

(No Model.)

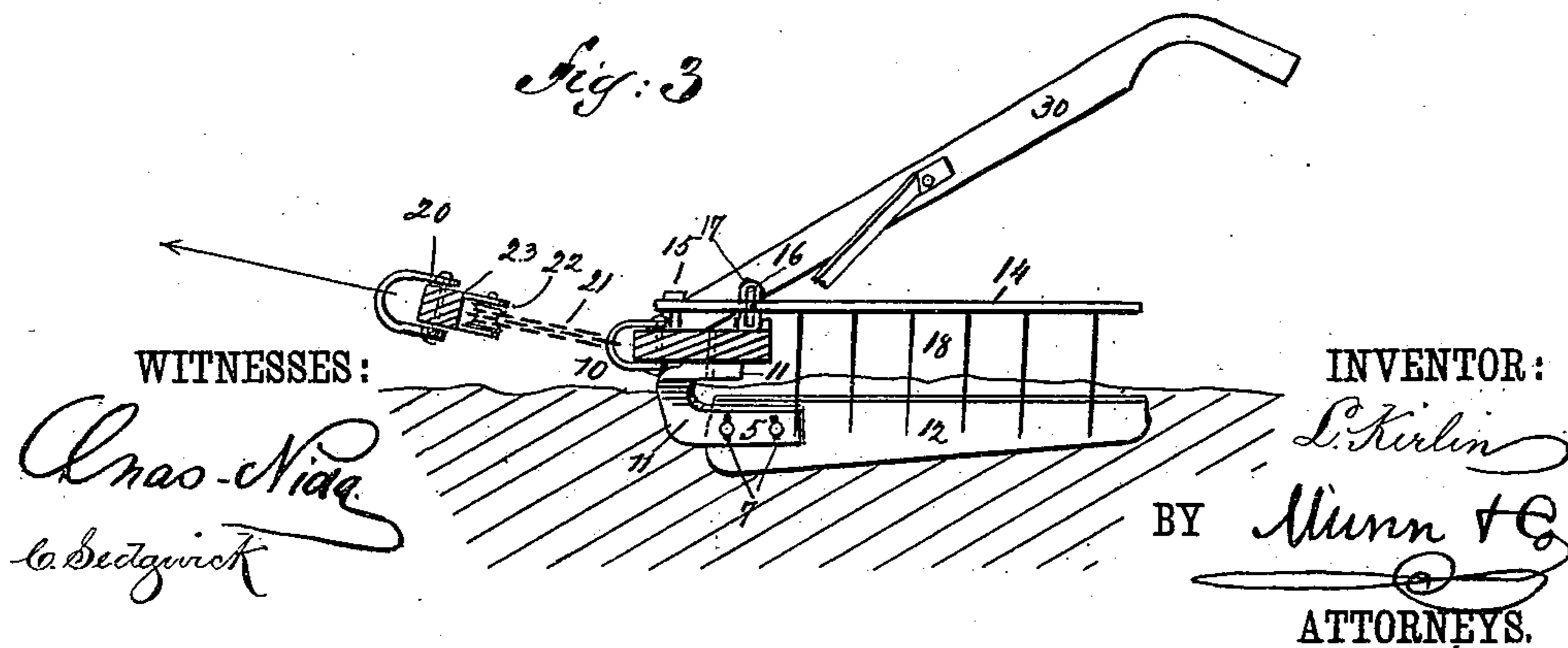
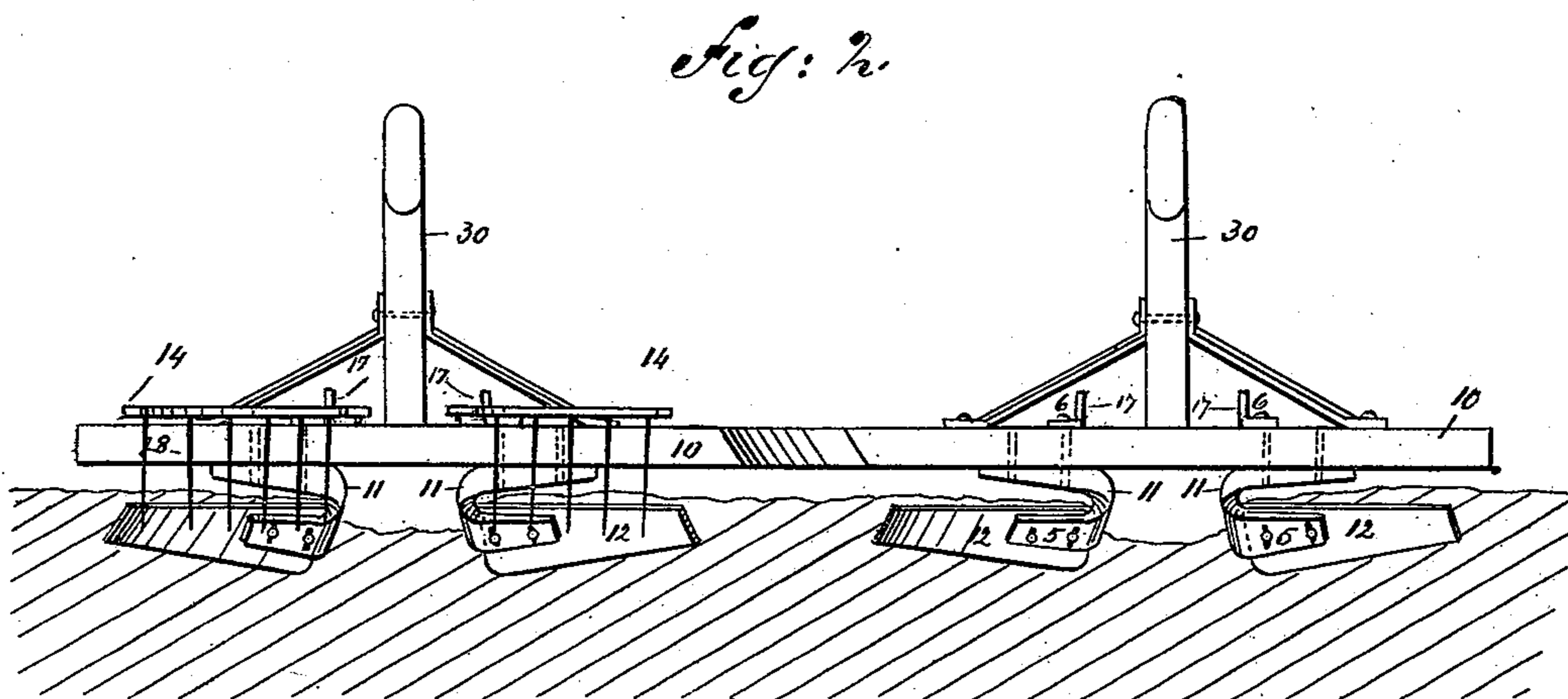
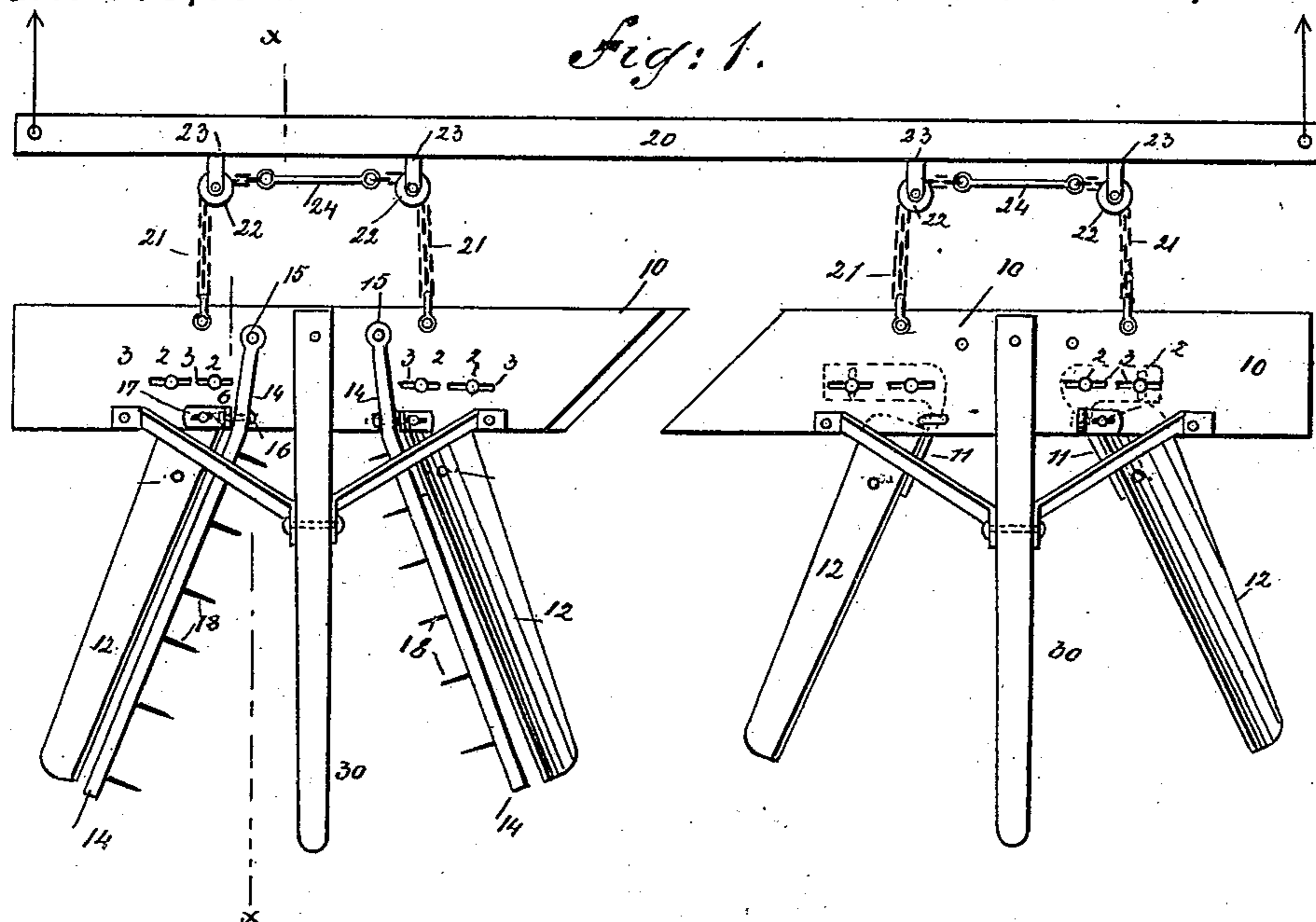
2 Sheets—Sheet 1.

L. KIRLIN.

LISTED CORN CULTIVATOR.

No. 355,652.

Patented Jan. 4, 1887.



(No Model.)

2 Sheets—Sheet 2.

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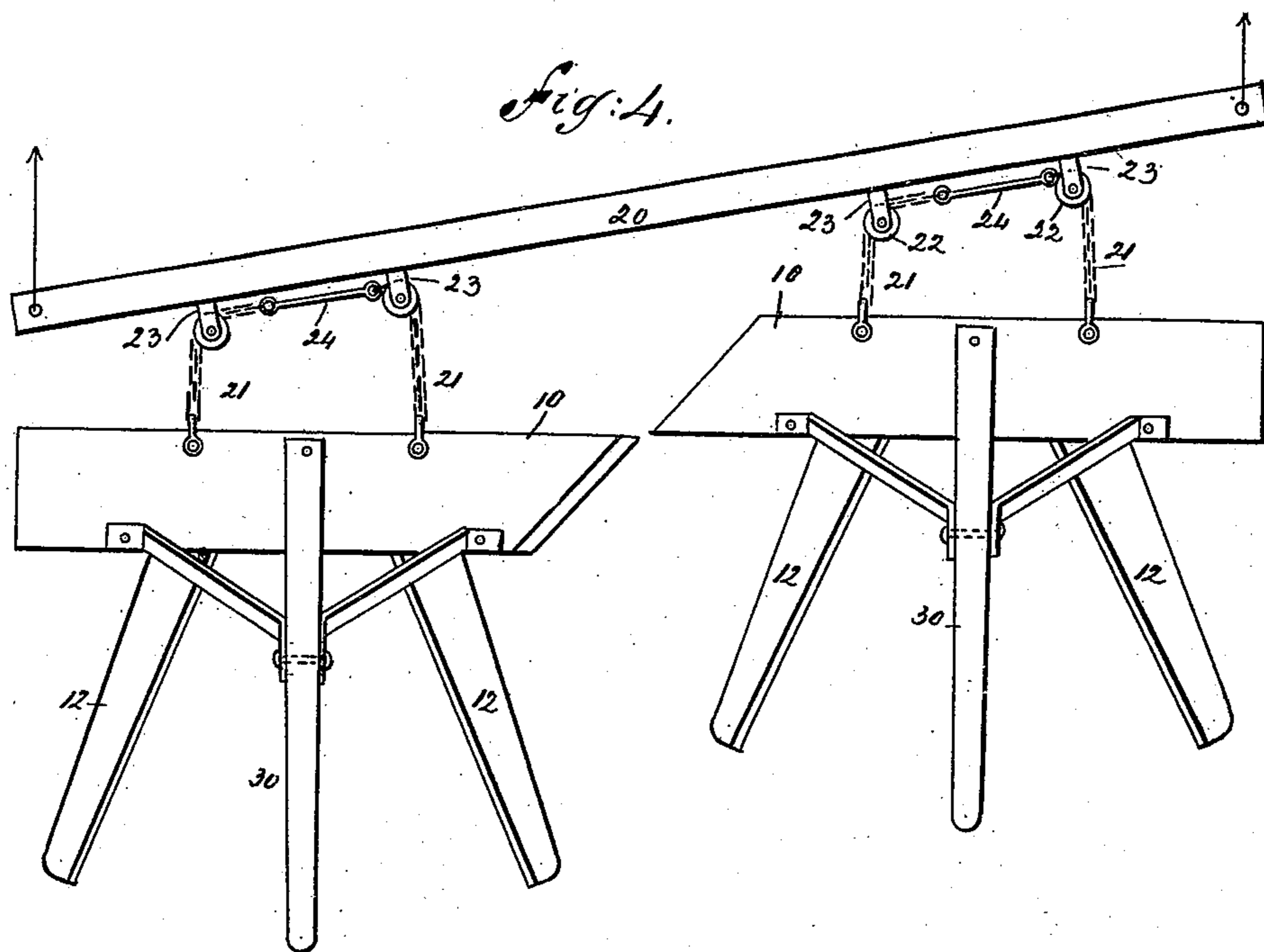


Fig. 5.

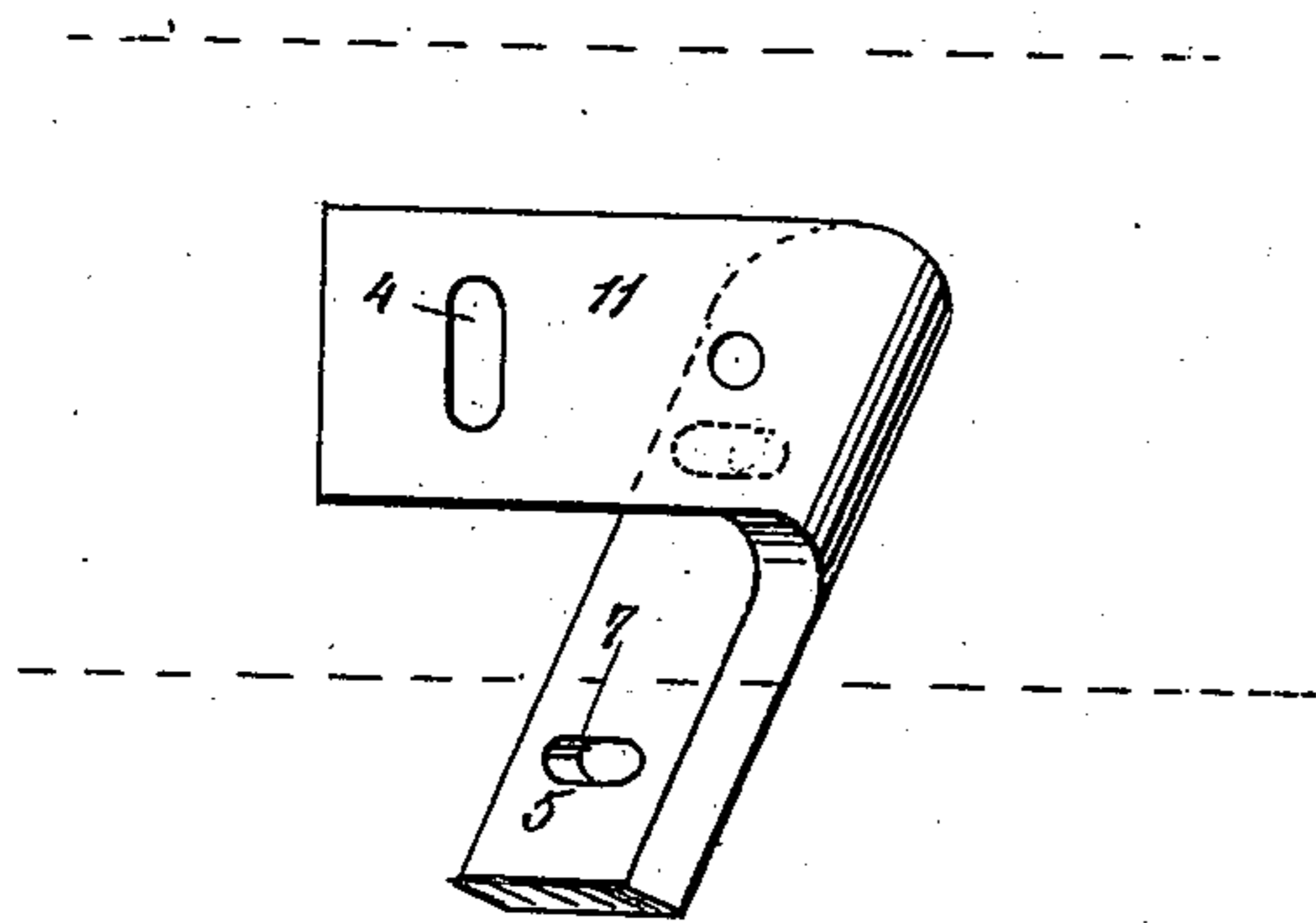
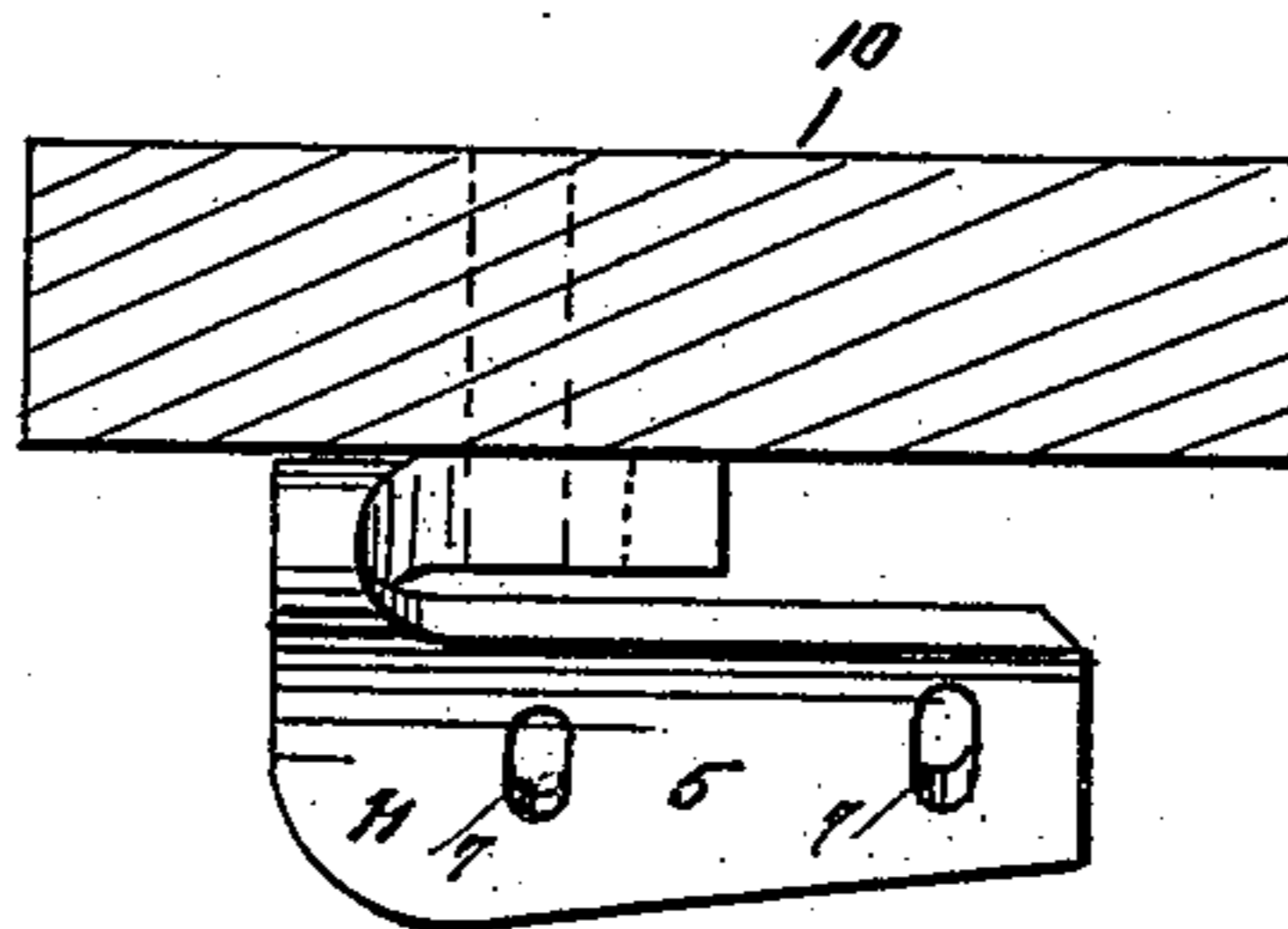


Fig. 6.



WITNESSES:

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UNITED STATES PATENT OFFICE.

LINDEN KIRLIN, OF AXTELL, KANSAS.

LISTED-CORN CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 355,652, dated January 4, 1887.

Application filed October 1, 1886. Serial No. 215,085. (No model.)

To all whom it may concern:

Be it known that I, LINDEN KIRLIN, of Axtell, in the county of Marshall and State of Kansas, have invented a new and Improved
5 Listed-Corn Cultivator, of which the following is a full, clear, and exact description.

My invention relates to the construction of a novel form of listed-corn cultivator, wherein the parts are so arranged that two rows of corn
10 may be cultivated at the same time; and the invention consists in the construction and arrangement of parts hereinafter described and claimed.

Reference is to be had to the accompanying
15 drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of my improved form of cultivator, the parts being shown in the
20 position they assume when the two horses attached to the evening-bar are abreast, the harrow attachment being shown in connection with one set only of the cultivator-blades. Fig. 2 is a rear view of the cultivator. Fig.
25 3 is a cross-sectional view taken on line *x x* of Fig. 1. Fig. 4 is a diagram illustrating the position of the parts when one horse is in advance of the other. Fig. 5 is a perspective view illustrating the construction of one of the
30 brackets which serve to support the cultivating-blades; and Fig. 6 is an enlarged view of the bracket, representing the same as secured to the beam, which beam is shown in section.

Referring now to the construction illustrated
35 in the drawings, 10 10 represent two beams or blocks, to the under side of which there are secured brackets 11, said brackets being held to the beams by bolts 2, which pass through elongated slots 3, that are formed in the beams,
40 so that the brackets of each beam may be adjusted toward or from each other. The aperture in the brackets 11, through which the outer bolt, 2, passes, is an elongated slot, as shown at 4 in Fig. 5. The brackets 11 are
45 formed with arms 5, to which the cultivator-blades 12 are bolted, the apertures in the arms 5 being elongated to permit of a proper adjustment of the blades, these elongated apertures being shown at 7.

50 From the construction described it will be seen that a perfect adjustment of the blades

may be obtained, for by loosening the two bolts 2 the blades may be moved toward or from each other. By loosening the outer bolt, 2, the rear ends of the blades may be moved
55 toward or from each other, and by loosening the rear bolt, employed to connect the blades to their brackets, the said rear ends of the blades may be raised or lowered, as desired.

In connection with each blade I arrange a
60 rearwardly-extending bar or rod, 14, that is provided with harrow-teeth 18, the forward end of the bar being secured to the beam or block 10 by a bolt, 15, while the rod or bar is held against a bracket, 17, by a bolt, 16, said
65 bracket being formed with a longitudinal slot, through which the bolt 16 passes. The bracket 17 is held to the beam or block 10 by a bolt, 6.

Each of the beams 10 is connected to the bar
70 20, which answers the double purpose of an evener and draft-bar, connection between each beam and the bar 20 being established through the medium of chains 21, that are secured to the beams and passed over sheaves or grooved
75 wheels 22, that are mounted in proper bearings, 23, said bearings being secured to the bar 20. The two chains 21 are connected by a short rod, 24. Properly-connected handles 30 are arranged as illustrated in the drawings.

Such being the general construction of the
80 cultivator, the operation is as follows: A horse is hitched to each end of the bar 20, and the two sets of cultivator-blades are adjusted so that the corn planted in the furrow will be within the opening between each set of blades.
85 The blades are adjusted so that they will cut through the crust upon the side of the furrow, thus loosening and mellowing the ground, and, although it is not absolutely necessary, I greatly
90 prefer to arrange arms in connection with each cultivator-blade, as the teeth of such arms will act to thoroughly pulverize any clods of earth which may pass over the blades, and at the
95 same time the teeth will prevent any heavy lumps of earth from falling upon the young plants. The bar 20, it will be understood, rests upon the tops of the ridges between the
100 furrows, and from the peculiar connection between this bar and the beams 10 the cultivator-blades attached to each beam will follow in the furrow, even should one horse advance in front of the other. For instance, should the

right-hand horse advance, the parts will assume the position in which they are shown in Fig. 4.

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

1. In a cultivator, the angle-bracket 11, having a flat upper arm provided with a transverse slot, 4, near its outer end, and an aperture, as shown, and the lower arm, 5, extending downward and rearward from the upper arm, and provided with two transverse slots, 7 7, substantially as shown and described.

2. The combination, with the beam 10, of the two laterally-adjustable brackets 11 at opposite sides of the center thereof, and formed with rearward-extending diverging arms 5 5, and the cultivator-blades 12, adjustably secured to the inclined outer faces of the said diverging arms, and acting edgewise on the soil at opposite sides of a row of corn, substantially as shown and described.

3. The combination, with the two beams 10

10, each having a handle, 30, and two inclined rearwardly-diverging cultivator-blades, 12 12, of the draft-bar 20, having two pulleys, 23 23, near each end, and chains 21, passed over said pulleys, and secured, respectively, at their ends to the beams 10 10 at opposite sides of their centers, substantially as set forth.

4. The combination, with a draft-bar or evenner provided with sheaves 22, of beams 10, carrying chains 21, which pass about the sheaves, links or bars 24, connecting the chains, and cultivator-blades and harrow-arms carried by the beams, substantially as described.

5. The combination, with a beam, of brackets 11, adjustably connected thereto, cultivator-blades 12, adjustably connected to the brackets, and harrow-arms 14, that are connected to the beam and provided with harrow-teeth, substantially as described.

LINDEN KIRLIN.

Witnesses:

BEN MCCOY,
MARY MCCOY.