

No. 689,804.

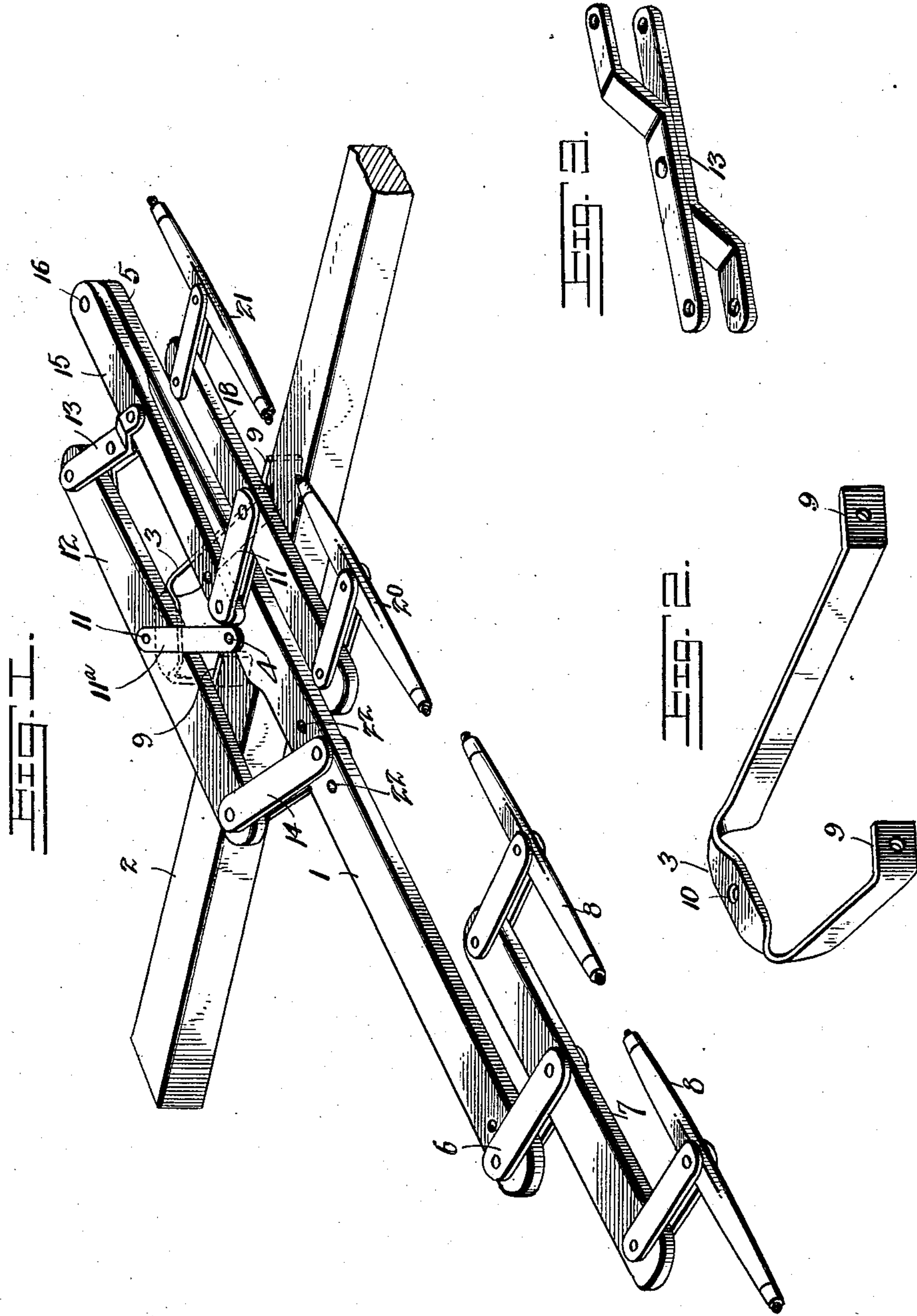
Patented Dec. 24, 1901.

C. C. HOLZWORTH.

DRAFT EQUALIZER.

(Application filed Oct. 16, 1901.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

CHARLES C. HOLZWORTH, OF JUNIATA, NEBRASKA.

## DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 689,804, dated December 24, 1901.

Application filed October 16, 1901. Serial No. 78,861. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES C. HOLZWORTH, a citizen of the United States, residing at Juniata, in the county of Adams and State of Nebraska, have invented a new and useful Draft-Equalizer, of which the following is a specification.

The invention relates to improvements in draft-equalizers.

10 The object of the present invention is to improve the construction of draft-equalizers and to provide a simple, inexpensive, and efficient one designed more especially for use on a binder or other machine and adapted to  
15 equalize the draft between the horses or other draft-animals and capable of preventing side draft.

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

25 In the drawings, Figure 1 is a perspective view of a draft-equalizer constructed in accordance with this invention. Fig. 2 is a detail perspective view of the bracket. Fig. 3 is a similar view of the left-hand connecting-link.

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

35 1 designates a main equalizing bar or lever extending from opposite sides of a draft-beam 2 and fulcrumed thereon by means of a pivot 4, located to one side of the center of the equalizing bar or lever to form arms of unequal length. The long arm of the main equalizing bar or lever extends from the opposite side of the draft-beam and has pivoted to it a pair of  
40 links 6, which are arranged at the upper and lower faces of the right-hand side of the main equalizing bar or lever 1 and which are connected to a right-hand doubletree 7. The doubletree 7 is provided at its ends with singletrees 8 of the ordinary construction. A bracket 3, which is approximately V-shaped, as clearly illustrated in Fig. 2 of the accompanying drawings, has its terminals bent to form lugs 9, which are secured to one side of  
45 the draft-beam 2 by suitable fastening devices. The rear portion of the bracket is provided with a perforation 10, adapted to receive a

pivot 11 of a rear lever 12, which is fulcrumed on the bracket in rear of the left-hand portion of the main equalizing bar or lever and  
55 which is connected with the same at opposite sides of the pivot 4 by links 13 and 14. The link 13 is composed of two bars, which have their ends offset, as clearly shown in Fig. 3, to provide openings for the lever 12 and a  
60 front lever 15. The upper bar has its front end angularly bent to offset it from the front end of the lower bar of the said link 13, and the lower bar has its rear end angularly bent. The pivots 4 and 11 are connected by a short  
65 brace 11<sup>a</sup>, extending rearward from the pivot 4 to the back of the bracket 3, which is arranged at an angle to the draft-beam.

70 The front lever 15 is fulcrumed at its outer end on the short arm 5, at the outer end thereof, by a suitable pivot 16, and the inner end of the front lever 15 is connected by links 17 or other suitable connections with a left-hand doubletree 18, located centrally of the draft-beam and extending from opposite sides thereof, as clearly shown in Fig. 1. The left-hand  
75 doubletree is provided with singletrees 20 and 21, located at opposite sides of the draft-beam 2. The front lever 15 is located above the main equalizing bar or lever, and the bars  
80 of the left-hand link 13 are angularly bent to arrange the openings in different planes. The links 14 at the right-hand end of the rear lever are parallel with each other and are pivoted to the said rear lever and to the upper  
85 and lower faces of the main equalizing bar or lever.

By the arrangement before described one of the singletrees is located at the left-hand side of the beam 2 and the other three singletrees are located at the right-hand side of the beam. The levers will equalize the draft between the draft-animals and will prevent any side draft, and the main equalizing bar or lever is provided with perforations 22 to permit an adjustment of the links 14 to vary the leverage, and the said perforations 10 are also adapted to permit an adjustment to vary the leverage. The inner end of the lever 15 is also provided with a plurality of perforations  
90 to permit an adjustment of the left-hand doubletree 18. The right-hand doubletree is capable of similar adjustment by means of perforations formed in the right-hand end of the  
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main equalizing bar or lever. The arrangement illustrated in Fig. 1 is also adapted for equalizing the draft between a larger number of draft-animals, and the doubletrees may be extended to form equalizing-bars and may be connected with doubletrees having singletrees. By such an arrangement the number of draft-animals may be doubled and the equalizing action of the device will remain the same.

It will be seen that the draft-equalizer is exceedingly simple and inexpensive in construction, that it possesses great strength and durability, and that it is adapted to equalize the draft between a number of draft-animals and is capable of preventing side draft.

What I claim is—

1. In a draft-equalizer, the combination of the draft-beam, the bracket secured to the draft-beam at the left-hand side thereof, the main equalizing bar or lever connected with the draft-beam and extending from opposite sides thereof, the front lever fulcrumed at its outer end to the left-hand arm of the main equalizing bar or lever, a doubletree provided with singletrees and connected with the inner end of the front lever, the rear lever fulcrumed on the bracket at a point between its ends, connections extending from the ends of the rear lever to points between the ends of the front lever and the main equalizing bar or lever, and a doubletree provided with sin-

gletrees and connected with the right-hand arm of the main equalizing bar or lever, substantially as described.

2. In a draft-equalizer, the combination of the draft-beam, the approximately V-shaped bracket secured to the draft-beam at the left-hand side thereof, the main equalizing bar or lever fulcrumed on the draft-beam and provided with a short arm projecting outward beyond the same, the front lever located above the main equalizing bar or lever and fulcrumed at its outer end to the short arm of the same, a doubletree provided with singletrees and connected with the inner end of the front lever, a rear lever adjustably mounted on the bracket at the back thereof, the left-hand link extending from the left-hand end of the rear lever and pivoted to the front lever at a point between the ends thereof, means for adjustably connecting the right-hand end of the rear lever with the main equalizing bar or lever, and a doubletree having singletrees and connected with the long arm of the equalizing bar or lever, substantially as described.

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

CHAS. C. HOLZWORTH.

Witnesses:

W. F. GARDNER,  
L. C. SIEGNER.