

No. 625,322.

Patented May 23, 1899.

G. G. COONLEY & D. M. BOYLAN.
DRAFT EQUALIZER.

(No Model.)

(Application filed Apr. 8, 1899.)

2 Sheets—Sheet 1.

Fig. 1.

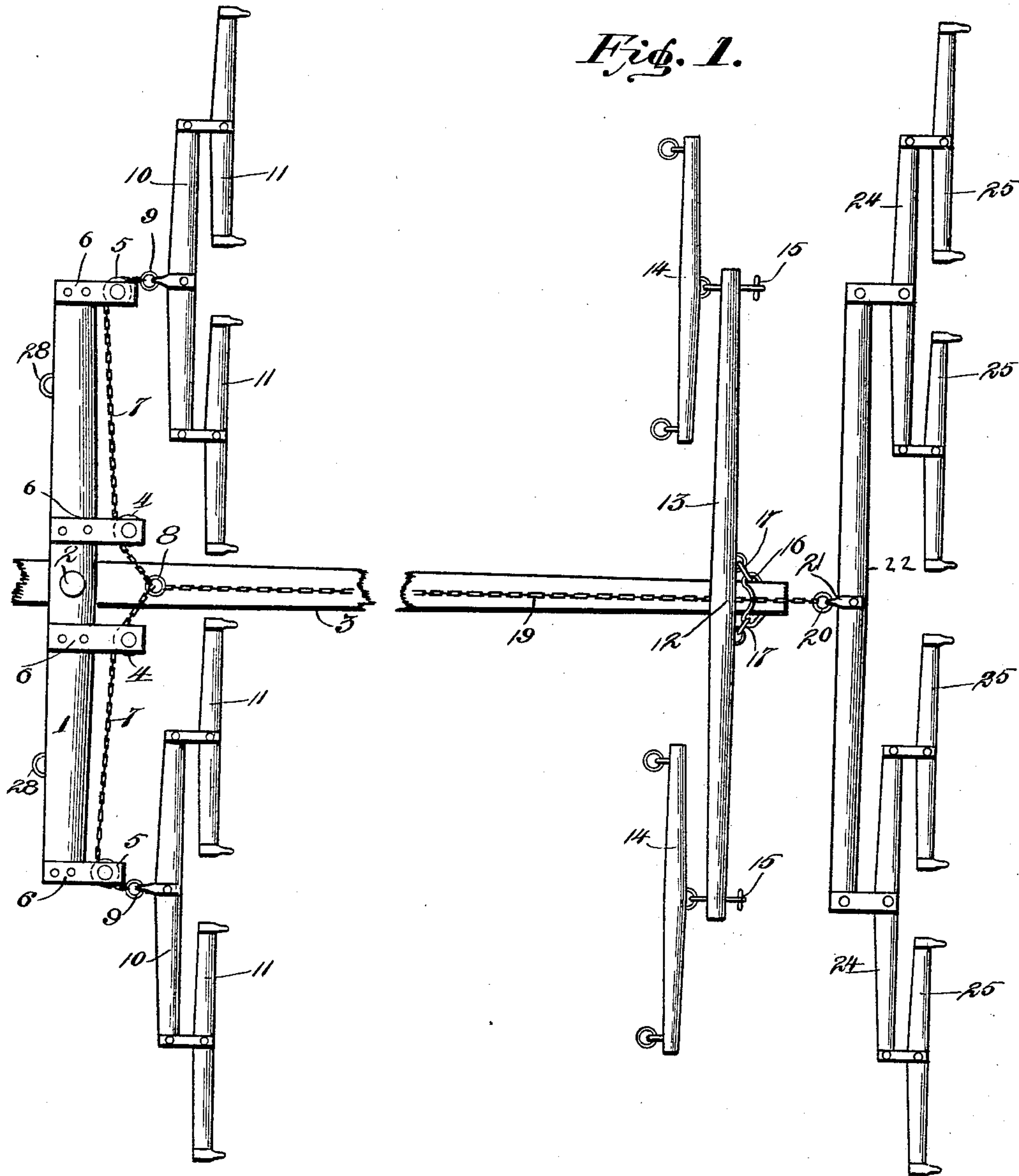
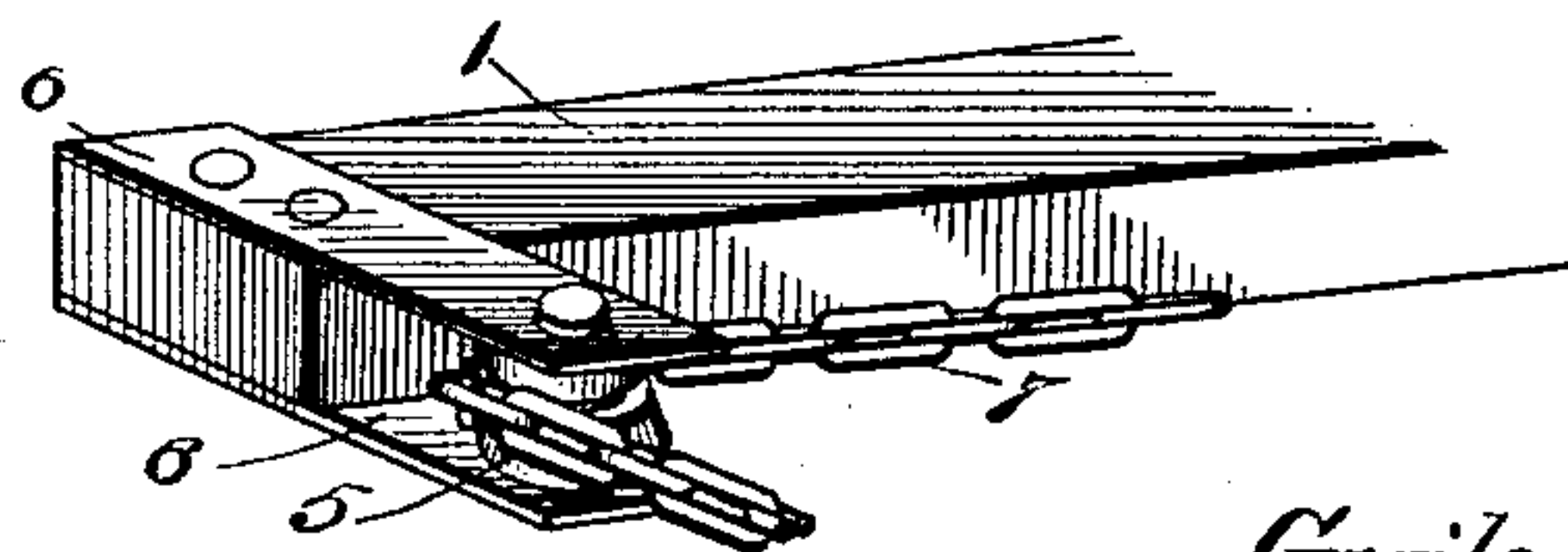


Fig. 3.



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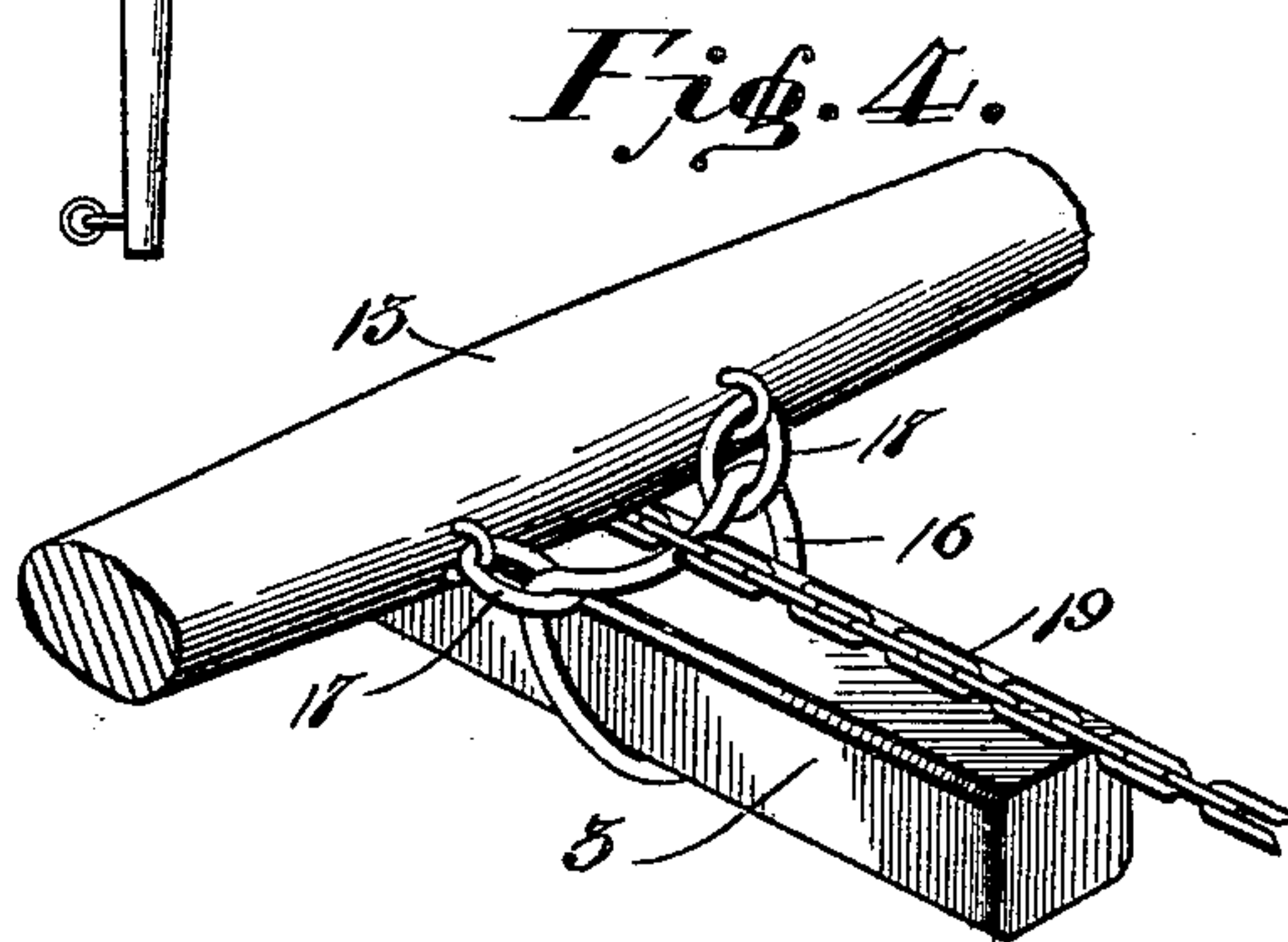
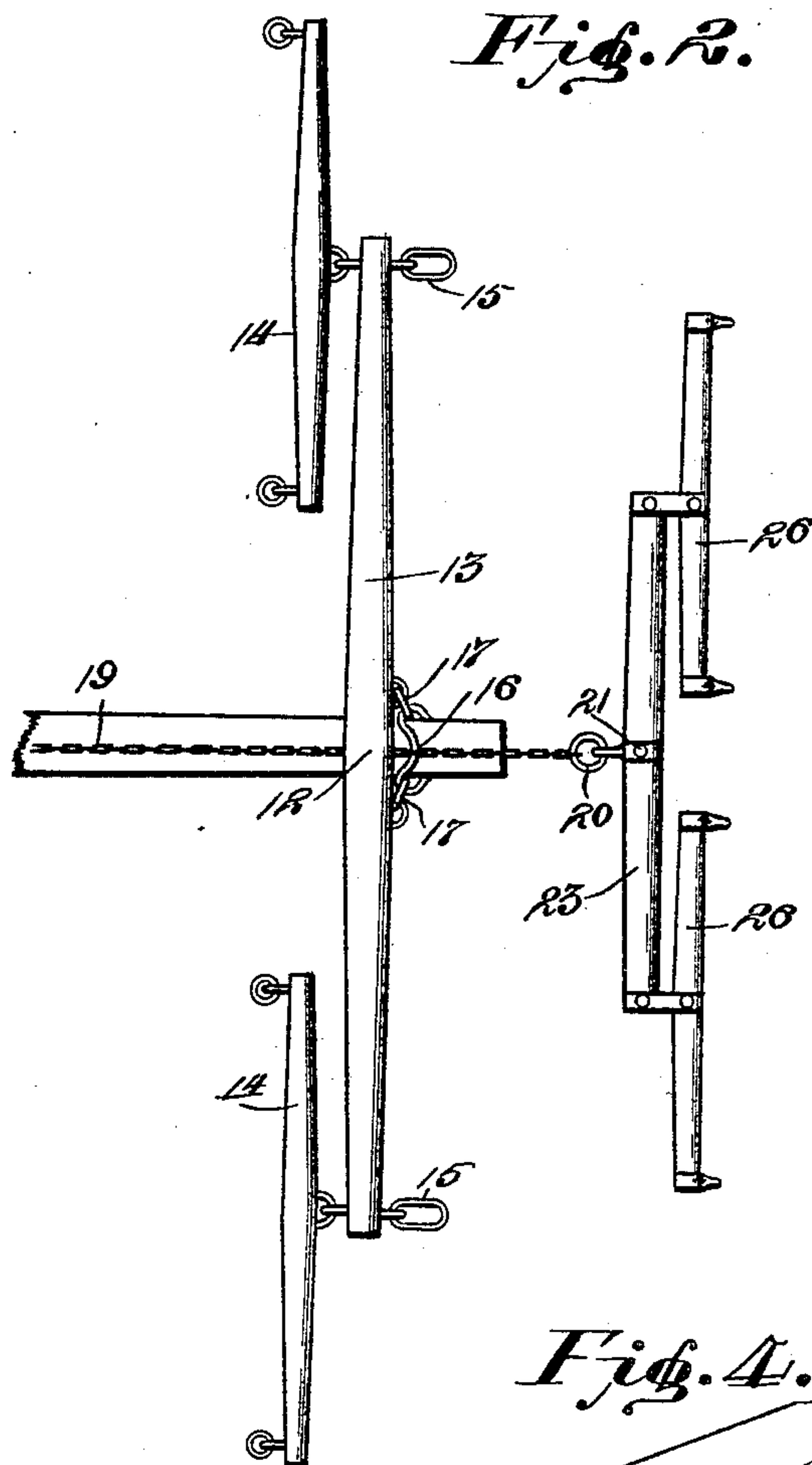
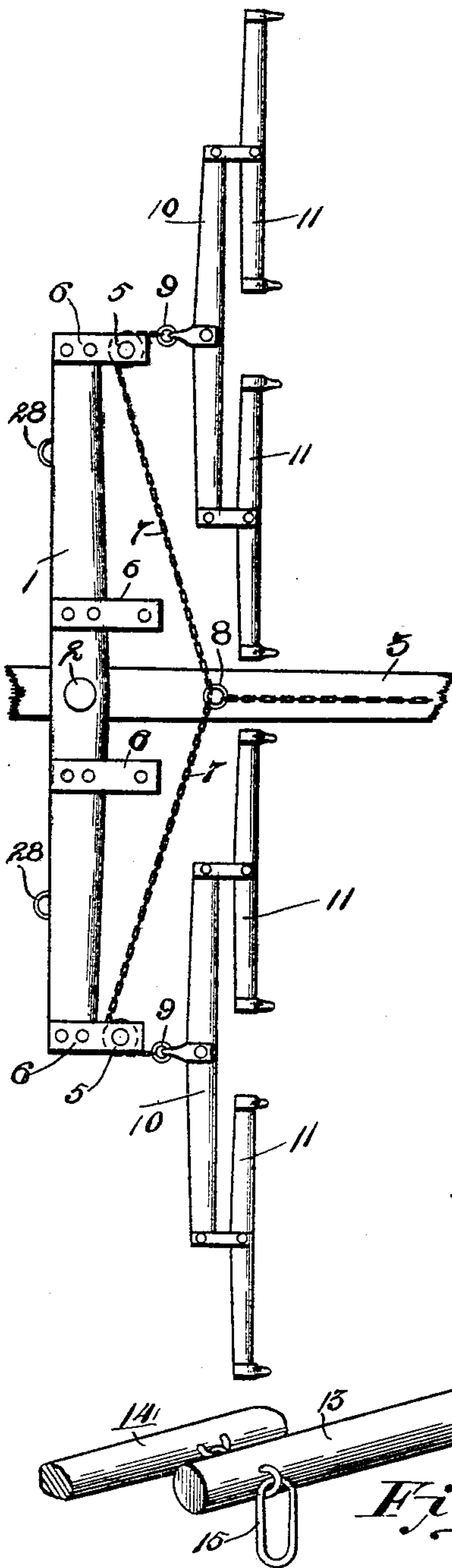
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

GUILEAD G. COONLEY AND DOUGLAS M. BOYLAN, OF BRISTOW, IOWA.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 625,322, dated May 23, 1899.

Application filed April 8, 1899. Serial No. 712,283. (No model.)

To all whom it may concern:

Be it known that we, GUILEAD G. COONLEY and DOUGLAS M. BOYLAN, citizens of the United States, residing at Bristow, in the county of Butler and State of Iowa, have invented a new and useful Draft-Equalizer, of which the following is a specification.

The invention relates to improvements in draft-equalizers.

The object of the present invention is to improve the construction of draft-equalizers and to provide a simple, strong, and efficient one designed for use in connection with road-graders and other heavy machinery and adapted to enable either six or eight horses to be hitched to the same.

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 plan view of a draft-equalizer constructed in accordance with this invention and shown arranged for eight horses. Fig. 2 is a similar view showing the parts arranged for six horses. Fig. 3 is a detail perspective view of one of the pulleys and a portion of the equalizing-bar. Fig. 4 is a perspective view of the neck-yoke center. Fig. 5 is a similar view of one end of the central neck-yoke bar.

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

1 designates an equalizing-bar pivoted at its center by a pin or bolt 2 to the rear portion of a tongue or pole 3 and provided at opposite sides of the same with inner and outer pulleys or sheaves 4 and 5, the inner ones being located at opposite sides of the pole or tongue and adjacent to the same, and the outer ones being located at the ends of the evener-bar. Each sheave or pulley is journaled on a bolt in a support consisting of upper and lower plates 6, bolted or otherwise secured to the upper and lower faces of the evener-bar and projecting forwardly therefrom. By this construction the pulleys or sheaves are detachable and the inner ones are designed to be removed when the device is arranged for six horses, as hereinafter described.

A chain 7 is arranged on the pulleys and is provided with a central attachment-ring 8, and the terminals of the chain are provided with rings 9, to which are coupled double-trees 10, having singletrees 11 at their ends. This construction arranges four horses at the back of the tongue or pole, and a four-horse neck-yoke 12 is located at the front of the tongue or pole.

The four-horse neck-yoke is composed of a central neck-yoke bar 13 and side neck-yoke bars 14, loosely connected with the terminals of the central neck-yoke bar and provided at their ends with rings or other suitable devices for connecting them with the rear horses. The terminals of the central neck-yoke bar are provided with loops or rings 15, and a neck-yoke center 16 encircles the tongue or pole and consists of a loop having a depressed top portion and connected by rings or links 17 with the central neck-yoke bar. The depressed top portion of the neck-yoke center forms bends or seats to receive the rings or links which are secured in eyes of the central neck-yoke bar, as clearly illustrated in Fig. 4 of the accompanying drawings.

The transverse chain 7 is connected at its center with the rear end of a longitudinal chain 19, which extends forward along the pole and passes through the neck-yoke center. It is provided at its front end with a ring 20, having a yoke 21 linked into it and adapted to couple a whiffletree 22 or a double-tree 23 to the chain, as illustrated in Figs. 1 and 2 of the accompanying drawings, accordingly as it is desired to use eight or six horses. The whiffletree 22 is provided at its ends with doubletrees 24, which have singletrees coupled to their terminals, and the double-tree 23 is provided at its ends with singletrees 26. The transverse chain is extended forward at its center between the inner pulleys or sheaves 4, and when it is desired to arrange the draft-equalizer to accommodate six horses the central sheaves or pulleys 4 are removed and the transverse chain is connected with the main evener-bar solely by the end pulleys or sheaves 5. The evener-bar 1 is provided near its ends with eyes or loops 28, extending rearwardly and adapted to have stay-chains connected to them.

The invention has the following advantages:

The draft-equalizer, which is simple and comparatively inexpensive in construction, possesses great strength and durability and is designed for heavy work on road-graders and similar machines. The device may be arranged to accommodate either six or eight horses, and the four horses at the back of the device are arranged in pairs at the sides of the pole or tongue, and they are connected at their heads to the four-horse neck-yoke. The pulleys or sheaves are detachably mounted on the evenner-bar and the central ones are removed when the device is arranged for six horses.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. A draft-equalizer comprising an evenner-bar designed to be centrally pivoted on a pole or tongue and provided with pulleys, a transverse chain arranged on the pulleys, rear whiffletrees connected with the transverse chain at the ends of the evenner-bar, a longitudinal chain connected at its rear end with the central portion of the transverse chain and extending along the tongue or pole, and the front whiffletrees connected with the front end of the longitudinal chain, substantially as and for the purpose described.

2. A draft-equalizer comprising an evenner-bar designed to be centrally pivoted on a pole or tongue and provided with pulleys, a transverse chain [arranged on the pulleys, rear whiffletrees connected with the transverse chain at the ends of the evenner-bar, a longitudinal chain extending along the tongue or pole and connected at its rear end with the center of the transverse chain, the front end of the longitudinal chain being located in advance of the pole, and the neck-yoke bars mounted on the front end of the pole or tongue and interposed between the front and rear whiffletrees, substantially as described.

3. A draft-equalizer comprising an evenner-

bar designed to be centrally pivoted to a tongue or pole and provided with pulleys, a transverse chain arranged on the pulleys, doubletrees connected with the chain at the ends of the evenner-bar and provided at their terminals with singletrees, a longitudinal chain or connection extending from the center of the transverse chain to a point in advance of the pole or tongue, whiffletrees connected with the front end of the longitudinal chain, and the four-horse neck-yoke consisting of the central neck-yoke bar provided with a neck-yoke center and having loops at its ends, and the side neck-yoke bars connected with the terminals of the central neck-yoke bar, substantially as described.

4. A draft-equalizer comprising an evenner-bar designed to be centrally pivoted to a tongue or pole and provided at opposite sides thereof with removable pulleys arranged in pairs, a transverse chain arranged on the pulleys, doubletrees attached to the ends of the chain, a longitudinal chain connected with the center of the transverse chain and extending in advance of the pole or tongue, whiffletrees arranged at the front end of the longitudinal chain, and the four-horse neck-yoke comprising the central neck-yoke bar and the side neck-yoke bars, substantially as described.

5. In a draft-equalizer, the combination with a pole or tongue, and the front and rear whiffletrees, of the neck-yoke comprising the central neck-yoke bar, the side neck-yoke bars, eyes carried by the central neck-yoke bar, and a ring engaging the eyes and arranged on the pole or tongue, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnessss.

GUILEAD G. COONLEY.
DOUGLAS M. BOYLAN.

Witnesses:

F. T. WELLS,
E. A. JONES.