

No. 819,533.

PATENTED MAY 1, 1906.

E. FOWLER.
DISK PLOW.

APPLICATION FILED AUG. 2, 1905.

3 SHEETS—SHEET 1.

Fig. 1.

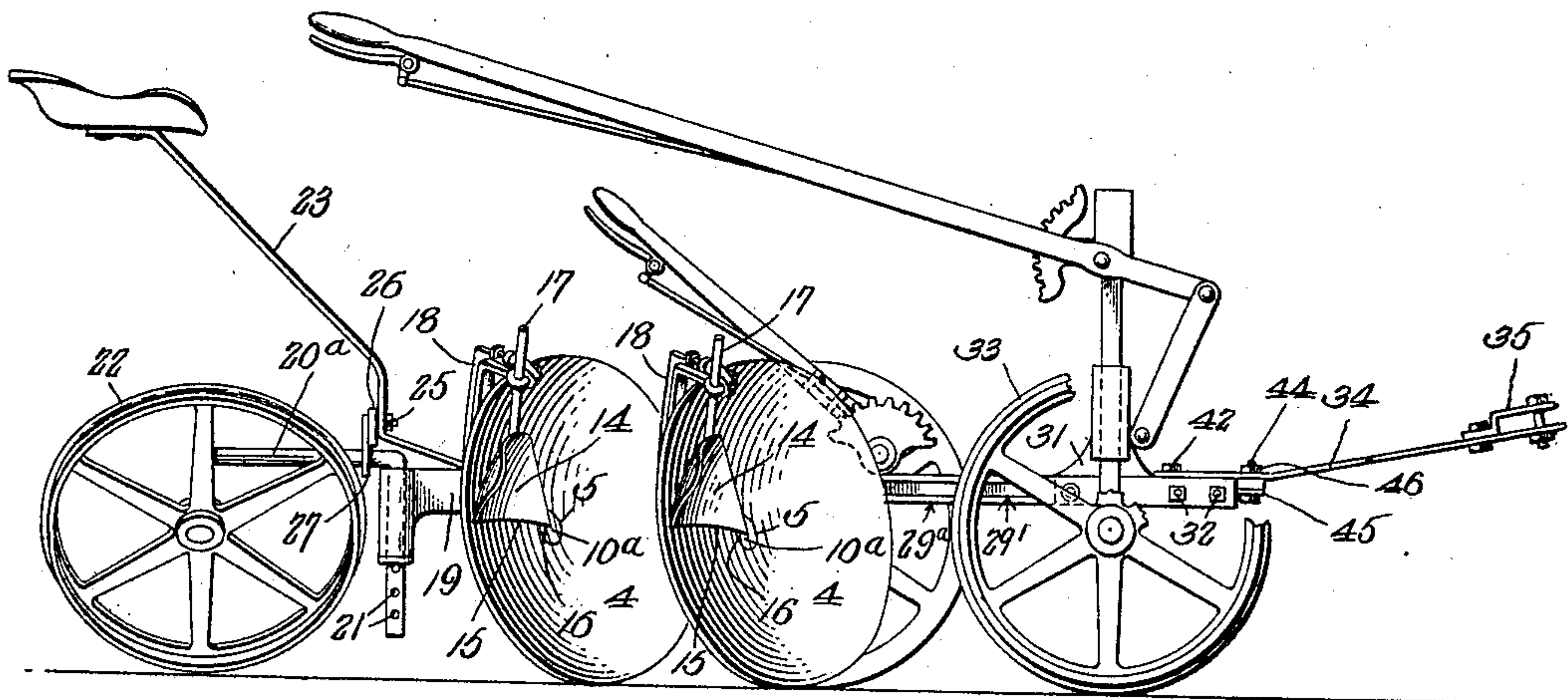
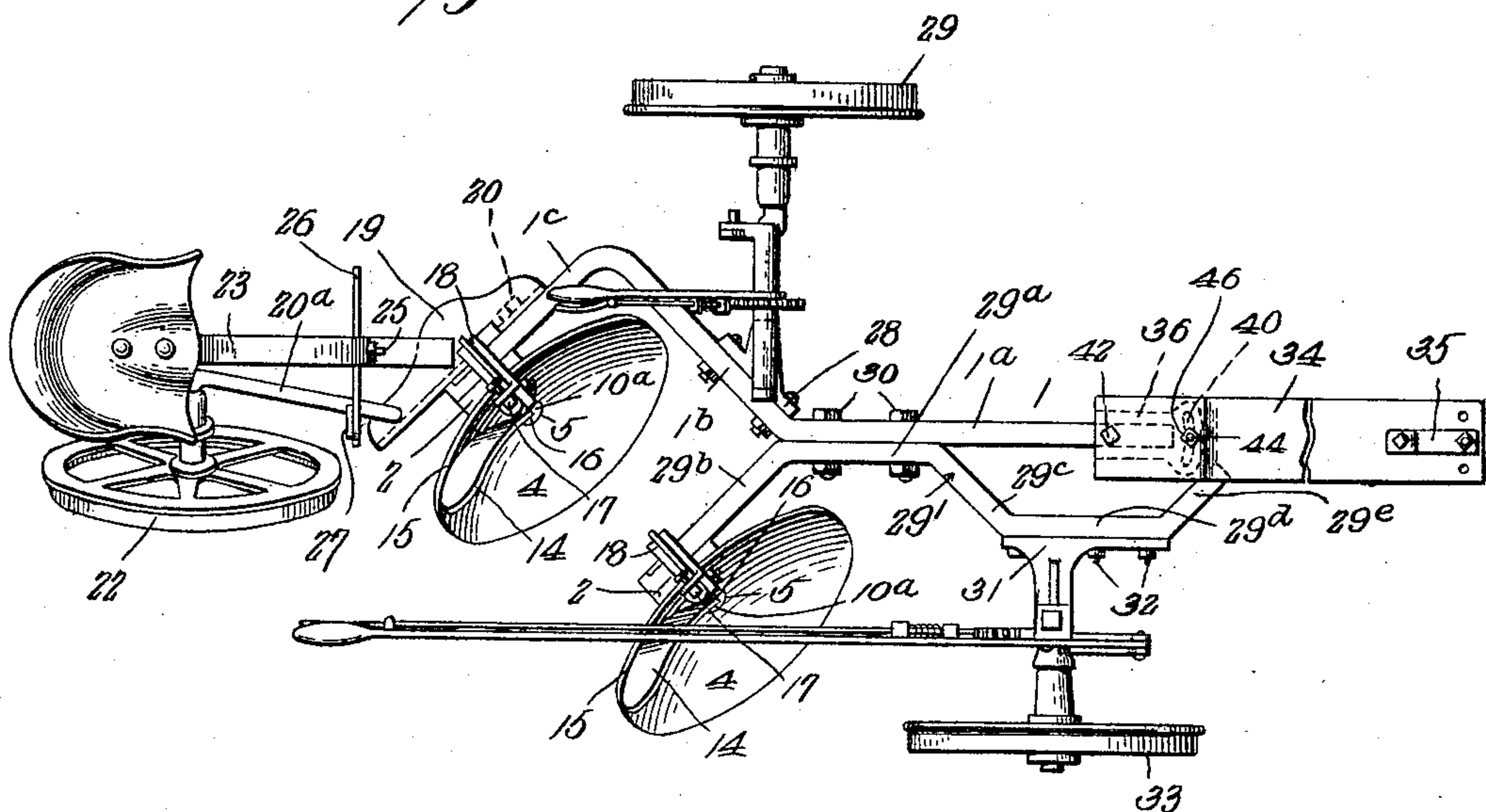


Fig. 2.



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3 SHEETS—SHEET 2.

Fig. 3.

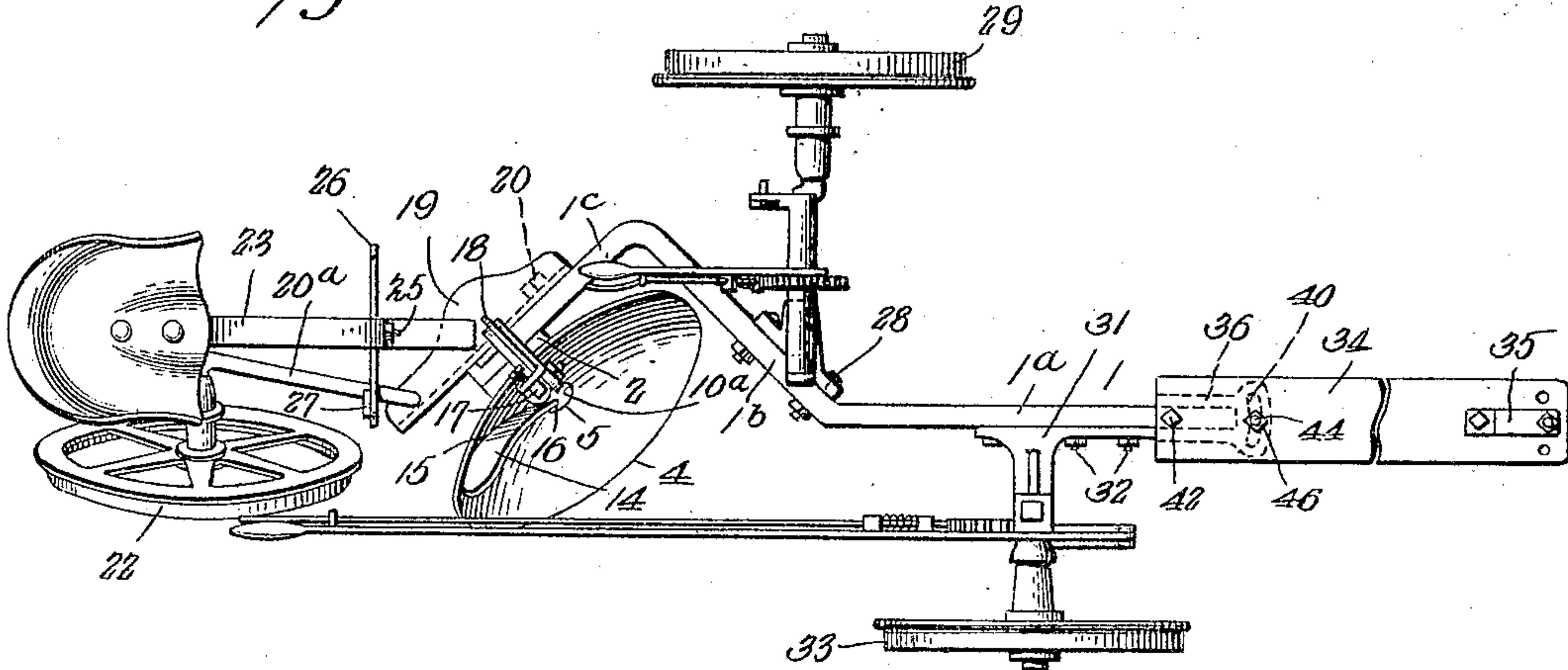


Fig. 4.

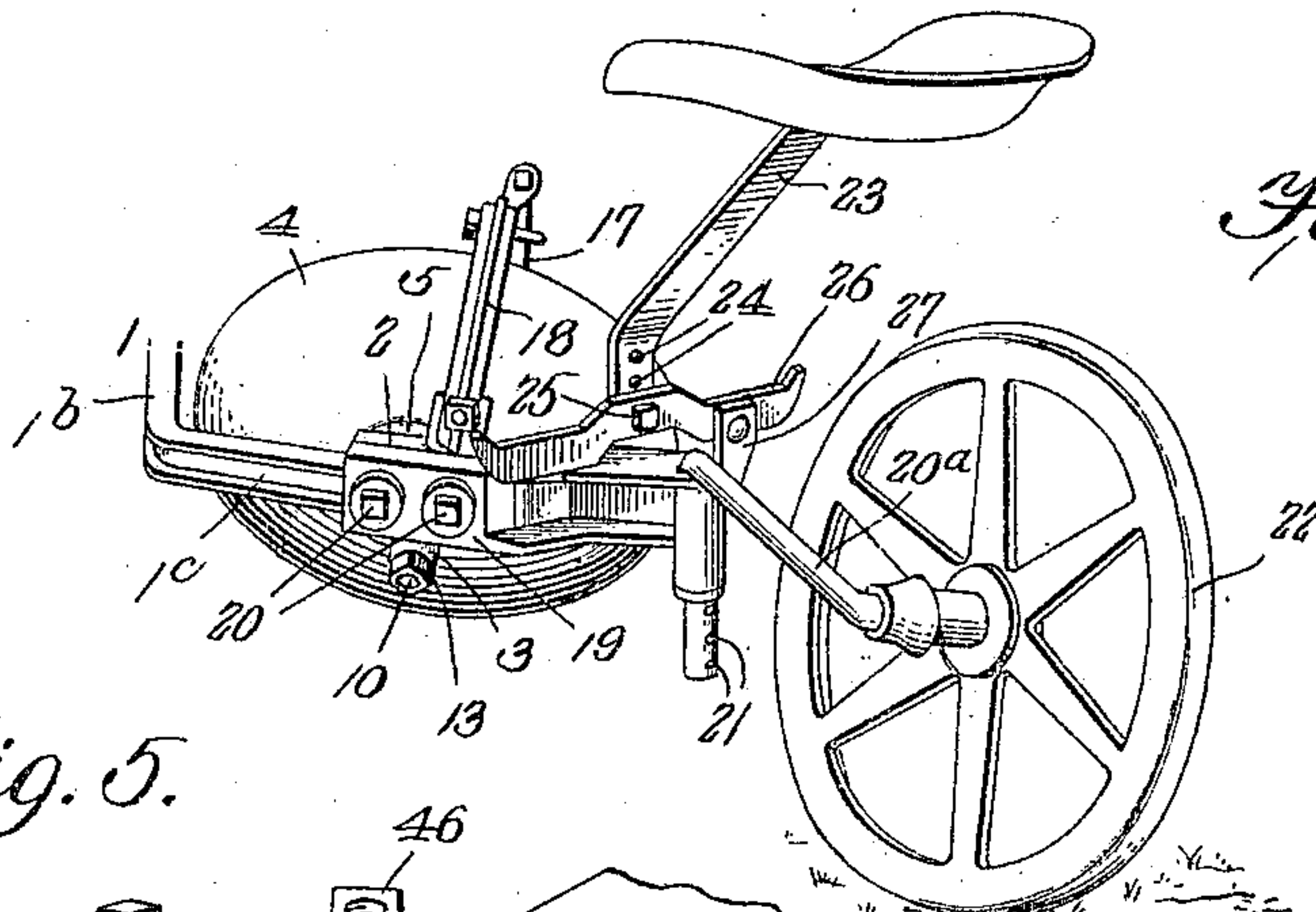
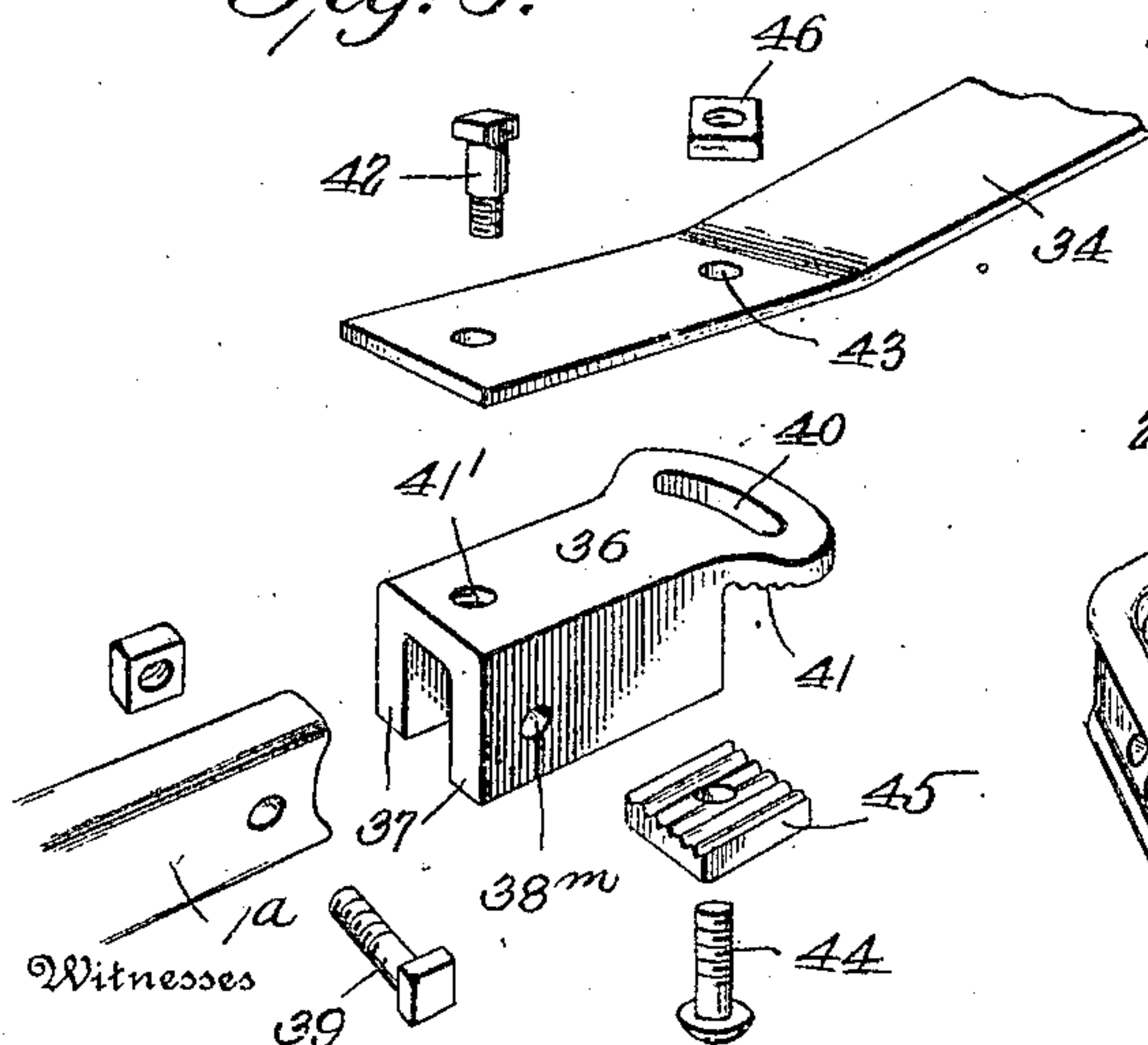


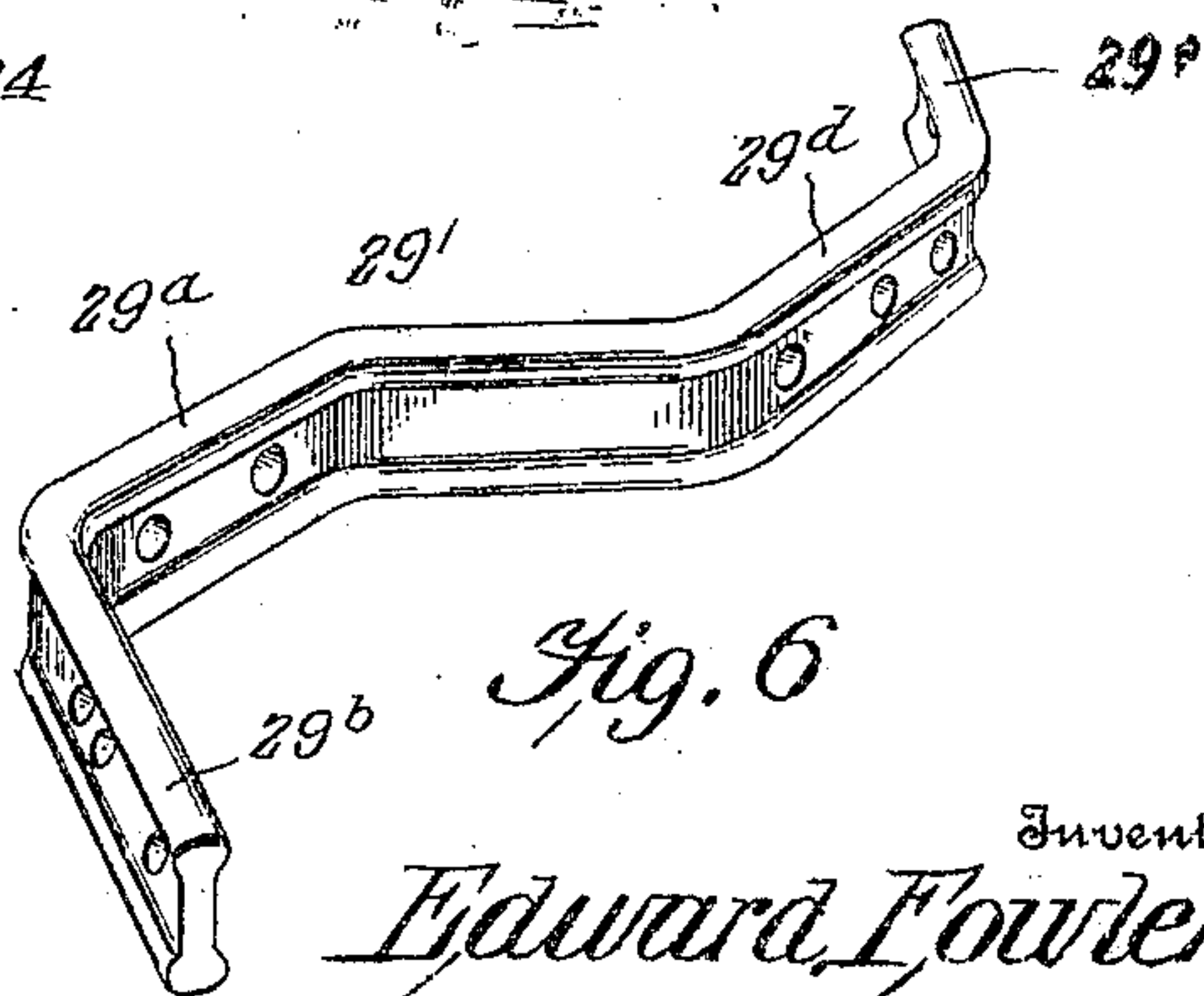
Fig. 5.



Witnesses

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Fig. 6.



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3 SHEETS—SHEET 3.

Fig. 7.

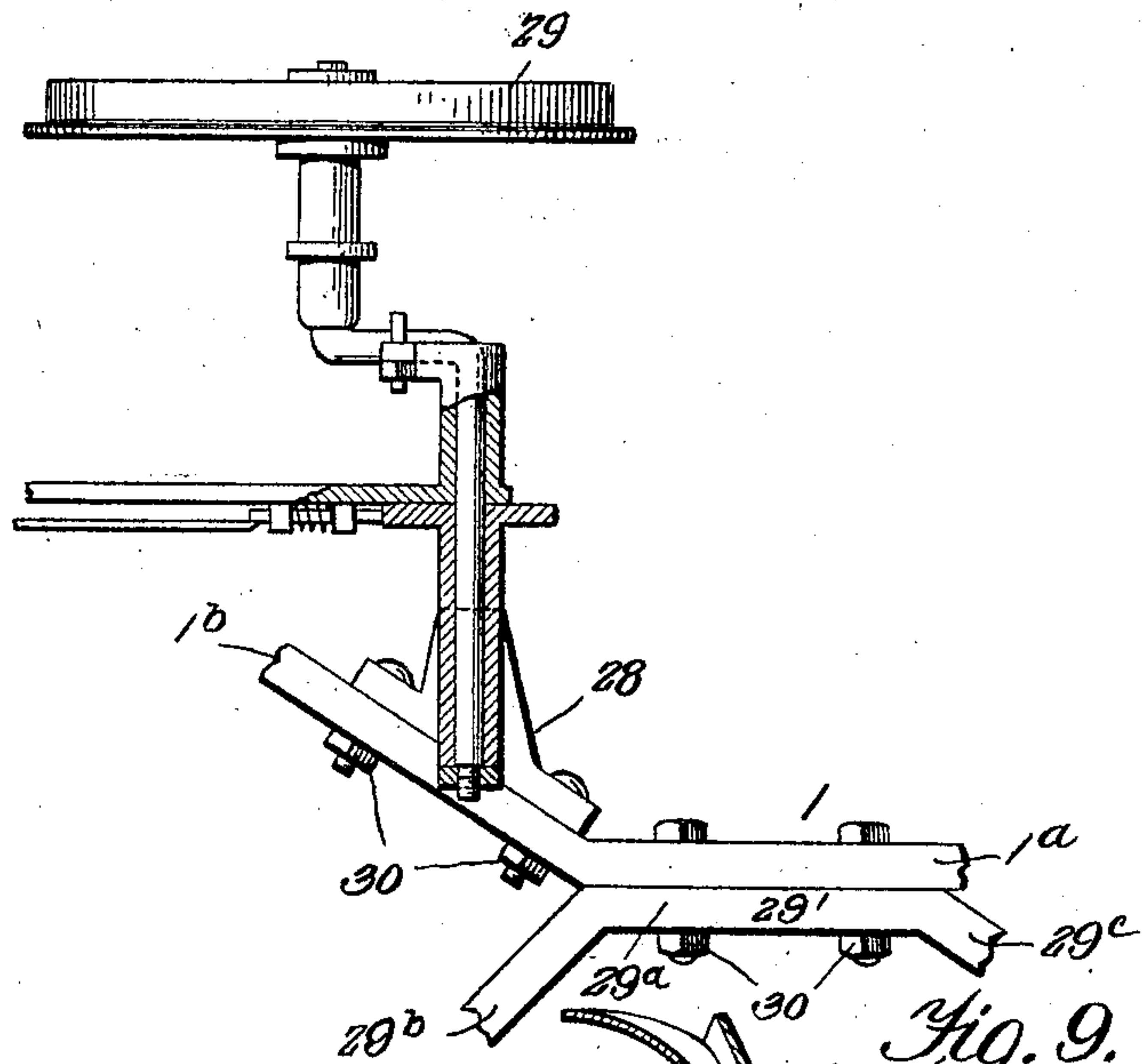


Fig. 8.

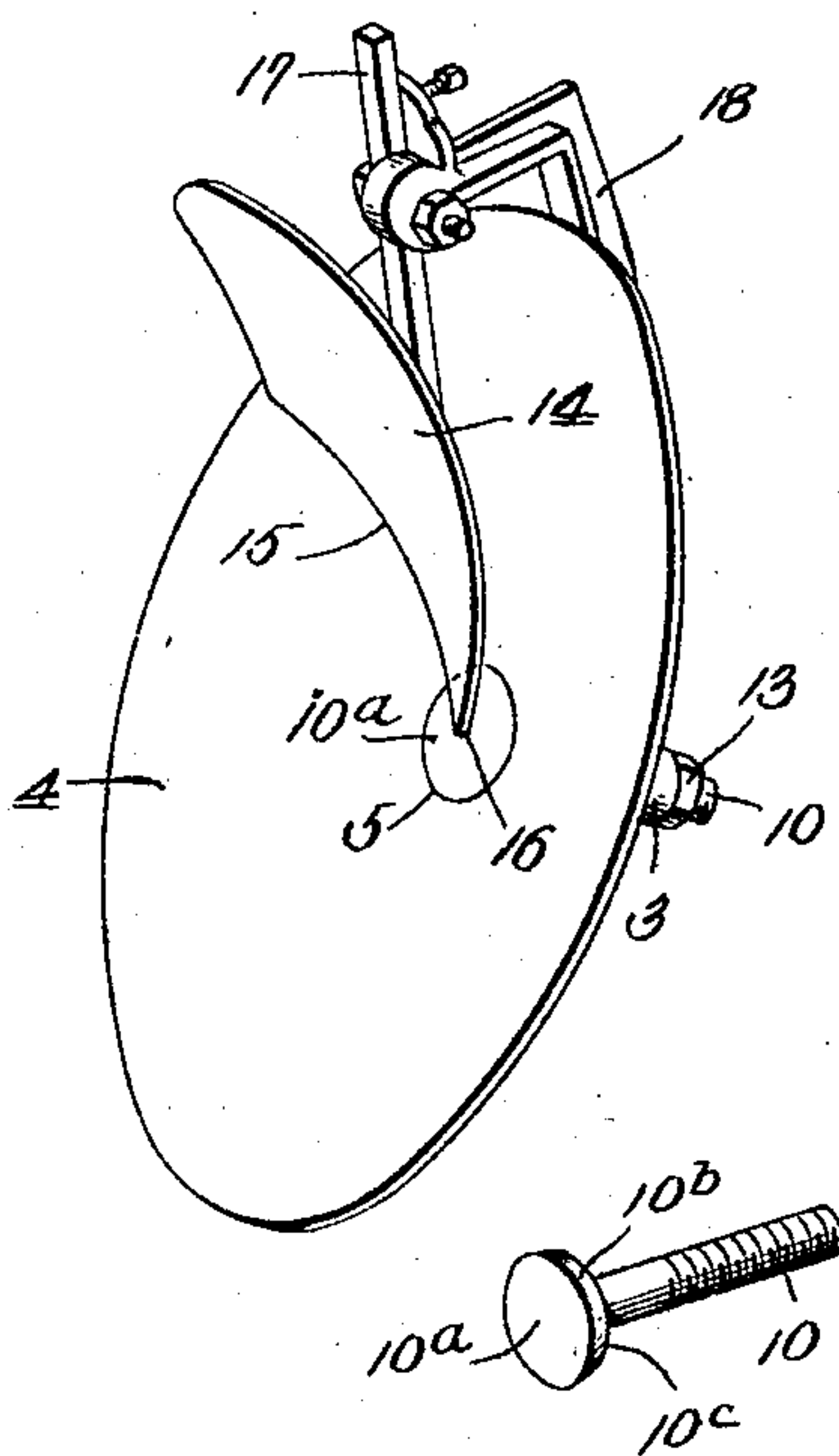


Fig. 9.

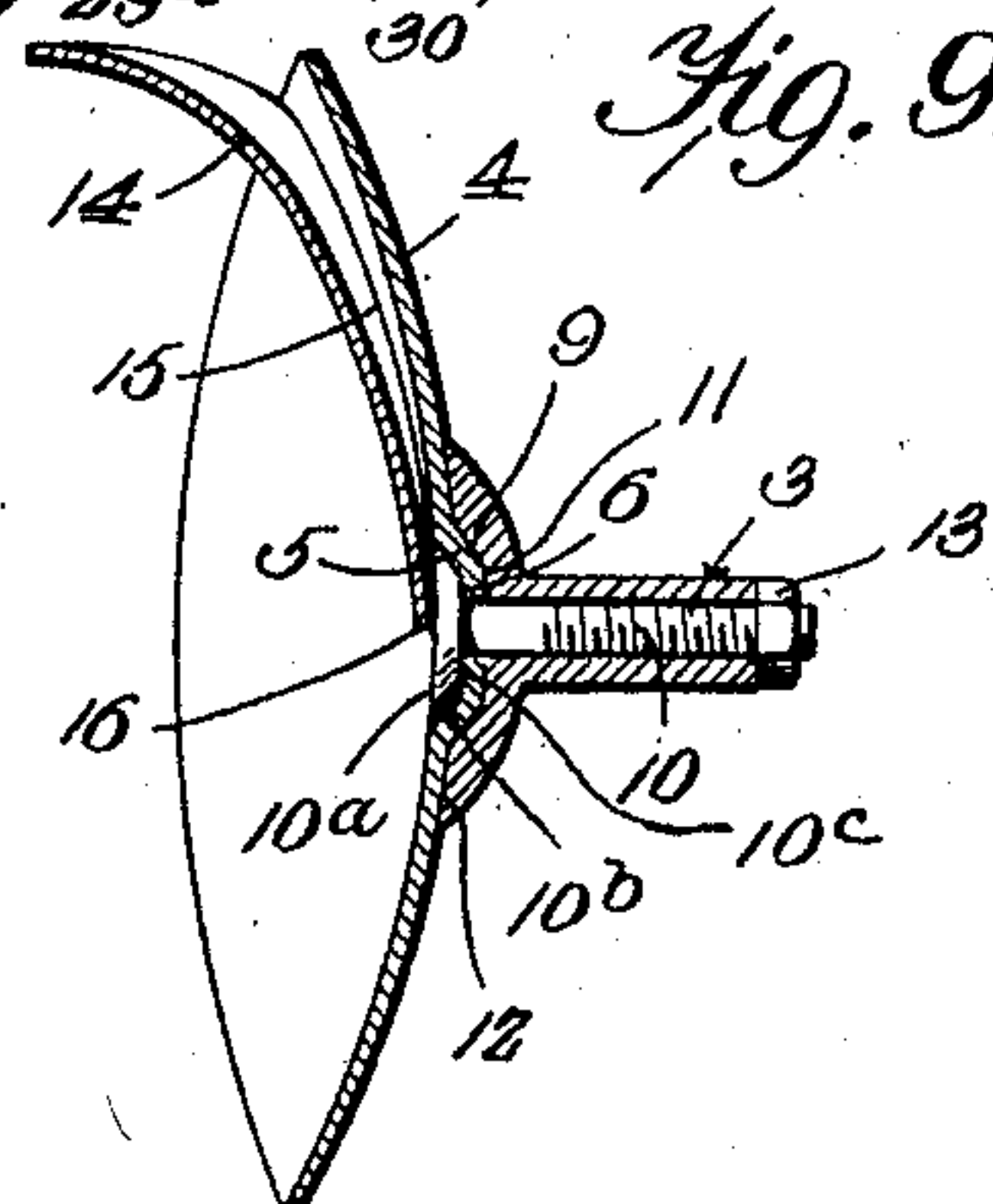
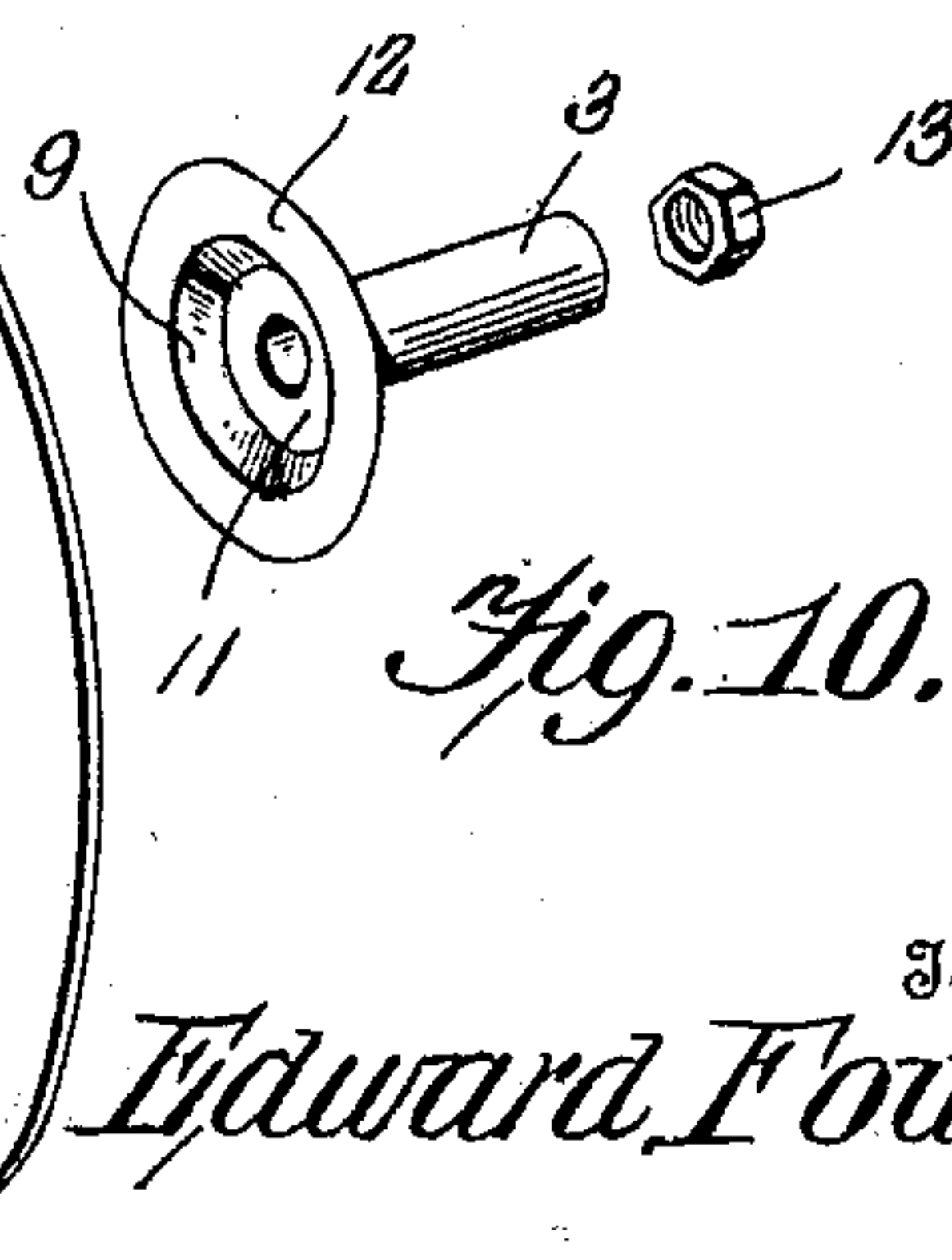


Fig. 10.



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UNITED STATES PATENT OFFICE.

EDWARD FOWLER, OF CEDAR GROVE, GEORGIA, ASSIGNOR OF ONE-SIXTH TO OTY T. SIMMONS, ONE-SIXTH TO JESSEY L. SIMMONS, AND ONE-SIXTH TO BYRON V. KELL, OF CEDAR GROVE, GEORGIA.

DISK PLOW.

No. 819,533.

Specification of Letters Patent.

Patented May 1, 1906.

Application filed August 2, 1905. Serial No. 272,382.

To all whom it may concern:

Be it known that I, EDWARD FOWLER, a citizen of the United States, and a resident of Cedar Grove, in the county of Walker and State of Georgia, have invented certain new and useful Improvements in Disk Plows, of which the following is a specification.

This invention relates to disk plows.

As the person usually handling a plow is inexperienced in mechanics a disk plow which may be converted from a single to a double plow, or vice versa, must be of the simplest construction to be a commercial success.

It is therefore one of the objects of this invention to provide a plow construction meeting these requirements.

Another object of my invention is to provide for the rear furrow-wheel of a disk plow a lock which may be adjusted vertically to coact with the swinging arm in the various vertical adjusted positions of the latter.

A further object is to provide an animal-hitch which may swing vertically in order to prevent the team carrying the weight of the plow-frame on their backs and at the same time allow the front of the plow to drop into low places on the ground with full force and which may be adjusted laterally to suit the number of disks employed and the different kinds of soils.

Other objects and advantages will appear in the following description and will be more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a side elevation of the preferred embodiment of my invention when used as a double plow. Fig. 2 is a top plan view of the double plow. Fig. 3 is a top plan of the single plow. Fig. 4 is a detail perspective showing the rear furrow-wheel when locked. Fig. 5 is a separated perspective view showing the mounting of the animal-hitch. Fig. 6 is a detail perspective view of the supplemental beam. Fig. 7 is a detail view showing the connection between the main beam, the supplemental beam, and the unplowed-land-wheel mounting. Fig. 8 is a perspective view showing the relation of the scrapers to the disks. Figs. 9 and 10 are respectively a vertical section and a separated perspective showing the manner of securing the disks to their spindles.

The construction of the main beam 1 is substantially the same as that shown in my

copending application filed May 28, 1904, Serial No. 210,257, and consists of a straight forward portion 1^a, in alinement with the draft, a portion 1^b, deflected toward the land side, and a portion 1^c, turned toward the furrow side approximately at right angles to portion 1^b.

To the front face of the portion 1^c is secured the disk-mounting 2, in which turns the spindle 3 of the concavo-convex disk 4. The disk, as shown in Figs. 9 and 10, is made of sheet metal and is provided with a central tapering open boss 5, depressed rearwardly from the metal and having at its base an inwardly-extending flange 6. Within the boss is fitted the head of a bolt 10, the head having a concave top 10^a, tapering side walls 10^b, and a flat under surface 10^c to bear against flange 6. The spindle 3 is bored to receive the shank of the bolt and at one end is provided with an enlargement providing a seat having a flat bottom 11 and outwardly-inclined side walls 9, the edge 12 of the enlargement or the rim surrounding the seat being curved to conform to the rear face of the disk surrounding the boss. By this construction the flange 6 is clamped between the flat under face of the bolt and the flat bottom of the seat at the end of the spindle, thereby preventing the spindle separating from the disk when the disk strikes a rock, stump, or other obstruction. The spindle 3 and the bolt 10 are held together by a nut 13.

In disk plows it is necessary to maintain the front concave face of the disk clear of all obstructions, so that a proper turning of the soil may be obtained. The center of the disk has heretofore been the only place having an obstruction, this having been due to the fact that the bolt by which the disk is secured to the spindle projects from the disk, so that even if the scraper should clear this bolt the projecting portion of the bolt itself interferes with the turning. In my invention the head of the bolt being concave, as before stated, forms a continuation of the concave surface of the disk, and therefore the scraper 14, the edge 15 of which conforms to the concave of the disk, may have its end 16 extended to the axis or center of the disk, thereby clearing all portions of the same. The scraper is secured in any suitable manner, preferably by a rod 17, adjustable on an arm 18, secured to the disk-mounting.

On the rear face of the portion 1^c is remov-

ably secured a mounting or casting 19 by bolts 20, which also serve to secure the disk-mounting. The mounting 19 carries a swinging arm 20^a, which is adjustable vertically by means of openings 21 at its inner end and at its outer end carries a rear furrow-wheel 22. Also secured to the mounting 19 is a seat-post 23, carrying a seat at its upper end and provided with a vertical series of bolt-openings 24, in which may be secured a bolt 25, acting as a pivot for a foot-rest 26 in the form of a lever. The foot-rest is thus adjustable vertically on the seat-post and is thereby adapted to coact with the swinging arm 20 when the latter is in any of its various vertical positions. As it is pivoted intermediate its ends above the swinging arm 20^a, a downwardly-extending projection 27 thereon may be thrown into the path of the swinging arm 20 to limit the movement thereof to the furrow side of the plow. Upon the land side of the beam 1 is secured the unplowed-land-wheel mounting 28, which carries the unplowed-land wheel 29, which may be of ordinary construction.

When the plow is employed as a double plow, as shown in Figs. 1 and 2, there is removably secured to the furrow side of the main beam a supplemental beam 29, which comprises a central portion 29^a, parallel to and secured to the main beam by bolts 30, a rear portion 29^b, deflected rearwardly to the furrow side and approximately parallel with the disk portion 1^c of the main beam, a forwardly-deflected spacing portion 29^c, a wheel-mounting portion 29^d, parallel with main beam, and a forward portion 29^e, turned inwardly toward the main beam to prevent the formation of a projection. To the rear portion 29^b is secured the disk-mounting 2, which, together with the disk and its parts, is the same as the like parts on the main beam 1.

The front furrow-wheel mounting 31 is removably secured by bolts 32 to the wheel-mounting portion 29^d and carries the front furrow-wheel 33, which may be of the usual construction. When the supplemental beam 29' is removed, the wheel-mounting 31 may be detached and secured to the main beam 1, as shown in Fig. 3, the main beam being provided with bolt-openings for this purpose.

Upon the front end of the main beam is pivotally mounted to freely swing vertically the animal-hitch 34, having a broad flat upper surface to support the whiffletree and carrying a clevis 35 at its forward end. The means for pivoting the animal-hitch comprises a casting 36, having depending spaced arms 37, perforated at 38, the arms being disposed on opposite sides of the beam and secured thereto by a horizontal pivot-bolt 39. The front end of the casting is provided with a horizontal arcuate slot 40 and corrugations 41 on the under face. Casting 36 is also provided with a vertical bolt-opening 41',

through which passes horizontal pivot-bolt 42 of the animal-hitch 34. To hold the animal-hitch in any position about the horizontal pivot 42 within the two fixed limits formed by the ends of the slot 40, the hitch is provided with an opening 43, and a bolt 44, carrying a corrugated washer 45, passes through slot 40 and opening 43 and is held by means of nut 46, the corrugations on the washer 45 cooperating with the corrugations on the casting 36 to prevent a slipping of the parts. This horizontal or lateral adjustment of the animal-hitch is provided to properly distribute the draft when used as a single or as a double plow. It will be apparent that an additional disk may be secured to the main beam 1 in the rear of the main disk in the manner set forth in my application, Serial No. 210,257, before mentioned.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a disk plow, a rear furrow-wheel swinging arm, a foot-rest pivoted above the swinging arm and carrying a depending portion adapted to be thrown downwardly in the path of the arm, and means permitting the foot-rest to be adjusted vertically.

2. In a disk plow, the combination with the rear furrow-wheel swinging arm, of a seat-post provided with a vertical series of perforations, a foot-rest carrying a depending portion to be thrown in the path of the arm, and bolt passing through any one of the perforations and pivotally securing the foot-rest.

3. The combination with the vertically-adjustable swinging rear furrow-wheel, of a vertically-adjustable lock for limiting the swinging of the rear furrow-wheel.

4. The combination with the main beam having a straight forward portion adapted to have a front furrow-wheel secured thereto, a portion deflected toward the land side, and a portion deflected toward the furrow side, all of said portions being integral with one another; of an animal-hitch secured to the front end of the main beam; a rear furrow-wheel and disk secured to the portion deflected to the furrow side; an unplowed-land wheel secured to the main beam; a supplemental beam having a central portion detachably secured to the straight forward portion of the main beam, a rear portion approximately parallel with that portion of the main beam deflected toward the furrow side, a spacing portion deflected forwardly from the central portion, and a wheel-mounting portion extending from the spacing portion; a disk carried by the rear portion of the supplemental beam; and a front furrow-wheel adapted to be secured to the wheel-mounting portion of the supplemental beam or to the forward portion of the main beam.

5. The combination with the main beam, of a member pivoted to the main beam to

swing freely vertically, an animal-hitch pivoted to the member to swing laterally a clevis on the forward end of the ditch and means for adjusting and holding the hitch, in
5 any lateral position between two fixed limits.

6. The combination with a beam, of an animal-hitch having a broad flat upper face to support a whiffletree, a clevis on the forward
10 end of the hitch, means permitting the hitch to freely swing vertically relatively to the beam, and means permitting said hitch to be moved laterally to any position within two fixed limits and to be clamped in any position within these limits.

15 7. The combination with the main beam, of a member having depending arms posi-

tioned on opposite sides of the beam and pivoted thereto so that the member may swing vertically, said member being also provided with a horizontal arcuate slot; an animal-
20 hitch pivoted to the member to swing laterally, and a bolt engaging the hitch and passing through the slot to hold the hitch in various lateral positions.

The foregoing specification signed at Cedar Grove, Georgia, this 22d day of July,
25 1905.

EDWARD FOWLER.

In presence of—

SAMUEL P. COLQUITT

WILL. H. CLOSKSON.