

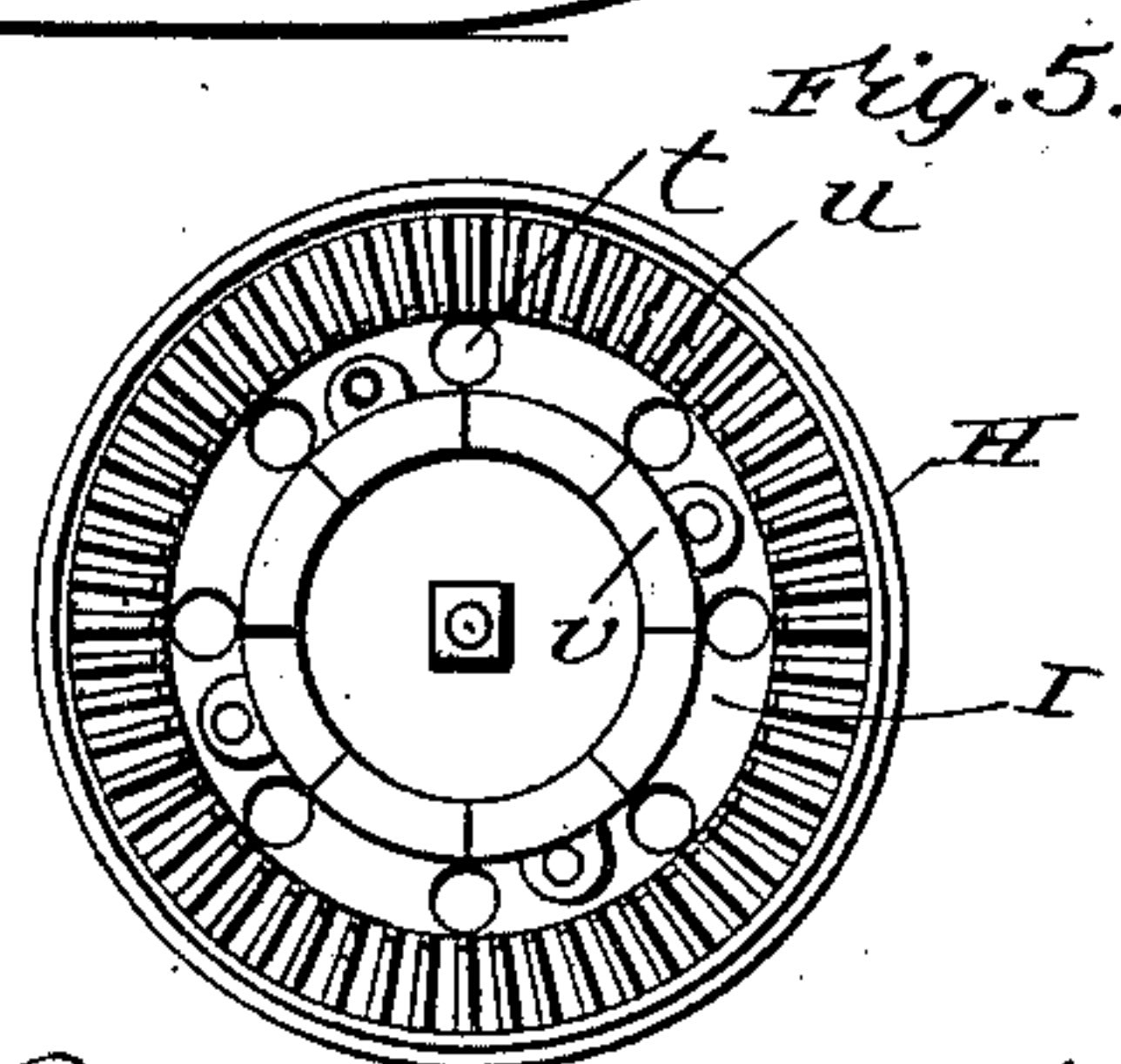
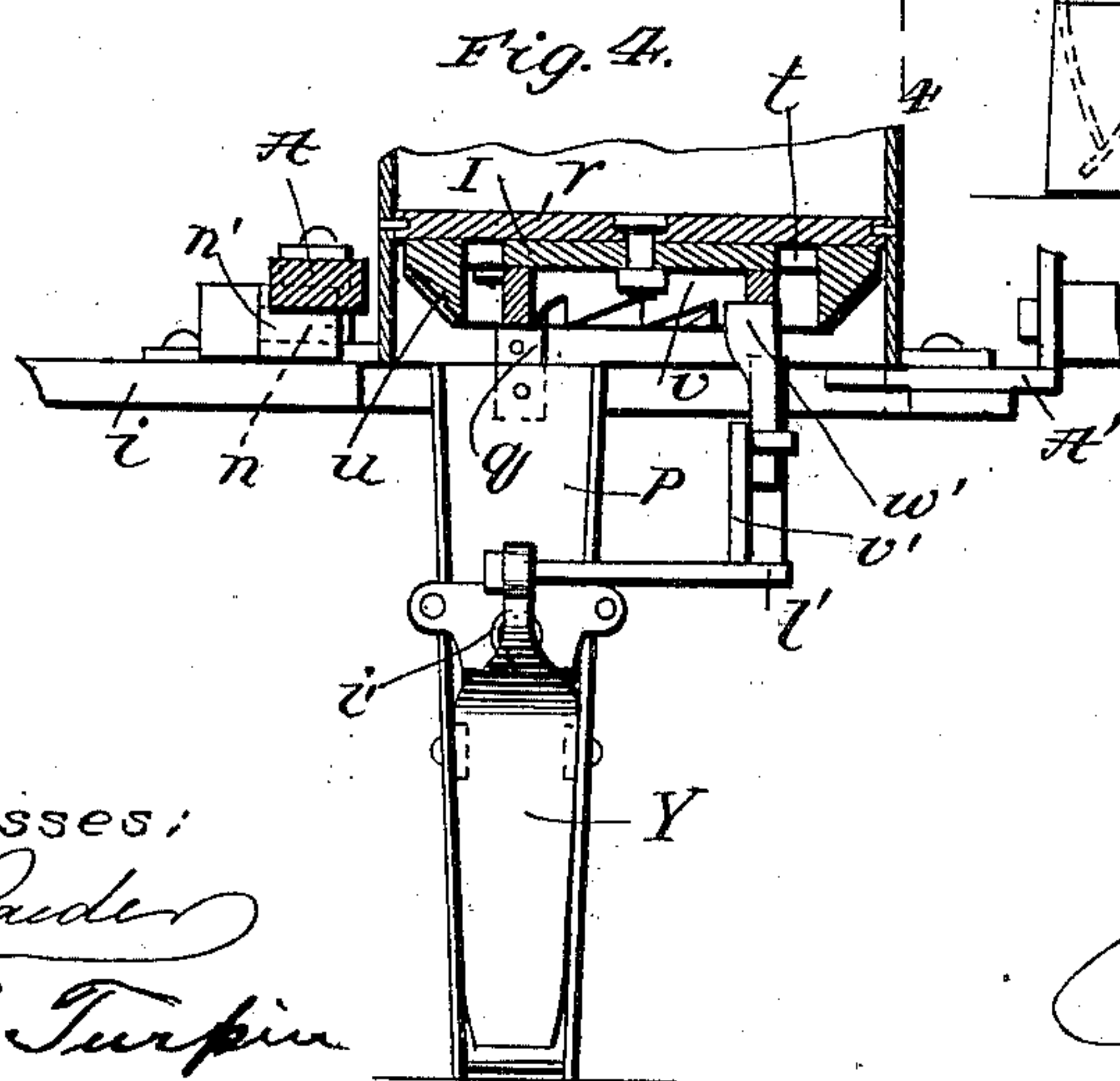
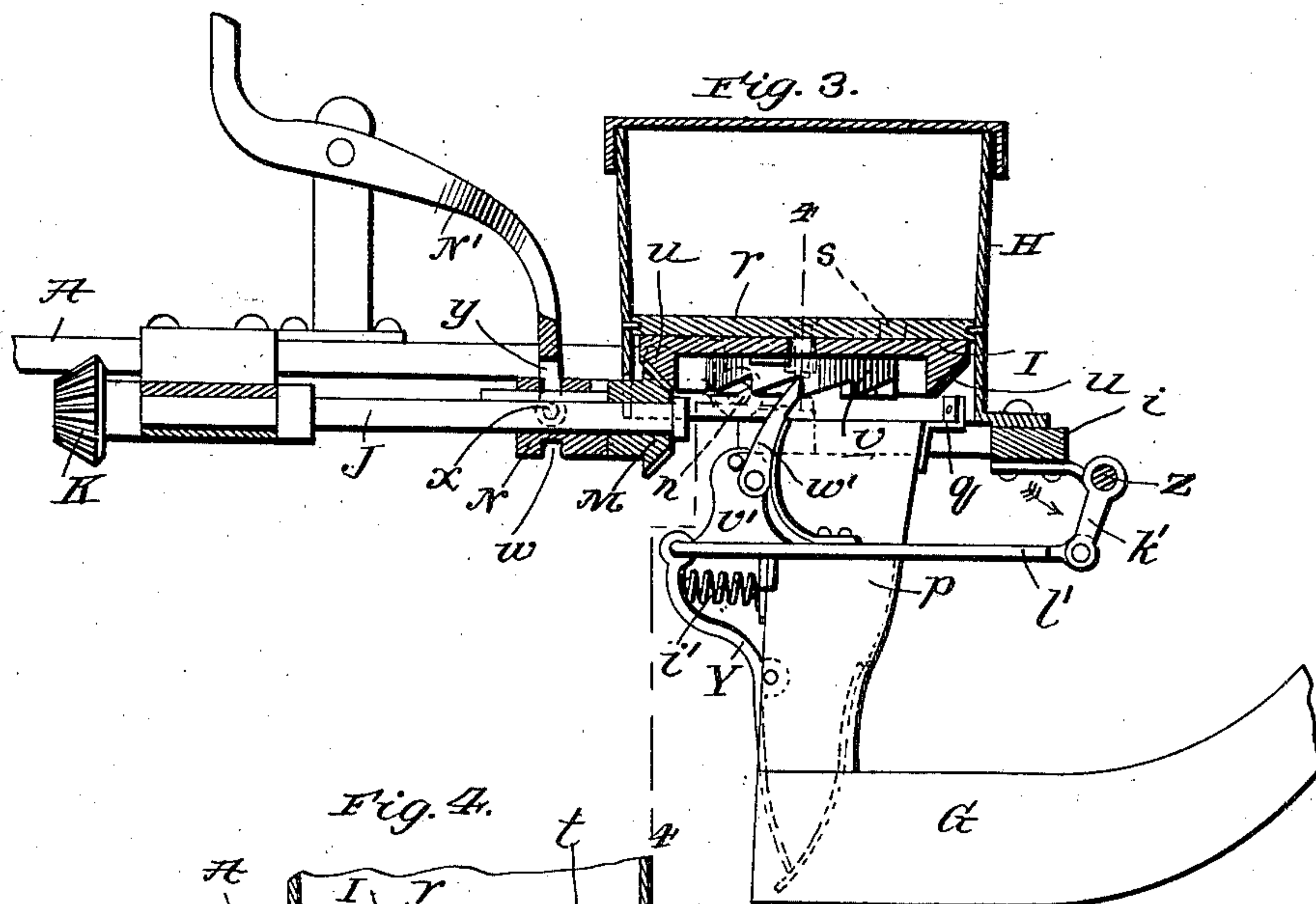
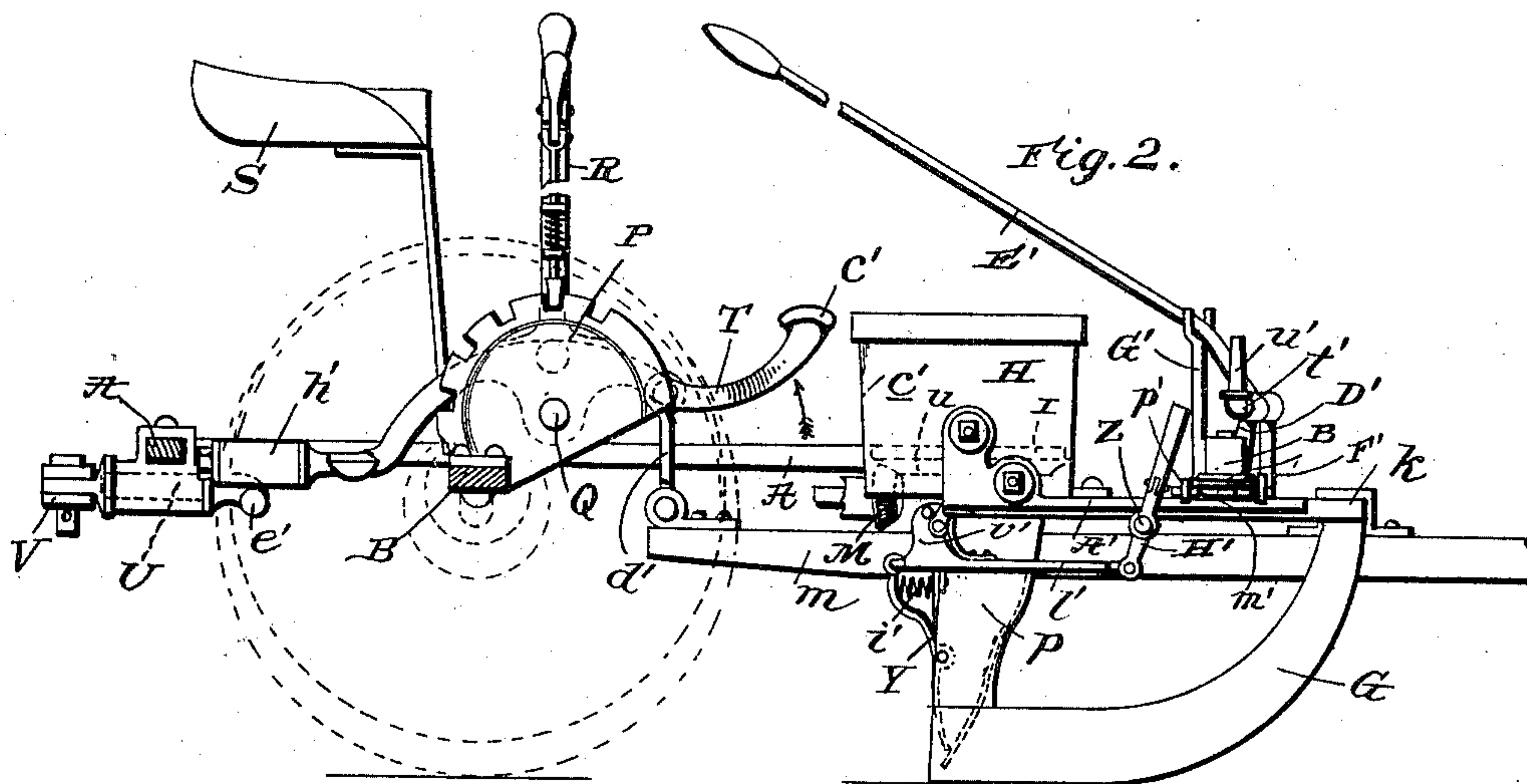


J. W. PARKER.  
CORN PLANTER.

(Application filed Oct. 18, 1900.)

(No Model.)

3 Sheets—Sheet 2.



witnesses:  
*E. H. Parker*  
*J. E. Turpin*

Inventor  
*James W. Parker*  
By *James J. Sheehy*  
Attorney

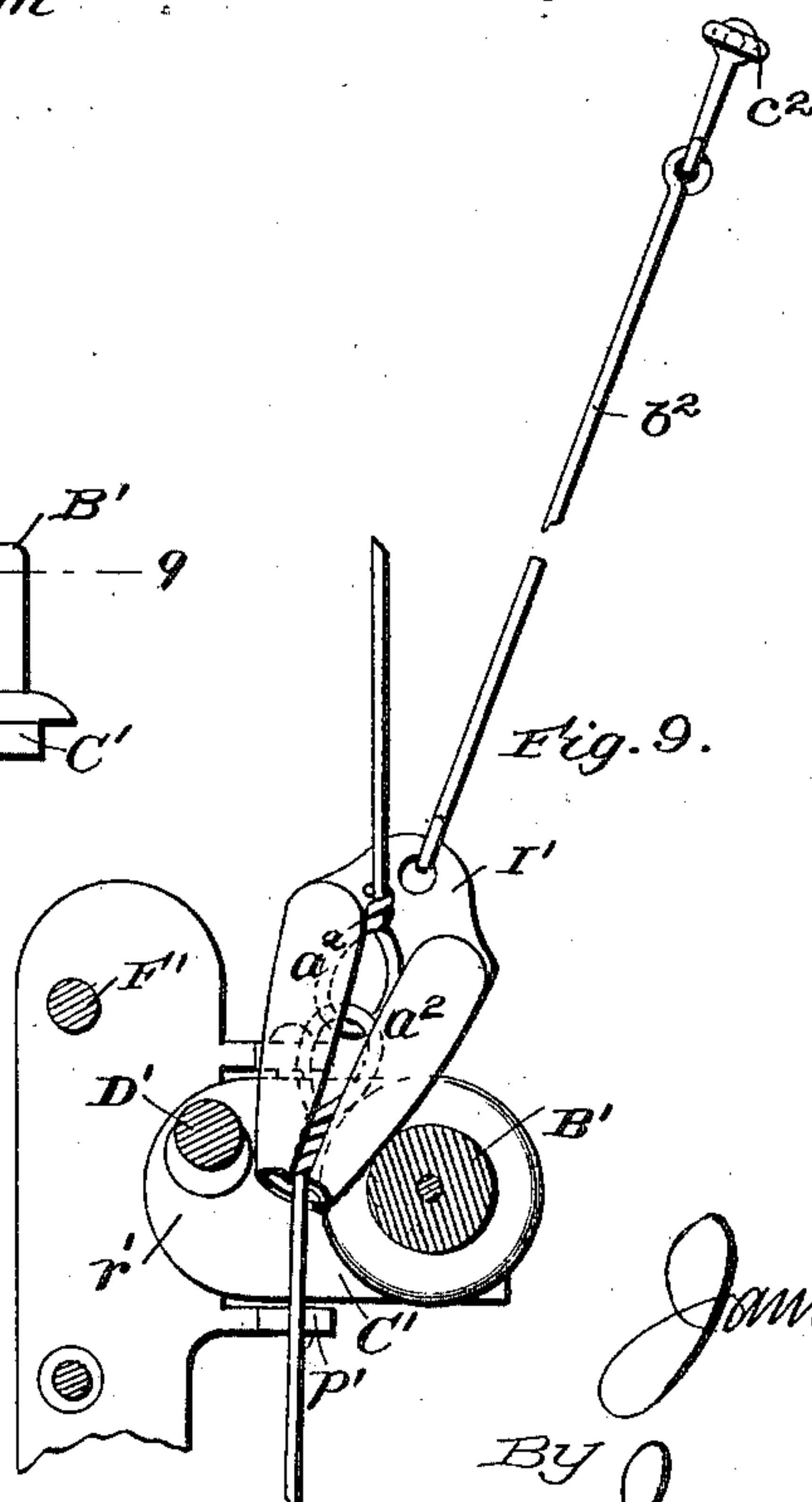
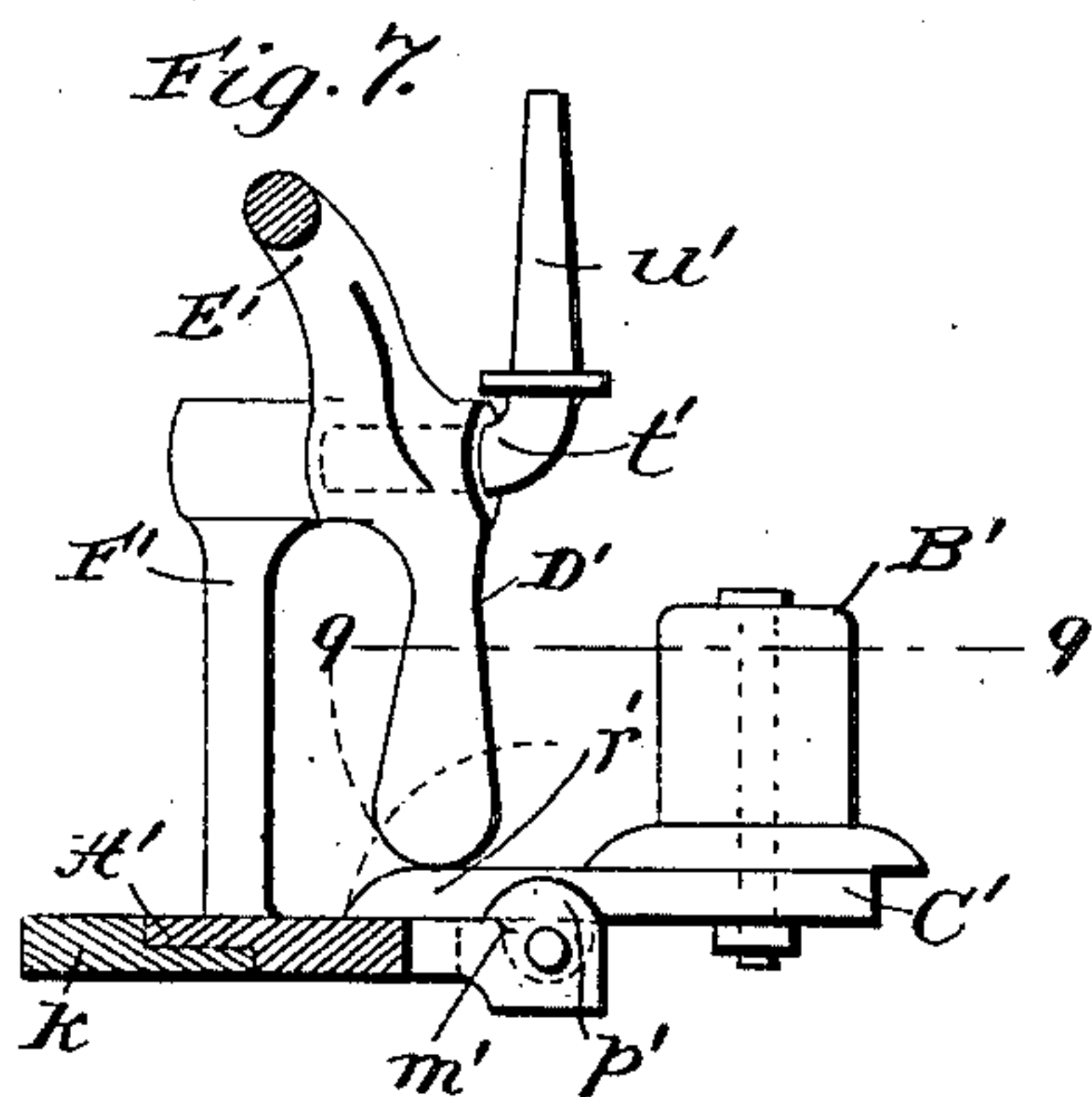
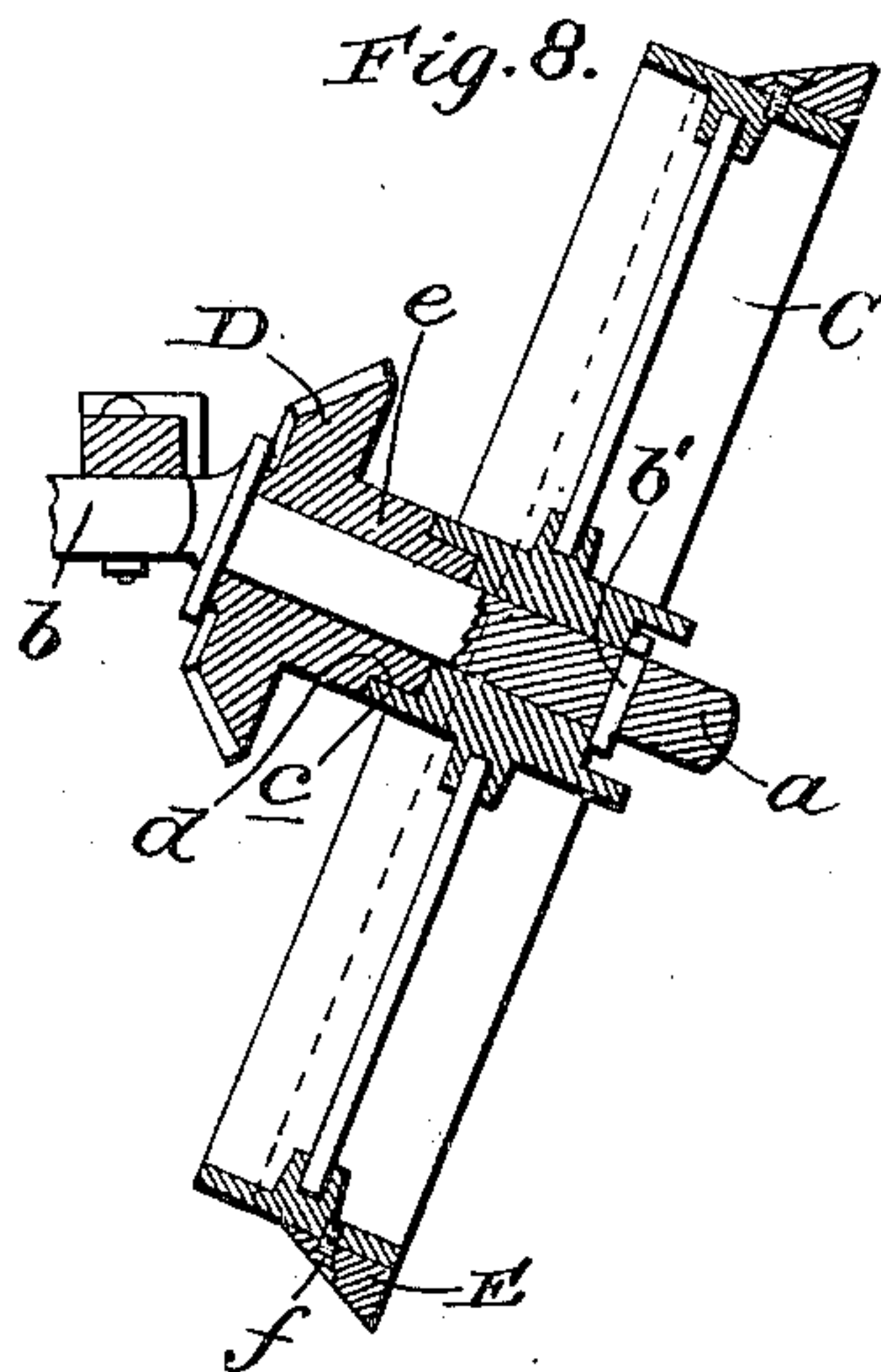
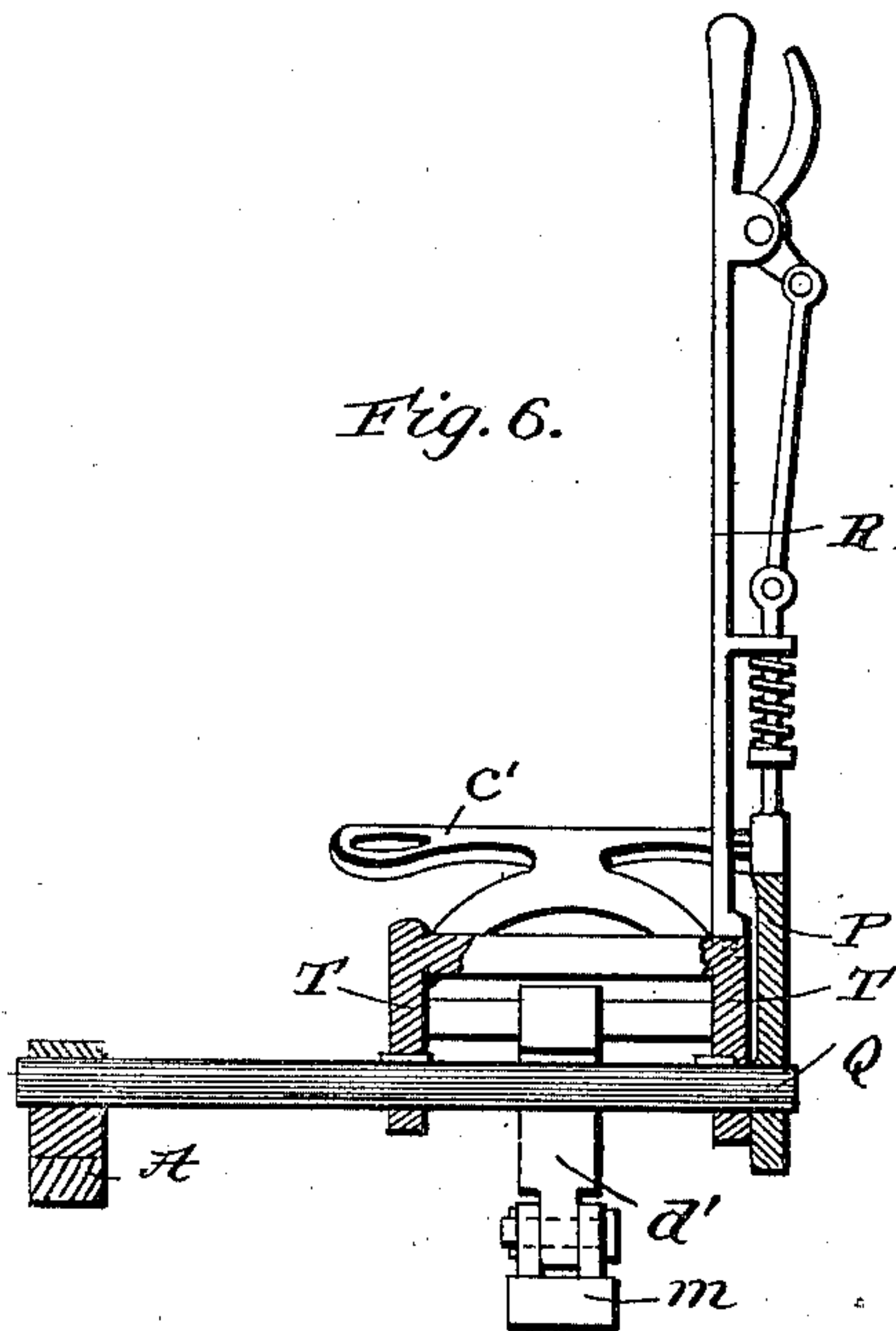


J. W. PARKER.  
CORN PLANTER.

(Application filed Oct. 18, 1900.)

(No Model.)

3 Sheets—Sheet 3.



witnesses:

*C. H. Rader*

*T. E. Turpin*

Inventor

*James W. Parker*

By

*James J. Shucky*

Attorney



# UNITED STATES PATENT OFFICE.

JAMES W. PARKER, OF ROCK ISLAND, ILLINOIS.

## CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 679,185, dated July 23, 1901.

Application filed October 18, 1900. Serial No. 33,499. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES W. PARKER, a citizen of the United States, residing at Rock Island, in the county of Rock Island and State of Illinois, have invented new and useful Improvements in Corn-Planters, of which the following is a specification.

My invention relates to improvements in corn-planters, and is designed more particularly as an improvement upon the check-row planter disclosed in my Letters Patent No. 520,862, of June 5, 1894.

It consists in the peculiar and advantageous construction, certain novel combinations, and the adaptation of parts hereinafter described, and particularly pointed out in the claims appended.

In the accompanying drawings, Figure 1 is a top plan view of a planter embodying my present invention with some of the parts broken. Fig. 2 is a view of the planter, partly in longitudinal vertical section and partly in side elevation. Fig. 3 is a detail section, on an enlarged scale, taken on the broken line 3 3 of Fig. 1. Fig. 4 is a detail section taken at right angles to Fig. 3 and on the broken line 4 4 of said figure. Fig. 5 is an inverted plan view of one of the rotary seed-discharging disks. Fig. 6 is a detail transverse section taken on the broken line 6 6 of Fig. 1. Fig. 7 is an enlarged detail section taken on the broken line 7 7 of Fig. 1. Fig. 8 is a detail diametrical section taken on the broken line 8 8 of Fig. 1. Fig. 9 is a view taken in the plane indicated by the broken line 9 9 of Fig. 7 and illustrating the manner in which a wedge anchored at the end of a field and connected to the check-row wire operates to automatically release the dumping-sheave and effect the disconnection of the check-row wire from the planter.

In the said drawings similar letters of reference designate corresponding parts in all of the several views, referring to which—

A is the supporting-frame of my improved planter, which is preferably made of metal in U shape, and B is the axle upon which the frame is arranged and secured. The said axle is provided at its ends with downwardly-inclined spindles *a*, which are disposed at about the angle illustrated to its intermediate

portion *b* and are designed to receive traveling and covering wheels C. The wheels C are removably secured upon the axle-spindles by pins *b'* or other suitable means, and they are provided at the opposite ends of their hubs with tongues *c*, designed to enter grooves *d* in the outer ends of sleeves *e*, forming part of miter-gears D, the said gears being loosely mounted on the axle-spindles, as illustrated. By virtue of the provision of the tongues *c* at opposite ends of the wheel-hubs it will be observed that the said wheels may be keyed to the gears, so as to turn therewith, irrespective of the sides of the wheels which are presented to the gears, for a purpose presently described. The wheels C are provided with peripheral flanges E, which are by preference detachably connected thereto by screws *f* or other suitable means, so that they may be readily removed when desired. The said flanges are of about the proportional width illustrated and have their outer sides beveled or disposed at about the angle illustrated to the peripheries of the wheels.

By virtue of the beveled outer faces of the flanges E and the inclination of the wheels C due to the downwardly-inclined axle-spindles it will be observed that when the wheels are arranged as shown in Figs. 1 and 8 they are calculated to press the earth inwardly toward the longitudinal center of the machine and close up the furrows at the inner sides thereof and are also adapted to mash the lumps of earth which they encounter and press the clods down over the corn. The wheels are adapted to be reversed on the spindles, as before described, and when they are so reversed—that is, arranged with the flanges E innermost—it will be observed that they will work in the same manner as upright wheels having rims of concave form in cross-section. The flanges E are susceptible of ready removal from the wheels, and when they are removed the wheels are well adapted for use in wet soil.

In addition to the advantages above pointed out the wheels C, by virtue of their inclination, are advantageous because they enable the attendant on the driver's seat to readily see the operation of the valves, presently described, and the discharge of the corn, and



also because they are calculated to throw off trash and dirt to one side of and not on the runners in front of them.

F is the seeding and runner frame of the machine. This runner-frame is preferably composed of a rear transverse bar *i*, a forward transverse bar *k*, having rearwardly-extending portions *l*, fixedly connected to the bar *i*, and a draft-pole *m*, fixedly connected to the bars *k* and *i* and extending in rear of the latter, as shown. The said frame is connected to the ends of the U-shaped bar constituting the wheel-frame A in a hinged manner, preferably through the medium of trunnions *n*, connected to the runner-frame and journaled in bearings *n'* at the forward end of frame A. This construction permits of the runner-frame being raised and lowered after the usual well-known manner.

G are runners or furrow-openers, which have their forward ends connected to the bar *k* of frame F and are provided at their rear ends with shanks *p*, shaped to form seed-discharge spouts. These shanks or discharge-spouts are connected by lugs *q* to seedboxes H, which, in turn, are arranged upon and connected to the frame F at opposite sides of the machine. The seedboxes are provided with bottoms *r*, each having an aperture *s* for the passage of seed, and below the bottoms *r* said boxes are equipped with seed-discharging disks I. The disks I are provided with apertures *t*, arranged in circular series and designed to register with the apertures *s*. They also have miter gear-teeth *u*, through the medium of which they are rotated when the machine is used as a drill, and ratchet-teeth *v*, through the medium of which they are rotated when the machine is used as a check-row planter.

J J are independent shafts journaled in suitable bearings on the frame A and interposed between the gears D and the seed-discharging disks I. These shafts are provided at their rear ends with miter-gears K, which are fast thereon and are intermeshed with the gears D. At their forward ends they are provided with loose miter-gears M, intermeshed with the miter-teeth of the disks I. The miter-gears M are provided with sleeves having clutch-faces at their rear ends, the said clutch-faces being designed for the engagement of endwise-movable clutch members N, splined on the shafts J, after the manner best illustrated in Fig. 3. The clutch members N have peripheral grooves *w* for the engagement of inwardly-directed lugs *x* on yokes *y* at the lower ends of hand-levers N', fulcrumed on the main frame within convenient reach of the driver, whereby it will be seen that the driver is enabled to quickly throw either one or both of the disks I out of gear with the shafts J, and thereby stop the discharge of seed from one or both of the boxes H; also, that the operator is enabled to throw the disks I out of gear with the shafts J, or, in other words, disconnect the disks

from the shafts when said disks are to be rotated by power other than that taken from the driving and covering wheels C. When the disks I are driven from the wheels C through the medium of the driving connection described, it will be appreciated that my improved machine may be used to advantage as a seed-drill, it being obvious that when the machine is so used the valves, presently described, in the discharge-spout *p* will be held in an open position by some suitable means, which I have not deemed it necessary to illustrate.

P is a segmental rack fixed on the axle B, and Q is a transverse shaft journaled in suitable bearings on the main frame. On this shaft Q is a hand-lever R, which is arranged adjacent to the driver's seat S and is provided with the usual spring-press detent designed to engage the rack P. On the shaft Q is also fixed a pedal-lever T. This pedal-lever T extends in front and rear of the shaft Q and is provided at its forward end with lateral portions *c'*, which afford rests for the feet of the driver and are designed to enable him to use his feet in depressing the forward portion of the lever. The lever T is connected in advance of the shaft Q and through the medium of a link *d'* with the rear end of the pole *m*, whereby it will be seen that when the shaft Q, hand-lever R, and lever T are rocked in the direction indicated by arrow in Fig. 2 the runner-frame will be raised from the ground and out of its operative position. When the runner-frame is thus raised, as is desirable at the end of a field, or when the planter is being drawn along a road, the gear-teeth *u* on the disks I are raised or moved out of engagement with the bevel-gears M, with the result that said disks are rendered idle and the discharge of seed from the boxes H stopped. This is a materially advantageous feature of my invention, for it will be seen that when the machine is being used as a drill the act of raising the runner-frame operates to stop the discharge of seed, and no further adjustment is necessary to effect such stoppage. From this it follows that no waste of seed will take place when the runner-frame is raised out of its operative position, even if the driver is careless and indifferent in his work.

U is a short shaft journaled in a suitable bearing at the rear end of the frame A and having a crank *e'* at its forward end.

V is a marker-bar connected to and extending laterally from the rear end of said shaft.

W is a marker, preferably in the form of a disk, carried at the outer end of the bar V.

X is a drag-bar connected to the bar V adjacent to the outer end thereof and having an eye *f'* at its forward end, designed to be placed over pins, presently described, arranged at either side of the runner-frame, and X<sup>2</sup> is a brace between the bars V and X, which insures the eye *f'* taking over the pins *u'*. The lever T is provided with two rearwardly-



extending parallel portions  $g'$ , which, as best shown in Fig. 1, are equipped with antifric-  
 5 tion-sleeves  $h'$  and are arranged to engage the crank  $e'$  of shaft U. From this it follows  
 10 that when the marker is in the position shown at the left of the machine and the shaft Q, lever R, and lever T are rocked in the direc-  
 15 tion indicated by arrow in Fig. 2 to raise the runner-frame, as in making a turn, the right-  
 20 hand portion  $g'$  of lever T engaging the crank  $e'$  will operate to raise the bar V sufficiently to enable the driver to grasp the same and throw it, with the marker, over to a position at the right of the machine. When the marker  
 25 is thus thrown over to the right of the machine, the crank  $e'$  will assume a position below the left-hand portion or rearwardly-extending arm  $g'$  of lever T, so that when the lever is again rocked to raise the runner-  
 30 frame, as in making a turn, the bar V will be raised to such position as to enable the operator to grasp the same and return the marker to the position shown at the left of the machine. When the marker is thrown  
 35 in the manner described from one side of the machine to the other, the loop or eye  $f''$  on its drag-bar will be lifted from the pin at one side of the runner-frame, and when the marker assumes its position at the other side  
 40 of the runner-frame will take over the pin at such other side of the machine without care or attention on the part of the driver. In the spouts  $p$  are pivoted valves Y, which form the rear walls of the spouts and nor-  
 45 mally close the same under the action of springs  $i'$ , which exert rearward pressure against the upper portions of the valves. To open the valves so as to discharge corn at in-  
 50 tervals, the transverse shaft  $z$ , journaled on frame F and provided with cranks  $k'$ , connected with the upper ends of the valves by pitmen  $l'$ , is rocked in the direction indicated by arrow in Fig. 3 by the check-row mechanism. Said mechanism comprises metal frames  
 55 A', connected to the frame F and arranged above the portions  $l'$  thereof, dumping-sheaves B', and plates C', having pendent lugs  $m'$  pivoted between lugs  $p'$  on the frames A'. The plates C' have inward extensions or toes  $r'$ ,  
 60 which are designed, when the sheaves B' are in their upright operative positions, to rest on the frames A' and beneath gravitating latches D', the said latches forming part of hand-levers E', which are fulcrumed on up-  
 65 rights F', rising from the frames A', and are designed to normally rest on supports G', also extending upwardly from the frames A', as shown. The uprights F' have lateral portions  $t'$ , forming fulcrums for the levers E', and  
 these lateral portions terminate in upwardly-extending pins  $u'$ , which latter are the pins engaged by the loops or eyes  $f''$  of the draw-rod of the marker W, in the manner before described. Arranged on the pitmen  $l'$  are  
 standards  $v'$ , to which are pivotally connected spring-pressed pawls  $w'$ , arranged to engage the ratchet-teeth  $v$  of the disks I, whereby it

will be seen that coincident with the opening of the valves Y the disks I will be turned so as to cause apertures  $t$  thereof to register with  
 70 the apertures  $s$  in the bottoms of the boxes H and enable seed to pass from said boxes downwardly through the spouts  $p$ .

H' indicates the usual forked tappets fixed on the shaft Z and having the pivoted upper  
 75 portions susceptible of swinging outwardly in order to dump the check-row wire when the sheaves B' are released and permitted to fall.

In using my improved machine as a check-row corn-planter the check-row wire rests in  
 80 one of the forked tappets H' and at the inner side of one of the dumping-sheaves B', so that as the machine moves forwardly the shaft Z will be rocked at intervals by the buttons of the wire acting against the forked tappets, and  
 85 hence the valve Y will be opened and the disk I will be moved at intervals to discharge seed through the spout  $p$ . When it is desired at any point in the field to discharge the check-row wire from the machine, the same is  
 90 accomplished by the driver raising the lever E' and disengaging the latch D' from the toe  $r'$  of the plate C', when said plate and the sheave thereon will fall of their own weight and dump the wire. In order to automatic-  
 95 ally dump or discharge the check-row wire from the machine at the end of the field, I provide the wedge I', illustrated in Fig. 9. The said wedge is formed of cast or malleable iron or other material and is provided with one or  
 100 more curls  $a^2$  to receive the check-row wire at a point adjacent to the reel. Said wedge is connected, either permanently or detachably, to an anchor-rod  $b^2$ , which in turn is connected  
 105 to an anchor-stake  $c^2$ , designed to be fixed in the ground. By virtue of this construction it will be seen that when the machine approaches the end of the field the wedge I', entering between the dumping-sheave B' and the latch D', will automatically push the lat-  
 110 ter out of engagement with the toe  $r'$  of the plate C', and thereby automatically effect the release of the plate C' and the dumping-sheave B' and the discharge of the check-row wire.

It will be appreciated from the foregoing that notwithstanding the fact that my im-  
 115 proved machine is susceptible of use as a drill and also as a check-row planter it is simple, inexpensive, and durable in construc-  
 120 tion and embodies no parts that are likely to get out of order after a short period of use.

I have entered into a detailed description of the construction and relative arrangement of the parts embraced in the present embodi-  
 125 ment of my invention in order to impart a full, clear, and exact understanding of the same. I do not desire, however, to be understood as confining myself to such specific construction and arrangement of parts, as  
 130 such changes or modifications may be made in practice as fairly fall within the scope of my claims.

While I have shown and described the



shaft J as journaled in bearings on the frame A, it is obvious that the said bearings might be arranged on the axle B, to which the frame is connected, without departing from the scope of my claims.

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

1. In a planter, the combination of an axle having downwardly-inclined spindles, a frame connected to the intermediate portion of the axle, and traveling wheels removably secured on said spindles and having square peripheries, and also having peripheral flanges which occupy a portion of their width and have beveled perimeters, substantially as and for the purpose set forth.

2. In a planter, the combination of a main or supporting frame, an axle connected thereto, traveling and covering wheels mounted on the axle, a runner-frame connected in a hinged manner to the supporting-frame, seed-boxes arranged on the runner-frame, seed-discharge disks having miter gear-teeth, gear-wheels arranged to turn on the axle and with the traveling and covering wheels, and shafts journaled in bearings on the supporting-frame, and having gears at their rear ends intermeshed with the gears on the axle, and beveled gears at their forward ends intermeshed with the miter gear-teeth on the seed-discharging disks, substantially as specified.

3. In a planter, the combination of a supporting-frame, an axle connected thereto, traveling and covering wheels mounted on the axle, gear-wheels also mounted on the axle, and connected to the traveling wheels so as to turn therewith, a runner-frame hinged to the supporting-frame, means for raising the runner-frame, seedboxes mounted on the runner-frame, rotary seed-discharging disks also carried by the runner-frame and having gear-teeth, and shafts journaled on the supporting-frame and having gears intermeshed with the gears on the axle, and other gears intermeshed with the seed-discharging disks, whereby when the runner-frame is raised, the seed-discharging disks are thrown out of gear, substantially as specified.

4. In a planter, the combination with a main frame, an axle connected thereto, traveling wheels on the axle, gears on the axle connected to the traveling wheels so as to turn therewith, a runner-frame hinged to the main

frame, means for raising said runner-frame, seedboxes carried by the runner-frame, rotary seed-discharging disks also carried by the runner-frame, and having gear-teeth, shafts journaled in bearings on the main frame and having gears intermeshed with the gears on the axle, gears loosely mounted on the shafts in normal engagement with the gear-teeth of the seed-disks, and having clutch-faces, clutch members splined on the shafts and adapted to engage the clutch-faces of the gears, and suitable means for moving the clutch members in and out of engagement with the gears, substantially as specified.

5. In a check-row planter, the combination of a main frame, an axle connected thereto, traveling wheels on the axle, a runner-frame connected to the main frame, seedboxes mounted on the runner-frame, seed-discharging disks also carried by the runner-frame, gearing intermediate of the traveling wheels and the disks for rotating the latter; said gearing comprising means whereby the disks may be thrown out of gear with the wheels, ratchet-teeth on the disks, discharge-spouts arranged below the disks, valves in said spouts, forks adapted to be moved by check-row wire, a shaft carrying said forks, and having cranks, pitmen connecting the cranks and the valves, and pawls on said pitmen for engaging the ratchet-teeth of the disks, substantially as specified.

6. In a check-row planter, the combination of a main frame, a runner-frame, a swinging bracket connected with the runner-frame and carrying a dumping-sheave, a gravitating latch normally engaging the bracket to hold the sheave in an upright position, a check-row wire resting between the sheave and latch, and a wedge engaging the check-row wire and connected to an anchor-rod; said wedge being adapted to enter between the sheave and the latch and automatically disengage said latch from the bracket carrying the sheave, substantially as specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES W. PARKER.

Witnesses:

E. E. McMULLEN,  
TAYLOR LINN.