

No. 719,564.

PATENTED FEB. 3, 1903.

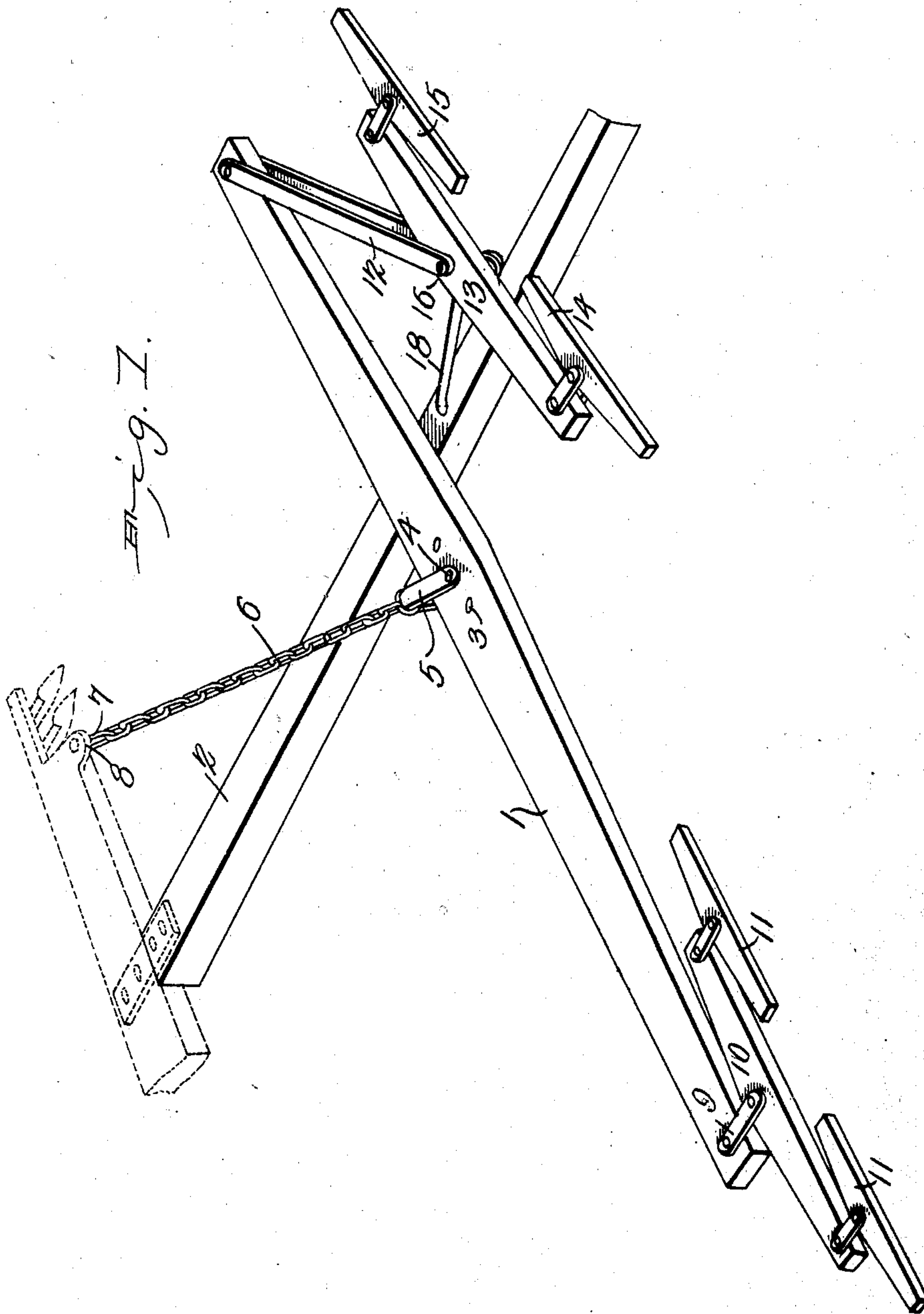
W. A. CAMPBELL & A. J. HENDERSON.

DRAFT EQUALIZER.

APPLICATION FILED NOV. 15, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
E. C. Stewart
J. H. Riley

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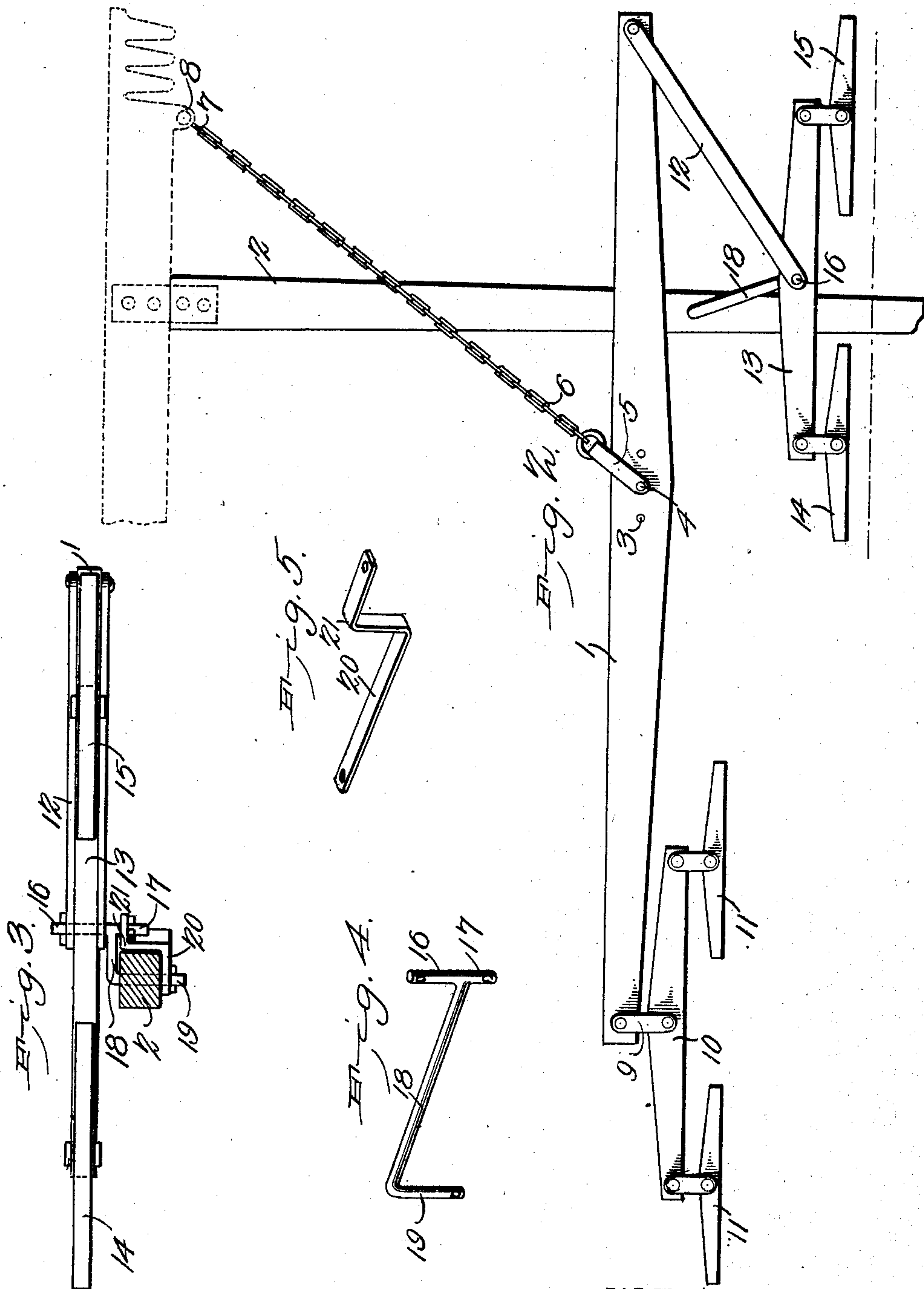
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UNITED STATES PATENT OFFICE.

WILLIAM A. CAMPBELL AND ANDREW J. HENDERSON, OF CHERRYVALE,
KANSAS.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 719,564, dated February 3, 1903.

Application filed November 15, 1902. Serial No. 131,542. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM A. CAMPBELL and ANDREW J. HENDERSON, citizens of the United States, residing at Cherryvale, in the county of Montgomery 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.

The object of the present invention is to improve the construction of draft-equalizers and to provide a simple, inexpensive, and efficient one of great strength and durability designed for use on binders and other agricultural machinery, where it is desirable to distribute the draft-animals unequally with relation to the load and capable of effectually eliminating all side draft and of equalizing the draft between the tongue-team and the outer team.

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

In the drawings, Figure 1 is a perspective view of a draft-equalizer constructed in accordance with this invention. Fig. 2 is a plan view. Fig. 3 is a transverse sectional view. Fig. 4 is a detail perspective view of the oscillatory rod. Fig. 5 is a similar view of the bracket.

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

1 designates a main equalizing bar or lever disposed transversely of a draft beam or tongue 2 and having one arm or portion loosely resting upon the same and adapted to move transversely thereof and also longitudinally of the same. The main equalizing bar or lever is provided adjacent to the center with a series of perforations 3, adapted to receive a pivot-pin 4 of an approximately U-shaped clevis 5, which is connected with the front end of a chain 6 or other flexible connection. The pivot-pin removably and detachably secures the clevis 5 to the main equalizing-bar to permit the said clevis to be adjusted to adapt the draft-equalizer to the

draft-animals. The chain 6 extends rearward from the main equalizing bar or lever at a point beyond the draft beam or tongue and it crosses the same and has its rear end 7 connected to the binder at a point adjacent to the inner shoe 8 at the center of the load, whereby the draft is entirely removed from the draft beam or tongue, which is located at one side of the center of the load. By entirely removing the draft from the draft beam or tongue and connecting it with the center of the load the side draft resulting from connecting the draft with the draft beam or tongue is entirely eliminated, as will be readily understood. The chain extends rearward across the draft beam or tongue from the right-hand side to the left-hand side; but it will be apparent that the parts may be readily reversed to adapt the equalizer to the arrangement of the draft beam or tongue at either side of the center of the load.

The outer end of the main equalizing-bar is connected by links 9 with the doubletree 10, which is provided at its ends with single-trees 11 for an outer team. The inner end of the main equalizing bar or lever is connected by a pair of bars or links 12 with an inner doubletree 13, located in advance of the inner arm of the main equalizing bar or lever and extending across the draft beam or tongue and provided with singletrees 14 and 15 to accommodate the tongue-team. The links or bars 12 extend outwardly and rearwardly from the center of the inner doubletree to a point beyond the adjacent end of the same, and they are connected at their front ends with the doubletree 13 by means of pivots or arms 16 and 17 of an oscillatory rod or lever 18. The oscillatory lever 18, which preferably consists of a rod, is provided at its outer end with upwardly and downwardly extending arms or pivots, which form an approximately T-shaped head. The inner end of the lever 18 is provided with a depending arm 19, forming a pivot and extending through the draft beam or tongue 2. The upwardly-extending arm 16 passes through the doubletree 13 and through the double link 12, and the lower arm 17 passes through a perforation in an arm of an oscillatory bracket 20. The bracket 20 is provided at its inner

end with a perforation through which passes the inner pivot 19 of the lever 18, and the outer portion of the bracket is angularly bent or formed to provide an upwardly-extending approximately L-shaped arm 21, which is perforated to receive the lower arm 17 of the lever 18. The lever 18 and the bracket 20 are adapted to oscillate to permit the main equalizing bar or lever to move laterally and longitudinally of the draft beam or tongue to equalize the draft between the tongue-team and the outer team.

The draft-equalizer is flexibly connected with the center of the load and is adapted to equalize the draft between the horses at the inner and outer sides of the draft beam or tongue, and it forms an automatically-adjustable fulcrum which automatically shifts itself to seat the center of the load to balance the same, and it is not affected by any unequal distribution of the load. It takes all the draft off the tongue and places it entirely upon the chain or flexible connection 6, which is hitched to the center of the load, and by removing the draft from the tongue the weight incident to such draft is removed, thereby merely relieving the draft-animals. It also by this construction eliminates from the tongue its use as a draft-beam.

When the end of the field is reached and it is desired to turn the binder or harvester around, the team next to the tongue is stopped and the team at the right-hand end of the main equalizing bar or lever is caused to move forward. The draft is thereby almost wholly removed from the flexible connection or chain and is thrown upon the draft beam or tongue, which turns the machine squarely around without moving it forward, thereby placing it directly at the point where the next swath is to be cut.

What is claimed is—

1. In a draft-equalizer the combination with a draft beam or tongue of a main equalizing

bar or lever loosely arranged upon the tongue or beam and extending from opposite sides thereof, a flexible connection extending across the draft beam or tongue and connected with the main equalizing bar or lever and with the center of the load, an oscillatory rod pivoted to the draft beam or tongue and extending from one side thereof, a doubletree pivotally connected to the oscillatory rod and having singletrees located at opposite sides of the draft beam or tongue, means for connecting the rod with the adjacent arm of the main equalizing bar or lever, and a doubletree having singletrees and connected with the other arm of the main equalizing bar or lever, substantially as described.

2. In a draft-equalizer the combination of a draft beam or tongue, a main equalizing bar or lever loosely arranged upon the beam or tongue and provided between its ends with a flexible connection extending rearward across the beam or tongue to the center of the load, an oscillatory rod having upwardly and downwardly extending pivots at its outer end and provided at its inner end with a pivot mounted on the draft beam or tongue, a bracket connected to the draft beam or tongue by the inner pivot of the rod and receiving the outer pivot thereof, a doubletree connected with one of the outer pivots of the rod, and links extending from the outer pivots of the rod to the adjacent arm of the main equalizing bar or lever, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

WILLIAM A. CAMPBELL.

ANDREW J. ^{his} × HENDERSON.
mark

Witnesses:

E. P. ALLEN,
B. P. MILLER,
W. G. BROWN.