

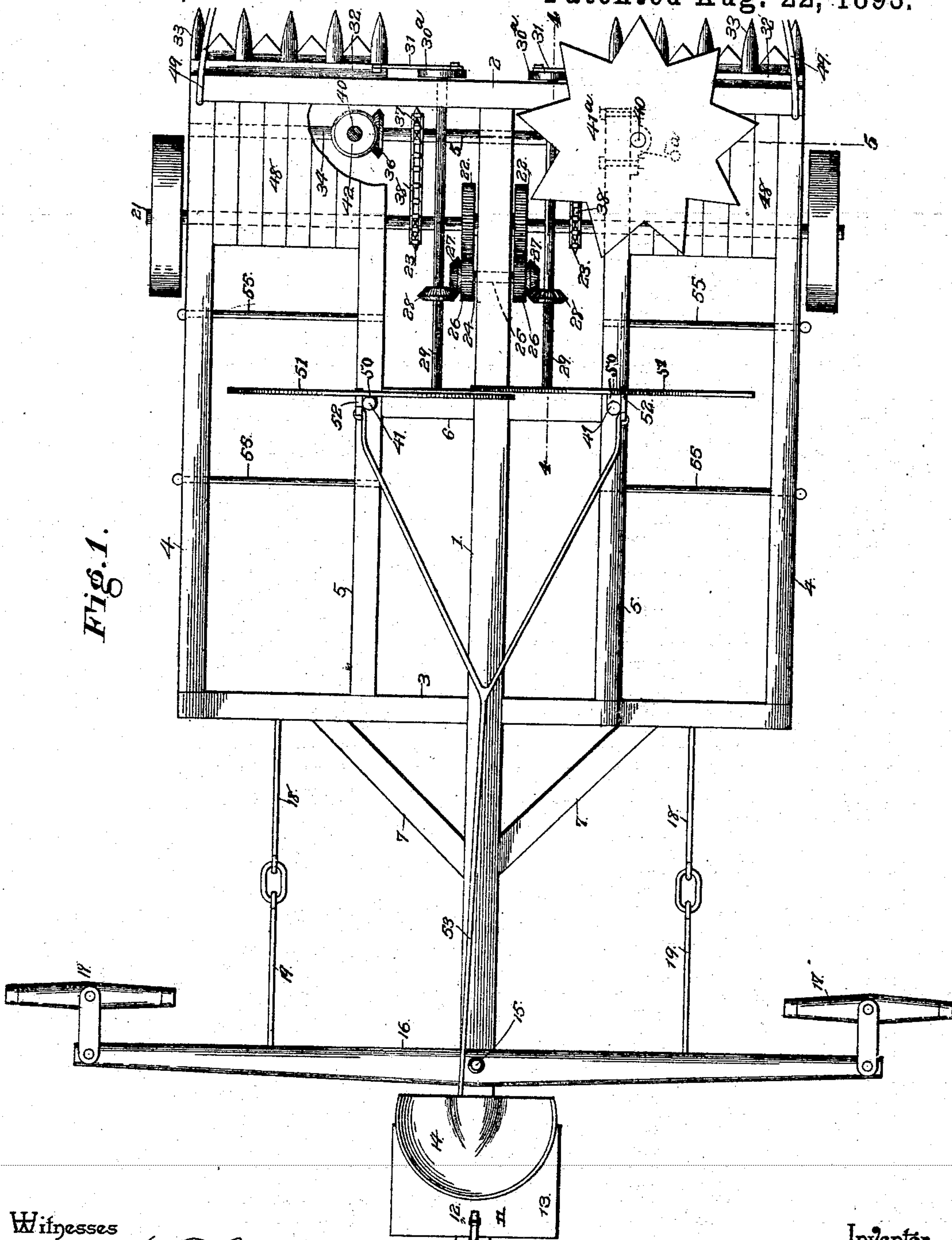
(No Model.)

3 Sheets—Sheet 1.

E. WARDER.
CORN HARVESTER.

No. 503,757.

Patented Aug. 22, 1893.



Witnesses

W. C. Fowler
John H. Siggers

By his Attorneys,

C. A. Snow & Co.

Inventor

Edward Warder

(No Model.)

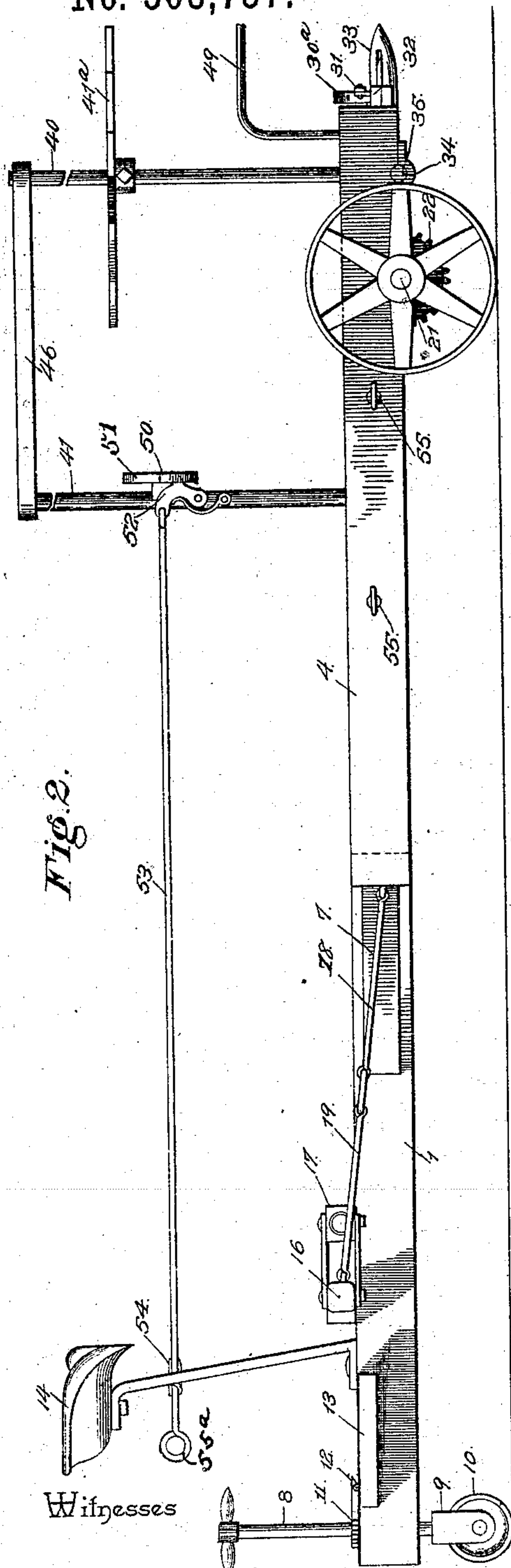
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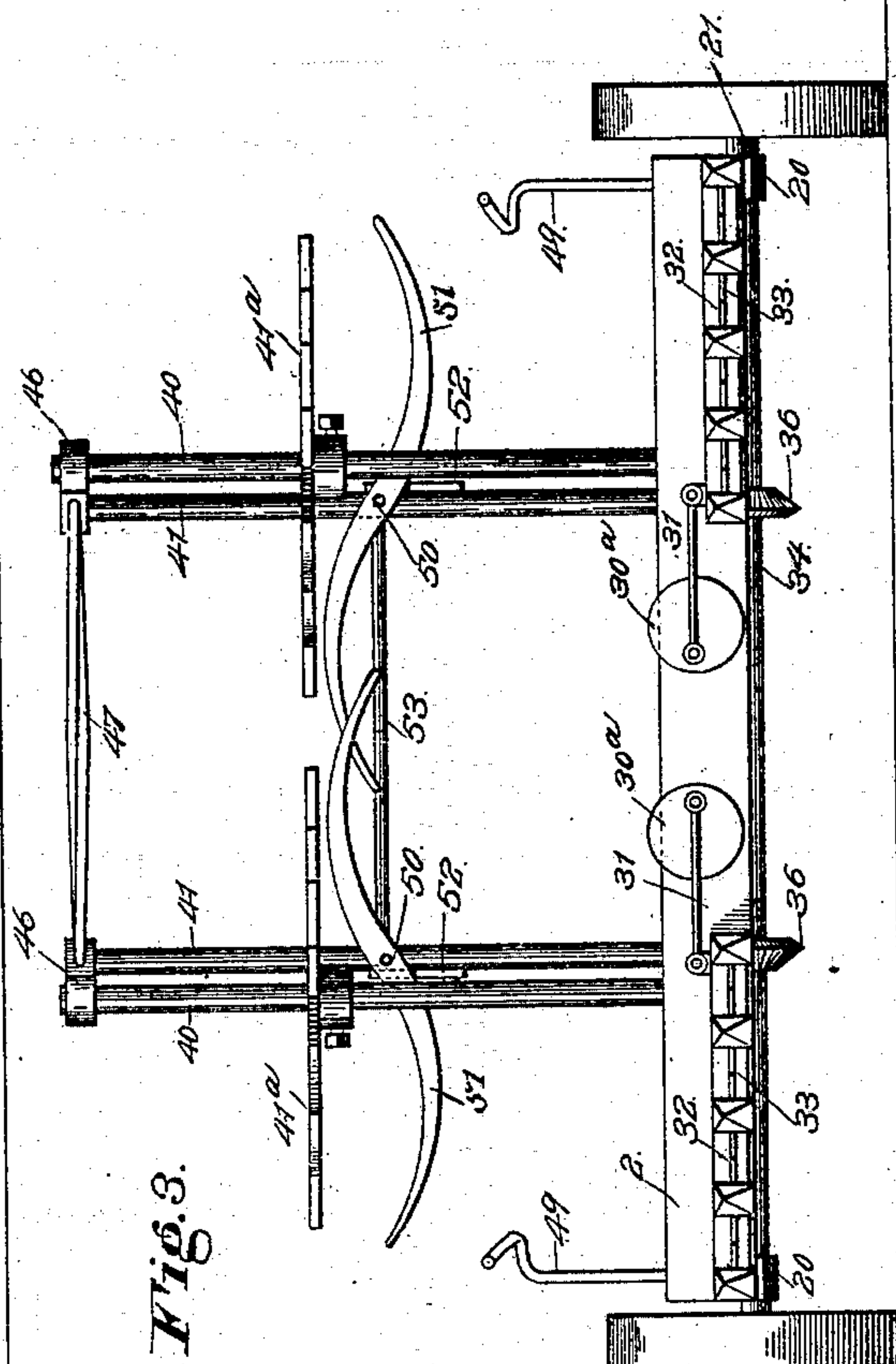
Fig. 2.



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Fig. 3.



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Fig. 4.

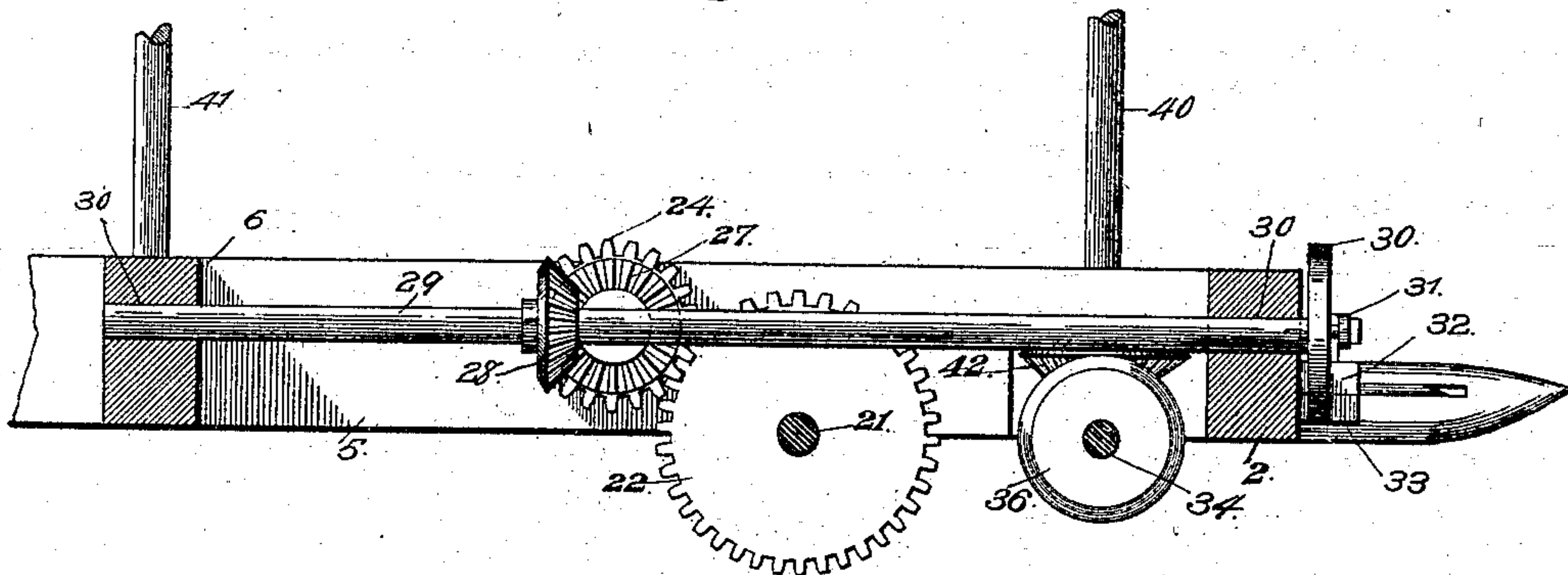


Fig. 6.

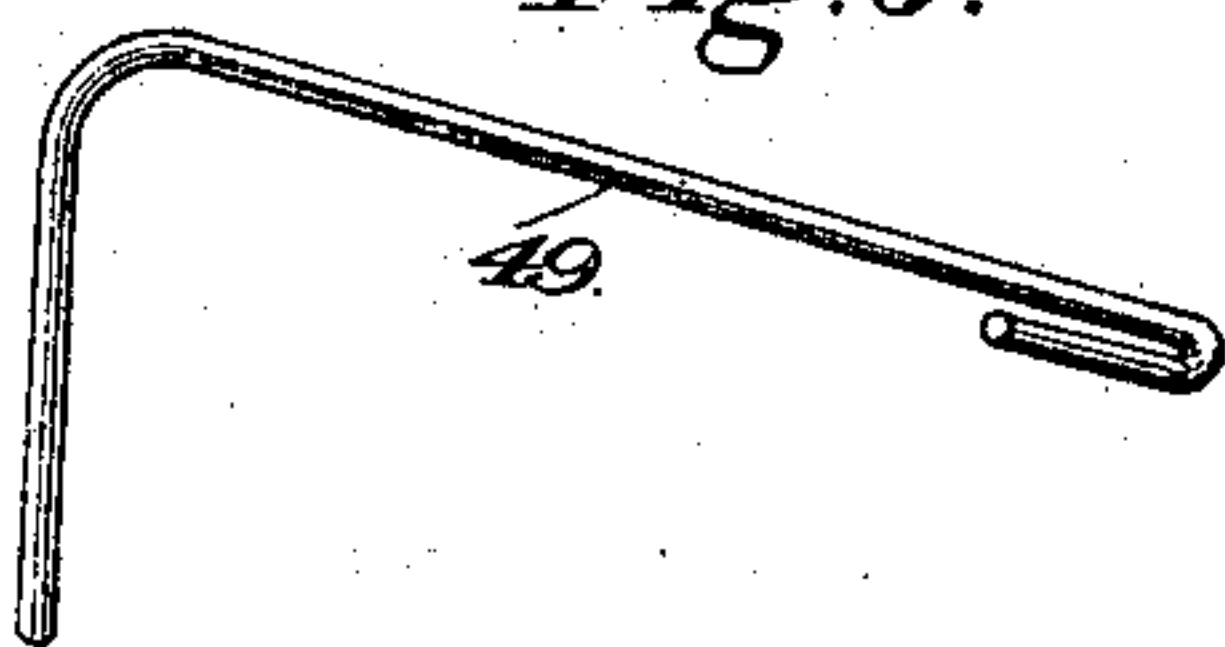
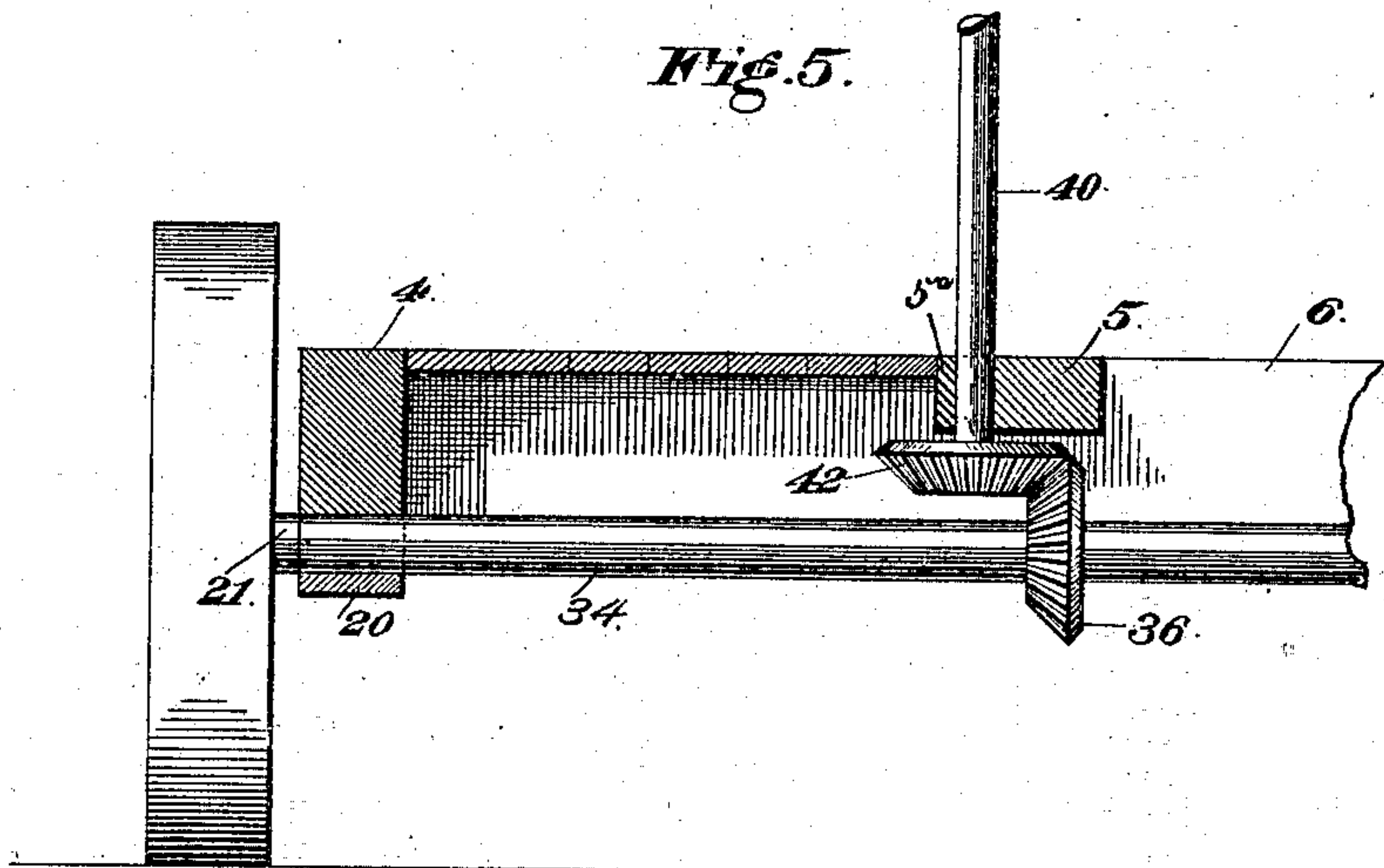


Fig. 5.



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UNITED STATES PATENT OFFICE.

EDWARD WARDER, OF GYPSUM, KANSAS.

CORN-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 503,757, dated August 22, 1893.

Application filed May 31, 1892. Serial No. 435,038. (No model.)

To all whom it may concern:

Be it known that I, EDWARD WARDER, a citizen of the United States, residing at Gypsum, in the county of Saline and State of Kansas, have invented a new and useful Corn-Harvester, of which the following is a specification.

This invention relates to corn and sorghum harvesters; the objects in view being to provide a harvester of comparatively simple construction, that will efficiently operate simultaneously upon two rows of stalks; which will accommodate an attendant at each side for the purpose of gathering in the stalks and forming them into bundles or shocks; that is so constructed that the horses for moving the machine may be hitched at points of the machine in rear of the cutting mechanisms, whereby they are preserved against injury from such mechanism.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

In the drawings: Figure 1 is a plan view of a harvester embodying my invention, partly broken away. Fig. 2 is a side elevation of the same. Fig. 3 is a front elevation. Fig. 4 is a longitudinal section through one of the cutting mechanisms. Fig. 5 is a transverse sectional view through one of the platforms upon line 5—5 of Fig. 1. Fig. 6 is a detail in perspective of one of the guides.

Like numerals of reference indicate like parts in all the figures of the drawings.

The general framework comprises a main beam 1, to the front end of which is secured a front transverse beam or sill 2, and at the middle of which is secured a rear transverse beam or sill 3, the extremities of the beams 2 and 3 being connected by side-beams 4. Between the sill and side-beams 4 intermediate longitudinal beams 5 connect the beams 2 and 3, and the beams 5 are connected with the central beam 1, between the front and rear beams 2 and 3, by means of a short transverse beam 6. Diagonal braces 7 incline from the beam 1 to the rear sides of the beam 3.

The beam 1 near its rear end is provided with a vertical bearing, in which is mounted the upper spindle or shank-portion 8 of a cast-

er-frame 9, said shank-portion having a suitable operating handle and a guiding caster-wheel 10 journaled in the lower end of the frame. A toothed wheel 11 is mounted on the shank-portion of the caster-frame, and a holding pawl 12 is pivoted on a platform 13 which is supported by the beam 1, the free end of the pawl engaging the wheel. The platform supports a seat 14 for the accommodation of the driver.

Pivoted by a bolt 15 to the beam 1, immediately in front of the platform 13, is a double-tree 16, the opposite ends of which have singletrees 17, loosely connected therewith. Draft-rods 18 are connected to the beam 3, and similar rods 19 are connected to the double-tree at each side of its center, the ends of the rods 18 and 19 being bent to removably engage an intermediate ring or link.

In bearings 20, formed in the under sides of the beams 1 and 4, a transverse axle 21 is journaled, and said axle is provided at opposite sides of the beam 1 with gear-wheels 22, and between the bars 1 and 4 with sprocket-wheels 23. Immediately in rear of the axle a short transverse counter-shaft 24 is journaled in a bearing 25 in the beam 1, and at each side of the beam 1 there is mounted on the shaft a small spur-gear 26, each of which engages with a similar gear 22, before mentioned. Opposite beveled pinions 27 are also mounted on the shaft 24, at the sides of the beam and engage with a small beveled pinion 28, which is mounted upon a pair of longitudinal shafts 29, journaled in bearings 30, formed in the beams 2 and 6 and between the central beam 1 and short longitudinal beams 5. The front ends of these shafts 29 terminate in crank-disks 30, and pitmen 31 are loosely connected to the disks, and each has its free end loosely connected with the inner end of a reciprocating cutter-bar 32, mounted in the ordinary finger-bar 33, one of which is connected to the front side of the beam 2, at each side of its center.

A transverse counter-shaft 34 is journaled in bearings 35, formed in the under sides of the bars 1, 4, and 5, and in front of the axle. This shaft has located upon it at the outer sides of the bars 5, beveled gears 36, and also sprocket-wheels 37, beyond the gears, said sprocket-wheels being connected by sprocket-

chains 38 with the before-mentioned sprocket-wheels 23 of the axle. By this means motion is conveyed to the shaft 34 from the axle. A front and a rear standard or post 40 and 41, respectively, rise from the platforms 48 and beams 5 and are journaled in bearings formed therein, and the front posts are each provided with vertically adjustable star-shaped disks 41^a which constitute opposite gathering-reels. The bearings for the posts 40 are not necessarily formed in the beams 5, but may be formed in blocks 5^a fixed thereto as shown in Fig. 1, in dotted lines, and in Fig. 5 in full lines. Each of the front posts is provided below the platform with a beveled pinion 42, and the said pinions are engaged and operated by the gears 36 of the shaft 34. Each pair of posts 40 and 41 is connected by a longitudinal bar 46, and diagonal tie-rods 47 connect the longitudinal bars and strengthen the reels. Platforms 48, each for the accommodation of an attachment, are supported upon the front ends of the beams 4 and 5, in rear of each of the cutting mechanisms. To each post 41 is pivoted, at 50, a compoundly-curved arm 51. Their upper concaved or hollowed sides are always presented uppermost at their outer ends, or in rear of the cutting mechanisms. Pivoted to the sides of the posts 41 are holding-pawls 52, the same having their locking-points normally engaging the under edges of the opposite stalk-supporting arms outside the posts 41. Pull-rods or cords 53 lead from the two holding-pawls and rest in a keeper 54 under the seat of the driver, beyond which a handle 55^a is located.

In Fig. 1 the bar 46 and rods 47 are omitted to prevent confusion of the drawing of the gearing which falls thereunder.

It will be seen that the machine operates simultaneously upon two rows of stalks, which are guided when irregular by forwardly-projecting inclined dividing-rods or arms 49, which are located at the outer front corners of the frame. As the stalks are cut by the harvesting mechanism, the operation of which has been described, in connection with the detailed description of parts, the corn drops back in position on the outer portions of the arms 51, to be gathered and tied into shocks by the attendants; and the pull rods or cords 53 are tripped at intervals to dump the bunch when large enough. By removing the arms the stalks may drop directly to the ground.

In rear of the platforms the bars 4 and 5 are connected by transverse rods 55, that are removable. If desired, these rods may be employed in connection with the corn-supporting arms for the purpose of catching the bundle and supporting it during the operation of tying or binding, or the rods may be removed and the bundle permitted to fall to the ground; or furthermore, the rods may be employed independent of the stalk-supporting arms. The outer arms of the droppers are provided at their under sides with indentations 56 to be engaged by the retaining pawls.

Having described the invention, what I claim is—

1. The combination with a frame-work having an oblong opening, cutting-devices in advance of the platform, a pivoted dropper supported at one side of the opening and extending thereover, an axle, means for communicating motion from the axle to the cutting mechanism, and temporary locking devices for the dropper, of a plurality of bars or rods removably located over the opening in the frame-work, substantially as specified.

2. In a harvester of the class described, the combination with the frame, comprising front and rear beams, 2 and 3, side-beams 4, 4 parallel intermediate beams 5, 5, central beam, 1, carrying the draft attachments and platforms 48, of the twin cutting mechanism located at the front ends of the platforms, transverse rods 55, arranged between bars 4 and 5 in rear of the platforms, gathering reels located above the platforms in rear of the cutting mechanisms, the axle carrying ground wheels, means for conveying motion from the axle to the cutting mechanisms and reels, vertical posts 41 rising from beams 5 in rear of the platforms, droppers pivotally mounted upon said posts, and having concavely curved arms extending laterally over the spaces between the beams 4 and 5 in rear of the platforms, the retaining pawls, and means to operate the same, substantially as specified.

3. In a harvester of the class described, the combination with a rectangular frame having platforms 48, open spaces in rear thereof and a central beam, 1, of the cutting mechanism located at the front edges of said platforms, gathering reels located above the same, droppers arranged above the spaces in rear of said platforms, transverse removable rods 55 arranged in said spaces beneath the droppers, the axle carrying ground-wheels, means for conveying motion from the axle to the cutting mechanism, and a transverse draft-beam secured to a rearward extension of said central beam, in rear of the frame and extending beyond the sides of the latter whereby the draft animals may follow said ground-wheels, out of the line of the droppers and cutters, substantially as specified.

4. In a harvester of the class described, the combination of the framework, the cutting mechanism at the front of the framework, a post rising from the framework in rear of the cutters, arms pivoted to the post and extending over the opening in the frame, means for locking and unlocking the arms, and rods removably covering the opening, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

EDWARD WARDER.

Witnesses:

J. TINKLER,
C. R. WILLIAMS.