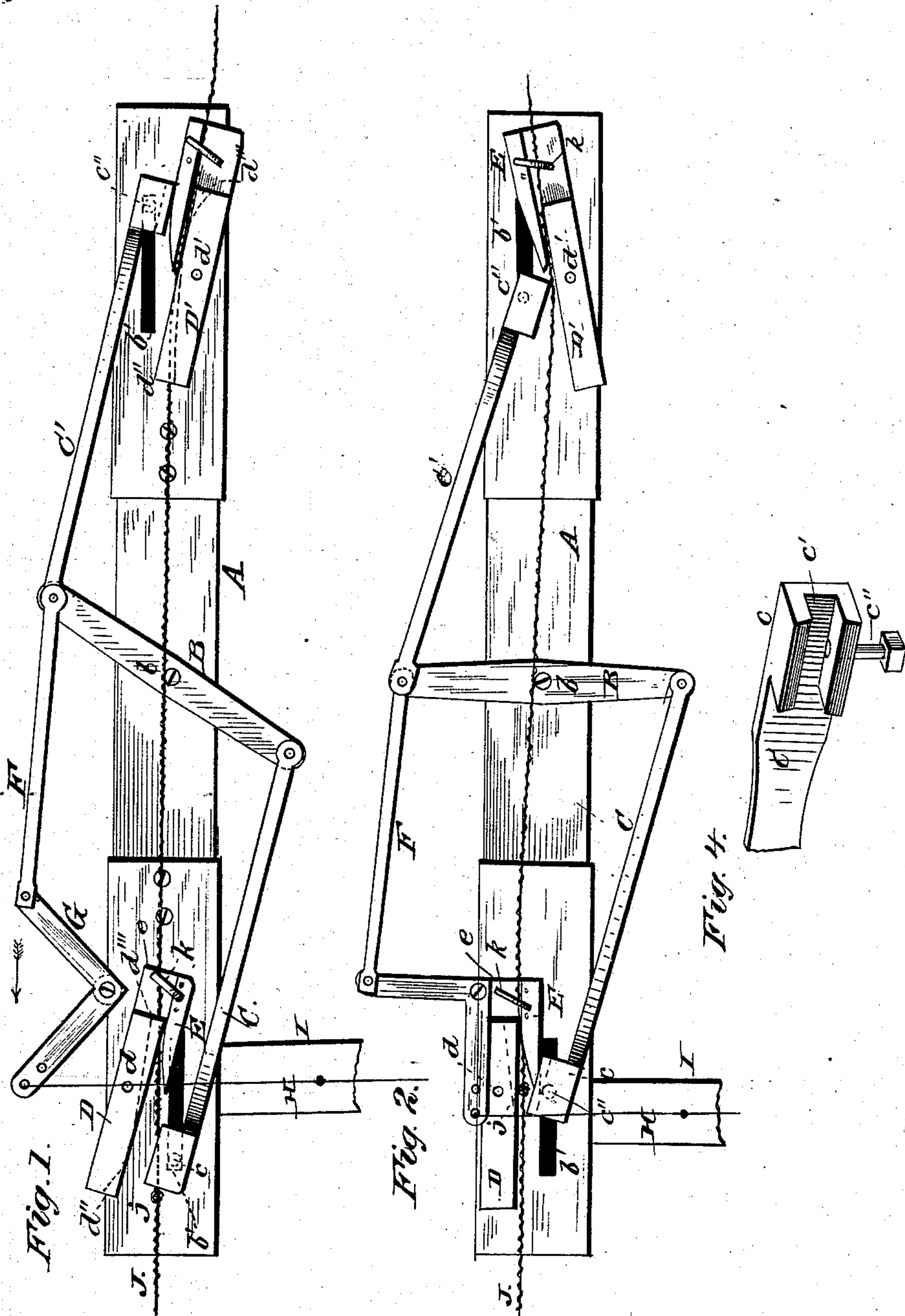


(Model.)

2 Sheets—Sheet 1.

L. D. BENNER.
Corn Planter Check Rower.
No. 239,596. Patented April 5, 1881.



Witnesses
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A. H. Krouse

Inventor
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attorney

(Model.)

2 Sheets—Sheet 2.

L. D. BENNER.
Corn Planter Check Rower.

No. 239,596.

Patented April 5, 1881.

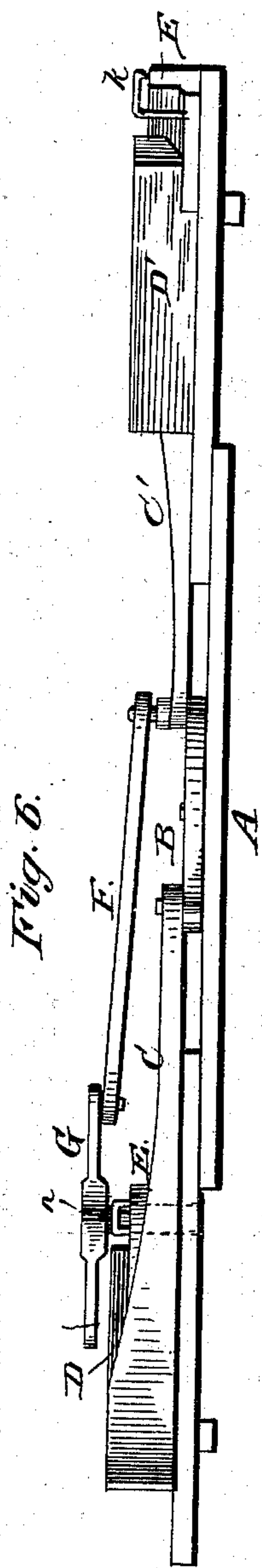


Fig. 5.

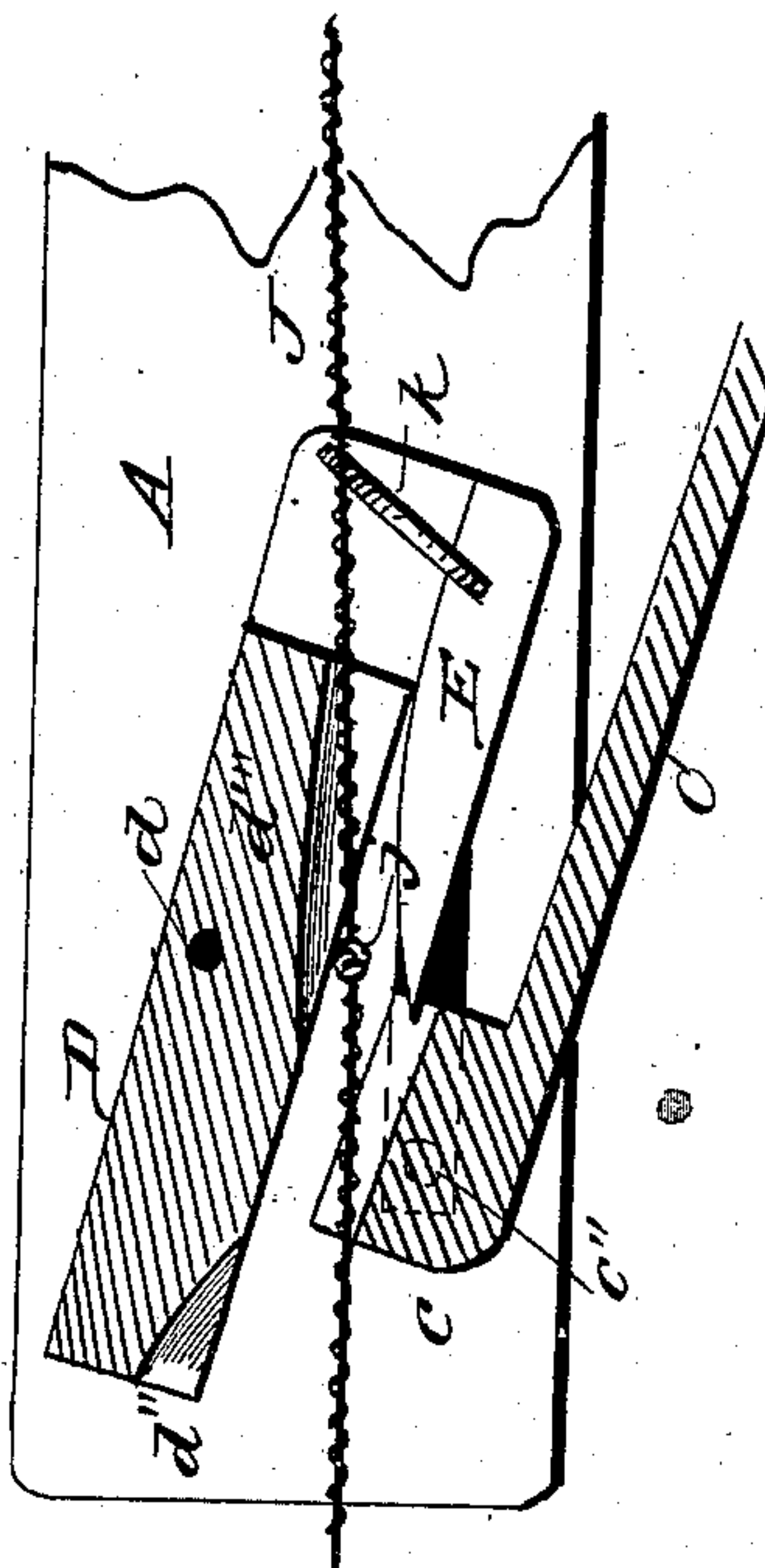
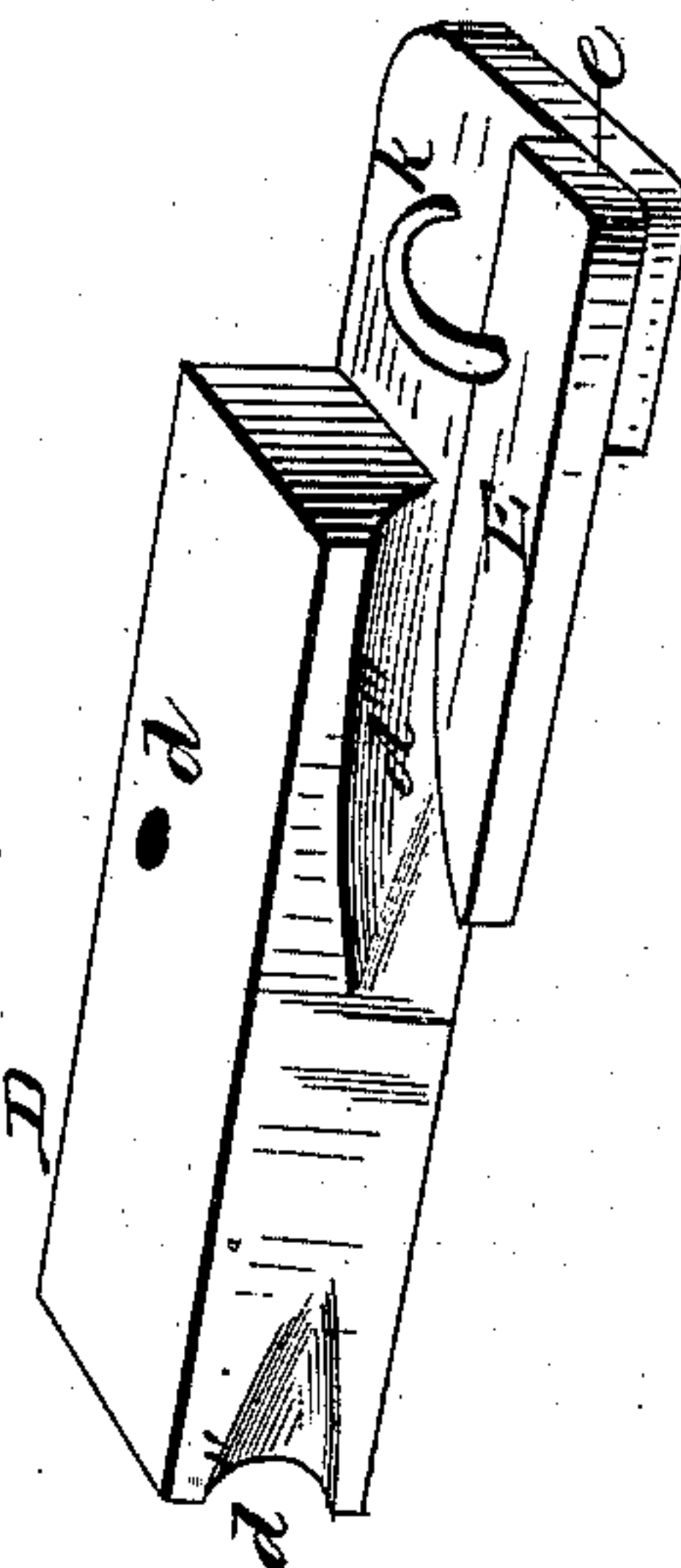


Fig. 3.



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UNITED STATES PATENT OFFICE.

LORENZO D. BENNER, OF GALESBURG, ILLINOIS, ASSIGNOR OF ONE-HALF
TO JOHN C. STEWART AND GEORGE C. ALDEN, OF SAME PLACE.

CORN-PLANTER CHECK-ROWER.

SPECIFICATION forming part of Letters Patent No. 239,596, dated April 5, 1881.

Application filed November 1, 1880. (Model.)

To all whom it may concern:

Be it known that I, LORENZO D. BENNER, a citizen of the United States, residing at Galesburg, in the county of Knox and State of Illinois, have invented certain new and useful Improvements in Corn-Planter Check-Rowers; and I do hereby 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 letters or figures of reference marked thereon, which form a part of this specification, in which—

Figure 1 is a top plan of a construction embodying my invention. Fig. 2 is same view as Fig. 1, but the parts shown in different relative positions. Fig. 3 is a perspective of one of the rocking knot-releasers. Fig. 4 is a perspective of one of the sliding arms. Fig. 5 is an enlarged horizontal section of one of the sliding arms and a knot-releaser. Fig. 6 is a side elevation, the parts in same relative positions as shown at Fig. 1.

This invention relates to corn-planter check-rowers of that class which are actuated by a knotted wire or cord stretched across the field; and it consists, first, in the use of sliding arms pivoted to an oscillating bar and projecting in different directions, so that each knot on the wire or cord will act upon one of the sliding arms, to push it backward, and thereby retract the other sliding arm, so that the same knot may act upon it to draw or pull it rearward, and thereby restore the arm first acted upon to its original and normal position, and in position to receive a similar impulse from the next succeeding knot, whereby both a forward and return stroke may be given to the planter seeding devices by each knot on the check-row wire or cord; second, in combination with the sliding arm upon which the knots of the check-row wire or cord act, a cam-block which deflects the wire or cord and releases the knot from the sliding arm.

The invention further consists in constructions and combinations hereinafter described, and set forth in the claims hereto annexed.

Referring to the drawings by letters, letter

A represents a bar to which the working parts are connected, as hereinafter described.

B is a bar, pivoted to the bar A at *b*.

C is a sliding arm, pivoted at one end to one end of the bar B, and its other end provided with a head or enlargement, *c*, on one side, which has a groove, *c'*, as shown at Fig. 4. A lug, *c''*, projects from the under side of the head *c*, through a straight slot, *b'*, in the bar A, and causes the head *c* to reciprocate in a straight line when the bar B is oscillated.

C' is a sliding arm, pivoted at one of its ends to the opposite end of the bar B from the bar C, and its other end projecting from the bar B in an opposite direction from the bar C, and provided with a grooved head, *c*, similar to the head *c* on the bar C, and a lug, *c''*, which operates in a slot, *b'*, in the bar A, same as the similarly-lettered parts on the end of the arm C.

D D' are blocks, pivoted at *d d'*, respectively, one to each end of the bar A, and adjacent to the paths of the heads *c*. The forward end of each block D D' has a groove, *d''*, in its face next to the head *c*, to prevent the knots on the check-row wire catching on the block, and the rear ends of the blocks D D' have each a groove, *d'''*, in its same side as the groove *d''*, through which the knots pass, as hereinafter described. Each block D D' has a lateral projection, *e*, from its side next the head *c*, and a cam, E, extends forward from each projection *e*, and is pointed at its forward end, its cam-face side next the groove *d''* being about parallel with said groove and at such distance therefrom as will permit the knots on the check-row wire to pass between the cam and the groove.

A link, F, connects the oscillating bar B with one end of an elbow-lever, G, the other end of which is connected, by a link, H, with the ordinary slide-bar, I, which connects the seed-slides of the planter.

J is a check-row wire or cord with ordinary knots, *j*, at distances apart equal to twice the distance between the hills of corn to be planted.

K is a staple or guard for the knotted wire or cord.

In operation the device may be placed centrally and with the bar A transversely to the planter, and only one of the bars A and its at-

5 tached devices be used; but I prefer to place a
 bar, A, with its attached working devices, at
 each side of the planter, and so that each bar A
 may move forward with the planter in the di-
 10 rection shown by the arrow at Fig. 1. At
 Fig. 1 a knot, *j*, is in position to commence to
 act on the head *c* of the arm C, and as the
 planter advances will force the arm C back-
 ward, and thereby oscillate the bar B and
 15 draw the arm C' forward to the positions
 shown at Fig. 2, and at the same time oscillate
 the elbow-lever G, and thereby operate the
 planter-seeding devices. In moving the head
 20 *c* of arm C rearward the cam E will pass be-
 tween the knot *j* and block D, as shown at
 Fig. 5, and deflect the knot or force it to one
 side, so as to release it from the head *c* and
 allow it to pass backward through the groove
 25 *d'''* and between said groove and the cam E.
 As the planter continues its forward move-
 ment the same knot which acted on the head
c of the arm C will next act upon the head *c*
 of the arm C' in a similar manner, but on the
 30 end of the head next the arm, instead of its ex-
 treme outer end, and will draw the arm C' rear-
 ward, and thereby force the arm C forward,
 ready for the action of the next knot, and at
 the same time again operate the seeding de-
 vices. The knot is released from the head *c*
 35 on the arm C' by the cam E on the block D'
 in a similar manner to the release from the
 head on the arm C, already described.

The blocks D D' may be rigidly fixed to the
 bar A; but I prefer them pivoted, to facilitate
 35 their operation in receiving and releasing the
 knots.

What I claim as new is—

1. In a corn-planter, the combination, with
 40 a knotted check-row wire or cord, of sliding
 arms projecting in different directions, and piv-
 oted to an oscillating bar, so that each knot
 on the wire or cord will act upon one of the
 sliding arms to push it backward, and thereby
 retract the other sliding arm, so that the same

knot may act upon it to draw or pull it rear- 45
 ward, and thereby restore the arm first acted
 upon to its original position, ready to receive
 a similar impulse from the next succeeding
 knot, substantially as and for the purpose
 specified. 50

2. In combination with a knotted check-row
 wire or cord, sliding arms C C', projecting in
 different directions, and pivoted to an oscillat-
 ing arm, B, so that each may act upon the
 other, and so that they may be each carried 55
 rearward and each carried forward by the ac-
 tion of each and every knot passed in contact
 therewith on the check-row wire or cord.

3. In combination with a knotted check-row
 wire or cord, and with sliding arms C C', having 60
 heads moving in a straight or nearly straight
 line, cams E, arranged to deflect the knots on
 the wire or cord, and thereby release them
 from the sliding arms.

4. In combination with a knotted check-row 65
 wire or cord, and with sliding arms C C', hav-
 ing heads *c*, moving in a direct line or path,
 pivoted blocks D D', having grooves *d''* in
 their forward ends, substantially as and for
 the purpose specified. 70

5. In combination with a knotted check-row
 wire or cord, and with sliding arms C C', hav-
 ing heads *c* moving in a direct line or path,
 pivoted blocks D D', having cams E on their
 face next the arms C C', substantially as and 75
 for the purpose specified.

6. In combination with a knotted check-row
 wire or cord, and with sliding arms C C', hav-
 ing heads *c*, moving in a direct line or path, piv-
 oted blocks D D', having cams E and grooves 80
d''', substantially as and for the purpose speci-
 fied.

In testimony whereof I affix my signature
 in presence of two witnesses.

LORENZO D. BENNER.

Witnesses:

L. F. DANFORTH,
 MERRILL S. ORTON.