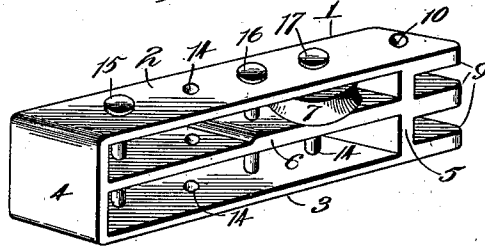
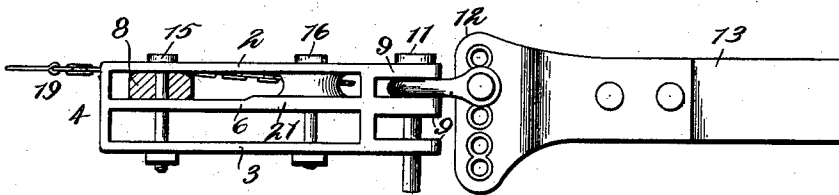


Fig. 4.



Witnesses
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By *his* Attorneys,

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UNITED STATES PATENT OFFICE.

MORGAN HEATON, OF NORTON, KANSAS.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 654,792, dated July 31, 1900.

Application filed January 9, 1900. Serial No. 856. (No model.)

To all whom it may concern:

Be it known that I, MORGAN HEATON, a citizen of the United States, residing at Norton, in the county of Norton and State of Kansas, have invented a new and useful Draft-Equalizer, of which the following is a specification.

The invention relates to improvements in draft-equalizers.

One object of the present invention is to improve the construction of draft-equalizers and to provide a simple and comparatively-inexpensive one adapted to dispense with singletrees and capable of enabling the draft-animals to be hitched close to the load.

A further object of the invention is to provide a four-horse evener of this character which may be readily separated to enable a pair of the horses to be hitched to a plow, harrow, or other implement when desired; and, furthermore, the invention has for its object to enable the frames or casings to be utilized as a pulley-block.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a plan view of a four-horse evener constructed in accordance with this invention. Fig. 2 is a sectional view on line 2 2 of Fig. 1. Fig. 3 is a detail perspective view of the frame or casing. Fig. 4 is a side elevation, partly in section, showing one of the frames or casings coupled to a plow-beam.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates an oblong frame or casing constructed of any suitable metal and composed of a top 2, a bottom 3, front and rear ends 4 and 5, and a horizontal plate or partition 6, dividing the oblong frame into upper and lower compartments or spaces and forming a support for a pulley 7 and a doubletree 8. The oblong frame or casing is provided at its rear end 5 with a series of longitudinal lugs 9, located opposite the adjacent ends of the top and bottom of the frame and the central longitudinal plate or partition and provided with perforations 10, adapted to receive a coupling pin or bolt 11, whereby the frame

may be attached to the clevis 12 of a plow-beam 13 or to the draft-beam of any other implement. The frame or casing is provided at intervals with registering perforations 14, disposed at different points and adapted for the reception of bolts 15, 16, and 17, forming pivots for the doubletree 8, a main whiffletree 18, and the said pulley 7.

The frames or casings may be pivotally mounted on the ends of the main whiffletree 18 by the bolts 16; but when it is designed to extend the connection and increase the distance between the main whiffletree and the pivots 15 of the doubletrees the main whiffletree may be moved rearward to the pivots of the pulleys 7. The distance can be shortened by arranging the main whiffletree on the pivots of the pulleys and moving the doubletrees backward to the bolts 16, or the parts may be arranged in any other manner permitted by the bolts and the perforations of the frame or casing. The doubletrees are provided at their ends with trace-hooks, and the pulleys receive chains 19 or other flexible connections extending forward at opposite sides of the frames and provided at their terminals with trace-hooks 20, located at opposite sides of the centers of the doubletrees.

The main whiffletree is designed to be pivotally mounted on a pole or draft-beam of an agricultural or other machine, and either pair of horses may be uncoupled from the ends of the main whiffletree and attached to the plow, harrow, or other implement. The draft-equalizer simplifies the construction by dispensing with singletrees and prevents the traces from coming in contact with the ground in turning a machine or implement and obviates all liability of a horse stepping outside of the traces. When the draft-equalizer is not in use, both pulleys may be arranged in either of the frames or casings when a pulley-block is desired, and a doubletree and a chain and pulley may be mounted on a tongue or pole when it is desired to use the device on a vehicle. The arrangement of the longitudinal plate or partition and the relative positions of the doubletree, the main whiffletree, and the pulley operate to prevent the frame or casing from tilting under a strain and afford an even pull.

It will be seen that the device is exceed-

ingly simple and inexpensive in construction, that it is adapted for use both as a two-horse and a four-horse evener, and that it dispenses with singletrees and effectually prevents the traces from coming in contact with the ground when a machine or implement is turned. It will also be apparent that the distance between the doubletrees and the main whiffletree may be varied and that the draft-animals may be hitched close to the load.

In order to relieve the doubletrees of much of the wear of the chains or other flexible connections, the rear portions of the longitudinal plates or partitions are thickened at 21 to provide an elevated support at the upper face of each plate or partition for the reception of the pulley, which has a grooved periphery. By elevating the pulleys in this manner the chains are prevented from binding to any great extent on the doubletrees.

What is claimed is—

1. A device of the class described comprising a substantially-oblong frame provided at its rear end with perforated lugs and having a longitudinal partition, said frame being provided at intervals with a longitudinal series of perforations adapted to receive pivot-bolts and permit the same to be adjusted to and from each other, a pulley arranged within the frame and having a pivot passing through perforations of the same, and a doubletree pivoted within the frame, substantially as described.

2. A device of the class described comprising a main whiffletree, a pair of substantially-oblong frames arranged at the ends of the main whiffletree and provided with longitudinal plates or partitions dividing the frame into upper and lower spaces, the main whiffletree being arranged in one of the spaces, pulleys mounted in the other space, doubletrees pivotally mounted in the frame in substantially the same plane as the pulleys, and flexible connections arranged on the pulleys and extending forward at opposite sides of the

frame and designed to be connected to the adjacent traces, substantially as described.

3. A device of the class described comprising an approximately-oblong frame provided with rearwardly-extending lugs and having a longitudinal plate or partition dividing it into upper and lower spaces, the lower space being designed to receive a main whiffletree, a doubletree pivotally mounted in the frame, a pulley also mounted in the frame and located in rear of the doubletree, and a flexible connection extending around the pulley and located at opposite sides of the frame, substantially as described.

4. A device of the class described comprising an approximately-rectangular frame having a longitudinal partition thickened at its rear portion, whiffletrees pivoted in the frame, a pulley arranged within the frame on the thickened portion of the partition, and a flexible connection passing around the pulley, substantially as described.

5. A device of the class described comprising an approximately-rectangular frame having a longitudinal series of perforations and provided with a longitudinal partition, whiffletrees detachably connected to the frame by the said pivots, a pulley mounted on one of the pivots, and a flexible connection arranged on the pulley, substantially as described.

6. In a device of the class described, an approximately-rectangular frame provided at its rear end with perforated lugs and having a longitudinal partition, said frame being provided at intervals with perforations adapted to receive pivots, combined with a pulley mounted in the frame, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

MORGAN HEATON.

Witnesses:

JAMES L. MILLER,
JOHN C. BROWN.