(No Model.)

J. P. McDOWELL.

DRAFT EQUALIZER.

No. 414,432. Patented Nov. 5, 1889.

Fig. 1.

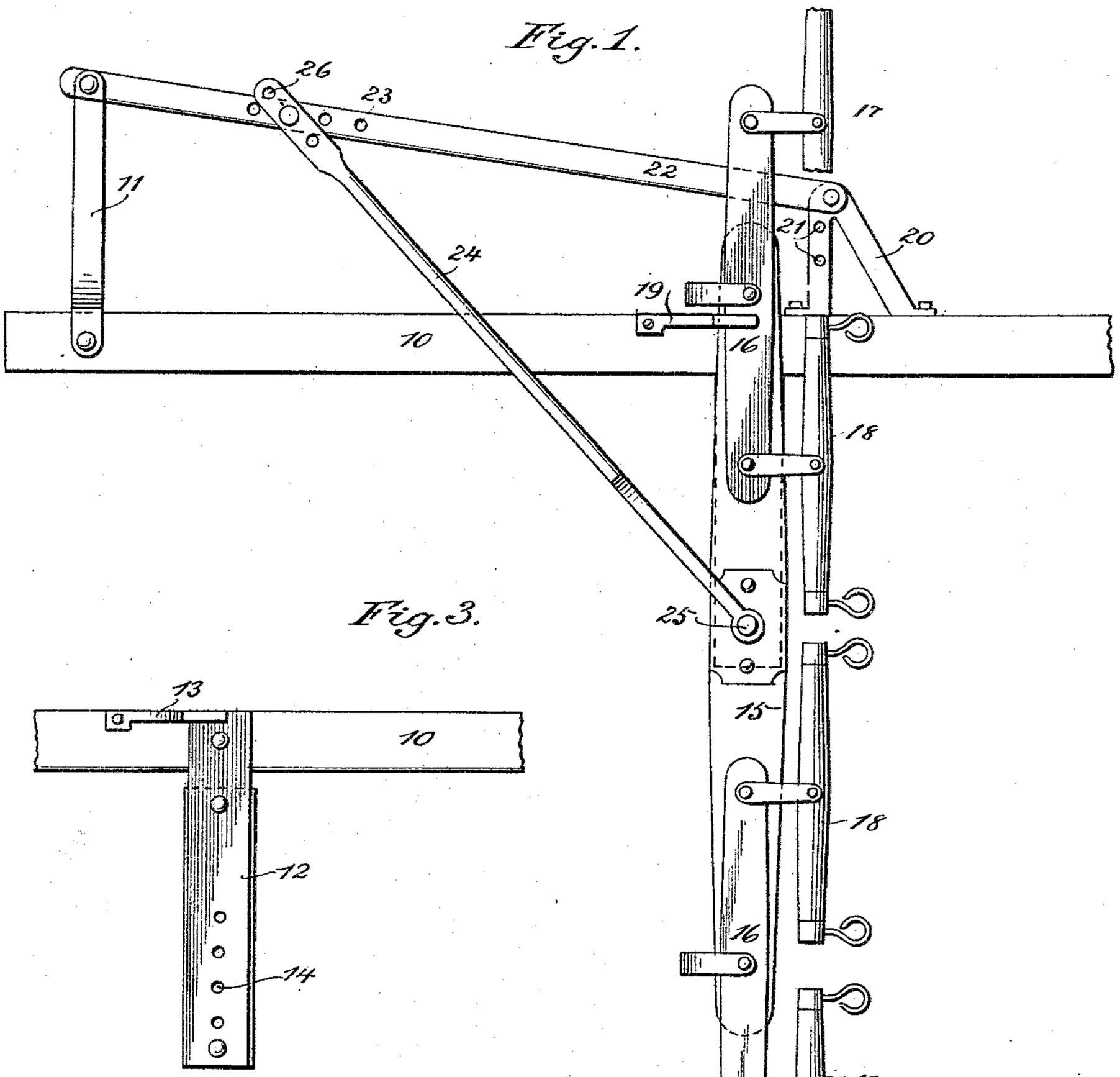
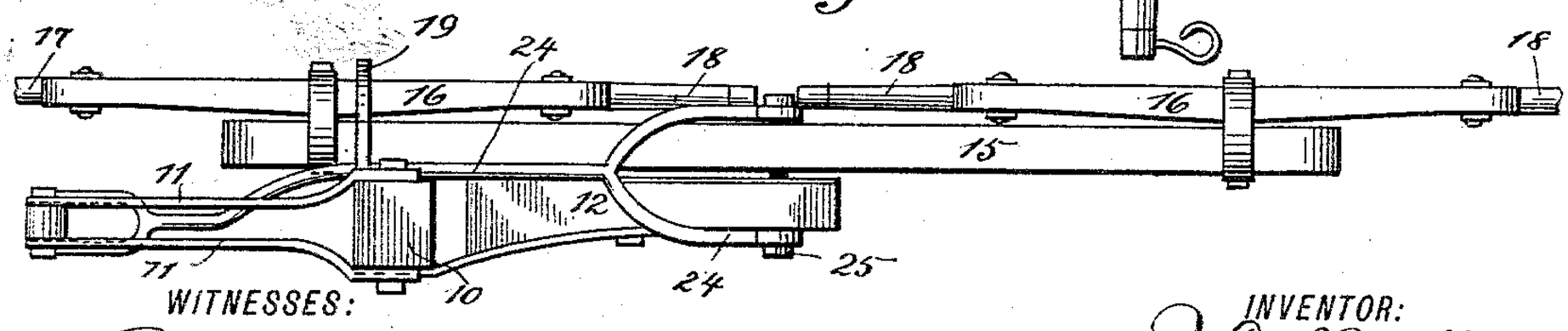


Fig. 3.

Fig. 2.



WITNESSES:

D. C. Reusch.

C. Sedgwick

INVENTOR:

J. P. McDowell

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JONAS P. McDOWELL, OF FOOTE, IOWA.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 414,432, dated November 5, 1889.

Application filed August 14, 1889. Serial No. 320,728. (No model.)

To all whom it may concern:

Be it known that I, JONAS P. MCDOWELL, of Foote, in the county of Iowa and State of Iowa, have invented a new and Improved Draft-Equalizer, of which the following is a full, clear, and exact description.

My invention relates to an improvement in draft-equalizers, and has for its object especially to improve the construction of the equalizer for which Letters Patent were granted to myself March 19, 1889, No. 399,766; and a further object of the invention is to provide a device especially adapted for attachment to the tongues of harvesters, which will be of simple and durable construction and in connection with which three or more horses may be employed.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the device applied to a tongue. Fig. 2 is a rear elevation, and Fig. 3 is a bottom plan view, of the arm upon which the evener is pivoted.

Upon the left-hand side of the pole or tongue 10 of the harvester, at the inner end, two parallel straps 11 are pivoted, one strap being pivoted upon the upper face of the tongue and the other upon the under face, as illustrated in Fig. 2. From the right-hand side of the tongue a distance in advance of the straps 11 a horizontal arm 12 is pivoted by means of a single bolt passing through the arm and tongue, and the said arm, which projects outward from the tongue at a right angle, is limited in its lateral movement by a brace or stay-plate 13, as shown in Fig. 3. The said arm is provided with a series of longitudinally-arranged apertures 14.

Upon the outer end of the arm 12 an evener 15 is centrally pivoted, and at each end of the evener, upon the upper side, a doubletree 16 is pivoted, the same being preferably effected by causing the clevis or clip to embrace the evener and doubletrees and by passing a bolt through the horizontal members of the clevis, the evener, and doubletrees, as illustrated in Figs. 1 and 2; but I desire it to be understood that the doubletrees may be otherwise attached, if desired. By this arrangement of the doubletrees upon the evener it will be observed that one singletree 17 is upon the left of the tongue near the grain-table and three singletrees 18 are located at the right of the tongue.

To the rear of the evener, when parallel with the supporting-arm 12, a stop block or bracket 19 is vertically secured to the tongue, adapted to limit the rearward movement of the left-hand extremity of the evener and prevent the doubletree at that end from interfering with the binder.

The prime object of this improvement is to cause all the draft to be sustained by a device attached to the left-hand side of the tongue in front of the doubletree at that end, and by so carrying the draft to make the binder run straight after the horses and cause it to take a full cut at all times. This I effect by securing to the left-hand side of the tongue in advance of the left-hand evener, as stated, an essentially-triangular bracket 20, the rear member of which bracket is straight and provided with a series of longitudinally-arranged apertures 21, the bracket being made to extend at a right angle to the tongue, as illustrated in Fig. 1. This bracket 20 is connected with the straps 11 at the inner end of the tongue, upon the left-hand side, by a draw-bar 22, the forward end of the draw-bar being bifurcated to pass over the outer end of the bracket 20, and secured thereto by a suitable detachable pivot-pin, and the inner end of the said draw-bar is passed between the straps 11 at their outer ends and pivoted at that point. The draw-bar is provided between these ends, preferably between the center and the inner end, with a series of apertures 23, and a connecting-bar 24 is employed to unite the draw-bar with the evener. This is effected by bifurcating both ends of the connecting-bar and causing one bifurcated end to receive the supporting-arm 12 and the evener, the connecting-rod and supporting-arm and evener being secured one to the other by a pivot-pin 25, which passes through the members of the connecting-bar, through the evener,

and through one of the apertures 14 of the supporting-arm. This pivotal pin 25 is the pivot or fulcrum of the evener. The left-hand end of the connecting rod or bar 24 is preferably flattened and provided with a series of apertures 26, and this left-hand end is made to embrace the draw-bar at its apertured portion, and is pivotally connected therewith by its pivot passing through one of the apertures of the connecting rod or bar and the registering aperture of the draw-bar. It will be observed that I thus obtain three points of adjustment—namely, the adjustment of the forward or outer end of the draw-bar upon the bracket 20, the adjustment of the left-hand end of the connecting rod or bar 24 upon the draw-bar, and the adjustment of the evener and the right-hand end of the connecting rod or bar upon the supporting-arm 12. By these means I am enabled to cause the bracket 20 upon the left-hand side of the tongue in front of the doubletree-rest to sustain the entire draft through the medium of the draft-bar 22, and by centering the draft at this point I cause the binder to run straight after the horses.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a tongue, an arm projected horizontally at a right angle to the same, an evener centrally and adjustably pivoted upon the said arm, and doubletrees pivoted to the said evener at its extremities, of a draw-bar pivoted upon the side of the tongue opposite to that carrying the said arm, the said draw-bar being pivotally attached to a bracket projected from the tongue near the inner end and adjustably pivoted upon a second bracket located in front of the evener, and an adjustable connecting-rod attached to the evener at its pivotal point and to the draft-bar, substantially as shown and described.

2. The combination, with a tongne, an arm projected horizontally from the right-hand side of the tongue, an evener centrally and adjustably pivoted upon the said arm, and doubletrees pivoted upon said evener, of a horizontal bracket secured to the left-hand side of the tongue in front of the evener, straps attached to the left-hand side of the tongue near the inner end, a draw-bar pivoted to the said straps at one end and adjustably pivoted to the bracket at the other end, and a connecting-rod adjustably attached to the draw-bar and connected with the right-hand arm and evener by the pivotal pin of the latter, substantially as and for the purpose specified.

3. The combination, with a tongue, a horizontal arm pivoted to the right-hand side of the same, an evener adjustably and centrally pivoted upon said arm, a doubletree attached to each end of the evener, and means, substantially as shown and described, for limiting the lateral movement of the arm and the rearward movement of the left-hand doubletree, of an essentially-triangular bracket attached to the left-hand side of the tongue in front of the extremity of the evener, the inner member whereof is provided with a series of apertures, parallel straps secured to the tongue near the inner end and projecting beyond the left-hand side, a draw-bar pivoted at one end between said straps and connected with the apertured bracket by a detachable pivot-pin, the said draw-bar being provided with longitudinally-arranged apertures, and a connecting-rod having apertures at the left-hand end and pivotally connected with the apertured portion of the draw-bar, the right-hand end of the said connecting-rod being attached to the supporting-arm 12 and the evener by the pivotal pin of the latter, substantially as and for the purpose specified.

JONAS P. McDOWELL.

Witnesses:
JOHN W. WAIT,
EDWARD F. McARTER.