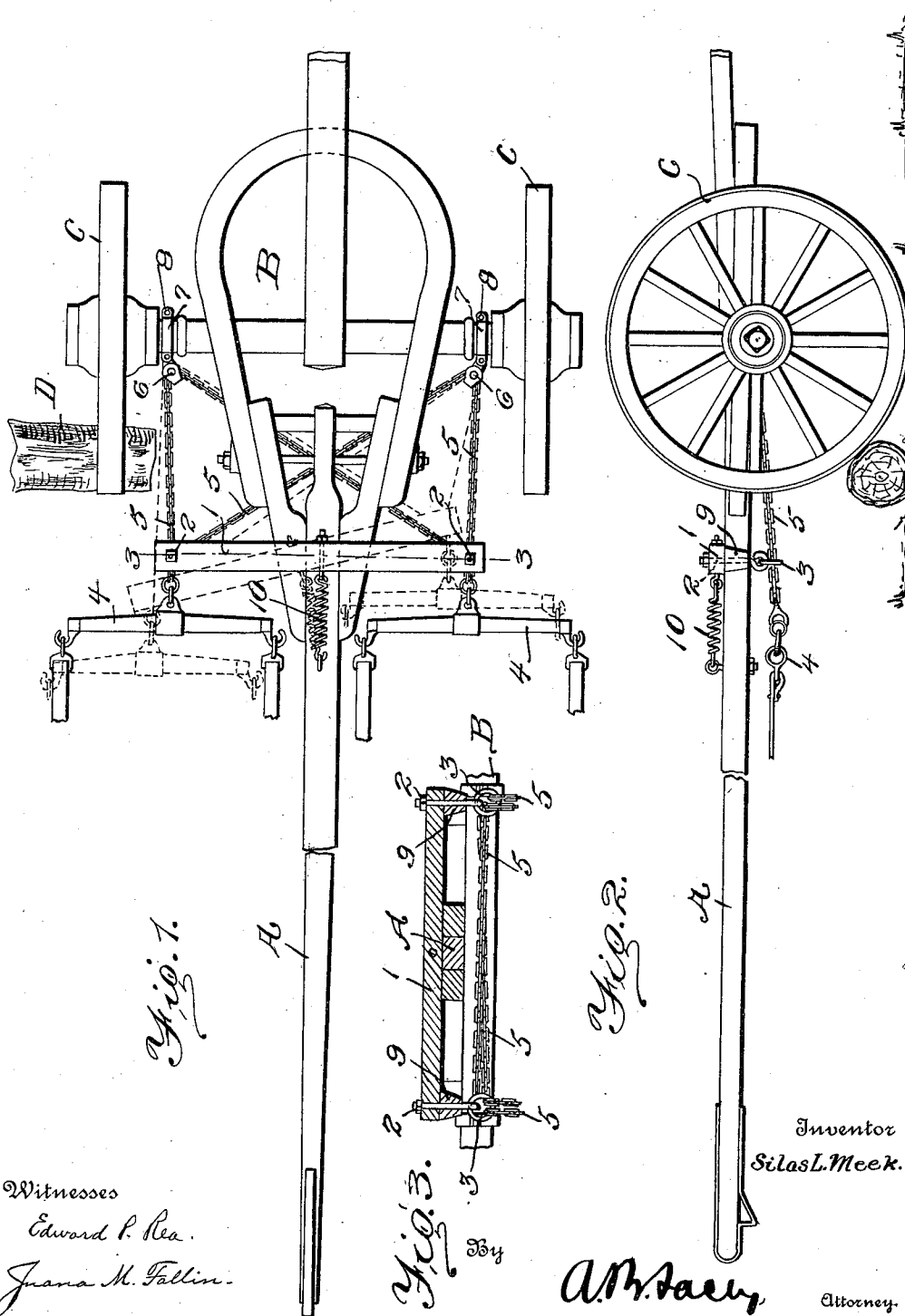


S. L. MEEK.
DRAFT EQUALIZER.
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1,036,135.

Patented Aug. 20, 1912.



Witnesses
Edward P. Rea.
Juana M. Fallin.

Inventor
Silas L. Meek.

A. M. Searcy

Attorney.

UNITED STATES PATENT OFFICE.

SILAS L. MEEK, OF ALMA CENTER, WISCONSIN.

DRAFT-EQUALIZER.

1,036,135.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, SILAS L. MEEK, citizen of the United States, residing at Alma Center, in the county of Jackson and State of Wisconsin, have invented certain new and useful Improvements in Draft-Equalizers, of which the following is a specification.

This invention relates to draft equalizers and is particularly adapted for use on wagons, trucks and the like, and aims to prevent swinging of the vehicle tongue when the forward wheels pass over obstructions in the road and at the same time to equalize the draft between the animals when such interference is met.

A further aim is to equally apportion the load between the two animals should either one lag behind or keep in advance of the other on the initial pull or during subsequent travel.

A still further object is to provide a simple, durable and efficient draft equalizer, capable of being manufactured at a relatively low cost and so constructed that it may be readily attached to vehicles and the like in present service without altering the vehicle, thus tending to make more general the use of this class of devices.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

For a full understanding of the invention and the merits thereof, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a plan view of the device attached to a wagon; Fig. 2 is an elevation of the same; Fig. 3 is a vertical cross section on the line 3-3 of Fig. 1.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

In order to clearly illustrate the operation of this improved draft equalizer it is shown operatively attached to the fore part of a wagon, in which A designates the tongue B the axle, and C the wheels thereof. An evenor or spacing bar 1 is disposed preferably above the tongue A and rests thereon, being pierced near each end by eye bolts 2 which carry depending rings 3. A swingle-

tree 4 is swiveled to a flexible member, preferably in the form of a chain 5, which latter is passed through the ring 3 and brought rearwardly to the axle B adjacent to the adjoining wheel where said chain is passed through a pulley block 6 which is secured to said axle, preferably by split collar 7 clamped about the axle by the bolts 8. After being passed through said pulley block, the chain extends diagonally across to the other end of the spacing bar where it passes through the other ring 3 and thence to the adjacent swingletree. It will be noted that by this arrangement, the chains 5 cross beneath the wagon tongue and each, after passing through the adjacent pulley and through the rings 3, is secured at each end to the swingletree adjacent thereto. In order to prevent the chains from rubbing against the tongue A and nearby parts of the wagon construction, the eye bolts 2 are relatively long and are encircled by correspondingly thick washers 9 which reinforce and tend to prevent handling of said bolts.

During the travel of the wagon, if one of the wheels C strikes an obstruction D, there would, of course, be a resultant tendency to retard the movement of this wheel of the vehicle and also throw the tongue A to one side and at the same time place unequal strain upon the draft animals. At this point, that is where the obstruction is encountered, the equalizer becomes operative and prevents swinging of the tongue. The swingletree adjacent to the retarded wheel is allowed to advance and the opposite one to swing backward by virtue of the chains 5 acting through the pulleys 6, as shown by the dotted lines. A tendency to maintain equal draft between the two animals is constant, since the spacing bar 1 is loosely secured to the wagon tongue and not rigidly secured thereto, there being merely a spring connection 10 which aids in returning said bar to a normal position when regular conditions are encountered as on a level road. The spring 10 also tends to maintain a tension on the chains 5 so that the latter cannot sag, thus constantly securing the chains in their proper working relation and eliminating the possibility of said chains becoming fouled by obstructions in the roadway. The spring 10 further tends to keep the swingletree 4 adjacent to the spacing bar and in an elevated position when not in use. It is desired to further direct attention to

the tendency to maintain equal draft on both animals, since if one lags behind or precedes the other, both will still continue to perform approximately the same amount of work through the operation of the equalizing device, as will be seen by the dotted lines in Fig. 1. It will also be noted that all strain is withdrawn from the spacing bar 1 and other adjacent parts of the wagon, the motive force being applied directly to the vehicle axle near the wheels so that a differential is established, since the greater power is always transmitted to the retarded wheel. If the spacing bar were bolted or otherwise rigidly attached to the wagon tongue, this equalizing effect could not take place, and this point is one of the main features of the invention.

Having thus described the construction and clearly set forth the merits of the device, it is hereby claimed:

1. The combination with a vehicle frame, of a draft equalizer including spaced swingle-trees, a spacing bar resting loosely on the vehicle tongue and adapted to maintain the swingle-trees in spaced relation, flexible members slidably connected to said bar and each having one end thereof swiveled to each swingle-tree, the intermediate portion of each member being slidably connected to the vehicle frame, and a spring connecting the bar with the wagon tongue and tending to maintain said bar in its normal position.

2. The combination with a vehicle frame, of a draft equalizer including spaced swingle-trees, a spacing bar resting loosely on the vehicle tongue and adapted to maintain the swingle-trees in spaced relation, a spring connecting the bar with the tongue and tending to maintain the bar in its normal position, depending rings swiveled to each end of the bar, pulley blocks secured to opposite ends of the vehicle axle, and flexible members, one passing through each block and having their opposite ends passed through the depending rings and swiveled to the adjacent swingle-tree.

3. The combination with a vehicle frame, of a draft equalizer including spaced swingle-trees, a spacing bar resting loosely on the vehicle tongue, flexible members slidably connected to said bar and each having one end thereof swiveled to each swingle-tree, the intermediate portion of each member being slidably connected to the vehicle frame, and a spring having one end thereof secured to the vehicle tongue and the other end secured to the spacing bar, said spring being adapted to maintain the flexible members under tension.

In testimony whereof I affix my signature in presence of two witnesses.

SILAS L. MEEK. [L. s.]

Witnesses:

M. M. RIGGS,

G. M. BREAKEY.