

No. 849,364.

PATENTED APR. 9, 1907.

O. J. BOE.
DRAFT EQUALIZER.
APPLICATION FILED FEB. 23, 1906.

Fig. 4.

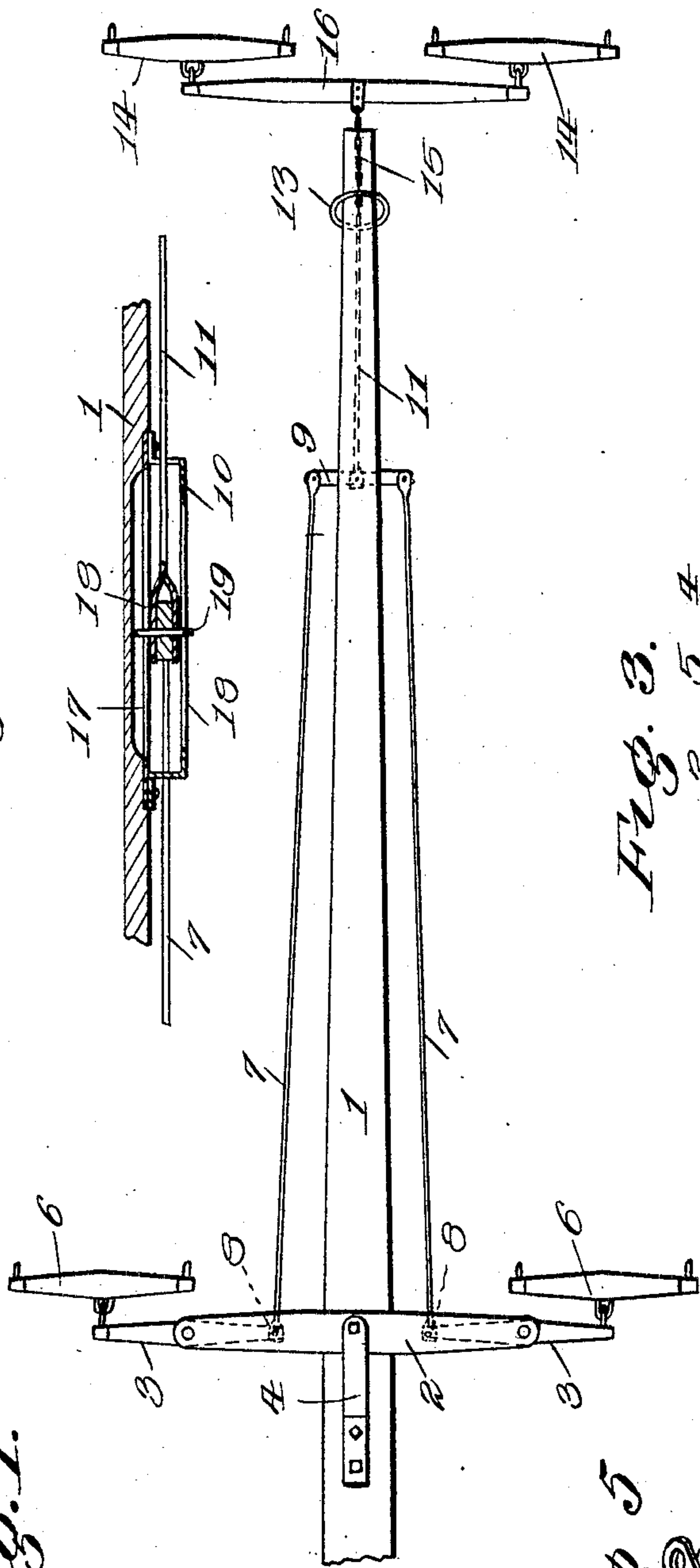


Fig. 1.

Fig. 3.

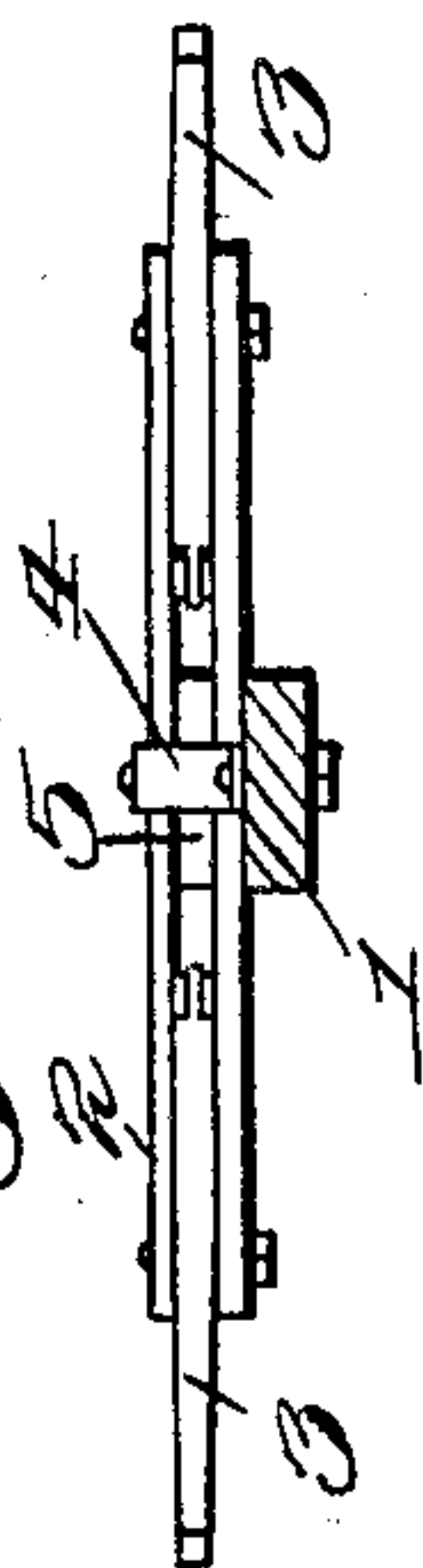


Fig. 2.

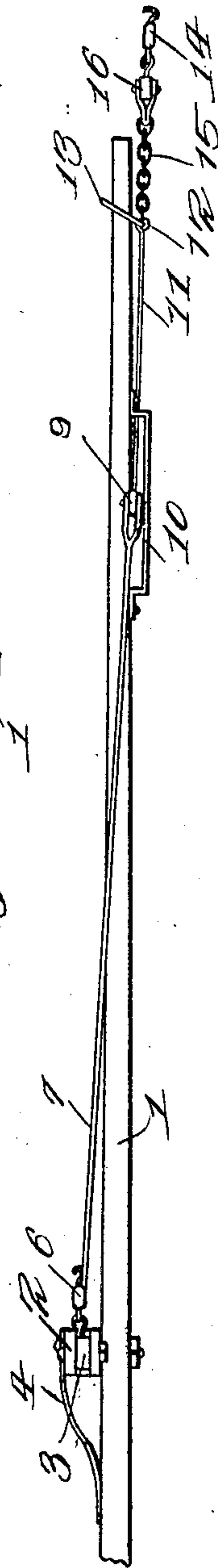


Fig. 5.



Witnesses

Wm. H. Woodson

Inventor

O. J. Boe.

By

W. A. Racy. Attorneys

UNITED STATES PATENT OFFICE.

OSCAR J. BOE, OF BALFOUR, NORTH DAKOTA.

DRAFT-EQUALIZER.

No. 849,364.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed February 23, 1906. Serial No. 302,558.

To all whom it may concern:

Be it known that I, OSCAR J. BOE, a citizen of the United States, residing at Balfour, in the county of McHenry and State of North Dakota, have invented certain new and useful Improvements in Draft - Equalizers, of which the following is a specification.

This invention relates to improvements in that type of draft-equalizers which are particularly designed to be used in connection with a plurality of draft-horses which are arranged so as to form a number of pole-horses and a number of lead-horses.

The object of the invention is to so construct the equalizer as to distribute the pull equally among the horses and also to eliminate all danger of side draft.

A further object is to so design the device that the lead-horses can be detached and all the load thrown upon the pole-horses without necessitating any change in the equalizer. This feature will be found very advantageous in close quarters, where it is necessary to detach a portion of the horses.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a plan view of the improved equalizing device. Fig. 2 is a side elevation of the same. Fig. 3 is a view from the rear end of the tongue. Fig. 4 is a sectional view showing a modified form of guide for the equalizing-lever, and Fig. 5 is a detail perspective view of one of the clips.

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

The numeral 1 designates the pole or tongue of the vehicle or agricultural implement, and 2 the main or rear doubletree, which is pivoted to the pole. This doubletree 2 is formed with bifurcated ends, within which the levers 3 are mounted, and is connected to the upper face of the pole 1 by means of a bolt, which is used in connection with the hammer-strap 4. In the preferred form of the device the doubletree 2 is formed of two spaced members which are connected at an intermediate point by means of a block 5. The ends of the spaced members constitute forks within which the levers 3 are pivoted. The outer ends of the levers 3 are connected to the

swingletrees 6, to which the pole-horses are attached. The inner ends of the levers 3 are reduced in cross-section and pivotally connected to rods or tension members 7 by means of clips 8. It will be observed that these tension members 7 extend forwardly along the pole 1 and have their opposite ends connected to the equalizing-lever 9 by means of clips similar to those just mentioned. These clips 8 are preferably formed of metal and comprise two arms which fit upon opposite sides of the levers and are pivoted thereto by bolts or similar fastening members. The equalizing-lever 9 is slidably mounted within a guideway 10, which is secured to the lower face of the tongue 1 at an intermediate point. This guide member 10 may be formed of a strip of metal having its ends bent upwardly and secured to the tongue.

The middle point of the equalizing-lever 9 is pivotally connected to a rod or tension member 11, which extends inwardly along the tongue and terminates in an eye 12, which serves as a connecting means for the lead-horses, and is connected to a guiding ring 13, which encircles the tongue and prevents lateral pull upon the rod 11. The rod 11 preferably passes through the forward end of the guide member 10, and for this purpose a slot may be formed in one end of the bar before the same is secured in position. The lead-horses are hitched to the swingletrees 14, which are connected to the eye 12 by means of the chain 15 and doubletree 16.

A modified form of guideway for the equalizing-lever 9 is also shown. In this construction a plate 17 is secured to the tongue under the member 10, and the plate and bar are provided with longitudinal slots 18, within which the projecting ends of the pin 19 are adapted to slide. When thus formed, the equalizing-lever 9 can move freely back and forth within the guideway 10, but is prevented from having any lateral movement.

In the operation of the device the pull of the lead-horses is transmitted through the rod 11 to the equalizing-lever 9 and is there divided evenly between the pole - horses. Owing to the operation of the levers 3, the pull will thus be equally distributed between all the horses, and there will be no danger of side draft.

Having thus described the invention, what is claimed as new is—

1. In a draft-equalizer, the combination of a tongue, a doubletree secured to the rear end

of the tongue, a lever pivotally connected at an intermediate point to each end of the doubletree, means for connecting a draft-animal to the outer end of each of the levers, an
5 equalizing-bar secured to the forward end of the tongue and having both a pivotal and sliding connection therewith, connecting means between the inner ends of the before-mentioned levers and the outer ends of the
10 equalizing-bar, a tension member connected to the equalizing-bar at a point between its ends and extending forwardly along the tongue, and means for connecting the lead-animals to the tension member.

15 2. In a draft-equalizer, the combination of a tongue, a doubletree secured to the rear end of the tongue, a lever pivotally connected at an intermediate point to each end of the doubletree, means for connecting a draft-animal
20 to the outer end of each of the levers, a guideway secured to the tongue toward the forward end thereof and comprising a bar spaced from the tongue and having its ends bent inwardly and secured thereto, a pin slid-
25 ably mounted within the guideway, an equalizing-bar pivotally mounted upon the pin so as to have both a swinging and a sliding movement, connecting means between the inner ends of the before-mentioned levers
30 connected to the doubletree, and the outer ends of the equalizing-bar, a tension member connected to the equalizing-bar at a point

between its ends, and means for connecting the lead-animals to the tension member.

3. In a draft-equalizer, the combination of 35
a tongue, a doubletree pivotally connected to the rear end of the tongue, and having the opposite ends thereof bifurcated, a lever pivotally mounted at an intermediate point in
40 each of the bifurcated ends of the doubletree, means for connecting a draft-animal to the outer end of each of the levers, a guideway secured to the tongue toward the forward end thereof and comprising a bar having its ends bent inwardly and secured to the tongue, the
45 said bar having a slot therein and the tongue being formed with a groove corresponding to the slot, a pin slidably mounted within the slot and groove, an equalizing-bar mounted upon the pin so as to have both a swinging
50 and sliding movement, connecting means between the inner ends of the before-mentioned levers and the outer ends of the equalizing-bar, a tension member secured to the equalizing-bar and extending forwardly along the tongue, 55
and means for connecting the lead-animals to the tension member.

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

OSCAR J. BOE. [L. s.]

Witnesses:

H. M. MURRAY,
GEO. M. KREMER.