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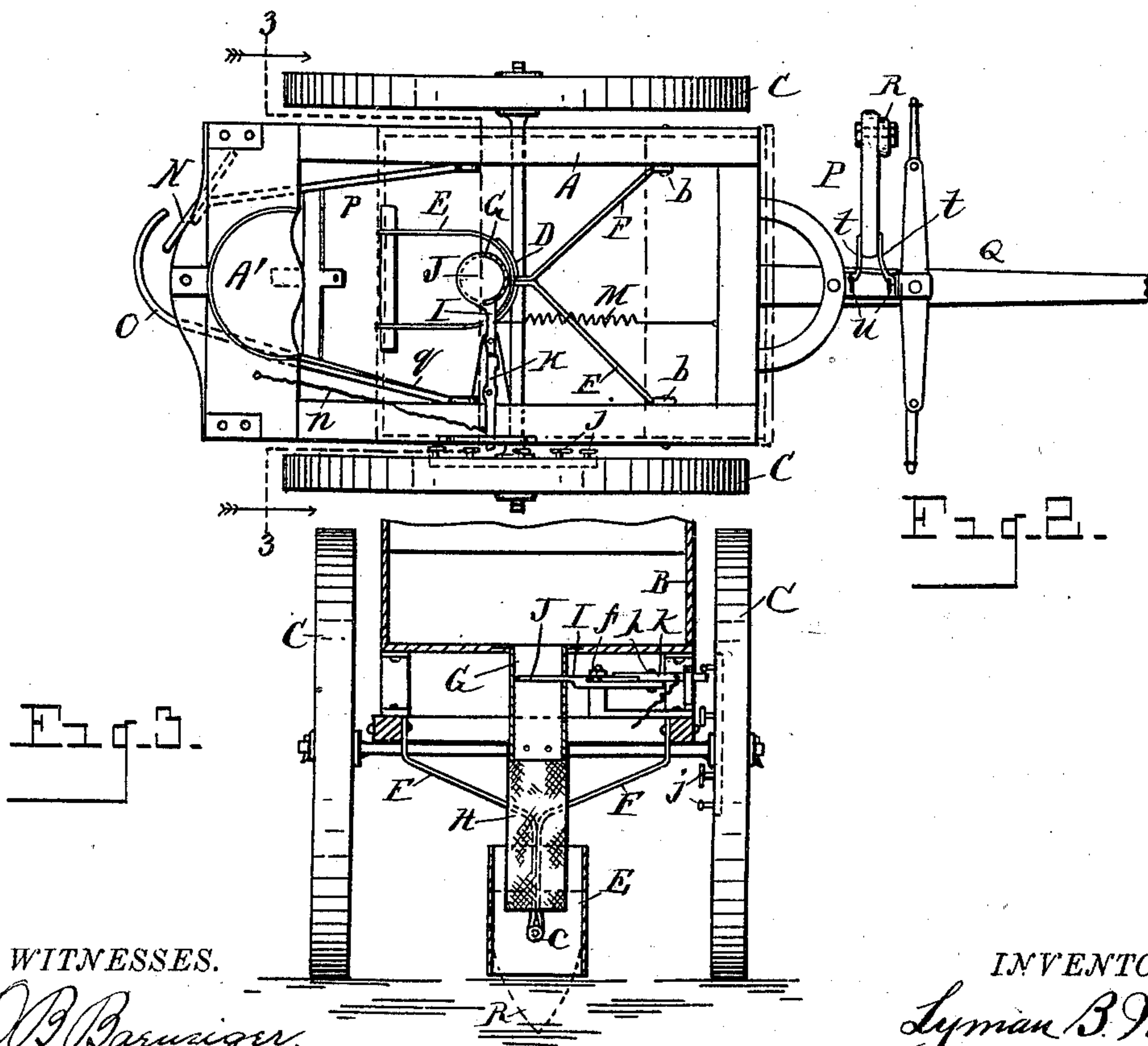
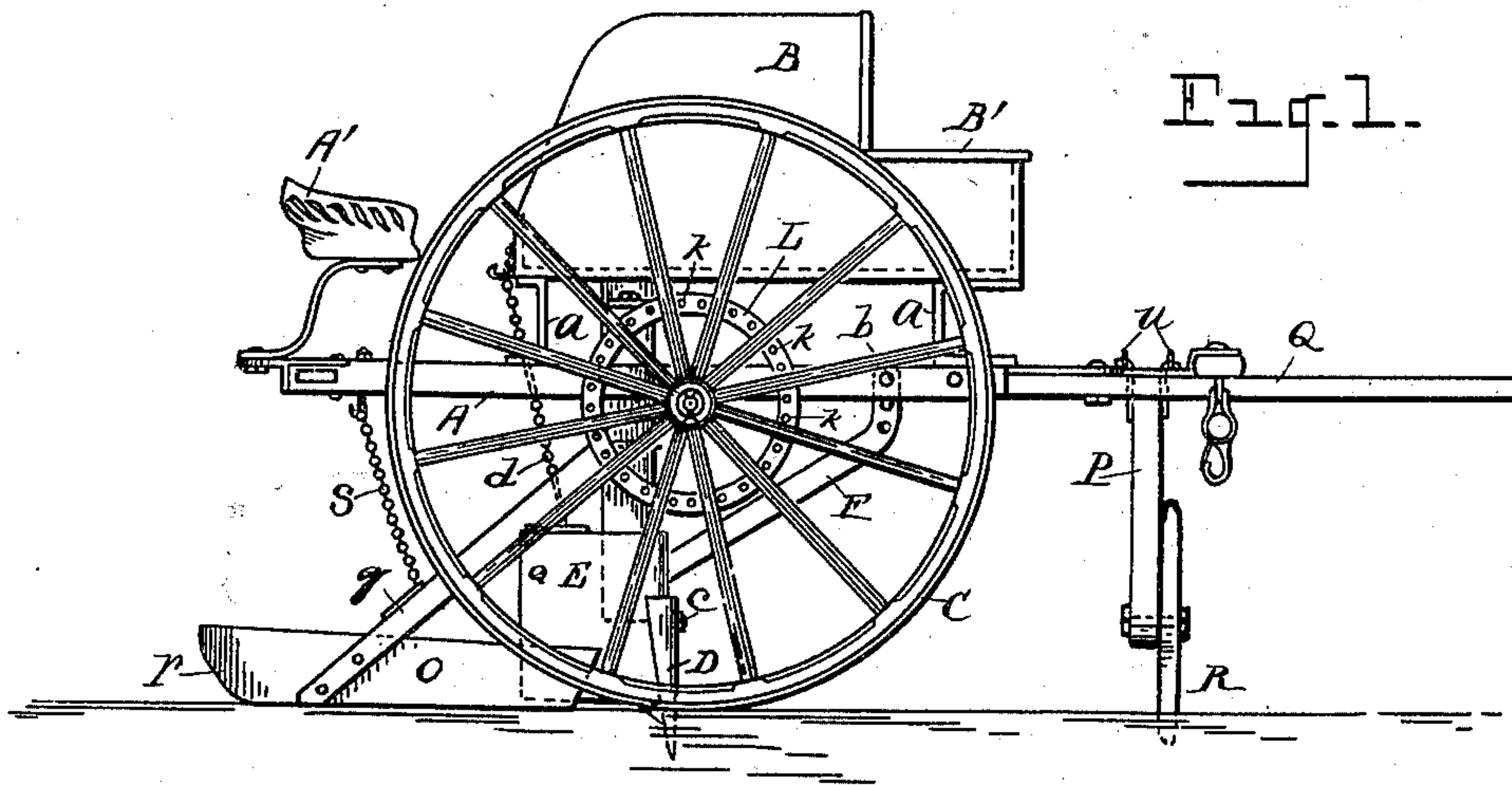
Patented Apr. 10, 1900.

L. B. WOOD.
POTATO PLANTER.

(Application filed Aug. 25, 1899.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES.

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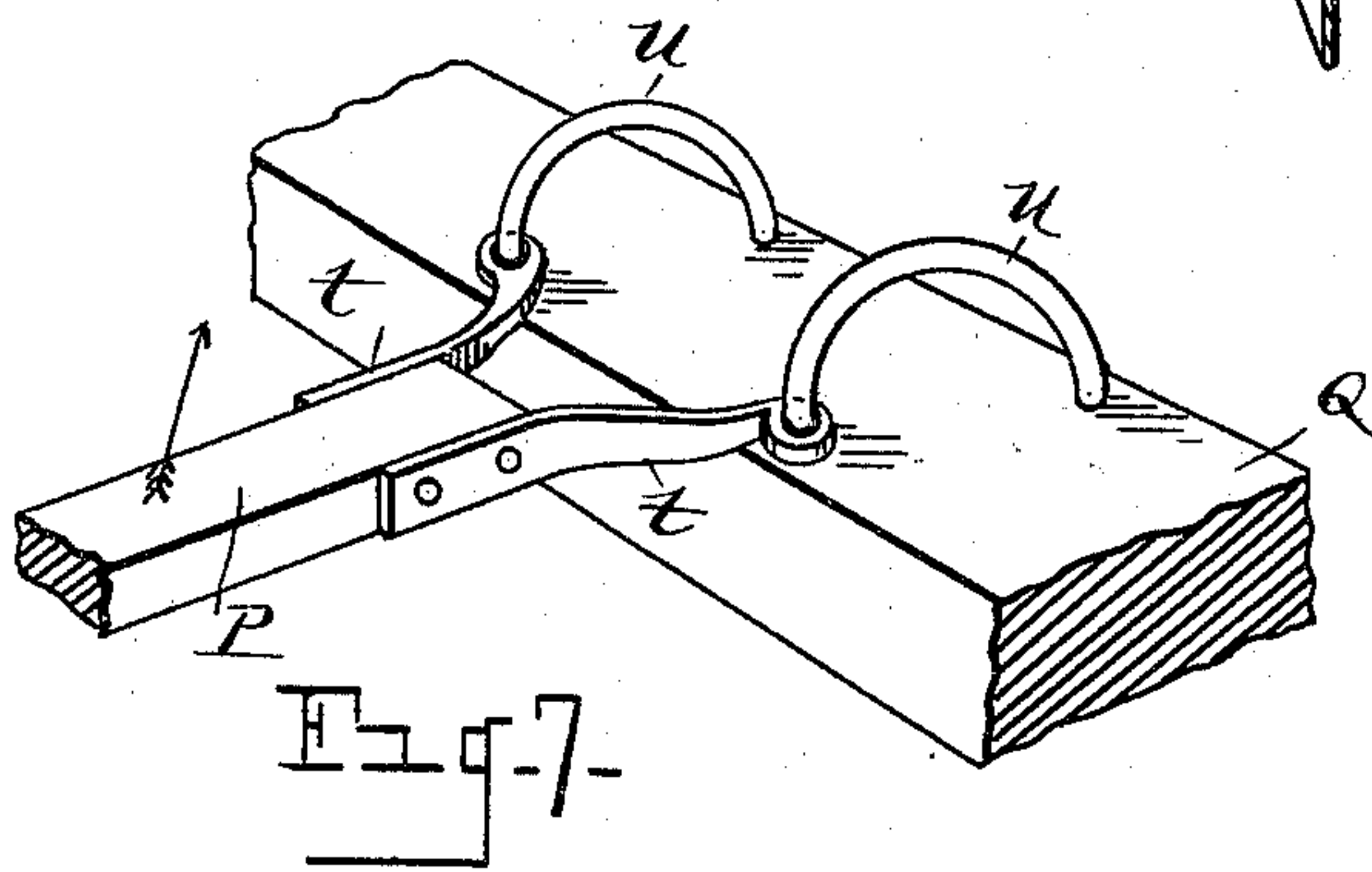
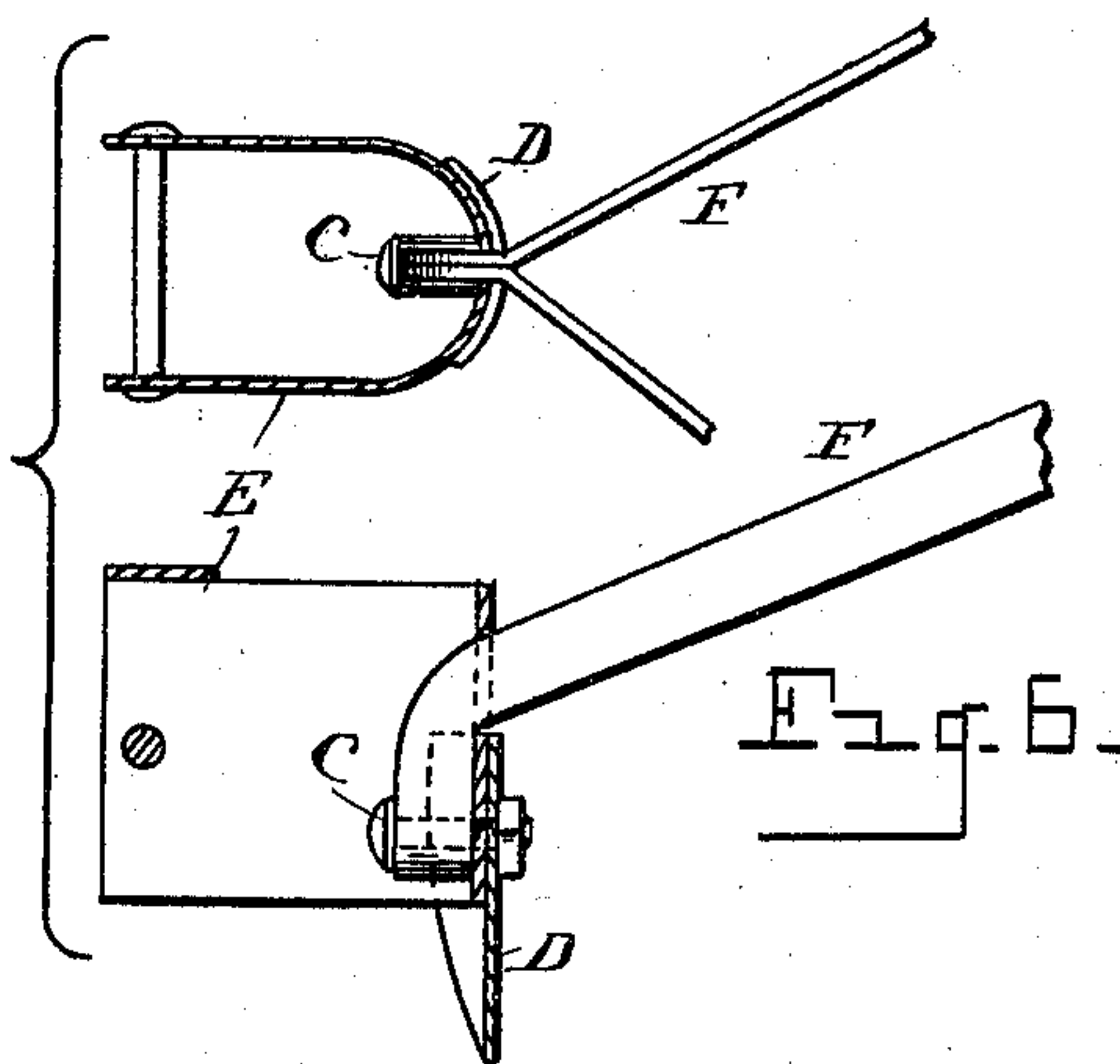
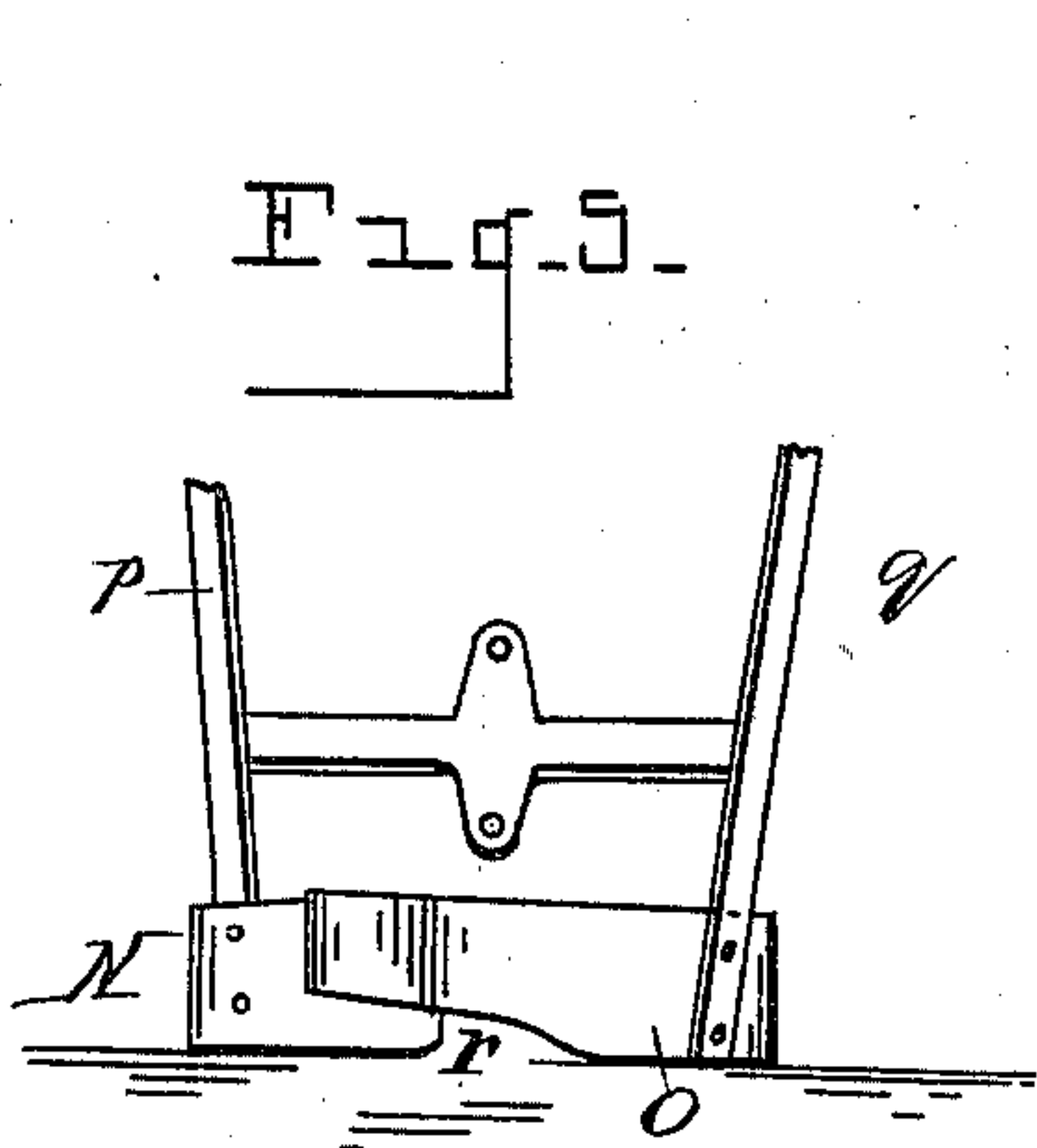
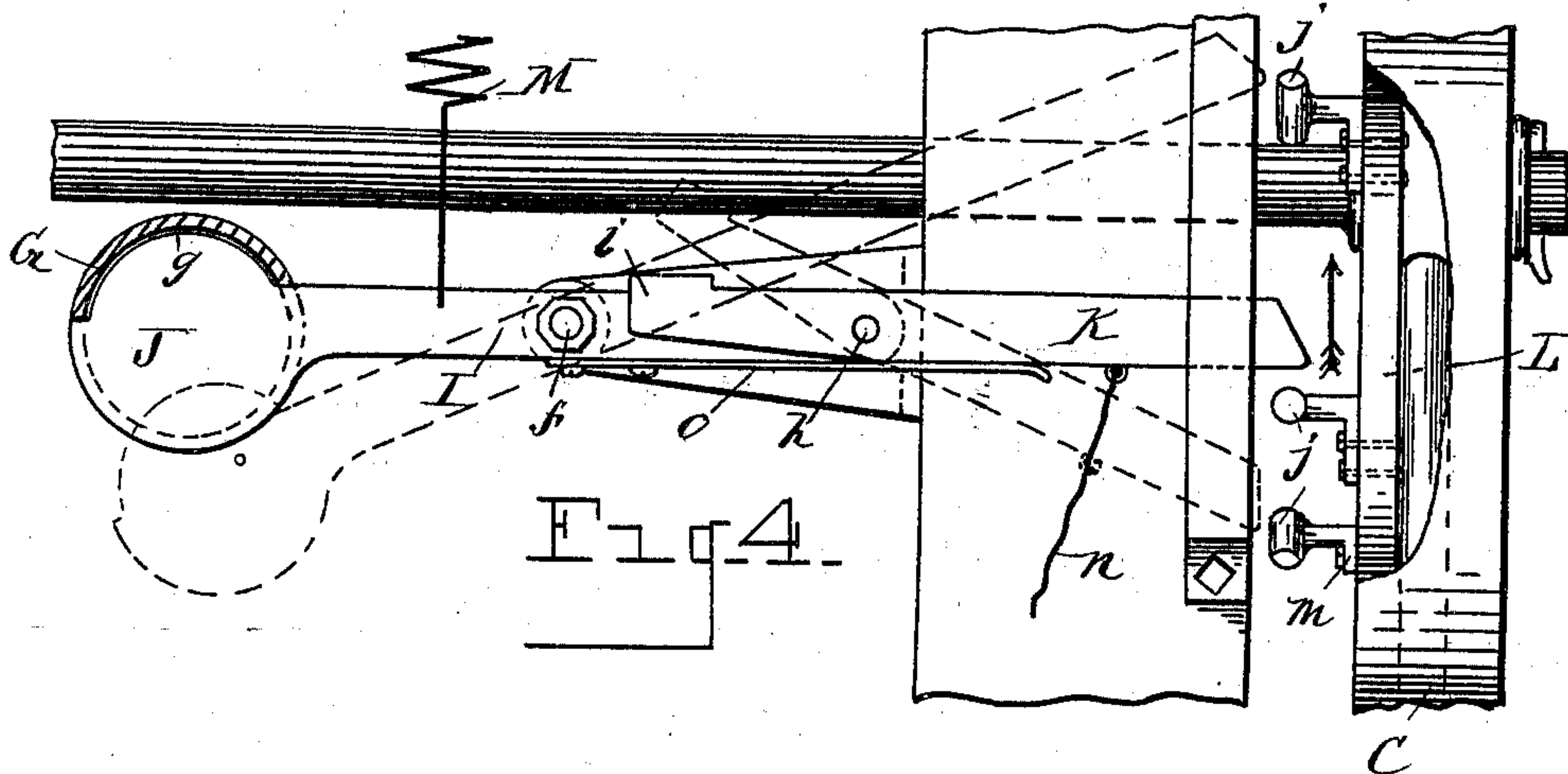
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UNITED STATES PATENT OFFICE.

LYMAN B. WOOD, OF ANN ARBOR, MICHIGAN.

POTATO-PLANTER.

SPECIFICATION forming part of Letters Patent No. 647,060, dated April 10, 1900.

Application filed August 25, 1899. Serial No. 728,403. (No model.)

To all whom it may concern:

Be it known that I, LYMAN B. WOOD, a citizen of the United States, residing at Ann Arbor, in the county of Washtenaw, State of Michigan, have invented certain new and useful Improvements in Potato-Planters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to potato-planters; and it consists in the construction and arrangement of parts hereinafter fully set forth, and pointed out particularly in the claims.

The object of the invention is to provide simple and efficient means for furrowing the ground to the requisite depth, for dropping the potatoes into the furrow, so that the hills shall be located the proper distance apart, with means for regulating the dropping mechanism to vary said distance, to provide for properly covering the potatoes deposited in the furrow, and for marking the ground during the planting of one row for the succeeding row.

The above object is attained by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved planter. Fig. 2 is a plan view thereof. Fig. 3 is a vertical transverse section, as on line 3 3 of Fig. 2. Fig. 4 is an enlarged detail of the mechanism employed for dropping the potatoes. Fig. 5 is a rear elevation in detail of the follow-blades, which serve to cover the potatoes dropped into the furrow. Fig. 6 shows enlarged details in transverse and vertical section of the guard which receives the lower end of the chute through which the potatoes are fed and directs them into the furrow, showing the plow-point mounted upon said guard and the draft-rods attached to said guard and point. Fig. 7 is an enlarged detail in perspective, showing the manner of attaching the marker to the pole so that said marker may be swung from side to side.

Referring to the letters of reference, A designates a suitable frame, upon which the hop-

per B is supported by means of the corner posts or legs *a*, whereby the bottom of the hopper is held some distance above said frame. The hopper is of such size as to contain the requisite amount of cut potatoes. In the rear of the hopper and supported on the frame is a seat *A'* for the operator who feeds the potatoes into the discharge-chute. The seat for the driver is at *B'* at the front of the hopper. The frame *A* is mounted upon the axle of the transporting-wheels *C*.

D designates the plow-point which forms the furrow and which is bolted at *c* to the rounded forward portion of the guard *E*, whose wings extend rearwardly on each side, with their lower edges adjacent to the ground, whereby clods and other obstructions are prevented from falling into the furrow in advance of the potatoes, which are discharged into said guard immediately behind the plow-point. The draft-rods *F* are attached to the plow-point and guard by the bolt *c* and extend forwardly, their diverging ends being pivoted at *b* to the frame, said rods being provided at their forward ends with a series of apertures for vertical adjustment. Attached to the cross-piece on the rear of the guard *E* is a chain *d*, whereby the guard and its plow-point may be raised and lowered to regulate the depth of the furrow as desired.

Leading from the bottom of the hopper, near the rear end thereof, is an annular spout *G*, preferably formed of metal. This metal spout *G* extends downward to a point below the frame of the machine, where a flexible spout *H*, made of canvas or other suitable material, is attached to the lower end thereof and leads into the guard *E* in the rear of the plow-point, so that the cut potatoes passing from the hopper through the spout are discharged into the furrow within the guard *E*.

To provide for automatically opening the spout, so as to discharge the cut potatoes therethrough at proper intervals, a pivoted arm *I* is employed, extending horizontally and fulcrumed on a support *f*. The inner end of said arm is provided with a flattened annular blade *J*, which has a cutting edge *g*, said blade being adapted to enter a slot in the rear face of the metallic portion *G* of the spout and fill the diameter of said spout, so as to entirely close the opening therethrough.

Pivoted at *h* to the outer end of said arm is a lever *K*, whose outer end extends adjacent to the transporting-wheel. The inner end of the lever *K* is provided with a depending flange *i*, adapted to engage the edge of the pivoted arm *I*, so that when the lever is carried in the direction indicated by the arrow in Fig. 4 it is locked to said arm, causing said arm to swing therewith, as shown by dotted lines in said figure, and carry the blade *J* thereon out of the slotted opening in the spout, thereby permitting the cut potatoes within the spout to drop therethrough. The lever *K* is operated to actuate the arm *I* and its blade *J* through the medium of a series of lugs *j*, secured to a ring *L*, mounted upon the wheel *C*. Said ring, as will be seen, is provided with a series of apertures *k*, adapted to receive the bolts *m*, which pass through the feet of said lugs, whereby said lugs are made adjustable upon said ring, so that the distance between them may be varied, thereby varying the operation of the lever *K*, and consequently the operation of the arm *I*, whereby the spaces between the hills may be increased or decreased at pleasure.

In the operation of the machine enough potatoes to form the hill are fed into the upper end of the chute from the hopper and are arrested by the blade *J* of the arm *I*. As the machine is propelled one of the lugs *j* carried by the transporting-wheel *C* engages the end of the lever *K* and swings said lever and the arm *I* so as to carry the blade thereof out of the chute and discharge the potatoes into the furrow. A further rotation of said transporting-wheel carries the engaging lug thereon past the end of the lever *K*, when it is returned to its normal position, and the blade *J* is drawn back into the chute by the spring *M*, attached to the arm *I*, when the potatoes for a succeeding hill are thrown into the upper end of said chute and the operation is repeated, a hill of potatoes being planted by each successive lug upon the transporting-wheel which engages the end of the lever *K*.

When it is desired to stop the operation of the dropping mechanism, the lever *K* may be swung upon its pivot, so that its outer end will stand out of the path of the lugs *j*, as shown by dotted lines in Fig. 4, said lever being held in said position by a chain or cord *n*, attached thereto. Upon the release of said cord the spring *o*, attached to the arm *I* and engaging the edge of the lever *K*, returns said lever to its normal position, so that its outer end projects into the path of the lugs *j*, and a further rotation of the transporting-wheel *C* will again operate the dropping mechanism.

To cover the potatoes which have been deposited in the furrow, the follow-plates *N* and *O* are employed. Said plates are supported at the lower ends of the rods *p* and *q*, respectively, whose upper ends are suitably pivoted to the frame. The plate *N* is the shorter of the two and stands at an angle to the furrow, so that the earth engaged thereby is directed

inwardly into the furrow. The plate *O* is longer and is curved at its rear end in the arc of a circle, so as to extend around and embrace the inner end of the plate *N*, whereby the dirt suitable for covering the potatoes is directed into the furrow, and clods, stones, and other obstructions are by the curved end of the follow-plate *O* discharged at one side out of the line of said row, so as not to lie upon the potato-hills. It will be seen that the rear end of the follow-plate *O* is beveled upwardly, as at *r*, the purpose of which is to prevent said follow-plate from discharging too much of the accumulated earth from the row, permitting the smaller particles of earth to pass under the rear end of said plate and lie upon the potato-hills. Attached to a cross-piece connecting the rods of the follow-plates is a chain *s*, whereby said plates may be raised and lowered, according to the character of the ground, so that their operation of covering the row may be made effective.

To provide for marking one row while planting another, a bar *P* is employed, provided with the brace-irons *t*, having eyes in their ends which embrace the staples *u*, attached to the pole *Q*, whereby the bar *P* may be swung from side to side of said pole. Attached to the outer end of said bar is a cross-arm *R*, whose ends are adapted to engage the ground and mark it for a succeeding row while the machine is being drawn across the field in the operation of planting.

Having thus fully set forth my invention, what is claimed is—

1. In a potato-planter, the combination of the transporting-wheels and frame, the hopper, the plow adapted to make a furrow, the cylindrical spout leading from the hopper to a point in the rear of said plow said spout having a diametrical slot in the wall thereof, the reciprocatory arm carrying a circular plate adapted to enter said slot to fill and close the upper end of said spout, the lever jointly connected to said arm for actuating said arm and plate, and a series of lateral projections carried on the transporting-wheel adapted to successively engage and actuate said lever.

2. In a potato-planter, the combination of the transporting-wheels and frame, the plow, the cylindrical feeding-spout leading from a hopper to a point in the rear of said plow, said spout having a diametrical slot in the upper wall thereof, a pivoted arm carrying a circular plate adapted to swing into said slot and close said spout, a pivoted lever jointly coupled to said arm, a spring to maintain said lever normally in alinement with said arm, a series of lugs mounted upon the face of the transporting-wheel to successively engage the outer end of said lever, and a spring for returning said lever.

3. In a potato-planter, the combination of the frame and transporting-wheels, the hopper supported thereby, a spout leading from said hopper having a flexible lower end, the

guard receiving the lower end of said spout, the independent plow-point carried by said guard, draft-rods adjustably attached at their forward ends to the frame their rear ends uniting and passing into said guard and a bolt passing through said rods, guard and point to detachably unite said parts, and means for raising said guard and plow-point.

4. In a potato-planter, the combination of the transporting-wheels, the hopper, the spout leading therefrom, the shovel for forming a furrow, the follow-plates in the rear of said spout standing at an angle to the line of said plow and whose lower edges are mainly parallel to the ground and lie thereon said plates being adapted to carry the earth into said furrow as the machine is propelled.

5. In a potato-planter, the combination of a frame mounted upon transporting-wheels, the hopper upon said frame, a shovel for forming a furrow, a spout leading from the hopper and having its discharge end in the rear of said shovel, follow-plates in the rear of said spout standing at an angle to the line of said furrow, one of said plates being longer and curved at its rear end to extend around the end of the shorter plate, said curved plate having its rear edge beveled upwardly.

In testimony whereof I sign this specification in the presence of two witnesses.

LYMAN B. WOOD.

Witnesses:

PHILIP BLUM, Jr.,

P. J. LEHMAN.