

No. 644,486.

Patented Feb. 27, 1900.

W. M. WUNDERLICH.
DRAFT EQUALIZER.

(Application filed Jan. 9, 1900.)

(No Model.)

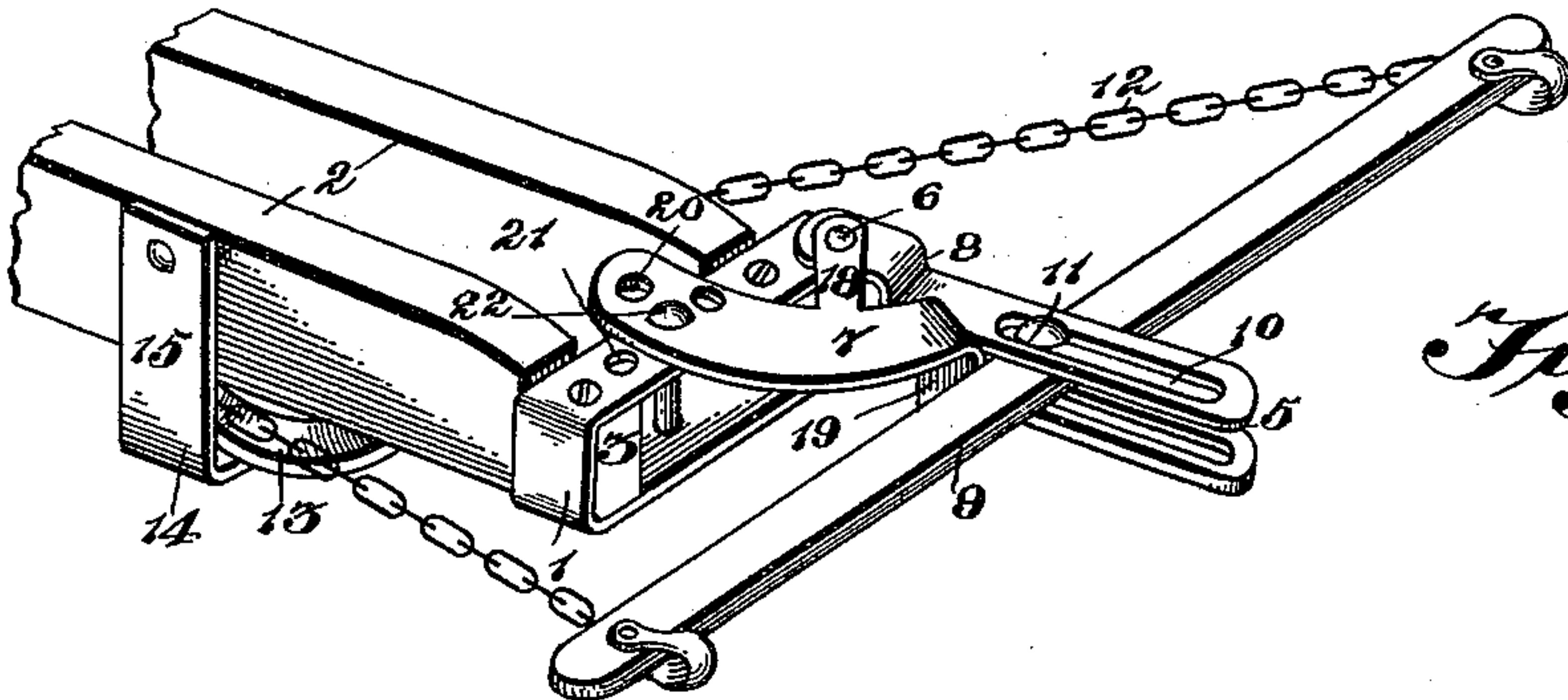


Fig 1.

Fig 2.

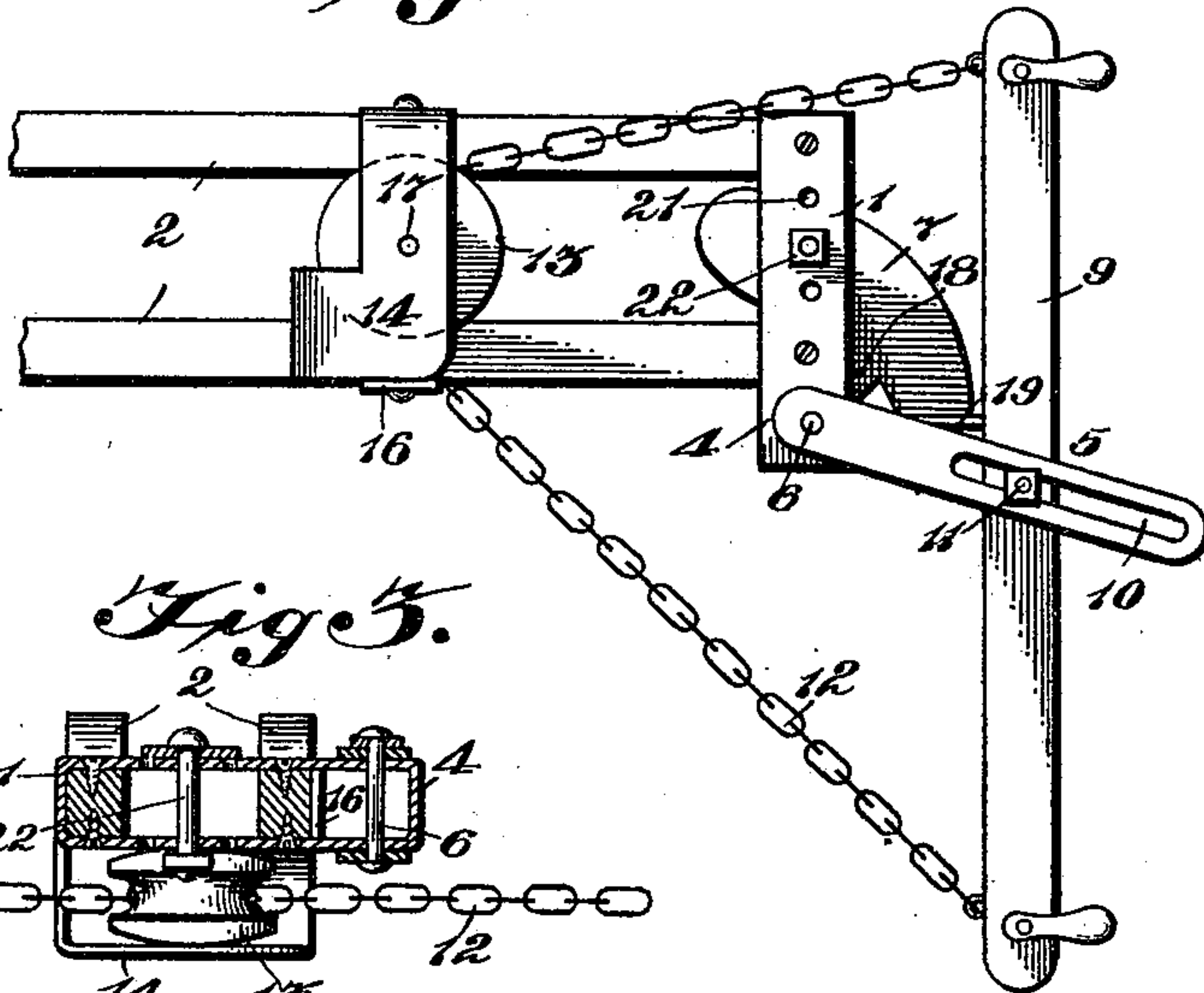


Fig 3.

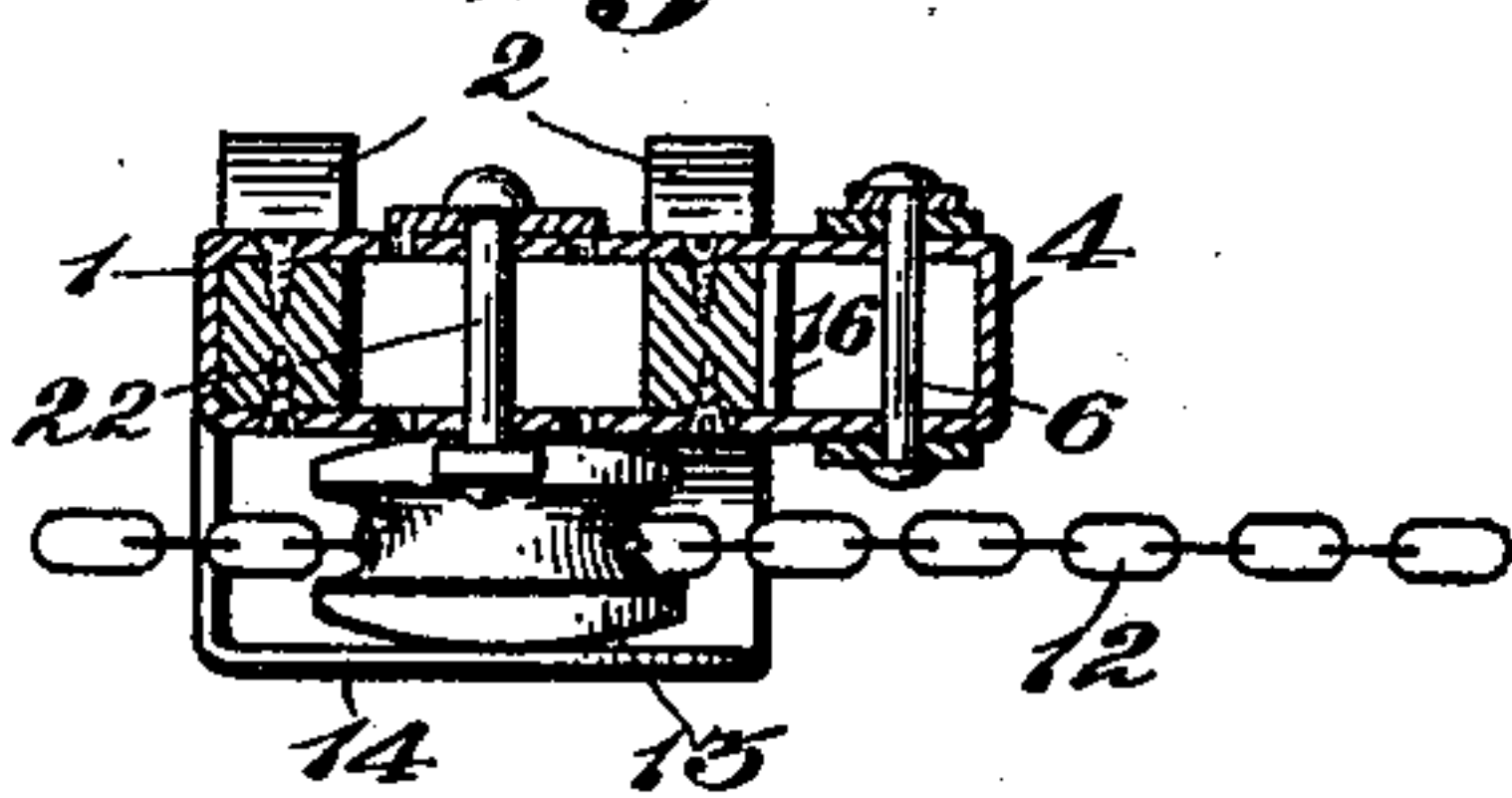
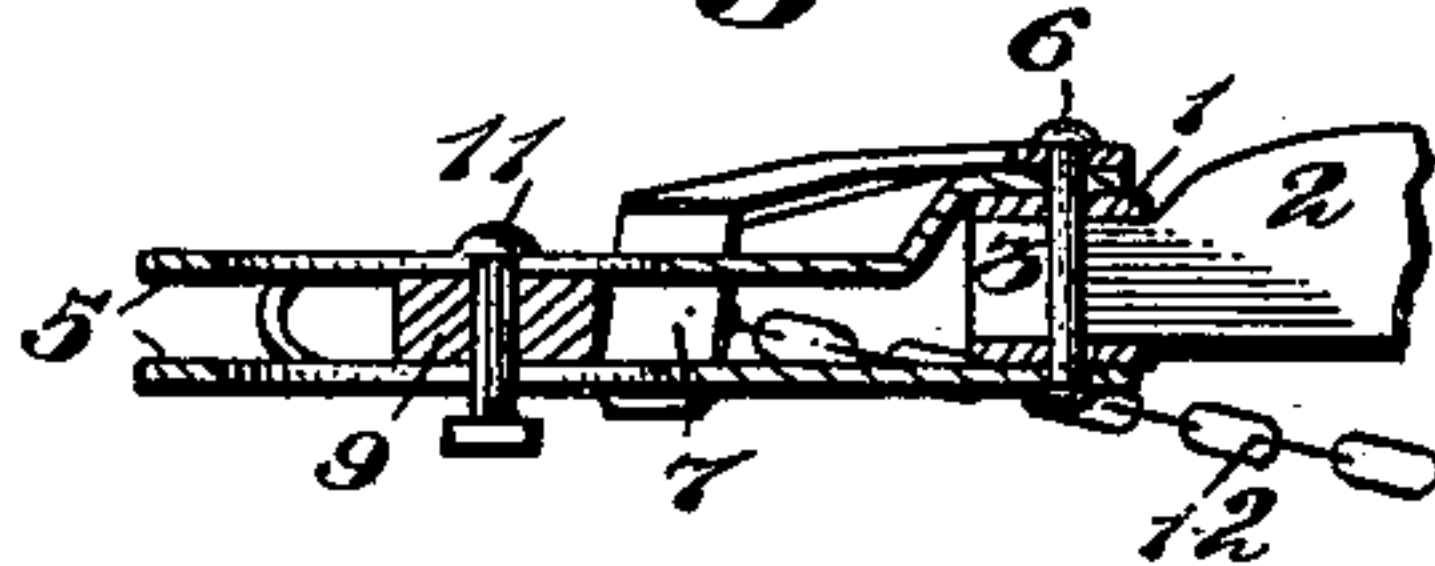


Fig 4.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM M. WUNDERLICH, OF GILTNER, NEBRASKA.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 644,486, dated February 27, 1900.

Application filed January 9, 1900. Serial No. 860. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. WUNDERLICH, a citizen of the United States, residing at Giltner, in the county of Hamilton 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.

One object of the present invention is to improve the construction of draft-equalizers and to provide a simple and comparatively-inexpensive device designed to be applied to gang-plows and other agricultural implements and capable of ready adjustment to prevent side draft and adapted to permit the draft-horses to pull straight in the traces.

A further object of the invention is to enable the draft-animals to be hitched close to a plow without adding weight to the same and to provide a structure of great strength and durability which will not interfere with the turning of the plow.

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.

In the drawings, Figure 1 is a perspective view of a draft-equalizer constructed in accordance with this invention. Fig. 2 is a reverse plan view of the same. Fig. 3 is a transverse sectional view on line 3 3 of Fig. 2. Fig. 4 is a detail sectional view taken longitudinally of the pivoted support of the main whiffletree.

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

1 designates an oblong loop or frame disposed transversely of the front ends of a pair of longitudinal plow-beams 2 and receiving and secured to the front ends 3 of such beams, which are reduced for the reception of the loop or frame, as clearly illustrated in Fig. 1 of the accompanying drawings. The loop or frame is extended laterally from one of the beams 2, and pivoted to the extended end or portion 4 is a guide 5, composed of upper and lower bars having their inner ends perforated for the reception of the pivot-bolt 6, which also serves as a pivot for an adjustable stop 7.

The upper bar of the pivoted guide 5 is angularly bent at 8 adjacent to the transverse loop or frame to reduce the space between the upper and lower bars of the guide 5, which receives a main whiffletree-bar 9, and the outer portions of the upper and lower bars of the guide are provided with longitudinal slots 10 for the reception of a central pivot 11 of the main whiffletree. The longitudinal slots of the guide throw the draft upon a chain 12 or other suitable flexible connection, having its terminals connected with the main whiffletree bar, at the ends thereof, and the said chain is extended around a grooved pulley 13. The grooved pulley 13, which is arranged beneath the draft-beams 2, is mounted in a bracket 14, open at the front and one side and provided with upwardly-extending arms 15 and 16, which are secured to the outer faces of the draft-beams. The bracket, which may be of any desired construction, is provided at its top and bottom with registering perforations for the reception of a pivot 17, upon which the pulley is mounted. When there is a strain upon the main whiffletree, the pivot 11 is adapted to play in the slots 10 and the draft is thrown upon the chain and the chain-pulley, the guide 5 and the adjacent parts being relieved of such strain by the slots 10.

The guide 5 is adapted to swing laterally of the draft-beams on its pivot 6, and it is held at the desired adjustment by the stop 7, which is located at the inner side of the guide. The pivoted guide is adapted to swing outward from the stop to facilitate turning the plow or other implement or machine to which the device may be applied, and the forward draft on the main whiffletree will return the guide to its normal position as soon as the horses or other draft-animals move forward. The adjustable stop consists of a curved body portion and a radially-arranged arm 18, mounted on the pivot 6 and located at a point between the ends of the body portion. The outer end of the body portion is provided with a depending arm 19 for engaging the inner edges of the upper and lower bars of the stop 5, and the inner end of said body portion is provided with a series of perforations 20, adapted to register with perforations 21 of the transverse frame or loop. The inner end of the body portion of the stop 7 is secured at the desired

adjustment by a bolt 22 or other suitable fastening device, which passes through the perforations 20 and 21. The ends of the main whiffletree are designed to be connected with
 5 doubletrees, and by shifting the guide the draft-animals may be arranged in the desired position with relation to the plow or other implement, and they will be caused to pull straight in the traces by such guide.

10 The device affords a short hitch or connection between the draft-animals and the plow and does not add any weight to the latter.

The device, while being designed especially for use in connection with gang-plows, may
 15 be advantageously employed on other agricultural machines.

What is claimed is—

1. A device of the class described comprising a pivoted guide arranged to swing later-
 20 ally of a draft beam or frame, a main whiffletree mounted on the guide, and an adjustable stop engaging the guide at the inner side thereof and holding the same against inward movement, said guide being adapted to swing
 25 outward beyond the stop, substantially as described.

2. A device of the class described comprising a pivoted guide designed to be connected with a draft frame or beam and provided with
 30 a slot or way, a main whiffletree mounted on the guide and engaging the slot or way, and an adjustable stop engaging the inner side of the guide, the latter being adapted to swing outward beyond the stop, substantially as de-
 35 scribed.

3. A device of the class described comprising a pivoted guide designed to be mounted on a frame or draft-beam, a main whiffletree
 40 slidingly mounted on the guide, an adjustable stop engaging the guide at the inner side thereof and holding the same against inward movement, said guide being adapted to swing outward freely, and flexible connections be-
 45 tween the main whiffletree and the draft beam or frame, whereby the guide is relieved of strain, substantially as described.

4. A device of the class described comprising a pivoted guide, a main whiffletree slid-
 ingly mounted on the guide, a pulley designed to be mounted on a draft beam or frame, a
 50 flexible connection passing around the pulley and attached to the ends of the main whiffletree, and means for securing the guide at the desired adjustment, substantially as de-
 55 scribed.

5. A device of the class described comprising a guide, a main whiffletree slidingly
 mounted on the guide, means for connecting the whiffletree with the draft beam or frame,
 an adjustable stop comprising a curved body
 60 provided at one end with an arm for engaging the guide, and having a radially-arranged arm located between its ends and mounted on the pivot of the guide, and a fastening de-
 65 vice engaging the inner end of the body portion of the stop, substantially as described.

6. A device of the class described comprising a transverse loop or frame designed to be
 mounted on a draft beam or beams, and provided with perforations, a guide composed of
 70 a pair of bars pivoted at their inner ends to the transverse loop and provided with longitudinal slots, a main whiffletree mounted on the guide and provided with a pivot arranged
 75 in the slots thereof, a pulley, a flexible connection passing around the pulley and attached to the whiffletree, an adjustable stop consisting of a body portion provided at one
 80 end with an arm for engaging the guide, and an arm extending from the body portion between the ends thereof and mounted on the pivot of the guide, and a fastening device en-
 85 gaging perforations of the slot and the transverse loop, 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.

WILLIAM M. WUNDERLICH.

Witnesses:

WM. GLOVER,
 CHAS. O. GLOVER.