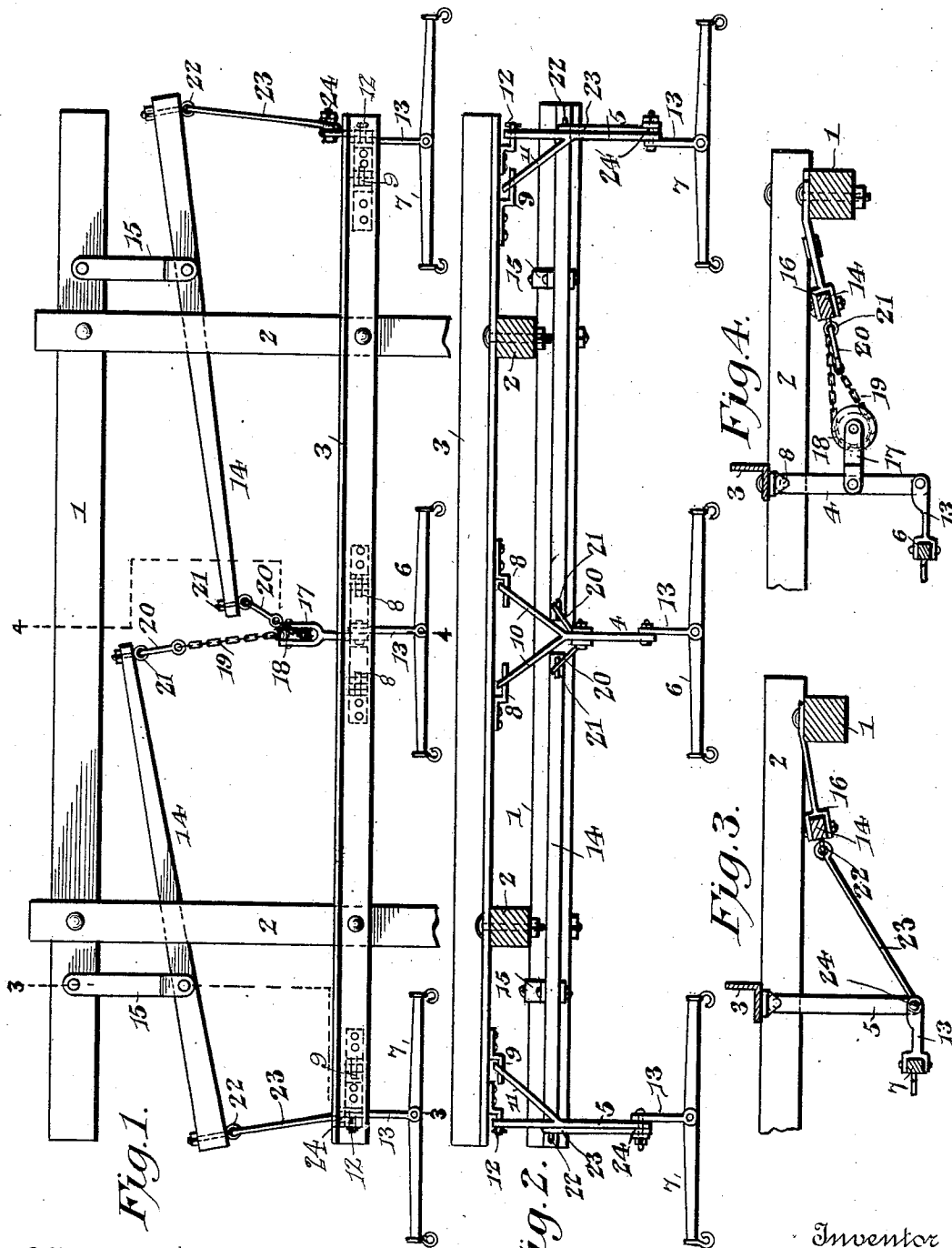


No. 835,657.

PATENTED NOV. 13, 1906.

S. E. BAILOR.
DRAFT EQUALIZER.
APPLICATION FILED JULY 13, 1905.



Witnesses
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UNITED STATES PATENT OFFICE.

SILAS E. BAILOR, OF TARKIO, MISSOURI.

DRAFT-EQUALIZER.

No. 835,657.

Specification of Letters Patent.

Patented Nov. 13, 1906.

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To all whom it may concern:

Be it known that I, SILAS E. BAILOR, a citizen of the United States, residing at Tarkio, in the county of Atchison and State of Missouri, 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 particularly for use on cultivators and adapted to equalize the draft between three horses.

With these and other objects in view 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, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a plan view of a draft-equalizer constructed in accordance with this invention. Fig. 2 is a front elevation of the same, the draft beams or tongues being in section. Fig. 3 is a vertical sectional view taken substantially on the line 3 3 of Fig. 1. Fig. 4 is a similar view taken substantially on the line 4 4 of Fig. 1.

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

1 designates an axletree forming a portion of the frame of a cultivator and secured to the rear portion of a pair of longitudinal draft beams or tongues 2, which are connected in advance of the axletree by means of a transverse bar 3, preferably constructed of flanged metal, such as angle-iron, as clearly shown in Figs. 3 and 4 of the drawings. The transverse bar, which extends laterally from the draft beams or tongues, forms a support from which is hung central and side upright oscillatory levers 4 and 5, fulcrumed at their upper ends and having their lower ends carrying swingletrees 6 and 7. The upright oscillatory levers are forked and are pivoted to the transverse bar by means of brackets or hangers 8 and 9, having hori-

zontal pivots or pintles, which are arranged in perforations of the levers 4 and 5. The sides 10 of the fork of the central lever 4 diverge and are inclined, as shown, and the horizontal pintles or pivots extend into perforations or openings of the sides 10 from the outer faces of the latter, whereby the central lever will be securely retained in position when the brackets or hangers 8 are secured to the transverse bar 3. The outer side of the fork of the outer levers is vertical and forms a continuation of and is arranged in the same plane as the lower portion of the outer levers. The inner side 11 of the fork of the outer levers is inclined and forms a brace. The horizontal pivots or pintles of the end brackets 9 are shown extending into the openings of the outer levers from the inner side of the same, and keys 12 or other suitable fastening devices may be provided for retaining the levers on the pivots or pintles; but the brackets at the outer levers may be arranged like those of the central bracket. Any other suitable means may be employed for hinging the upper ends of the levers to the supporting transverse bar. The whiffletrees 6 and 7 are pivotally connected with the lower ends of the upright levers by means of links 13, which may be of any desired construction.

The central and side levers 4 and 5 are connected with a pair of transversely-disposed approximately horizontally arranged equalizing bars or levers 14, connected between their ends by links 15 with an axletree, preferably at the upper face thereof. The links 15 are pivoted at their rear ends to the axletree by means of bolts or other suitable fastening devices, and their front ends are forked or bifurcated to receive the draft-equalizing bars or levers, to which they are pivoted. The inner arms of the draft-equalizing bars or levers, which are twice the length of the outer arms, are connected with the central upright lever, which is provided at an intermediate point with an inwardly-extending bracket 17, having a forked or bifurcated portion, in which is mounted a grooved pulley or wheel 18. The grooved pulley or wheel 18 receives a chain 19 or other suitable flexible connection, which has its terminals connected with the inner ends of the equalizing bars or levers by means of links 20. The links 20 consist of short rods provided at their terminals with eyes, the rear eyes being linked into eyebolts 21 and

the front eyes being linked into the ends of the chain 19. The eyebolts pierce the inner ends of the equalizing bars or levers and are provided with nuts, as shown. The outer ends of the equalizing bars or levers are provided with eyebolts 22 and are connected with the outer upright levers 5 by means of rods or links 23, which form stiff connections between the outer upright levers and the equalizing bars or levers. The links or rods 23 are provided at their rear end with eyes to receive the eyebolts 22, and the front ends of the said links or rods 23 are pivoted to the lower ends of the outer upright levers, as clearly indicated in Fig. 3 of the drawings.

The equalizing bars or levers are connected with the upright levers, and they are adapted to oscillate to equalize the draft between three draft-animals, and when the levers 14 oscillate the flexible connection 19 is adapted to move on the pulley, and the upright levers 4 and 5 are also adapted to oscillate to yield to the movement of the equalizing bars or levers.

The device is designed particularly for use on cultivators and, as shown, is adapted to equalize the draft between three horses or other draft-animals; but by substituting doubletrees for the swingletrees the device may be advantageously employed for equalizing the draft between six horses. The equalizer may, however, be advantageously employed on machines other than cultivators.

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

1. The combination with a frame, of a pair of transversely-disposed horizontally-swinging equalizing bars or levers fulcrumed at an

intermediate point on the said frame to form inner and outer arms, central and outer upright levers depending from the frame, means for connecting the outer upright levers with the outer arms of the horizontally-swinging equalizing bars or levers, a flexible connection slidable on the central upright lever and connected with the inner arms of the said equalizing bars or levers, and whiffletrees connected with the outer and central upright levers.

2. In a device of the class described, the combination with a frame, of a pair of transversely-disposed horizontally-swinging equalizing bars or levers fulcrumed at an intermediate point on the said frame to form inner and outer arms, upright central and outer levers depending from the frame, means for connecting the outer arms of the equalizing bars or levers with the lower ends of the outer upright levers, a flexible connection slidably connected with the central upright lever at a point between the ends thereof, said flexible connection having its terminals connected with the inner arms of the said equalizing bars or levers, and whiffletrees connected with the upright central and outer levers.

3. In a device of the class described, the combination of central and outer upright levers having forked upper portions forming braces, whiffletrees connected with the lower portions of the levers, and equalizing bars or levers connected with the said levers.

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

SILAS E. BAILOR.

Witnesses:

J. D. RANKIN,
J. W. HANNA.