

No. 698,059.

Patented Apr. 22, 1902.

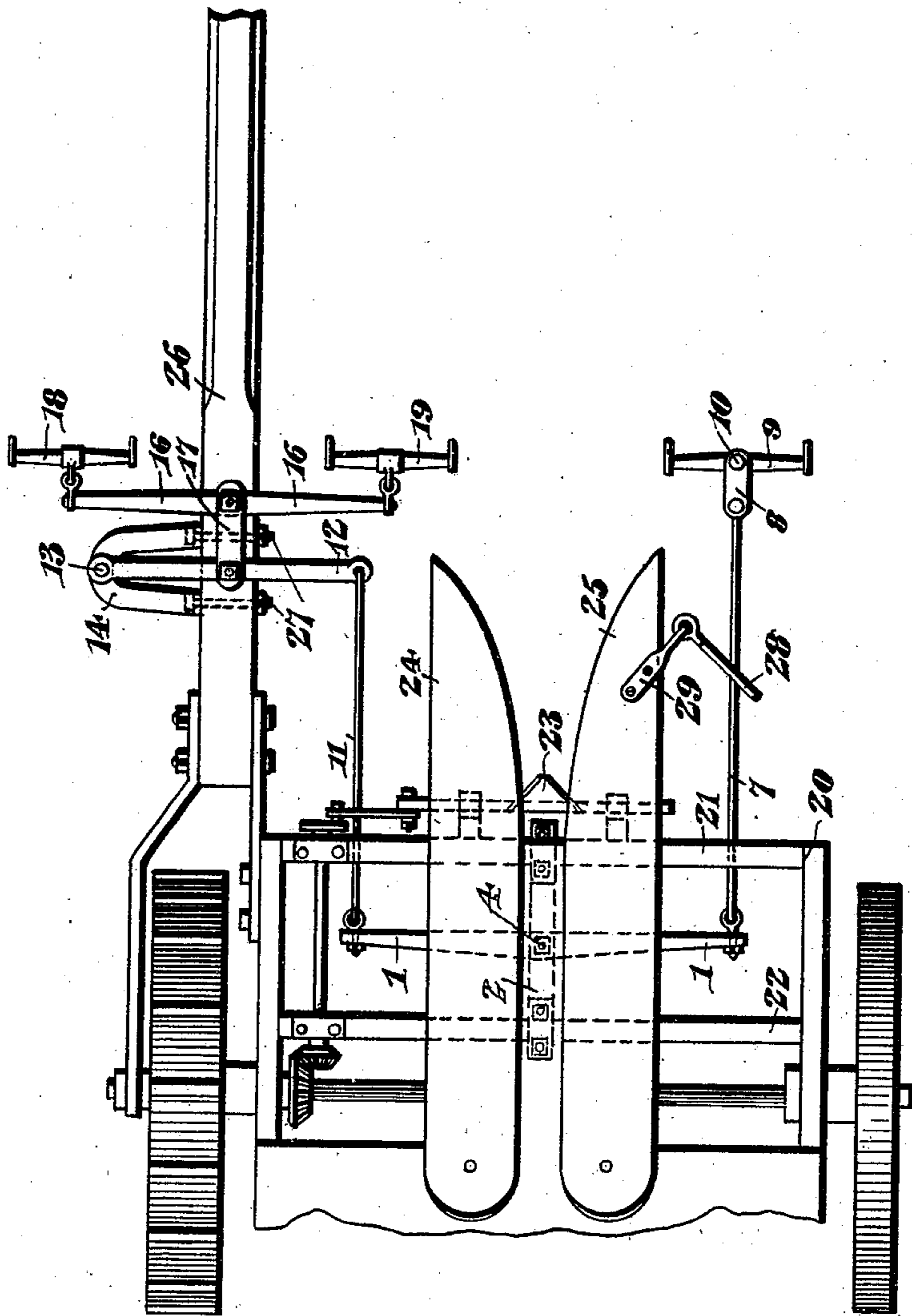
W. SCHLUTER.  
DRAFT EQUALIZER.

(Application filed Jan. 30, 1902.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



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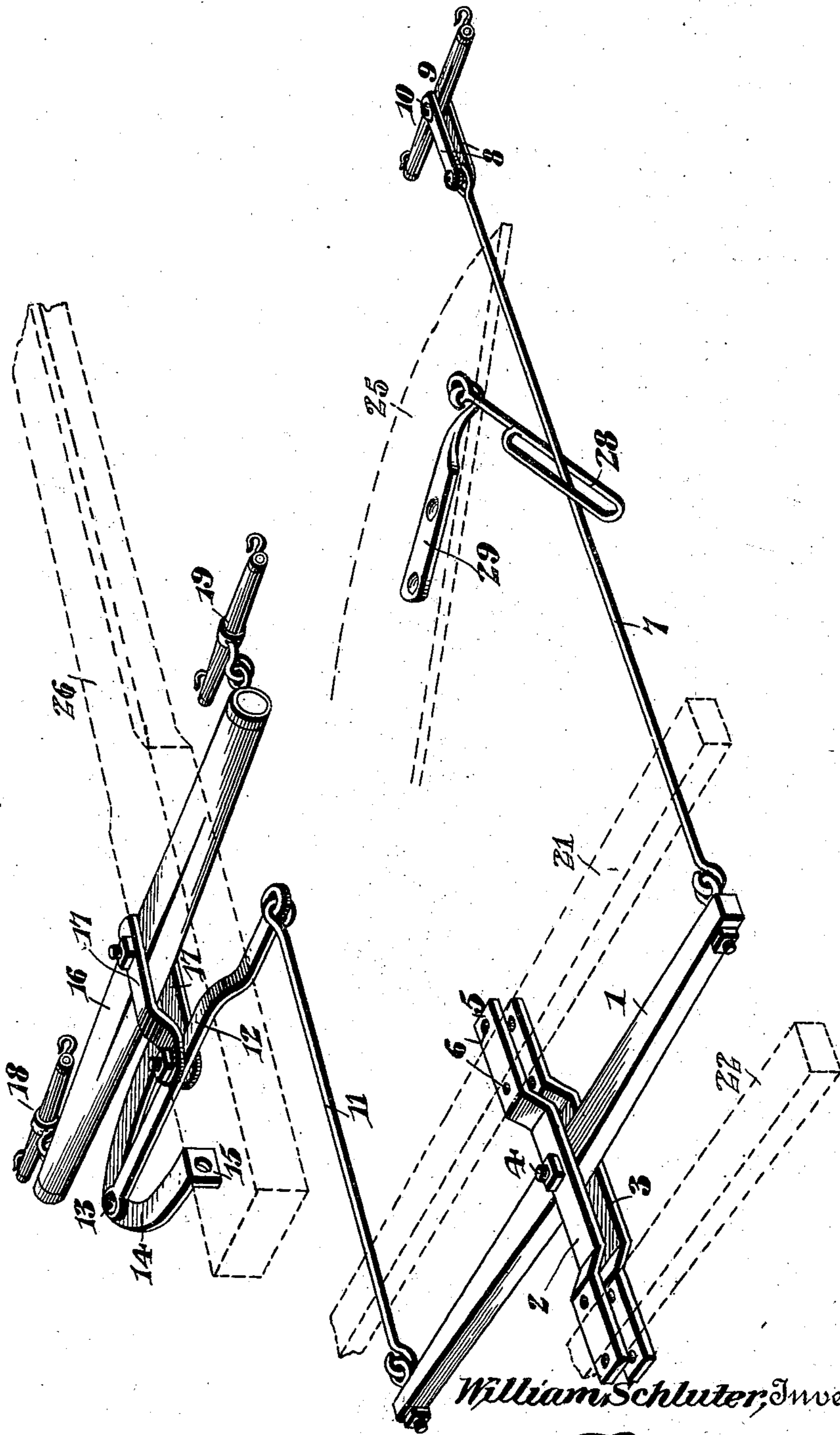
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2 Sheets—Sheet 2.

Fig. 2.



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# UNITED STATES PATENT OFFICE.

WILLIAM SCHLUTER, OF APLINGTON, IOWA.

## DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 698,059, dated April 22, 1902.

Application filed January 30, 1902. Serial No. 91,912. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM SCHLUTER, a citizen of the United States, residing at Aplington, in the county of Butler and State of Iowa, have invented a new and useful Draft-Equalizer, of which the following is a specification.

This invention relates to draft-equalizing means, and has for its object to provide improved means of this character which is especially adapted for application to corn-harvesting machines and arranged to place the draft centrally and in rear of the cutting apparatus thereof and also to dispose the draft-animals so that one of them may travel between the rows and the others upon the stubble side of the field without interfering in any manner whatsoever with the cutting apparatus.

A further object is to have the draft-equalizer complete in itself, so that it may be applied to any ordinary type of corn-harvester without altering or changing the same and without interfering with the cutting apparatus and the draft connections between the same and the ground-wheels of the machine.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a plan view illustrating the application of the present invention to a corn-harvesting machine. Fig. 2 is a perspective view of a draft-equalizing apparatus constructed and arranged in accordance with the present invention.

Like characters of reference designate corresponding parts in both figures of the drawings.

In carrying out the present invention there is provided a main draw-bar 1, which is fulcrumed centrally between the top and bottom members 2 and 3 of an attaching-bracket by means of a removable bolt 4. Each of the bracket members is in the form of a flat me-

tallic strap or bar, the central portion of which is bent or offset downwardly, thereby providing terminal ears 5, which are provided with corresponding bolt-openings 6, whereby the device is connected to the frame of a corn-harvesting machine, as will be hereinafter described.

To one end of the draw-bar there is loosely connected a draft-rod 7, which is provided at its outer end with a pair of superposed pivotally-connected links 8, which embrace a whiffletree 9 and are connected thereto by means of a suitable pivot-fastening 10.

A draft-rod 11, which is shorter than the rod 7, is loosely connected to the opposite end of the draw-bar and has its forward end loosely connected to the free end of an evener-bar 12, which lies transversely and wholly at the outer side of the rod and has its outer end pivotally connected, as at 13, to the central portion of a yoke-shaped bracket 14, each end of which is provided with a perforated pendent attaching-ear 15.

In front of the evener-bar 12 there is provided a doubletree 16, which is pivotally connected to the middle of the evener-bar by means of a pair of links 17, and the ends of the doubletree are provided with the respective whiffletrees 18 and 19.

To illustrate the application of the present apparatus to a corn-harvesting machine, a portion of the frame of such a machine has been illustrated at 20, said frame having the cross-bars 21 and 22 and the usual cutting apparatus 23, which is driven from one of the wheels of the machine in the usual manner. The members 2 and 3 of the attaching-bracket are secured to the central portions of the respective cross-bars 21 and 22, the latter being embraced between the corresponding attaching-ears of said bracket members, whereby the fulcrum of the draw-bar 1 is located in rear of and centrally with respect to the cutting apparatus, and the draft-rods 7 and 11 lie wholly at the opposite sides of said cutting apparatus and also of the guards 24 and 25, the whiffletree 9 being located slightly in front of the outer ends of the guards. The yoke-shaped bracket 14 has its pendent ears 15 applied to the outer side of the pole or tongue 26, which is connected, as usual, to one side of the frame of the ma-

chine, said ears being held in place by means of suitable bolts 27, piercing the tongue or pole. The bracket 14 and the evener-bar 12 are proportioned so that the links 17 or the center of the doubletree 16 lies centrally above the tongue 26, so that the whiffletrees 18 and 19 may be disposed equally at opposite sides of the tongue and in such position that the draft-animals connected thereto may pass between the stubble-rows, it of course being understood that the draft-animal connected to the whiffletree 9 is so disposed as to travel between the two outer rows of the corn, whereby the animals do not interfere with the outer row of corn, which is being acted upon by the cutting apparatus of the machine.

It will here be noted that besides equalizing the draft of the three animals the main connection is made in rear and disposed centrally with respect to the cutting apparatus, whereby the draft connections do not interfere with said cutting apparatus, and all lateral strain, such as is common when the animals are hitched to the pole only, is effectually obviated, and in consequence of the evenly-disposed draft the cutting apparatus operates more effectually and does not tear and twist the corn, as heretofore.

In order that the lateral movement of the draft-rods 7 may be limited, a suitable guide-loop 28 receives the intermediate portion of this rod and is pivotally connected to a bracket 29, which in turn is mounted upon the adjacent guard 25 of the cutting apparatus, thereby to prevent the adjacent animal from straying too far toward the outer side of the machine.

What I claim is—

1. In a draft-equalizing apparatus, the combination of an intermediately-fulcrumed draw-bar, the fulcrum of which forms the point of application of the draft to a vehicle, a draft connection applied to one end of the draw-bar, a doubletree connected to the other end of the draw-bar and otherwise independent of the first-mentioned draft connection, and an equalizing device included in the connection between the doubletree and the draw-bar and forming the sole support for the doubletree.

2. In a draft-equalizing apparatus, the combination of an intermediately-fulcrumed draw-bar, the fulcrum of which forms the point of application of the draft to a vehicle, a whiffletree applied to one end of the draw-bar, a doubletree connected to the other end of the draw-bar and otherwise independent of the whiffletree, and an equalizing device included in the connection between the doubletree and the draw-bar and comprising a fulcrumed equalizing-bar having its free end connected to the adjacent end of the draw-bar, the doubletree being connected to an intermediate portion of the equalizing-bar, the latter forming the sole support for the doubletree.

3. The combination with a harvesting-ma-

chine, having a draft-pole located at one side thereof, of a draw-bar fulcrumed intermediately in rear of and centrally with respect to the cutting apparatus of the machine, a draft connection applied to one end of the draw-bar, an evener-bar pivoted upon the draft-pole, a connection between the free end of the evener-bar and the other end of the draw-bar, and a doubletree connected to an intermediate portion of the evener-bar.

4. The combination with a harvesting-machine, having a draft-pole located at one side thereof, of a draw-bar fulcrumed intermediately in rear of and centrally with respect to the cutting apparatus of the machine, an outwardly-directed bracket carried by the pole, an evener-bar pivoted at its outer end to the bracket and projected inwardly and transversely across the pole, a connection between the free end of the evener-bar and the adjacent end of the draw-bar, a doubletree pivotally connected to an intermediate portion of the evener-bar, and a draft connection applied to the opposite end of the draw-bar, the said draft connection and the doubletree being located at opposite sides of the cutting apparatus of the machine, and the doubletree being projected at opposite sides of the pole.

5. The combination with a harvesting-machine, having a pair of cross-bars located in rear of the cutting apparatus thereof, and a draft-pole located at one side of the machine, of a bracket extending between the two cross-bars and located centrally in rear of the cutting apparatus, a draw-bar fulcrumed intermediately upon the bracket, a bracket carried by and projected laterally outward from the pole, an evener-bar pivoted to the bracket and projected transversely inward across the pole, a connection between the free end of the evener-bar and the adjacent end of the draw-bar, a doubletree connected to the intermediate portion of the evener-bar and projected equally at opposite sides of the pole, and a draft connection applied to the opposite end of the draw-bar, said draft connection and the doubletree being located at opposite sides of the cutting apparatus.

6. In a draft-equalizing apparatus, the combination of an intermediately-fulcrumed draw-bar, a draft connection applied to one end thereof, an equalizing-bar fulcrumed at one end and having its free end connected to the other end of the draw-bar, and a doubletree connected to an intermediate portion of the evener.

7. In a draft-equalizing apparatus, the combination of a bracket comprising top and bottom members having terminal connections, a draw-bar fulcrumed intermediately between the members of the bracket, a draft connection applied to one end of the draw-bar, a shorter draft connection applied to the opposite end of the draw-bar, an evener-bar having one end connected to the forward end of the latter draft connection and projected laterally outward therefrom, a supporting-

bracket having the outer end of the evener-bar pivoted thereto, and a doubletree pivotally connected to the central portion of the evener-bar.

5 8. In combination with a harvester, of a draw-bar fulcrumed in rear of the cutting apparatus thereof, and draft connections for the opposite ends of the draw-bar, said draft connections being arranged so as to lie on opposite  
10 site sides of the cutting apparatus, and each of the draft connections having means for attaching the draft-animals thereto, one of the draft connections being mounted on the pole or tongue.

15 9. The combination with a harvester, of a draw-bar fulcrumed in rear of the cutting apparatus, and draft connections for the opposite ends of the draw-bar, said draft connections being arranged so as to lie on opposite  
20 sides of the cutting apparatus, and each of the draft connections having means for attaching the draft-animals thereto, one of the draft connections being mounted on the pole

or tongue and having an equalizing device included therein.

25 10. The combination with a harvester, of a draw-bar fulcrumed in rear of the cutting apparatus thereof, and draft connections for the opposite ends of the draw-bar, said connections being arranged so as to lie on opposite  
30 sides of the cutting apparatus, and each of the draft connections having means for attaching the draft-animals thereto, one of the draft connections being mounted on the pole or tongue of the harvester and including a piv-  
35 otal equalizing-bar, a doubletree connected thereto, and a connection between the pivotal equalizing-bar and the adjacent end of the draw-bar.

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

WILLIAM SCHLUTER.

Witnesses:

N. H. REINTS,  
H. J. DE BUHR.