

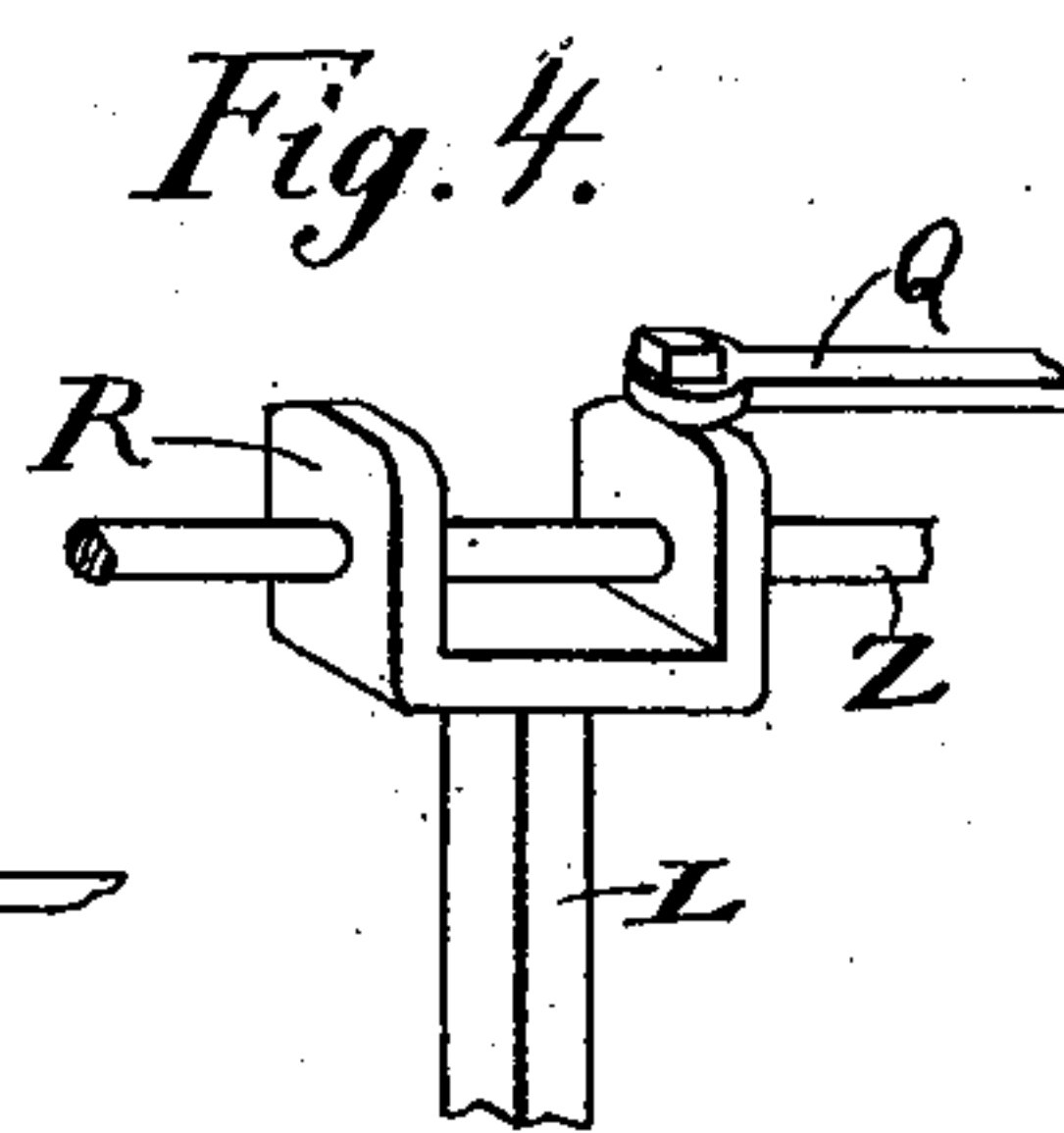
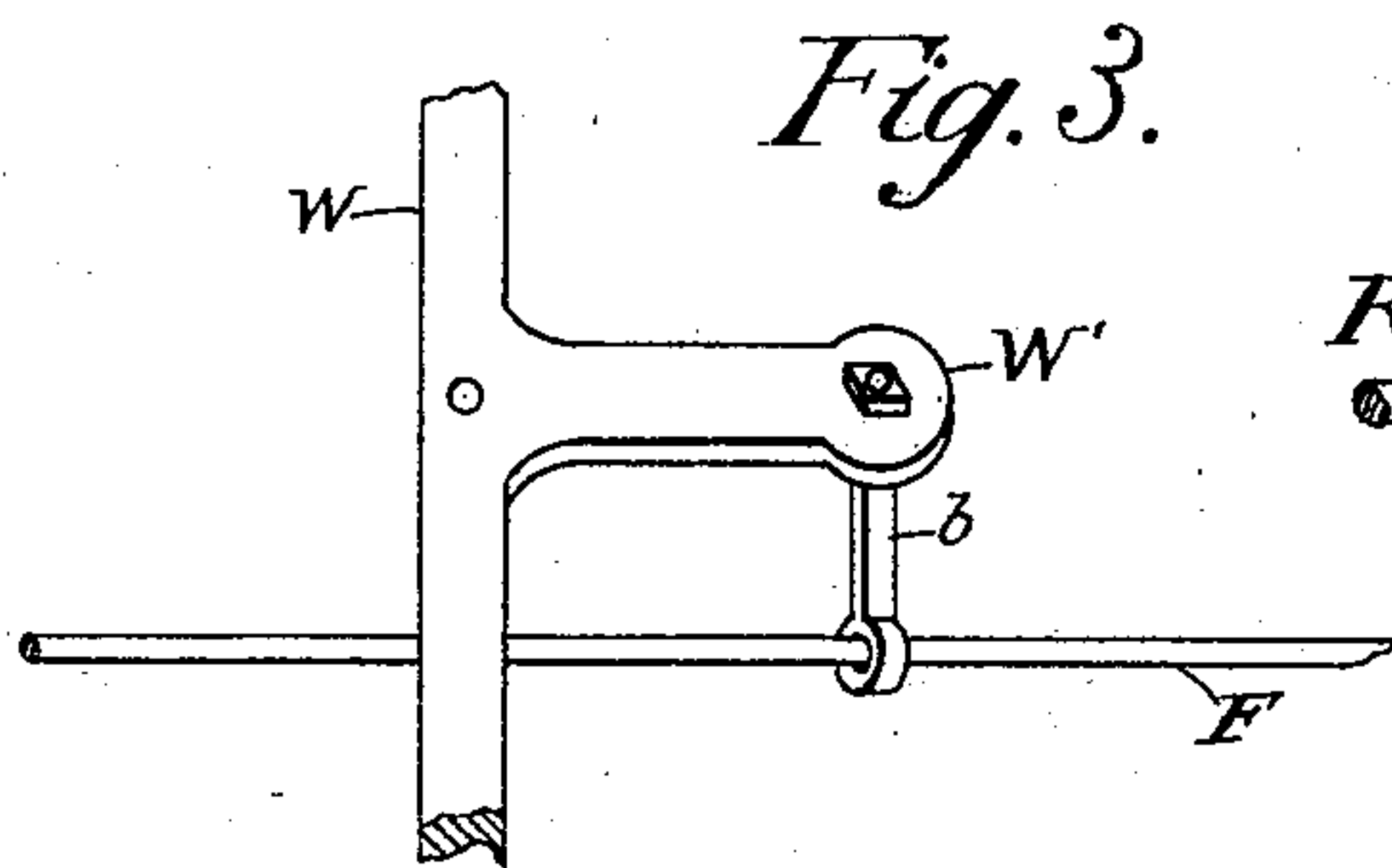
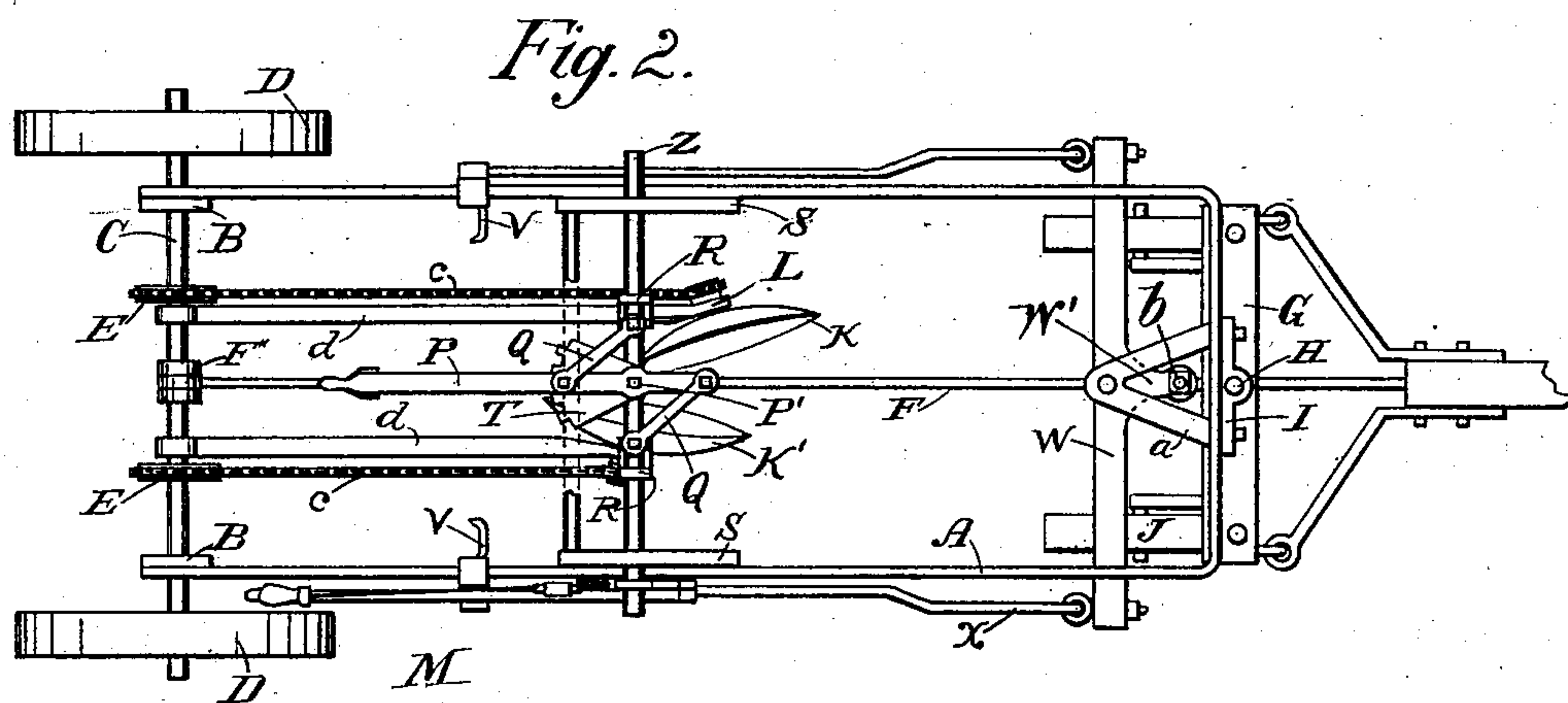
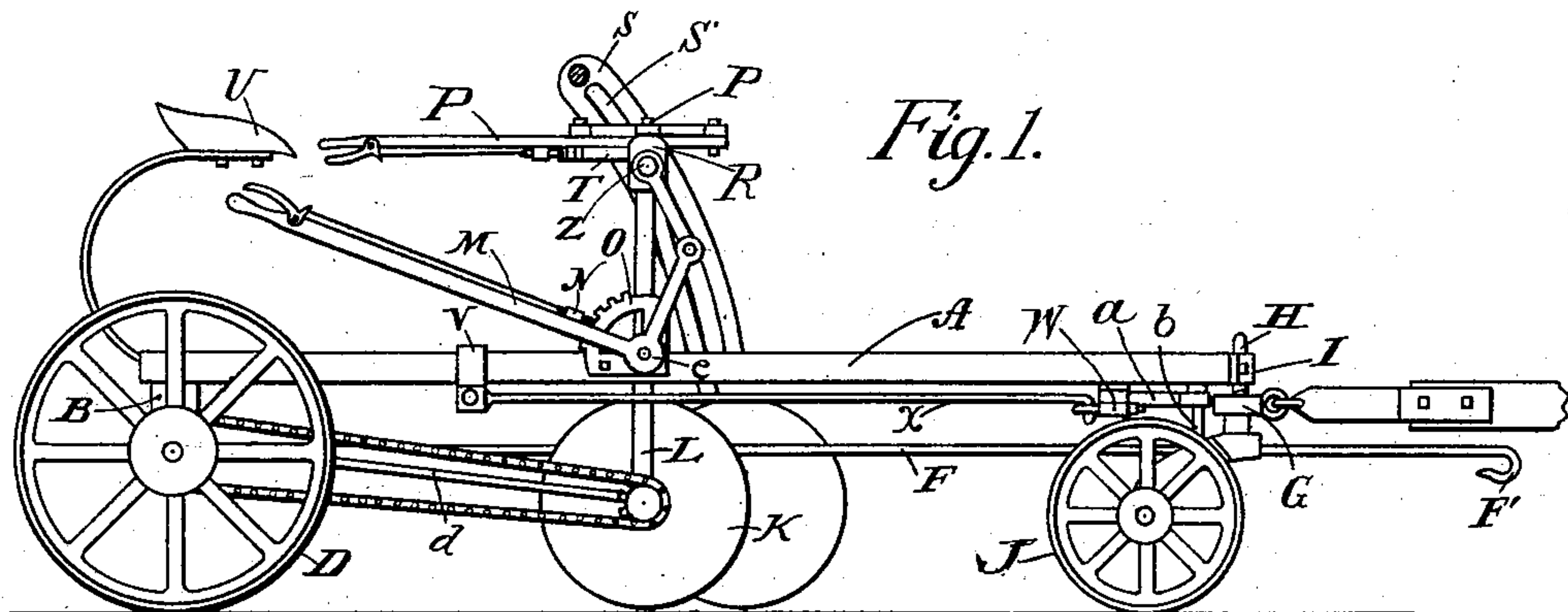
No. 755,118.

PATENTED MAR. 22, 1904.

C. A. DYSLE.
BEET PULLER.

APPLICATION FILED MAR. 30, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES A. DYSLE, OF LOS ANGELES, CALIFORNIA, ASSIGNOR TO AMERICAN SUGAR BEET IMPLEMENT COMPANY, OF BUTTE, MONTANA.

BEET-PULLER.

SPECIFICATION forming part of Letters Patent No. 755,118, dated March 22, 1904.

Application filed March 30, 1903. Serial No. 150,293. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. DYSLE, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Beet-Pullers, of which the following is a specification.

My invention relates to means to loosen the ground around the beets when they are ready to be harvested, so that they are easily taken from the ground by hand or machinery; and the object of my invention is to provide means whereby this can be accomplished rapidly and economically. I accomplish this object by means of the apparatus herein described and shown in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved beet-puller, a portion being broken away for better illustration. Fig. 2 is a plan view of my beet-puller with the seat removed. Fig. 3 is a perspective view of the draft-rod-carrying bracket. Fig. 4 is a perspective view of the slide R.

In the drawings, A represents the frame, the rear end of which is supported by the upright supports B, resting on the axle C. The axle C projects through and has bearings in these uprights. On the ends of the axle C are keyed the main wheels D. Rigidly affixed to the axle C are the two sprocket-wheels E, carrying the sprocket-chains *c*, which pass over sprocket-wheels on the hubs of the disks K. Beneath the frame A is disposed the draft-rod F, having on its forward end a hook F' to engage the doubletree for attaching the horses for drawing the same. This draft-rod extends to and has a bearing in its rear end F'' for the reception and operation of the axle. The front part of the frame is mounted on the forward truck G, to which it is pivotally secured by the king-bolt H, which extends through the bearings I, secured to the front end of the frame, and through the forward truck G. Pivotaly secured to the forward truck are the two fore wheels J, whereby the front end of the beet-puller can be swung in any direction, the purpose of which I will hereinafter explain.

It is found in pulling beets by machinery drawn by horses that it is almost impossible to keep the horses in line with the rows of beets, and I have therefore made special arrangements by which I can always keep the two saucer-shaped disk cutters K in proper position on opposite sides of the rows of beets, notwithstanding the team may sway more or less from a direct line over the rows of beets. To accomplish this, I have mounted the saucer-shape cutters in vertical hangers L. These hangers, pivoted on the free ends of the swinging bars or braces *d*, have a vertical movement on the frame by means of the bell-crank levers M, pivoted to the frame at *e*, which are provided with clutching devices N to engage the notches in the segments O. By the elevation or depression of the lever M the upright L will be moved vertically, carrying with it the attached cutting-disks K. They will be held in any adjusted position by the clutch mechanism N on the levers M. This mechanism enables me to elevate the cutters out of and above the ground into the inoperative position, as shown in Fig. 1, and enables me to drop the cutter to a desired point when the machine is in motion and it is desired to operate the same. The distance between the two cutting-disks is regulated by means of the lever P, which has a pivotal movement on the pivot P', secured on the cross-rod Z. The two connecting-links Q have a pivoted connection at one end on the lever P, the other end of the swinging links being pivotally secured to the slides R. These slides are mounted on and have a longitudinal movement on the cross-bar Z. This cross-bar has a vertical movement in the upright supports S. Affixed to the cross-bar Z is the segment T, provided with notches on its periphery to engage the dog on the lever P.

Now it will be manifest that by the movement to the right of the lever P, being within easy reach of the operator sitting in the seat U, the upright supports L, carrying the cutting-disks, will approach nearer together, and by throwing the lever to the left the cutting-disks will be caused to move farther apart and away from the center of the apparatus, which will

be represented by the draft-rod F. The operator's feet will rest in the foot-rests V. These foot-rests are slidably mounted on the frame A and are connected with the front cross-bar W by the connecting-rods X. This cross-bar W is pivotally connected with the front plate *a*, which is secured to the front end of the frame. The front cross-piece W has a forward extension W', from the forward end of which is a downwardly-projecting bracket *b*, which has in its lower end an opening through which the draft-bar F passes.

Now it will be manifest that the operator sitting in the seat U and directly above and straddling the row of beets to be pulled, with his feet resting in the foot-rests V, will be able at all times to tell whether the line of beets being pulled is directly between the cutting-disks. If the team should sway to the right or left out of a direct line over the row of beets, the operator can correct the same by throwing his weight onto the right or left foot-rests, as required, thereby keeping the cutting-disks equidistant from the center of the rows.

It will be observed that I have located the cutting-disks one in advance of the other, because I have found by numerous experiments that this is the proper way to mount these cutters. Heretofore they have been mounted one opposite to the other, the result of which has been great loss of power and very unsatisfactory results. As one disk crowds the dirt against the dirt being crowded by the other, it has a tendency to retard the operation of the apparatus; but by placing one disk slightly in advance of the other, as I have shown, this objection is avoided. I have connected the axle of each disk with the sprocket-chain *c*, which passes over sprocket-wheel E, keyed to the main axle. This will always insure the proper rotation of the cutting-disks. It will be seen that the sprockets on the axle of the cutting-disks do not revolve in a plane with the sprocket-chain, but depart therefrom at an angle of about ten degrees, which I have found by many experiments works satisfactorily on account of the fact that there is but little strain on the sprocket-chain to rotate the cutting-disks, and that only at times, owing to the fact that the cutting-disks naturally revolve any

way as they pass through the earth. Still I find it necessary to employ the sprocket-chain mechanism to insure reliability of rotation.

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

1. In a device for pulling beets of the character herein described having cutting-disks, means to throw the cutting-disks into and out of operative position, comprising upright supports in the lower end of which are revolvably mounted the cutting-disks, the upper end terminating in a sliding block engaging a vertically-movable cross-bar; a cross-bar arranged to operate in a vertical groove in upright standards; upright standards mounted on the frame and having a slide-operating groove therein; a lever pivoted on the frame and being provided with clutch mechanism to hold the lever in any desired position; a connecting-rod extending from the short end of the lever to the sliding block.

2. In a beet-pulling apparatus of the character herein described the cutting-disks and means to hold them in alinement with the row of beets to be pulled, comprising foot-rests slidably mounted on the frame and being operatively connected with pivoted means in the forward end of the frame, whereby the movement forward of either foot will tend to throw the cutters in the direction of the foot exerting the impulse.

3. In a beet-puller of the character herein described the cutting-disks one on each side of the row of beets, and means to change the distance between the disks, comprising the clutch-lever P pivoted at P'; a toothed sector T secured on a cross-bar Z; a clutch mechanism on said lever; connecting-rods Q extending from the lever P and connected with the slide R, the said slide R having a longitudinal movement on the cross-bar Z.

In witness that I claim the foregoing I have hereunto subscribed my name this 11th day of March, 1903.

CHARLES A. DYSLE.

Witnesses:

HENRY T. HAZARD,
G. E. HARPHAM.