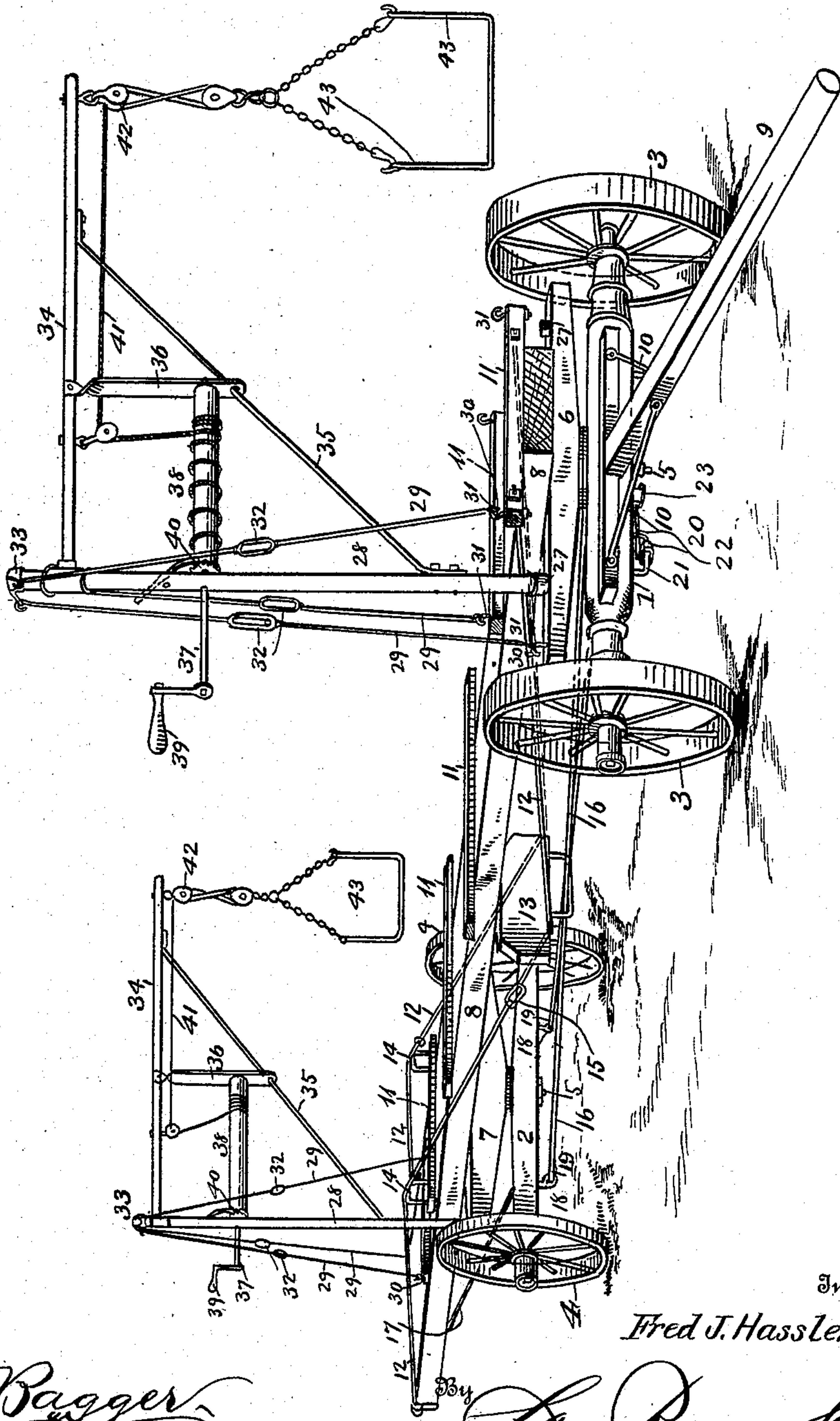


F. J. HASSLER.  
 RUNNING GEAR FOR LOADING APPARATUS.  
 APPLICATION FILED JULY 30, 1907.

899,975.

Patented Sept. 29, 1908.  
 4 SHEETS—SHEET 1.

Fig. 1.



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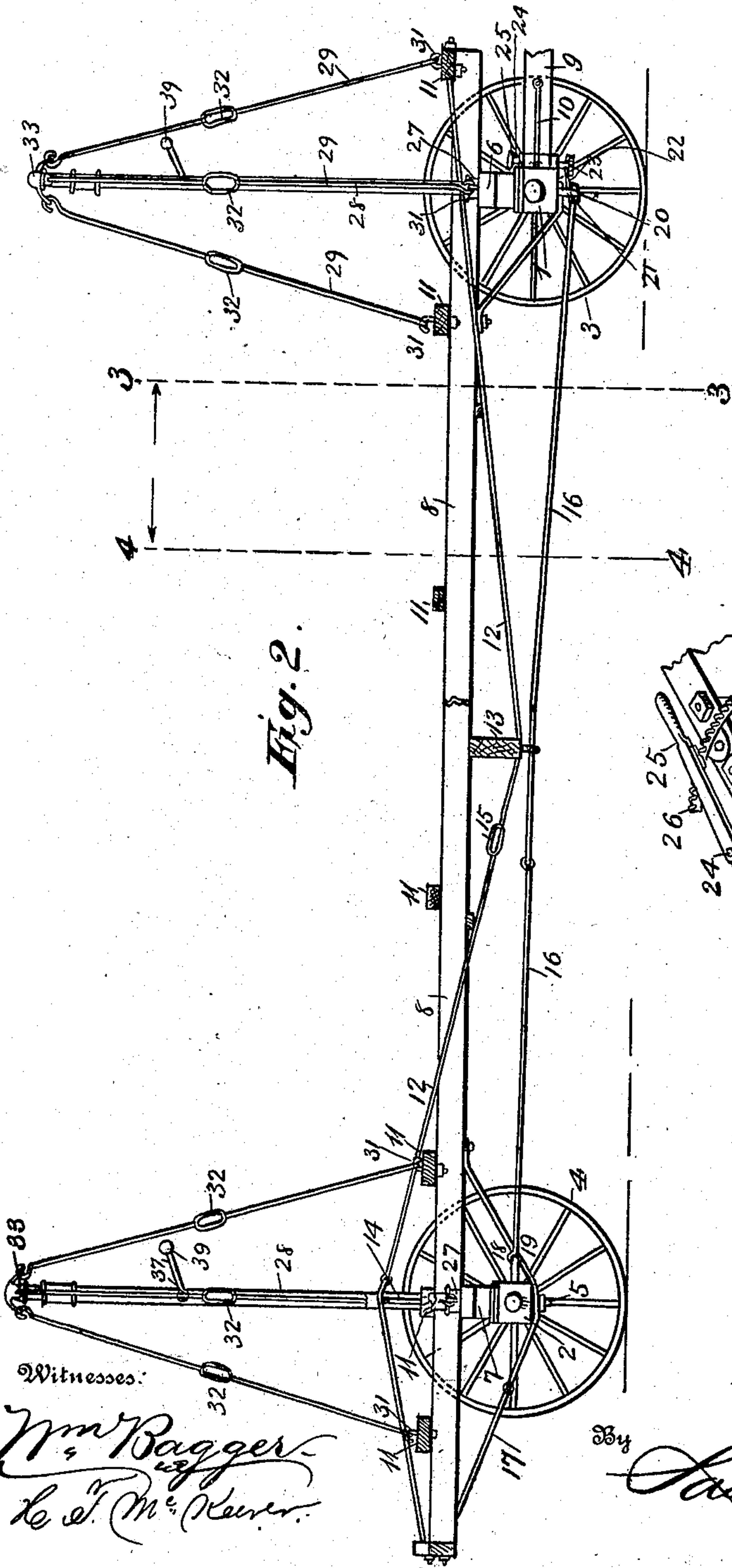


Fig. 2.

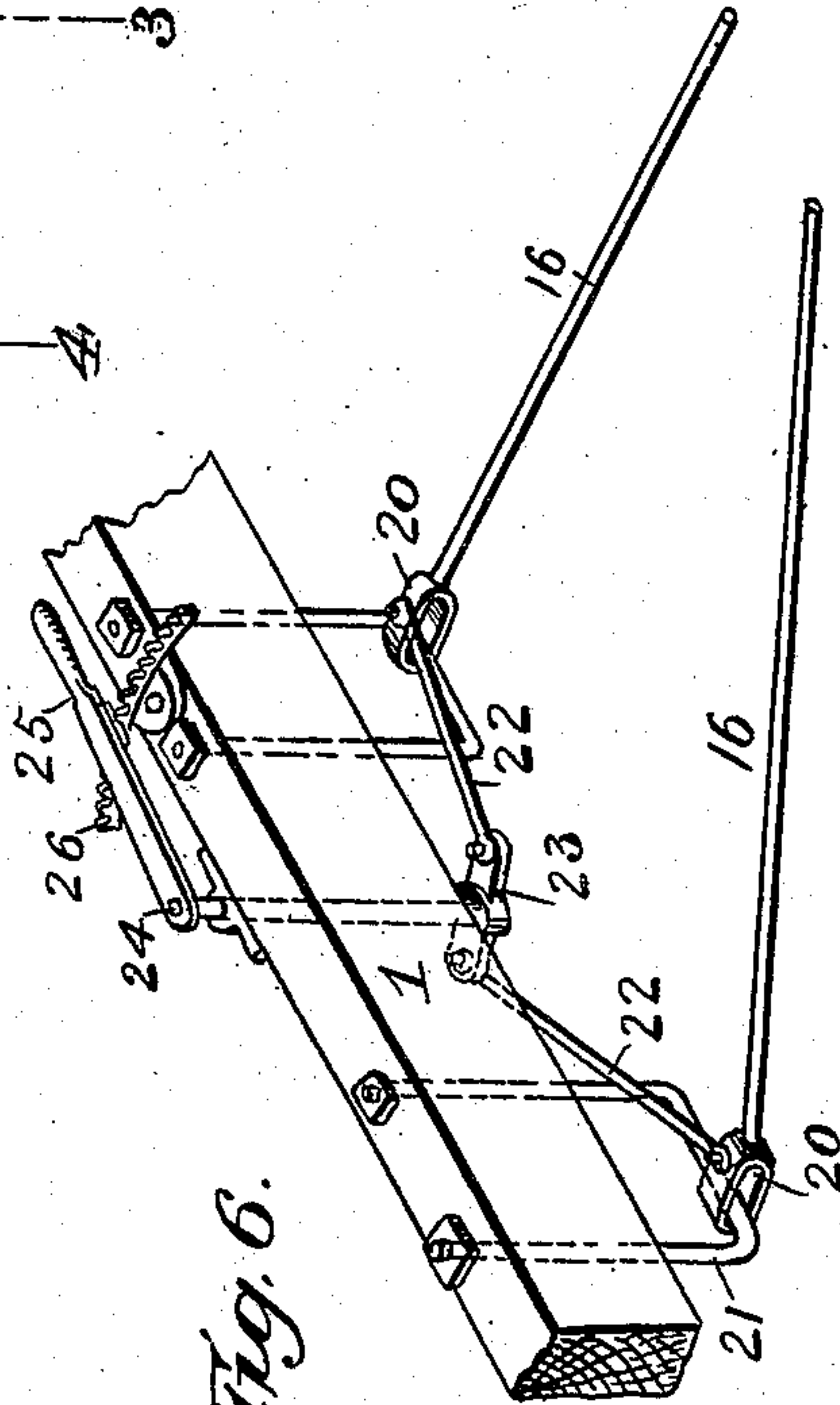


Fig. 6.

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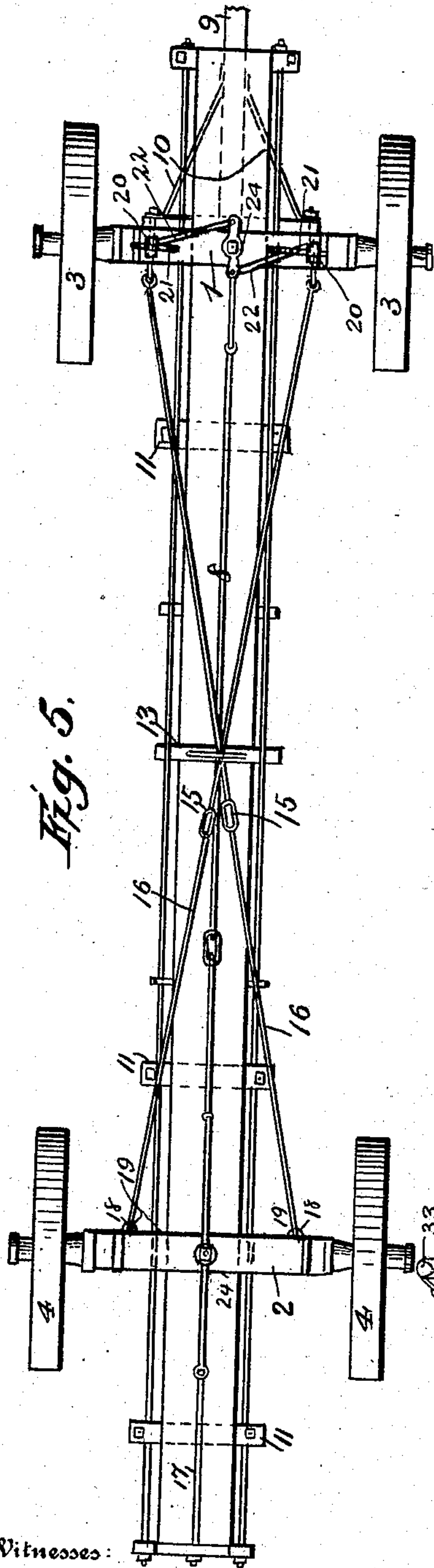


Fig. 5.

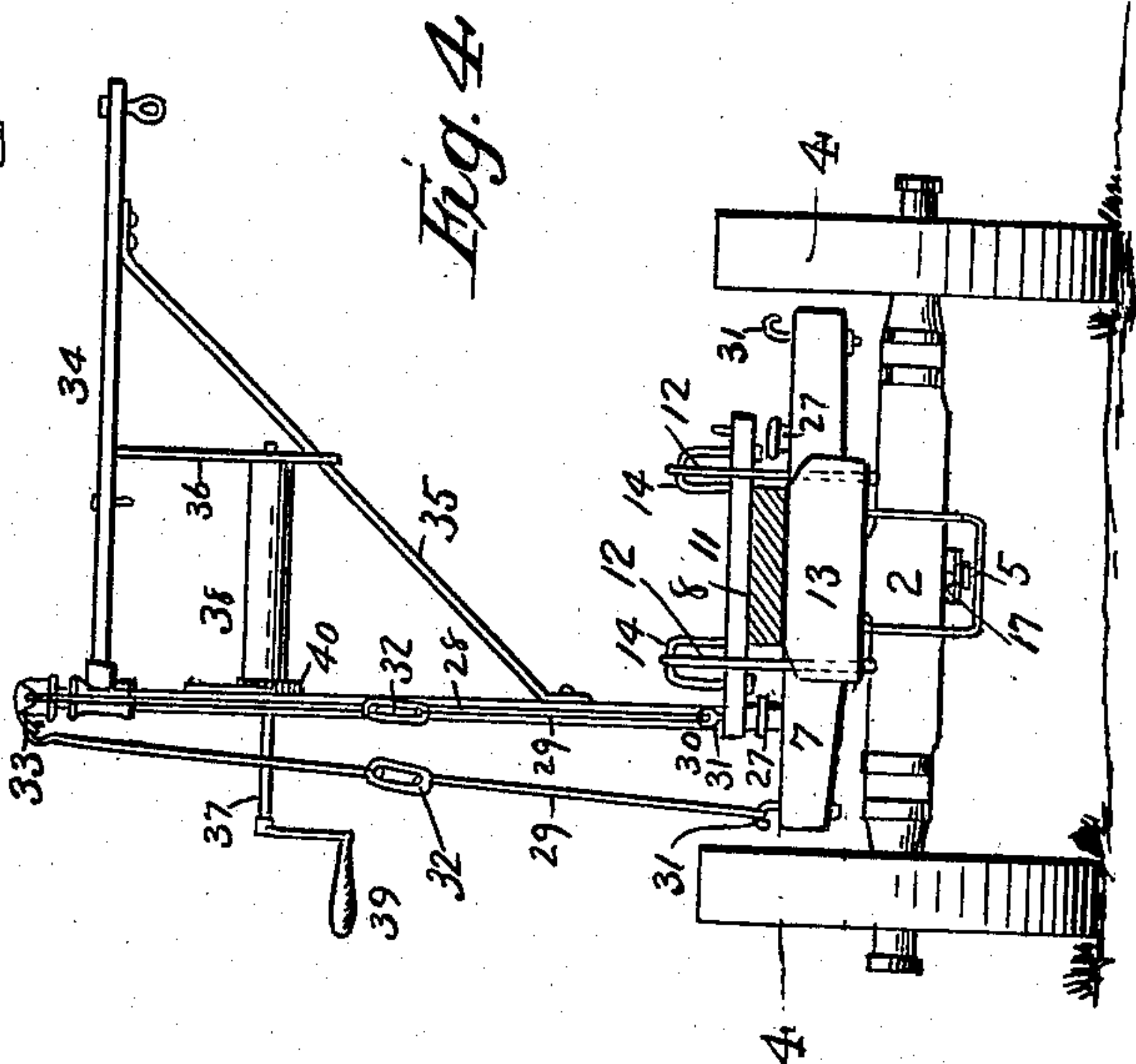


Fig. 4.

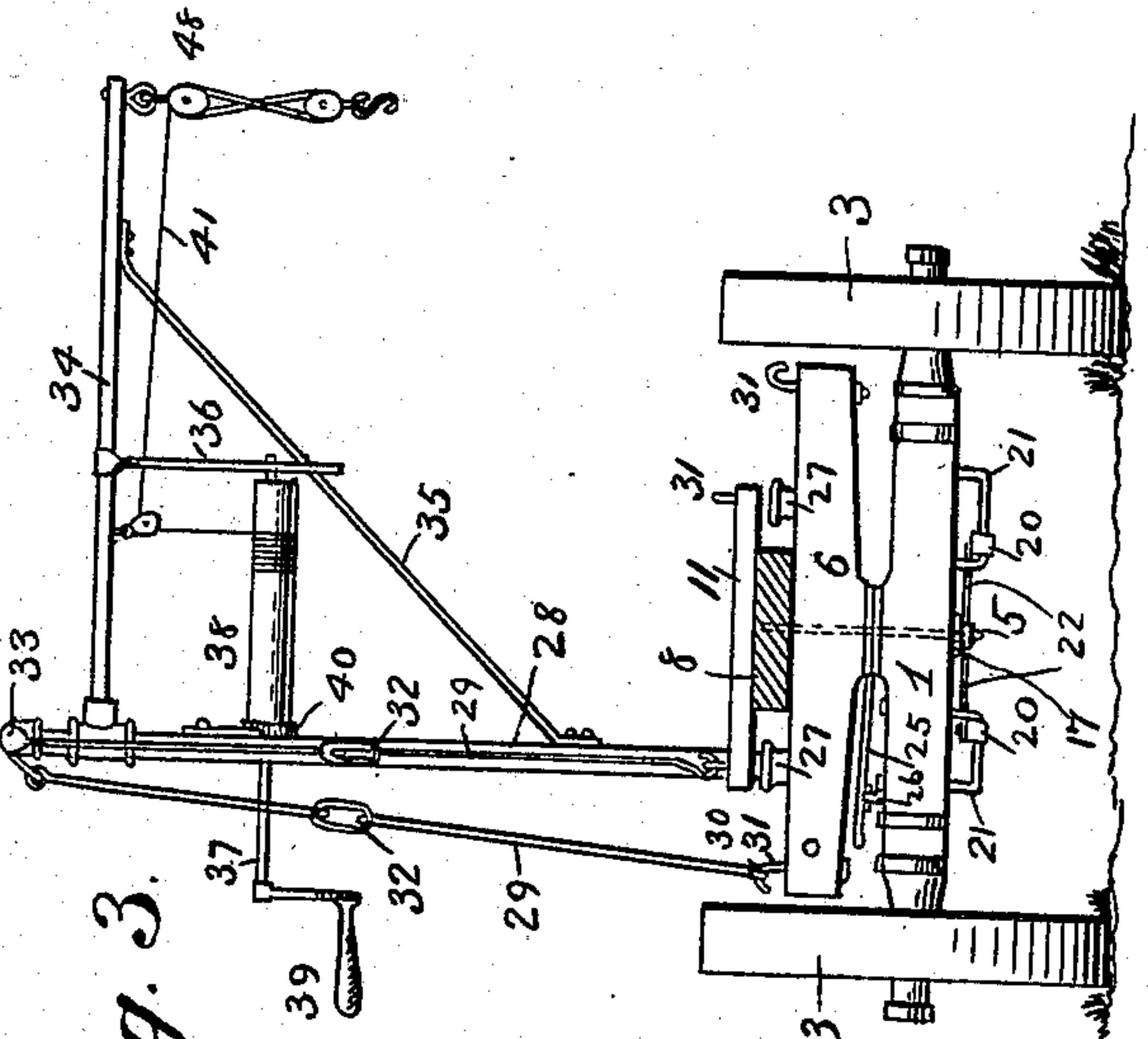


Fig. 3.

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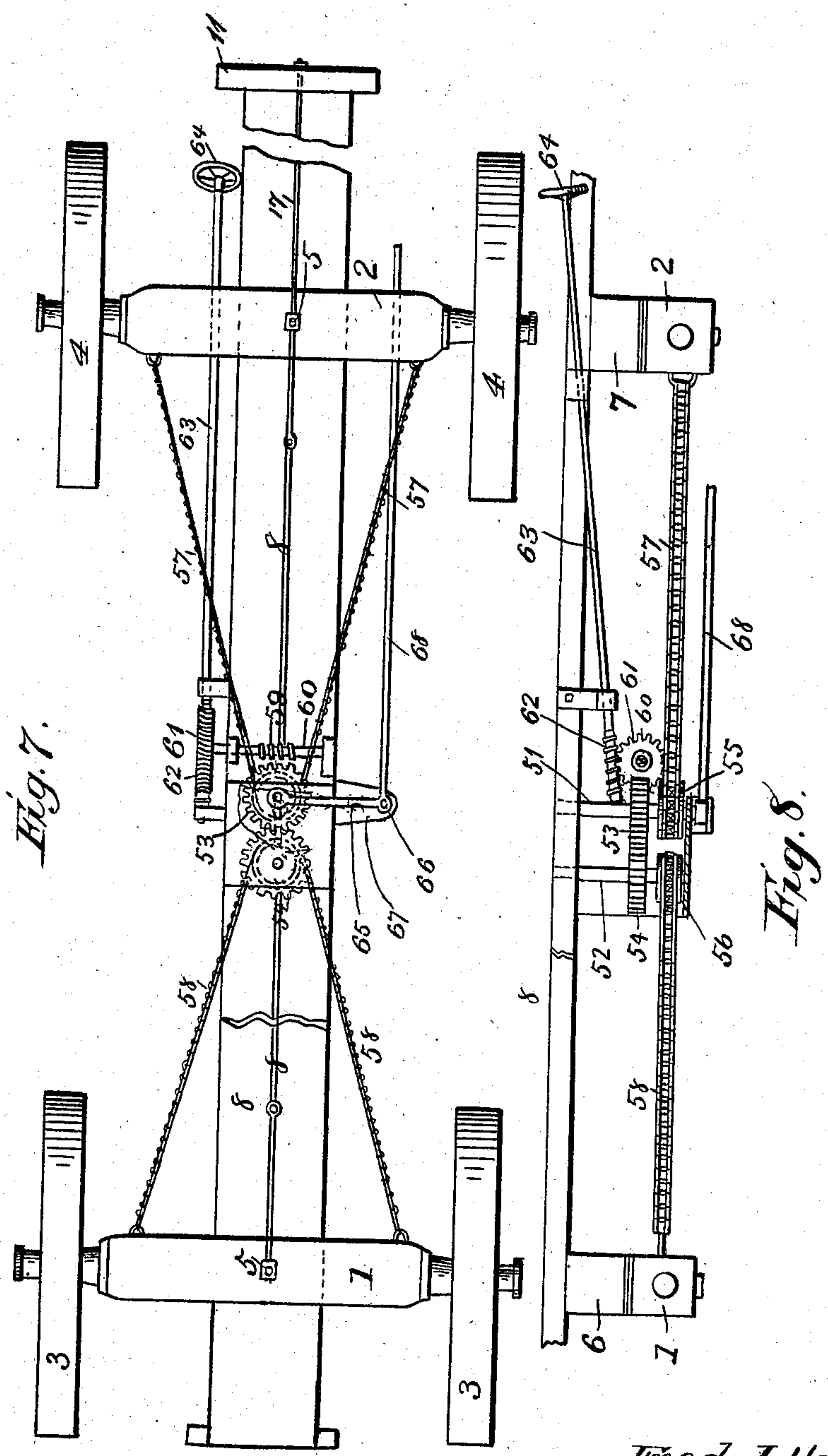
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# UNITED STATES PATENT OFFICE.

FRED JOHN HASSLER, OF HALLTOWN, ILLINOIS.

## RUNNING-GEAR FOR LOADING APPARATUS.

No. 899,975.

Specification of Letters Patent.

Patented Sept. 29, 1908.

Application filed July 30, 1907. Serial No. 386,275.

*To all whom it may concern:*

Be it known that I, FRED JOHN HASSLER, a citizen of the United States, residing at Halltown, in the county of Bureau and State of Illinois, have invented certain new and useful Improvements in Running-Gear for Loading Apparatus, of which the following is a specification.

This invention relates to an improved loading apparatus which is supported upon a running gear and which is particularly adapted for loading and for carrying from place to place the so-called extension feeders which are commonly used in connection with corn shellers of various kinds. These feeders are frequently made of great length, and they are therefore heavy and unwieldy, and it is not an easy matter to load them upon vehicles of ordinary construction, for transportation.

The object of the present invention, therefore, is to construct a loading apparatus, including a running gear, of simple and improved construction, whereby the manipulation and transportation of feeders for corn shellers shall be greatly facilitated; further objects of the invention being to simplify and improve the detailed construction and operation of this class of devices.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention; and in said drawings Figure 1 is a perspective view of a loading apparatus embodying the principle of the invention. Fig. 2 is a side elevation, partly in section. Fig. 3 is a vertical transverse sectional view taken on the plane indicated by the line 3—3 in Fig. 2. Fig. 4 is a transverse sectional view taken on the plane indicated by line 4—4 in Fig. 2. Fig. 5 is a bottom plan view. Fig. 6 is a perspective view showing a portion of the front axle, and illustrating the method of connecting the reach bars adjustably with said axle. Fig. 7 is a bottom plan view illustrating a modification in the arrangement of the running gear. Fig. 8 is a side elevation illustrating said modification.

Corresponding parts of the figures are denoted by like characters of reference.

The running gear which supports the improved loading apparatus includes the front and rear axles 1, 2, equipped respectively with the carrying wheels 3, 3 and 4, 4. Pivotaly supported on the axles, where they are secured by means of pins or bolts 5, are the front and rear bolsters 6 and 7 which, in turn, support a sill 8 which may be of any desired length. For the attachment of the draft the front axle is provided with a tongue 9 which is connected with said axle by the hounds 10. The sill 8 is provided at its front and rear ends, and at suitable intervals throughout its length with cross bars or braces 11, and the cross bars at the front and rear ends of the sill serve for the attachment of the ends of a pair of truss rods 12, the forward ends of which sag below the sill and are spaced from the latter by means of a strut member 13 while the rearward portions of said truss rods rise above the sill and are spaced from the latter by means of struts which are in the nature of yokes 14 secured upon one of the intermediate cross bars 11. By this construction the sill is stiffened and greatly reinforced throughout its entire length; it being obvious that the truss rods may, if desired, be constructed to include turn buckles, as shown at 15 whereby they may be tightened as occasion may require. The rear end of the sill, which extends a considerable distance in rear of the hind axle, is reinforced by an auxiliary truss bar 17 which is disposed in the vertical plane of the longitudinal center of the sill, and the ends of which are suitably connected with said sill at the rear end of the latter and at a point intermediate the front and rear axles. This auxiliary truss bar is spaced from the under side of the sill by the rear axle and bolster, and it may if desired, be suitably connected with the bolt 5 whereby the rear bolster is mounted upon the axle. It is also to be understood that this auxiliary truss may be constructed to include a turn buckle whereby it may be tightened at will.

The front and rear axles are connected with each other, in place of the ordinary reach, by means of crossed rods 16, enabling short turns to be made so that the apparatus may travel in cramped localities, and pass through narrow gates. The rods 16 are preferably connected with the rear axle by means of links or eye bolts and hooks, as shown at 18, 19, or by any suitable means which will permit the rods to have the requi-



site freedom of movement; the ends of the rods 16 are preferably connected adjustably with the front axle by means including slides 20 movably supported upon keepers 21 connected with and depending from the axle; said slides being connected by means of links 22 with a suitably supported lever 23; said lever being fixed upon a pin or shaft 24 which is provided with a handle 25 whereby it may be conveniently adjusted for the purpose of moving the forward ends of the rods 16 toward or from each other, as may be desired. A segment rack as shown at 26 is provided for the purpose of retaining the handle 25 and the parts controlled thereby at various adjustments. By this simple construction, the forward ends of the crossed connecting rods may be conveniently adjusted to regulate the ratio of movement of the hind axle with relation to that of the front axle when the running gear is being turned, and thus enabling it to be steered very accurately, as is obviously of great importance when the length of the apparatus in its complete form is taken into consideration.

Each of the bolsters 6, 7, is provided, intermediate its ends and the sides of the sill, with sockets 27 wherein masts or uprights 28 may be stepped or supported; there being two such masts or uprights which are capable of being changed from one side of the sill to the other; it being evident that said masts are to be mounted at the side of the sill distant from the material which is to be loaded. These masts or uprights are sustained in position for operation by means of guy members preferably consisting of rods 29 suitably connected with the upper ends of the masts, and provided at their lower ends with terminal hooks or eyes, as 30 adapted for engagement with corresponding hook and eye members, as 31 which are secured respectively at the ends of the bolsters and upon the cross bars and braces 11 adjacent to the masts. The guy rods 29 are preferably constructed to include turn buckles 32 to enable them to be conveniently adjusted and tightened. The upper ends of the guy rods have been shown as connected with the masts through the medium of caps 33 so that the said masts or uprights may turn or swivel in said caps and in the steps or sockets 27. Each of the masts or uprights is provided near its upper end with a derrick arm 34 which is connected with the mast by a diagonal brace 35; the latter is connected with the derrick arm by a vertical post or brace 36 which latter, together with the mast or upright, affords bearings for a shaft 37 carrying a winding drum 38 and a crank or handle 39 whereby it may be rotated; a pawl and ratchet of suitable construction being provided as shown at 40 in order to prevent reverse rotation. Connected with each of the drums 38 is one end of a flexible hoisting tackle including pulleys

42 and supporting devices 43 for the feeders or troughs that are to be loaded.

Under the modified construction of the running gear which has been particularly illustrated in Figs. 7 and 8 of the drawings, the front and rear axles 1 and 2 are connected pivotally, as before, with the bolsters 6 and 7. Supported in suitable bearings adjacent to the underside of the sill 8, at about a central point intermediate the front and rear axles, are vertical shafts 51, 52 carrying intermeshing pinions 53, 54 and carrying also sprocket wheels designated respectively 55 and 56. Flexible elements such as chains 57, 58, engage the sprocket wheels, and the ends of said flexible elements are connected respectively with the rear and front axles, near the ends of the axles. One of the pinions, 53, is adapted to mesh with a worm 59 upon a suitably supported transverse shaft 60, and said shaft carries at one end a worm gear 61 meshing with a worm 62 upon a shaft 63 having at its rear end a hand wheel 64 whereby it may be turned for the purpose of adjusting the steering mechanism when the pinion 53 and the worm 59 are in mesh; it being evident that by rotating the shaft 63 motion will be transmitted to the shafts 51, 52 carrying the sprocket wheels 55, 56 engaging the chains or flexible elements whereby the axles will be turned. The lower extremity of the vertical shaft 51 is mounted in a movable bearing which, in the present instance, has been illustrated as being formed in the end of one arm 65 of the bell crank lever fulcrumed at 66 upon a bracket 67 that is suitably connected with the running gear; the other arm 68 of the bell crank lever extends rearwardly to form a handle whereby it may be conveniently manipulated for the purpose of rocking the shaft 51 to throw the pinions 53, 54, out of mesh. When the pinions 53, 54, are in mesh with each other, the pinion 53 will be disengaged from the worm 59; it follows that in running the vehicle motion will be transmitted from the front to the rear axle, and the vehicle will in this manner be readily steered under ordinary circumstances. In close quarters, however, the bell crank lever 68 is manipulated to throw the pinions 53, 54 out of mesh, the pinion 53 being placed in engagement with the worm 59. The front axle may now be turned independently of the rear axle, and the latter may be efficiently manipulated by the steering gear including the shaft 63 and handwheel 64.

The operation and advantages of this invention will be readily understood from the foregoing description when taken in connection with the drawings hereto annexed. The masts or uprights are to be stepped in the sockets upon the bolsters at the side of the sill which is distant from the object that is to be loaded, and the masts may be readily secured and maintained in upright position by



the guy means provided for the purpose which, as stated, are arranged in such a manner that partial rotation of the masts or uprights will not be prevented. The supporting devices of the hoisting tackle are now lowered and connected with the feed trough or object that is to be loaded, after which, by proper manipulation of the hoisting mechanism, the said object is elevated to the proper height when, by turning or swinging the derricks, the said object may be carried into alinement with the sill, and lowered upon the latter where it will be supported for transportation. Unloading may be accomplished by a simple reversal apparatus.

In addition to the feeder troughs, the improved apparatus may be used for the conveyance of any auxiliary mechanism and material that may be required in the operation of corn shellers; thus, in many localities it may be utilized to great advantage for carrying heavy planks that are used for reinforcing weak bridges that are frequently encountered, and which frequently threaten to give way under the weight of the heavy machinery which at the present time is frequently employed. Other uses and advantages of the invention will readily suggest themselves to those skilled in the art to which it appertains.

I desire to be understood that while I have, in the foregoing, described the preferred construction of the invention, I do not necessarily wish to be understood as limiting myself to the precise structural details herein set forth, inasmuch as various changes and modifications may be resorted to within the scope of the invention.

I claim:

1. In a loading apparatus of the class described, a running gear including front and rear axles and bolsters pivoted thereon, a sill supported upon the bolsters and having a plurality of cross bars, a pair of truss rods connected terminally with the front and rear cross bars of the sill, a strut member spacing the truss rods from the under side of the forward portion of the sill, and yokes mounted

upon one of the cross bars and spacing the truss rods from the upper side of the rearward portion of the sill.

2. In a loading apparatus of the class described, a running gear including front and rear axles and bolsters supported thereon, a sill supported upon the bolsters and having a plurality of cross bars, a pair of truss rods connected terminally with the front and rear cross bars of the sill, strut members spacing the truss rods from the under side of the forward portion and from the upper side of the rearward portion of the sill and an auxiliary truss rod disposed in the vertical plane of the longitudinal center of the sill and connected terminally with the rear end of the sill and with the portion of the sill intermediate the front and rear axles, said auxiliary truss rods being spaced from the sill by the rear axle and bolster.

3. In an apparatus of the character described, the combination with front and rear axles, a sill and crossed connections extending from one axle to the other, and means carried by one of the axles comprising a shaft having levers thereon and links extending from said levers to the connections for simultaneously adjusting the connections apart or towards each other.

4. In an apparatus of the class described, a running gear including front and rear axles and bolsters pivoted thereon, a sill supported upon the bolsters, crossed connecting rods connected flexibly with one of the axles, keepers connected with the other axle, slides movable upon said keepers and connected with the connecting rods, a suitably supported lever, links connecting said lever with the slides, and means for effecting adjustment of the lever and retention thereof at various adjustments.

In testimony whereof I affix my signature, in presence of two witnesses.

FRED JOHN HASSLER.

Witnesses:

WILLIAM H. HAHN,  
GUSTAV H. PINTER.