(No Model.)

P. EVANS.

DRAFT EQUALIZER.

No. 483,911. Patented Oct. 4, 1892.

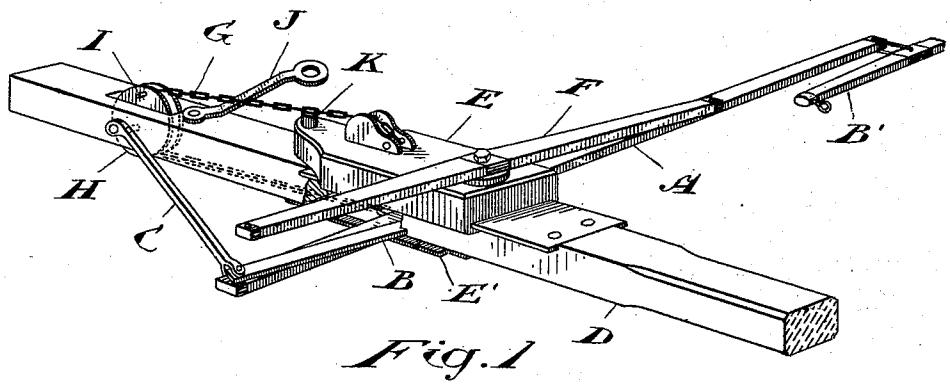

Fig. 1

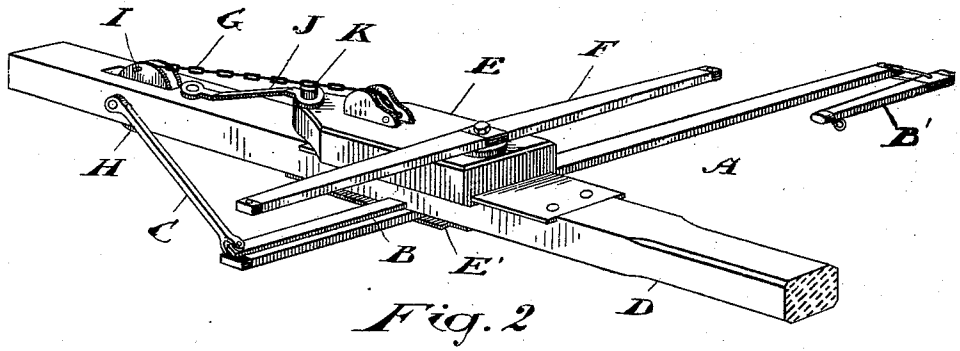

Fig. 2

Witnesses

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UNITED STATES PATENT OFFICE.

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DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 483,911, dated October 4, 1892.

Application filed May 4, 1892. Serial No. 431,802. (No model.)

To all whom it may concern:

Be it known that I, PHELPS EVANS, of the village of Bond Head, in the county of Simcoe, in the Province of Ontario, Canada, have invented a certain new and Improved Equalizer for Tripletrees, of which the following is a specification.

The object of the invention is to arrange a tripletree on the tongue of a vehicle or machine so that the draft shall be centrally directed substantially parallel with the tongue; and it consists, essentially, of a lever extending across the tongue, its long end having the third-horse whiffletree pivoted upon it, while its short end is pivoted to the outer end of a bar fastened to the tongue. On the tongue I place a sliding block, upon which the doubletree is pivoted, the block being connected to the lever by a rope or chain passing backward over an eccentric pulley set in the tongue in such a manner that the draft of all three horses shall be centrally directed substantially parallel with the tongue of the vehicle or machine, substantially as hereinafter more particularly explained.

Figure 1 is a perspective view of my improved equalizer for tripletrees set for three horses. Fig. 2 is a similar view of the device set for two horses.

In the drawings, A represents a lever, upon the long end of which is pivoted the whiffletree B′, the short end being pivoted to the outer end of the bar B, which is fastened at right angles to the tongue D, while E′ is a stirrup supporting the lever A under the tongue D, and C is a brace extending diagonally to the tongue D, or it may be carried straight back to some convenient point of the machine.

E is a block slidingly held upon the tongue D, as indicated, and upon which the doubletree F is pivoted.

G is a rope or chain fixed at one end to the block E, and after passing backward around the eccentric pulley H is connected at its other end to the lever A at a point immediately under the tongue D.

J is a hasp pivoted on the tongue D and designed to fit over a pin K on the sliding block E when it is desired to use only two horses. When three are to be used, the hasp J is lifted from the pin K, leaving the block E free. Consequently any draft on the doubletree F will be directed around the pulley H against the lever A, owing to the connection formed between the two by the rope or chain G, and the draft of the horse connected to the whiffletree B′ on the lever A pulls against the draft of the horses hitched to the doubletree F and their combined draft is directed through the lever A around the pulley H on a straight line with the tongue D.

In order that the draft of all three horses be equal, the third or single horse requires double the leverage given the other two, which pull together. As the third horse would not have working room alongside the team were the lever A only long enough to give an equalized draft, I lengthen it and compensate to the team for the increased leverage they have to pull against by increasing their leverage over the third horse on the pulley H by pivoting it eccentrically and set it with its greater diameter vertically above the tongue D. The rope or chain G, being fastened to the rear side of the pulley H, maintains the leverage in the proper position.

The travel of the equalizer in either direction is regulated by a pin I, projecting from the sides of the pulley H, which, striking the tongue D, arrests further movement in that direction.

If there were room for the third horse to work alongside of the team with only the double leverage required to pull against the team, it would not be necessary to pivot the pulley H eccentrically; but as I have found in practice that it was necessary to increase the length of the lever A in order to give the third horse sufficient room I have increased the leverage for the team by pivoting the pulley H eccentrically and set it so that the distance from its pivot-point to its top circumference shall be sufficiently greater than the distance from its pivot to its lower circumference to give the increase in leverage required to compensate the increase in leverage given to the third horse.

What I claim as my invention is—

1. A lever pivoted on a bar extending from one side of the tongue, a whiffletree pivoted on the end of the said lever, and a sliding block

supported on the tongue and connected to the lever by a chain or rope extending around a pulley pivoted in the tongue, substantially as and for the purpose specified.

2. A lever pivoted on a bar extending from one side of the tongue, a whiffletree pivoted on the end of the said lever, and a sliding block supported on the tongue and connected to the lever by a chain or rope extending around a pulley eccentrically pivoted in the tongue, substantially as and for the purpose specified.

3. A block E, slidingly supported on the tongue D and on which the doubletree is pivoted, in combination with a hasp J, pin K, and means, as the pulley H and chain G, for controlling the position of said block E, substantially as described.

Bond Head, April 9, 1892.

PHELPS EVANS.

In presence of—
MARK SCANLON,
T. S. GRAHAM.