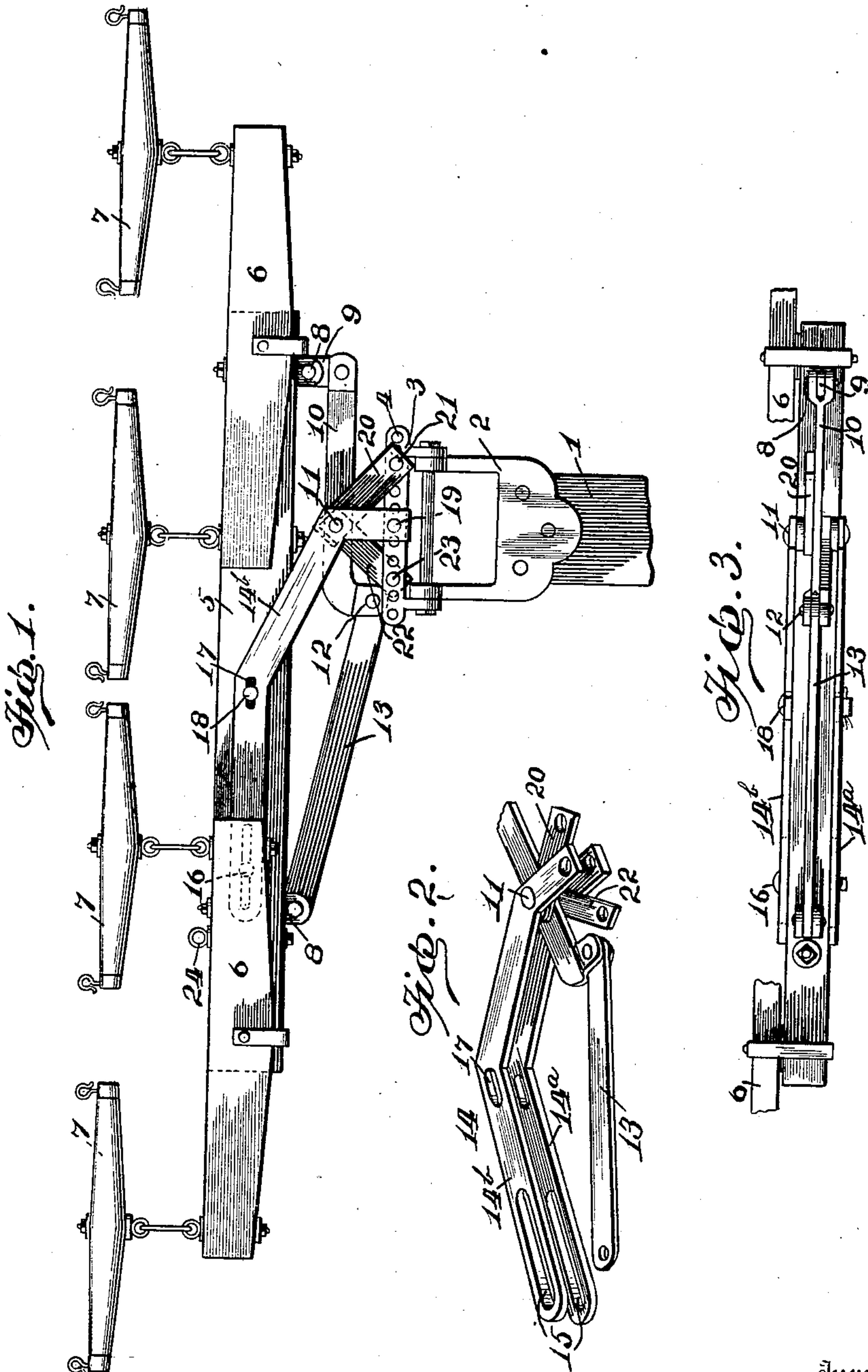


No. 742,747.

PATENTED OCT. 27, 1903.

F. J. SCHULZ.
DRAFT EVENER.
APPLICATION FILED DEC. 5, 1902.

NO MODEL.



Witnesses

A. B. Williams
Edgar M. Kitchen

By

Frank J. Schulz,
Mason, Fenwick & Lawrence,
Attorneys

Inventor

UNITED STATES PATENT OFFICE.

FRANK J. SCHULZ, OF PRATT, MINNESOTA.

DRAFT-EVENER.

SPECIFICATION forming part of Letters Patent No. 742,747, dated October 27, 1903.

Application filed December 5, 1902. Serial No. 133,961. (No model.)

To all whom it may concern:

Be it known that I, FRANK J. SCHULZ, a citizen of the United States, residing at Pratt, in the county of Steele and State of Minnesota, have invented certain new and useful Improvements in Draft-Eveners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to improvements in draft-eveners, and particularly to mechanism for evening the draft for various numbers of draft-animals, slight adjustments of parts being sufficient to compensate for unevenness of draft of various numbers of draft-animals.

The object in view is the equalization of draft between between three, four, or five draft-animals while employing a minimum number of parts for accomplishing the evening of the draft.

The present evener comprises certain novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 represents a view in top plan of a four-horse evener embodying the features of the present invention, the same being applied to any suitable draft-beam. Fig. 2 represents a detail perspective view of the equalization lever and arms detached. Fig. 3 represents an edge view of the evener, parts being broken away.

Referring to the drawings by numerals, 1 indicates any suitable plow or other draft-beam provided with any suitable adjustment and attaching device 2 for carrying a clevis 3, formed with a series of apertures 4. Spaced from the clevis 3 is any suitable whiffletree 5, carrying in the ordinary manner double-trees 6 6, which in turn carry swingle-trees 7 7. Projecting outwardly from the whiffletree 5 are brackets 8 8, one being comparatively near one end of the whiffletree and the other being somewhat farther away from the other end thereof. For the sake of convenience I shall call that end of the whiffletree 5 carrying the bracket 8 nearest the end the "near

end" and the other end the "off end," applying the same terms to the contiguous elements in order to designate their respective positions.

The near bracket 8 carries a pivoted link 9, which has its outer end pivoted to an evener-lever 10, said lever in turn being pivoted intermediate its length to a bolt or suitable rivet 11, the free end of the evener-lever 10 being curved so as to extend at approximately a right angle to the main body portion of the evener-lever, as at 12. The end 12 of evener-lever 10 is connected by the link 13 to the off bracket 8 and is pivoted to the modifying-lever 14, made up of bars 14^a and 14^b, which lever is arranged with one of the bars above and one bar below the whiffletree 5, each of said bars being slotted, as at 15, for engaging a laterally-projecting lug 16 on the whiffletree 5, said lug, as seen in Fig. 3, consisting simply of a bolt passed through said whiffletree. Each of the bars 14^a and 14^b are slotted, as at 17, for engaging the laterally-projecting lug 18, similar to lug 16, on the whiffletree 5. The bars 14^a and 14^b are parallel throughout their entire length and are exactly the same shape and size, so that whatever is said of one applies to the other. Each of the bars forming the modifying-lever 14 extends from the point of slot 17 at an angle from that portion thereof between said slot and slot 15 and is pivotally connected with the bolt 11, again turning at an angle at this point and projecting beyond the said pivot in a plane at approximately a right angle to that of the portion of the lever engaging the whiffletree 5. The last-mentioned projecting portions of the arms 14^a and 14^b extend to each side of clevis 3 and are secured by a suitable bolt 19, passed through the ends of said projections and through one of the apertures 4. A link 20 pivotally engages the bolt 21, passed therethrough and through one of the apertures 4. A second link 22 pivotally engages bolt 11 and extends at approximately a right angle to link 20 and has its free end connected with the clevis 3 by a suitable bolt 23, passed therethrough and through one of the apertures 4.

In operation any suitable number of draft-horses may be hitched to the properly-arranged draft devices connected with whiffletree 5, and the mechanism just described will even the draft, while but one of the horses need be positioned on one side of the draft-beam and the remaining horses may be positioned centrally and to the other side thereof.

In Fig. 1 I have disclosed a suitable connecting link or ring 24, to which a swingle-tree may be attached when it is desired to make a three-horse evener of the device disclosed in the drawings, the off doubletree 6 being removed.

When it is desired to make a five-horse evener, it is only necessary to remove the off doubletree 6, replace the same with a tree carrying three swingle-trees, and remove the bolt forming the lug 18, leaving the modifying-lever 14 free to pivot upon lug 16.

The modifying-lever 14 may be adjusted bodily through the engagement of lugs 16 and 18 with the slots 15 and 17, so that the bolt 19 may be caused to engage any one of the apertures 4 for a given distance beyond the middle of clevis 3. The fulcrum-point of the draft may thus be altered by adjusting lever 14, whereby the unevenness of the draft may be taken up, the said lever being adjusted in the direction of the off horse when the number of draft-horses is increased and being adjusted in the opposite direction when the number of horses is decreased.

The evener proper, which consists, primarily, of the lever 10 and the links 9 and 13, connecting its ends with the whiffletree 5, is modified in its action by the adjustment of the lever 14. If it is desired to transfer the line of draft to one side of the beam 1 a short distance, the pin 16 is removed from the slots 15, leaving the outer ends of the members of the lever 14 free, while the pin 18 engages the lever 14, so that the said lever 14 can hold the whiffletree, with the pin 18 as a fulcrum, to one side of beam 4. Of course with this action of the evener mechanism the brace links or bars 20 and 22 are released from their engagement with the clevis 3. It will of course be seen that the leverage at one end of the lever 14 is greater than at the other end and that a team of, say, two horses could be attached to link 9, while a team of, say, three horses could be attached to the link 13, with an even draft upon all the horses, while the center of draft would be regulated and held a proper distance to one side of the beam 1 by the lever 14. If it is desired to still further force the line of draft to one side of the beam 1, the pin or bolt 18 can be removed and the pin or bolt 16 inserted, so that the whiffletree would articulate upon the pin 16 and be held to one side by the said lever 14. The action of the evener 10, with its links 9 and 13, would still be as

before, but somewhat modified in its action by the adjustment of the lever 14. If it is desired to hitch the same number of horses at each end of the swingle-tree—say two at each end, as shown in Fig. 1 of the drawings—the lever 14 could be made rigid by inserting both of the pins 16 and 18 and by bracing the lever 14 in a stiffened or fixed position by the brace-bars 20 and 22. In this way the evener mechanism 10, with its links 9 and 13, will be locked against action, and the whiffletree 5 will be rigidly held in position by the lever 14. It will thus be apparent that the action of the evener-lever 10 can be modified so as to effect this action by the lever 14 or can be checked against action entirely thereby. It will be further seen that the lever 14 not only controls the action of the evener-lever 10, but can be used to vary the line of draft with respect to the beam 1.

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

1. An evener comprising an evener-lever, means connecting the same with a draft mechanism and a modifying-lever adjustably connecting the evener-lever with the said draft mechanism.
2. An evener, comprising an evener-lever, means for connecting its ends with a draft mechanism, and modifying means connecting the fulcrum of the evener-lever with the fulcrum of the draft mechanism, substantially as described.
3. An evener, comprising an evener-lever, means for connecting the same with a whiffletree and a modifying-lever connecting the fulcrum of the evener-lever with the clevis of the article drawn and controlling the position of the line of draft with respect to the said article, substantially as described.
4. An evener, comprising an evener-lever, the fulcrum-point of said lever being nearer one end thereof than the other, links connecting the ends of said lever with the whiffletree, and the modifying-lever connected with the fulcrum of the evener-lever, one end of said modifying-lever being adjustably connected with the article drawn while the other end of said lever is adjustably connected with the said whiffletree, substantially as described.
5. An evener mechanism, comprising an evener-lever, means connecting the ends thereof with a whiffletree, a controlling-lever connected with the fulcrum of the evener-lever and provided with an adjustable connection with the article drawn, means adjustably connecting the other ends of said lever with the whiffletree for varying the action of the said whiffletree or holding it rigid, substantially as described.
6. An evener mechanism, comprising an evener-lever, links connecting the short and long ends thereof with a whiffletree, a modi-

5 fying-lever formed of upper and lower members embracing the evener-lever and the whiffletree, the members of the said modifying-lever being provided with slots at their ends and at intermediate points, pins for engaging said slots and the evener at different points, and bars or plates for holding the modifying-lever in different relations to the

article to be hauled, substantially as described.

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

FRANK J. SCHULZ.

Witnesses:

B. F. HOOD,
MARIETTA SOPER.