

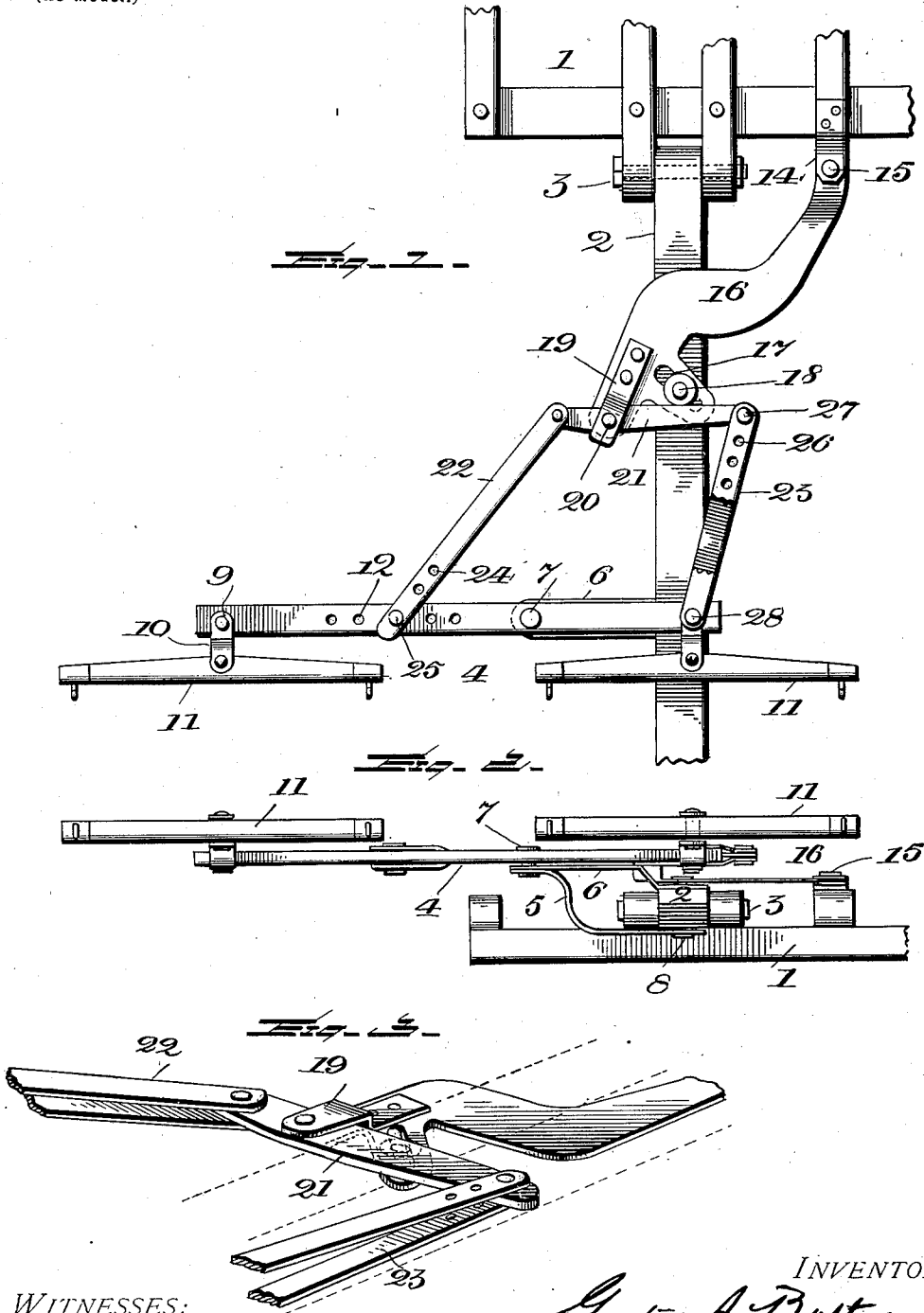
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Patented Dec. 4, 1900.

G. A. BELTZ.
DRAFT EQUALIZER.

(Application filed Apr. 18, 1900.)

(No Model.)



WITNESSES:
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UNITED STATES PATENT OFFICE.

GUSTAV A. BELTZ, OF RENVILLE, MINNESOTA.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 663,154, dated December 4, 1900.

Application filed April 19, 1900. Serial No. 13,450. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV ADOLPH BELTZ, a citizen of the United States of America, residing at Renville, in the county of Renville and State of Minnesota, have invented certain new and useful Improvements in Draft-Equalizers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in draft-equalizers or, as commonly known in the trade, "eveners," and has for its object to construct a device of this character readily adaptable for use either to right or left hand binders or the like. The invention aims, further, to construct a draft-equalizer in which simplicity, durability, cheapness, and efficiency are combined and in which provision is made for a four-horse evener, with three horses drawing from the inside of the machine and one from the outside, which has the tendency to take off more of the side draft than where there are two horses on each side of the pole or tongue.

My invention will be hereinafter specifically described and then particularly pointed out in the appended claims; and in describing the invention in detail reference will be had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference will be employed to designate like parts throughout the different views of the drawings, in which—

Figure 1 is a top plan view of my improved four-horse evener in position on the pole or tongue with the evener and pole or tongue connected to a binder or the like. Fig. 2 is an end view of the same; and Fig. 3 is a detail perspective view, partly broken away, of the equalizing-levers.

Referring now to the details of the drawings by reference-numerals, 1 indicates the front of the binder or like machine, only a portion of which has been shown for the purposes of illustrating my invention in connection therewith.

2 indicates the pole or tongue, which is or may be fastened to the binder or other machine or device to be drawn by the draft-bolt 3 or in any desired manner. The main equalizing bar or lever 4 is supported from this tongue or pole by brackets 5 and 6, the former

secured to the underneath face of the tongue or pole and the latter secured to the upper face thereof, both projecting outwardly to one side of the pole or tongue in the same direction and having registering apertures to receive the bolt or pin 7, which secures the main equalizing bar or lever thereto. The brackets 5 and 6 are of especial construction, the former being curved upwardly, with its end extending outwardly transversely to the pole on a horizontal plane, and the latter being bent angularly near the pole or tongue and then extended also on a horizontal plane, so as to lie upon the top of the lower bracket, as shown in Fig. 2 of the drawings. These brackets are secured to the pole or tongue by a common king bolt or pin 8. The main equalizing bar or lever 4 has attached thereto, near each end, by bolts or pins 9 the straps or links 10, or, if desired, ordinary clevises may be employed in this connection, and these links or straps carry the doubletrees 11, to which the singletrees (not shown) are connected in the ordinary and well-known manner. The main equalizing bar or lever is provided with a series of apertures 12 to permit, if desired, of the adjustment of said bar with one of the equalizing-links and also of the adjustment of the bar or lever in its relation to the tongue or pole.

To the binder or other machine or device with which the equalizer is used I attach at a point to one side of the connection of the pole or tongue with such device a pair of straps or like device 14, to which I connect, by means of the bolt or pin 15, the draft-lever 16, substantially angular in shape and which has what may be practically termed a "lateral" movement with respect to the tongue or pole to assist in the equalization of the draft. This is permitted by providing this draft-lever 16 with an oblong slot 17, in which operates the pin or bolt 18, secured in the tongue or pole. This draft-lever 16 has secured near its outer end a bracket or strap 19, between which and the draft-lever is pivotally held by the bolt or pin 20 a cross-bar 21, pivoted nearer to one end than to the other. To the end of this cross-bar closest to the pivotal point is pivotally connected the longer equalizing-link 22, and to its other end is connected in a like manner the shorter

of the equalizing-links 23. The equalizing-link 22 is provided at its outer end with a series of apertures 24, so as to have said end of the link adjustable with the main equalizing bar or lever 4, to which it is secured by the pin or bolt 25. The inner end of the link 23 is provided with a series of apertures 26, so as to be adjustable with the cross-bar 21, to which it is pivotally connected by the pin or bolt 27, the other end of this latter link being pivotally connected to the end of the main equalizing bar or lever closest to the pole or tongue by a pin or bolt 28, this pin or bolt serving the double purpose of securing this end of the link 23 in position and the doubletree to this end of the main bar.

I have herein shown both the link 22 and the link 23 composed of two members, as will be apparent by reference to Fig. 3 of the drawings; but it will be obvious that a single link on each side would be the equivalent of this construction.

The adjustment of the main equalizing bar or lever upon its supporting-braces will permit the adaptation of the device to a three-horse evener, and it will also be observed that the reversal of the parts—that is, the projecting of the main equalizing bar or lever from the opposite side of the pole or tongue to that as shown—would permit the use of the device for left-hand binders as now shown for right-hand machines.

It is thought the operation of the device as herein shown will be readily apparent without further detailed description of the same when taken in connection with the accompanying drawings, and it will be obvious that such changes as I have enumerated and like changes in details may be made without departing from the general spirit of my invention.

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

1. The combination with the pole, of the brackets connected to said pole and projecting to one side thereof, the main equalizing bar or lever pivotally mounted on said brackets, the draft-lever swiveled upon said pole with its inner end connected adjacent to the connected end of the pole, the pivoted cross-bar carried on the outer end of said draft-lever, and the equalizing-links pivotally connected to the ends of said cross-bar and to the main equalizing bar or lever, substantially as described.

2. The combination with the pole, of the draft-lever having its inner end connected adjacent to the connected end of the pole, the main equalizing bar or lever supported from said pole, the cross-bar pivotally supported in the outer end of said draft-bar, and the adjustable equalizing-links connecting said cross-bar with the equalizing bar or lever, substantially as described.

3. The combination with the pole, of the draft-lever swiveled upon said pole with its inner end connected adjacent to the connected end of the pole, the adjustable main equalizing bar or lever supported from said pole, the cross-bar pivoted in the outer end of the draft-lever, and the adjustable equalizing-links connected to the ends of said bar and to the main equalizing bar or lever, substantially as described.

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

GUSTAV A. BELTZ.

Witnesses:

JOHN KLOSTER,
B. F. HEINS.