

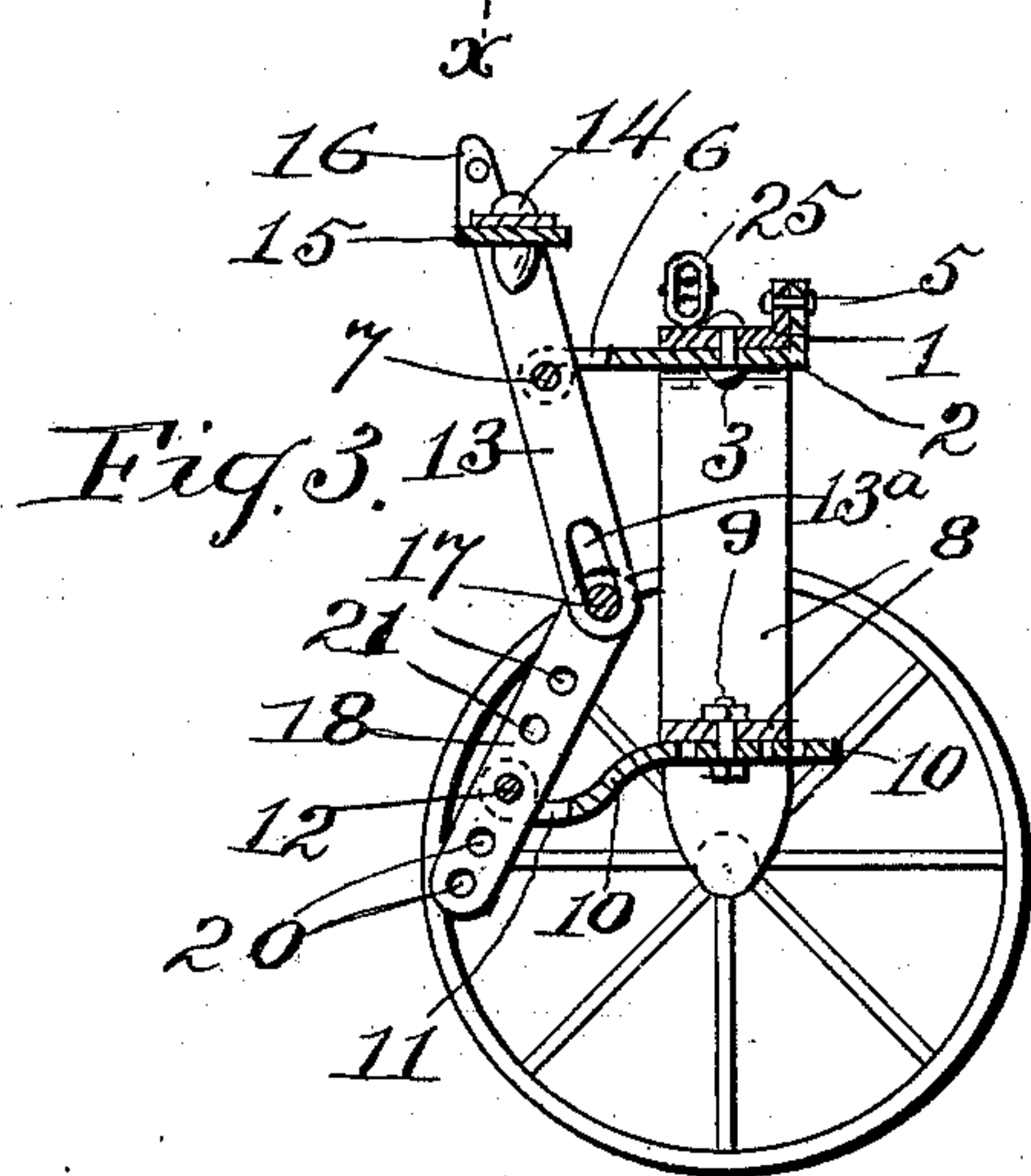
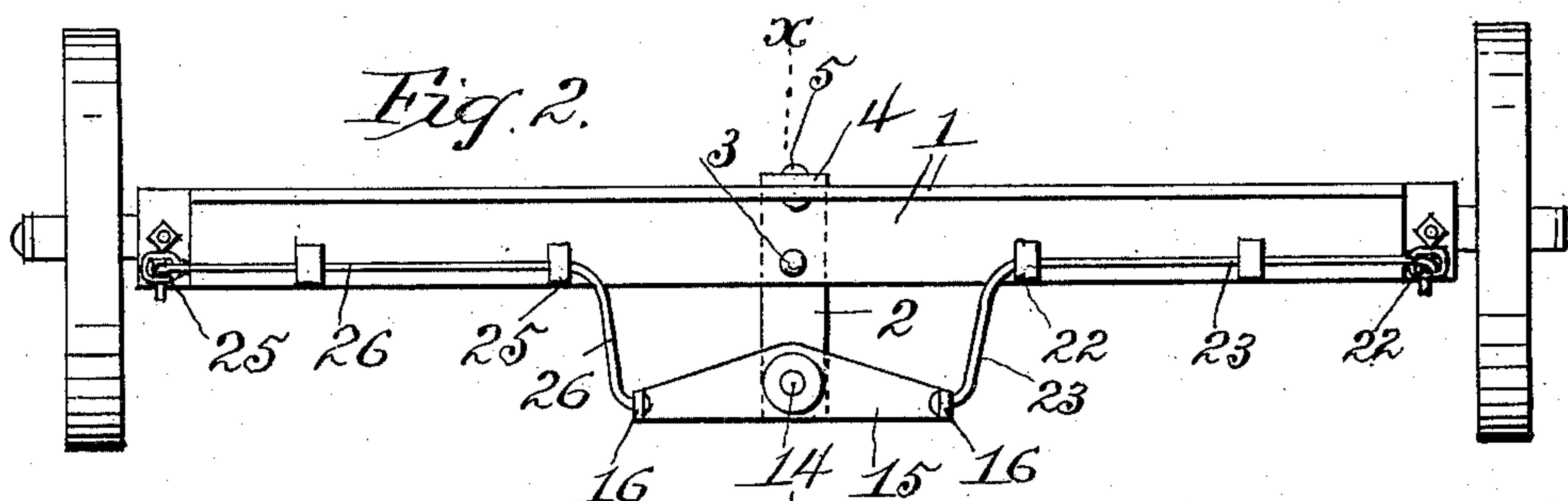
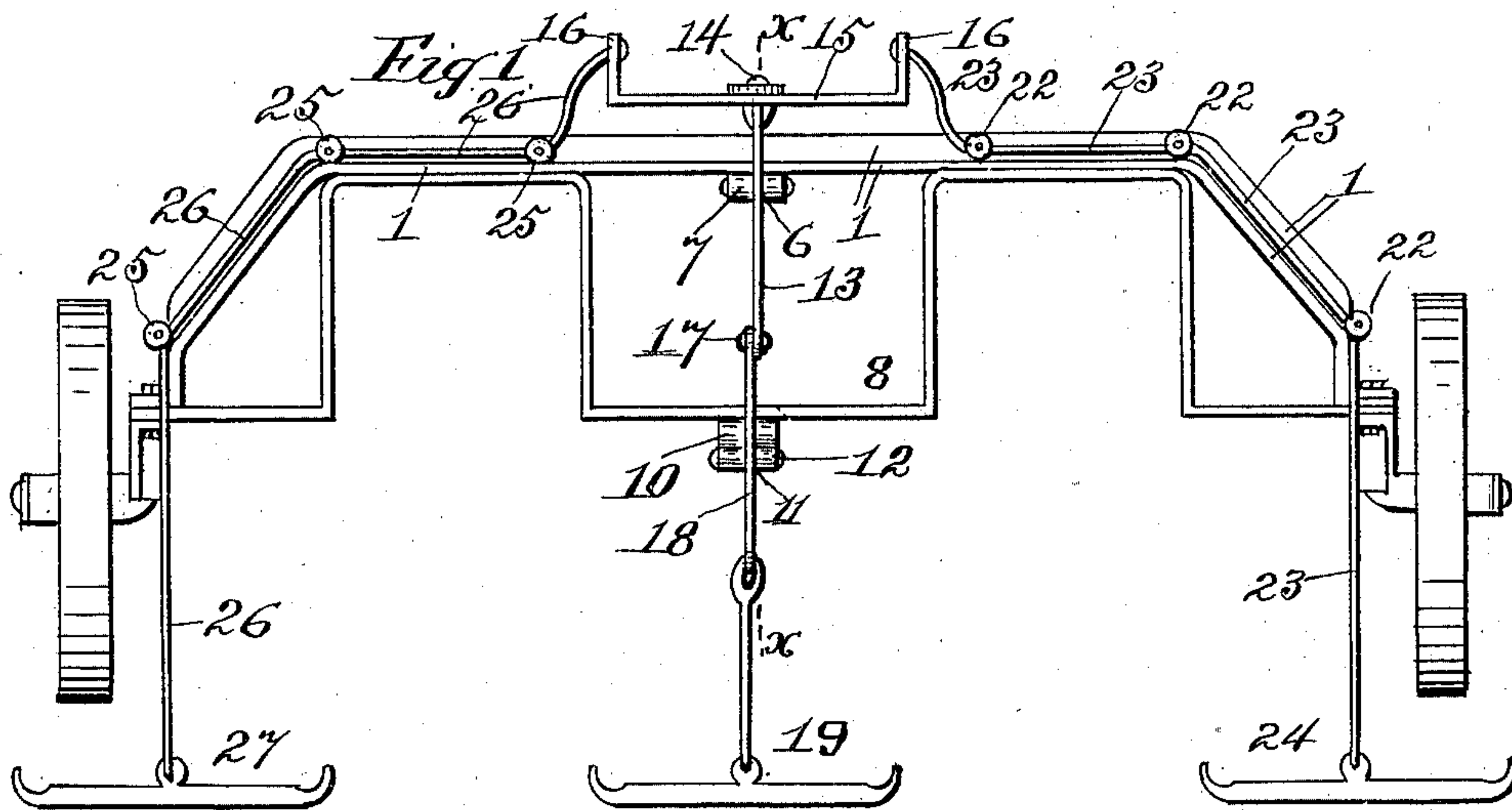
No. 653,054.

Patented July 3, 1900.

M. & C. ZÖLLNER.
DRAFT EQUALIZER.

(Application filed Jan. 16, 1900.)

(No Model.)



Witnesses:
W. A. Smith.
Michael J. Madigan.

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UNITED STATES PATENT OFFICE.

MATTHES ZÖLLNER AND CARL ZÖLLNER, OF FATE, TEXAS.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 653,054, dated July 3, 1900.

Original application filed September 30, 1899, Serial No. 732,189. Divided and this application filed January 16, 1900. Serial No. 1,664. (No model.)

To all whom it may concern:

Be it known that we, MATTHES ZÖLLNER and CARL ZÖLLNER, citizens of the United States, residing at Fate, in the county of Rockwall and State of Texas, have invented certain new and useful Improvements in Draft-Equalizers, of which the following is a specification.

This invention relates to draft-equalizers, and particularly to a draft-equalizer specially adapted for cultivators and which is disclosed in our application, Serial No. 732,189, filed on the 30th day of September, 1899, of which this application is a division.

The object of the invention is to provide a simple, convenient, and inexpensive device for equalizing the draft of wheeled cultivators.

The invention consists in the novel construction and arrangement of parts.

In the accompanying drawings, forming part of this application, Figure 1 is a front view of the equalizer applied to a cultivator-frame, with the singletrees hanging therefrom. Fig. 2 is a top view. Fig. 3 is a section on the line *x x*, Fig. 2.

The same numeral references denote the same parts in the several views of the drawings.

It is essential that in wheeled cultivators the draft be well equalized, so that the machine may be drawn evenly and the plows, seeders, or other implements may not be pulled or thrown from the rows or furrows. To this end we provide the top of the frame 1 centrally with an arm 2, secured at 3 to the frame 1, its rear end having a turned-up portion 4, secured to the said frame at 5, and its front end having a slot 6 and terminating in a pivot-bearing 7. To the depending portion 8 of the frame is adjustably secured by a bolt 9 a plate 10, its front end being depressed and having a slot 11 and terminating in pivot-bearing 12. A lever 13 is pivoted in the bearing 7 to work in the slot 6. One end of the said lever has a pivot 14, by means of which a yoke 15 is pivoted or swiveled to turn on the said lever end at right angles thereto, said yoke having ends terminating in vertically-disposed integral ears 16. To the other end of the lever 13, through an elongation 13^a thereof, is pivoted at 17 one end of a lever 18, the latter being pivoted in the bearing 12 to work

in the slot 11 and having connected to its other end a singletree 19. This lever is adjustable in the said slot by means of the holes 20, and it may be adjusted on the lever 13 by means of the holes 21, so as to make the levers 13 and 18 stand in vertical position in case of only the side singletrees 24 and 27 being used.

The frame 1 is provided with a series of eyes or guide-pulleys 22 on one side, through which is operated a draft rope or cable 23, having one end attached to one of the ears 16 and its other end connected to a singletree 24. The other side of the frame is provided with similar eyes or guide-pulleys 25, through which is operated a draft cable or rope 26, having one end secured to the other of said ears 16 and its other end connected to a singletree 27, the pulleys being swiveled to the frame, so as to turn with the draft of the cable.

The operation of the device is as follows: The pivot 17 will permit the levers 13 and 18 to turn in their respective bearings according to the draft applied to the several singletrees—that is, when the draft is made through all of the singletrees with a greater draft on the two side singletrees the levers will assume a vertical position until the draft is increased on the middle singletree, which will place the levers at an angle to each other and the pivot 17 to the rear of the said vertical position, thereby equalizing the draft on all of the singletrees. If there be no draft attachment to the middle singletree and all the draft being on the side singletrees, the levers will be positioned at an angle to each other with the pivot 17 forward of the said vertical position, thus equalizing the draft. The said respective pivot-bearings of the levers being between the draft ends of the levers and the pivot 17 it is obvious that the above operation will follow.

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

1. A draft-equalizer comprising a pair of levers pivoted together, each lever having another separate pivot, a yoke swiveled to one of the levers, a suitable cable or rope attached to each end of the yoke and carrying singletrees, and a singletree connected to the other lever.

2. The combination, with a cultivator or similar frame, a slotted pivot-bearing arm secured to the top of the frame, and a slotted pivot-bearing plate secured to the bottom of the said frame, of the levers pivoted together one in each of the said slots, a singletree connected to one of the said levers, a yoke pivoted to the other of the said levers and having vertically-disposed ears to which is attached a cable or rope carrying a singletree.

3. The combination of the levers pivoted together, each of said levers being further pivoted separately, and a yoke pivoted or swiveled to the end of one of the levers to turn at right angles to the motion of the levers.

4. The combination, with the cultivator-frame having a series of guide-pulleys, of the levers pivoted together and to the said frame, a yoke swiveled to one of the levers, a cable attached to each end of the yoke and extending through the said pulleys and having singletrees, and a singletree connected to the other of the said levers, as set forth.

In witness whereof we hereunto set our hands in the presence of two witnesses.

MATTHES ZÖLLNER.

CARL ZÖLLNER.

Witnesses:

W. R. DAVIS,

J. A. GIBSON.