No. 764,736. PATENTED JULY 12, 1904.

A. N. LAWRENCE.

DRAFT EQUALIZER.

APPLICATION FILED DEC. 1, 1903.

NO MODEL.

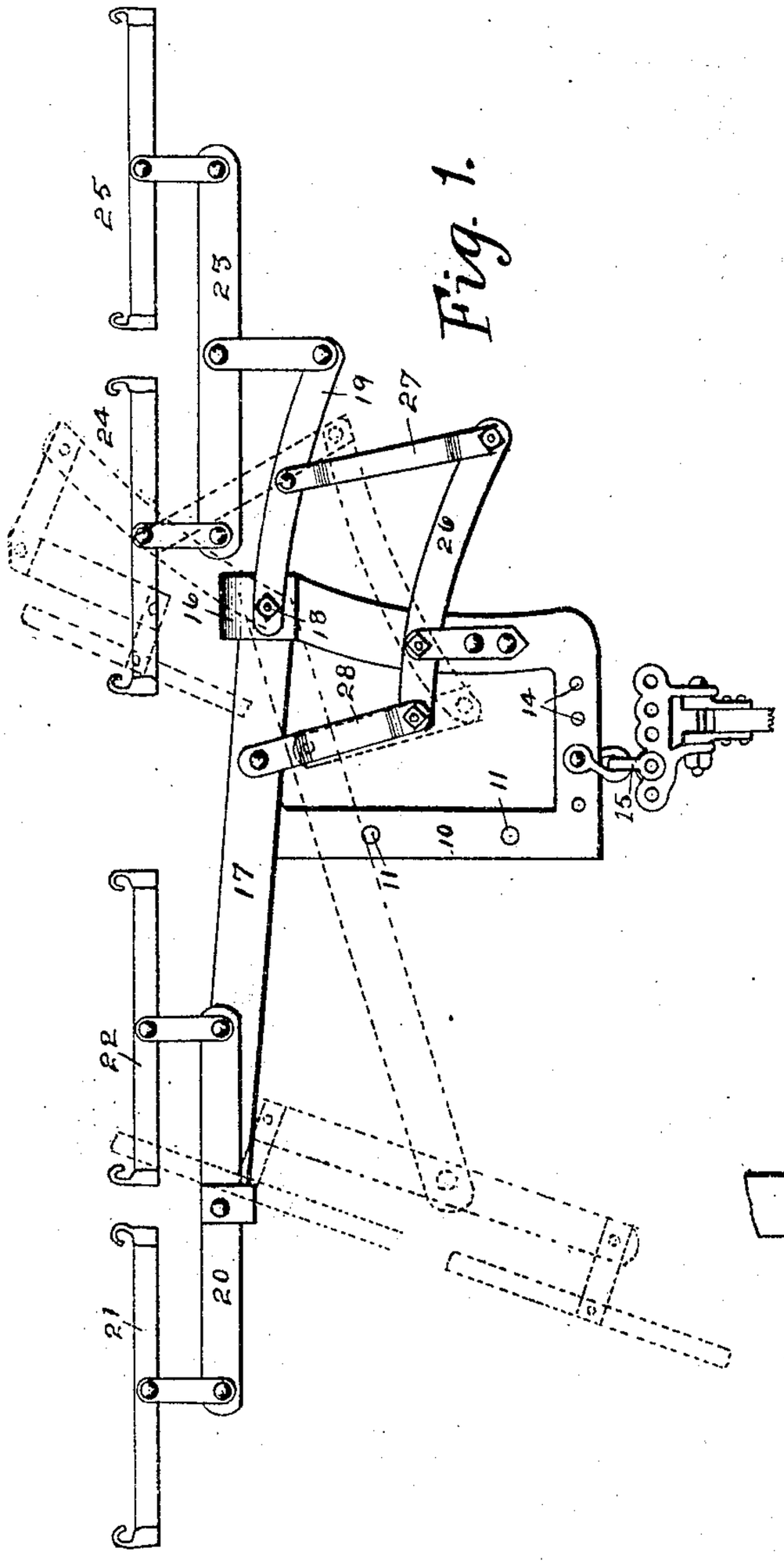

Fig. 1.

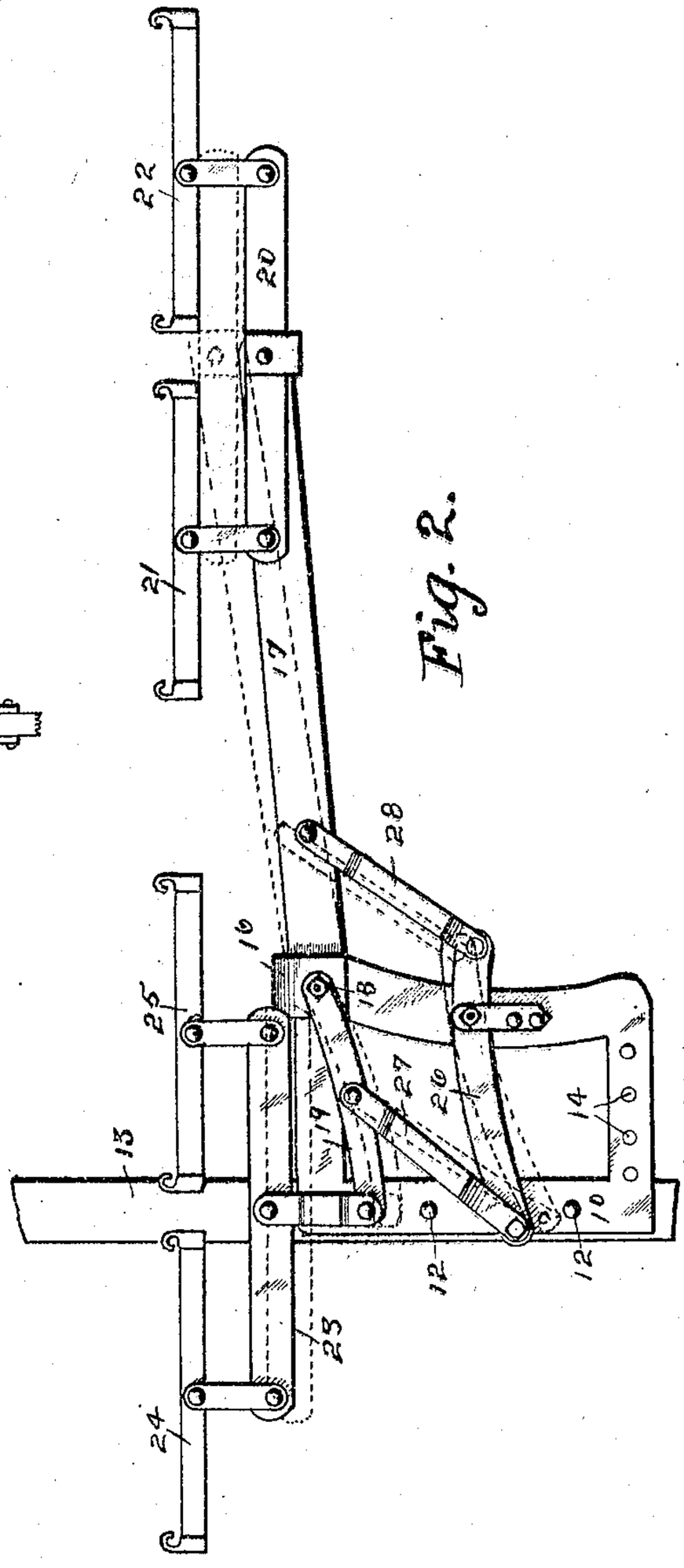

Fig. 2.

Witnesses

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No. 764,736. Patented July 12, 1904.

UNITED STATES PATENT OFFICE.

ALBERT N. LAWRENCE, OF CHELSEA, IOWA.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 764,736, dated July 12, 1904.

Application filed December 1, 1903. Serial No. 183,417. (No model.)

To all whom it may concern:

Be it known that I, ALBERT N. LAWRENCE, a citizen of the United States, residing at Chelsea, in the county of Powsheik and State of Iowa, have invented certain new and useful Improvements in Draft-Equalizers, of which the following is a specification.

The objects of my invention are to provide a draft-equalizer of simple, durable, and inexpensive construction that may be readily, quickly, and easily adapted for use in connection with tongued vehicles or in connection with farm implements without tongues.

A further object is to provide a device of this class which when used in connection with vehicles without tongues will be so arranged that the draft-animals may turn around in a comparatively short space, so that when the equalizer is used in connection with plows or the like the plow will run comparatively close to the end of a field or a fence-corner.

My invention consists in certain details in the construction, arrangement, and combination of the various parts of the device whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 shows a plan view of the complete device connected with the end of a plow-beam. The dotted lines indicate the positions that the parts assume when the draft-animals are turning around. Fig. 2 shows a similar view of the device arranged as required for use in connection with a vehicle-tongue and shown in position attached to the tongue. The dotted lines indicate the position of the parts when the long doubletree is slightly advanced.

Referring to the accompanying drawings, I have used the reference-numeral 10 to indicate the bracket. This bracket is preferably made of metal and is substantially rectangular in outline. On one side are the openings 11, through which bolts 12 may be passed to attach the bracket to a vehicle-tongue 13. On one of the sides of the bracket are the openings 14, by which the bracket may be attached to a clevis 15, and on one corner of the bracket is a metal loop 16. This metal loop is designed to receive one end of the long doubletree-lever 17, and this lever is pivotally supported in the loop 16 by the bolt 18. The said bolt 18 also pivotally supports the short doubletree-lever 19, which extends in an opposite direction from the long doubletree-lever. Assuming that the device is arranged as required for use in connection with a plow or implement without a tongue, then the long lever 17 is extended in a direction from the pivot 18 over the part of the bracket designed to be attached to a tongue, and the lever 19 is extended in an opposite direction. Attached to the lever 17 is a doubletree 20, to which the two swingletrees 21 and 22 are connected in the ordinary way, and attached to the outer end of the lever 19 is a doubletree 23, having the two swingletrees 24 and 25 attached thereto, also in the ordinary way.

I provide for equalizing the draft as follows: Pivoted to the bracket 10 in the rear of the bolt 18 is an equalizing-lever 26. About two-thirds of its length projects on the side toward the lever 19 and one-third on the side toward the long lever 17, and the ends of the equalizing-lever 26 are pivotally attached, first, to the short lever 19 by the link 27 and, second, to the long lever 17 by the link 28.

In practical use and assuming the parts to be arranged as shown in Fig. 1 it will be seen that when an equal amount of power is applied to both doubletrees the difference in the length of the levers 17 and 19 will be made up by the lever 26 being pivoted with its long end toward the side of the short lever 19, so that the draft will be exactly equalized, and when it is desired to turn the draft-animals are guided in the proper direction and the ones on the long lever 17 will be drawn rearwardly to such an extent as to be out of the way for the draft-animals attached to the short lever, and the latter draft-animals may then turn around in a space a little more than the length of the draft-animals—that is to say, the team may be driven to a point with their heads close to a fence or wall, and then the entire team may be turned around in this short space.

In adapting the device for use in connection with tongued vehicles the operator first removes the bolt 18 and then turns the levers 17 and 19 end for end and then places the long

lever 17 in the loop 16 in exactly the opposite direction in which the former stood, and the short lever 19 will also stand in an opposite direction. Then the bolt 18 is again passed through these levers, and finally the bolts 12 are passed through the bracket 10 into the tongue. In this position the draft-animals connected with the short lever will stand on opposite sides of the tongue, while the draft-animals connected to the long lever will stand on one side of the tongue, so that there will be three draft-animals on one side of the tongue and one on the other. In use with this form of the device the draft will be equalized by the lever 26 in the same way as before described.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States therefor, is—

1. An improved draft-equalizer, comprising a bracket, a long doubletree-lever detachably pivoted to the bracket and a short doubletree-lever detachably pivoted to the bracket, a doubletree connected with each lever, an equalizing-lever pivoted to the bracket, and links connecting the ends of the equalizing-lever with the long and short levers.

2. An improved draft-equalizer, comprising in combination a substantially rectangular bracket having openings at one side for attaching it to a vehicle-tongue and having openings at its rear for attaching it to a clevis and having a loop at its forward end, a long and a short doubletree-lever pivotally and detachably connected with the said loop, an equalizing-lever pivoted to the bracket in the rear of the loop and links connecting the ends of the equalizing-lever with the long and short levers.

3. An improved draft-equalizer, comprising in combination a substantially rectangular bracket having a loop at one of its forward corners, a long doubletree-lever pivotally and reversibly mounted in the loop, a short doubletree-lever pivotally and reversibly connected with the loop, an equalizing-lever pivoted to the bracket in the rear of the loop, and links connecting the ends of the equalizing-lever with the long and short levers, substantially as and for the purposes stated.

ALBERT N. LAWRENCE.

Witnesses:
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