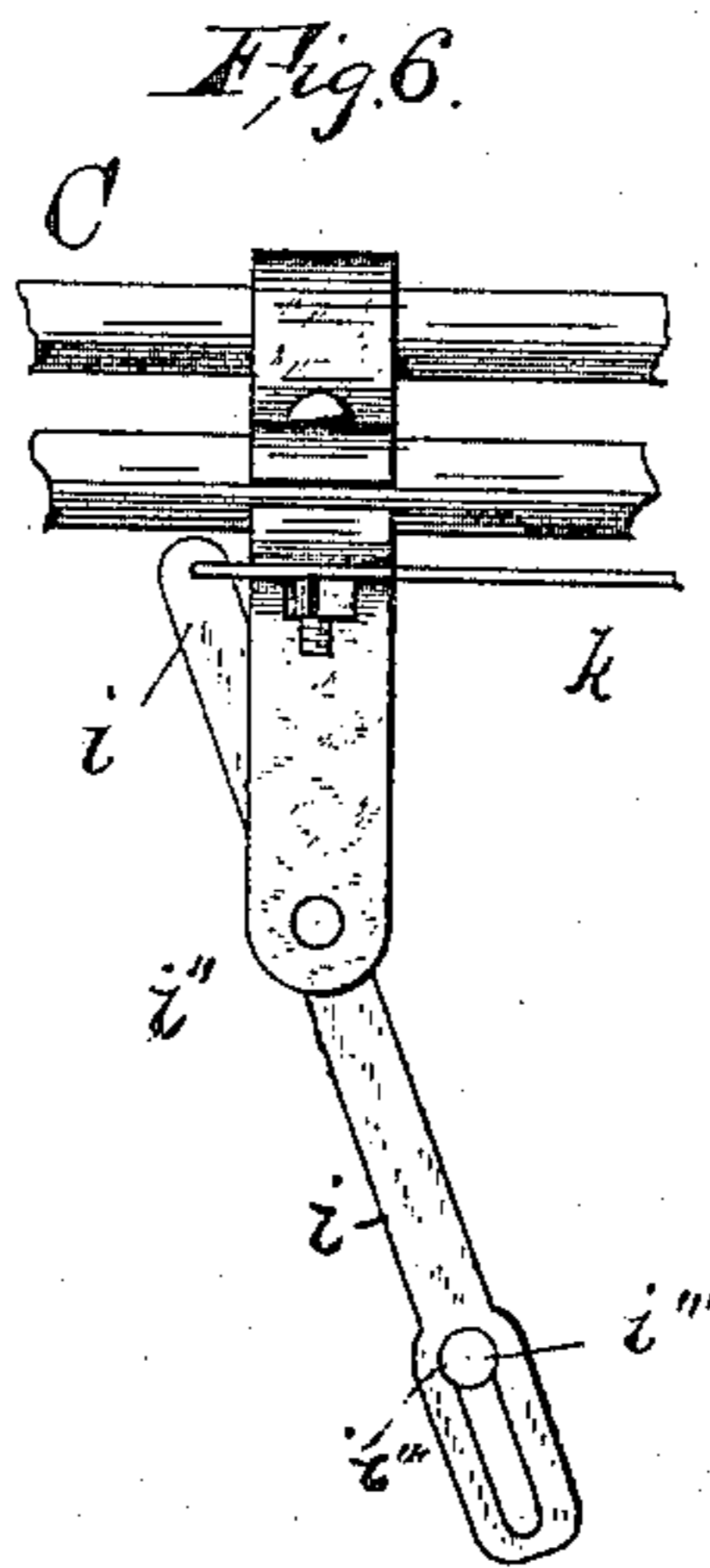
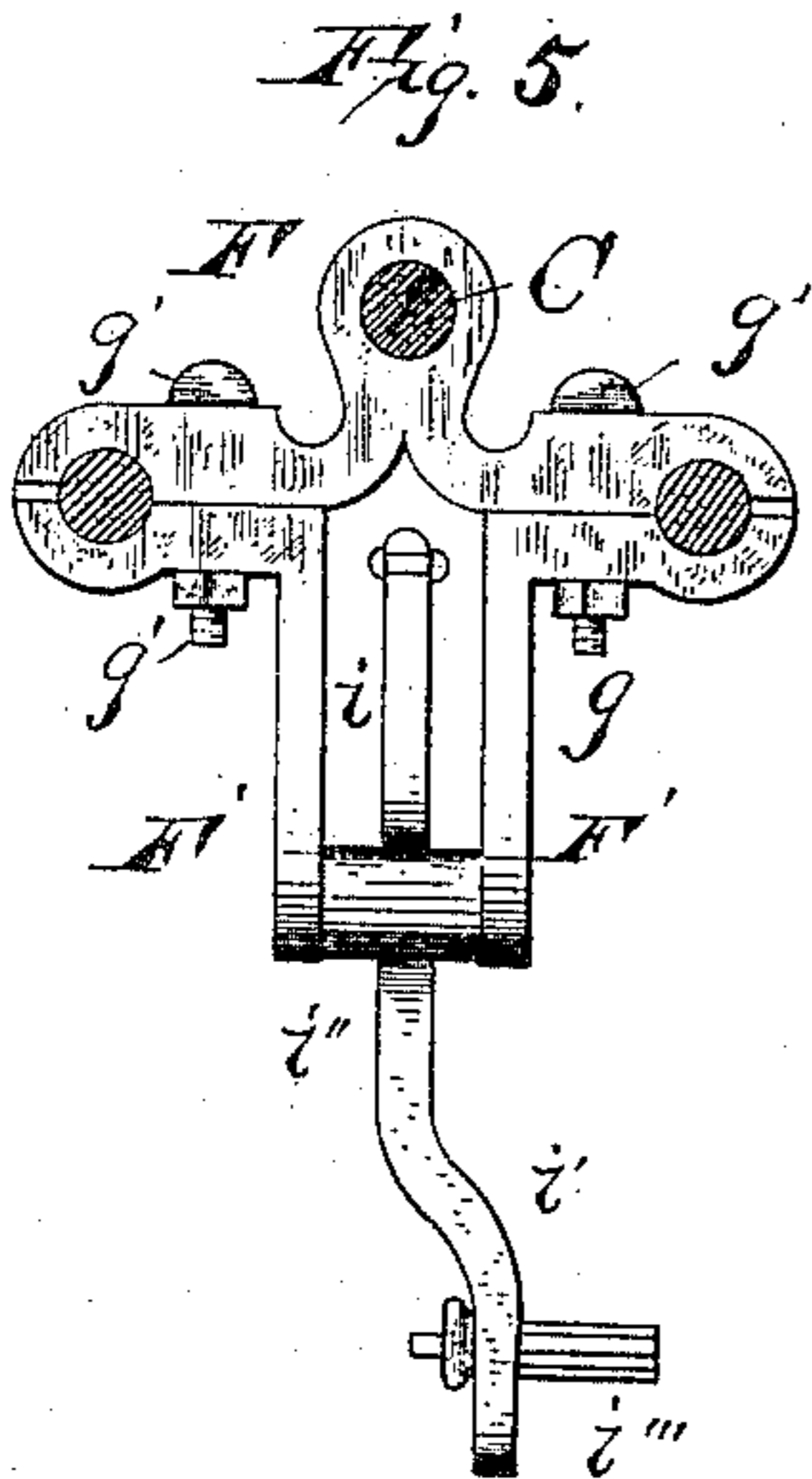
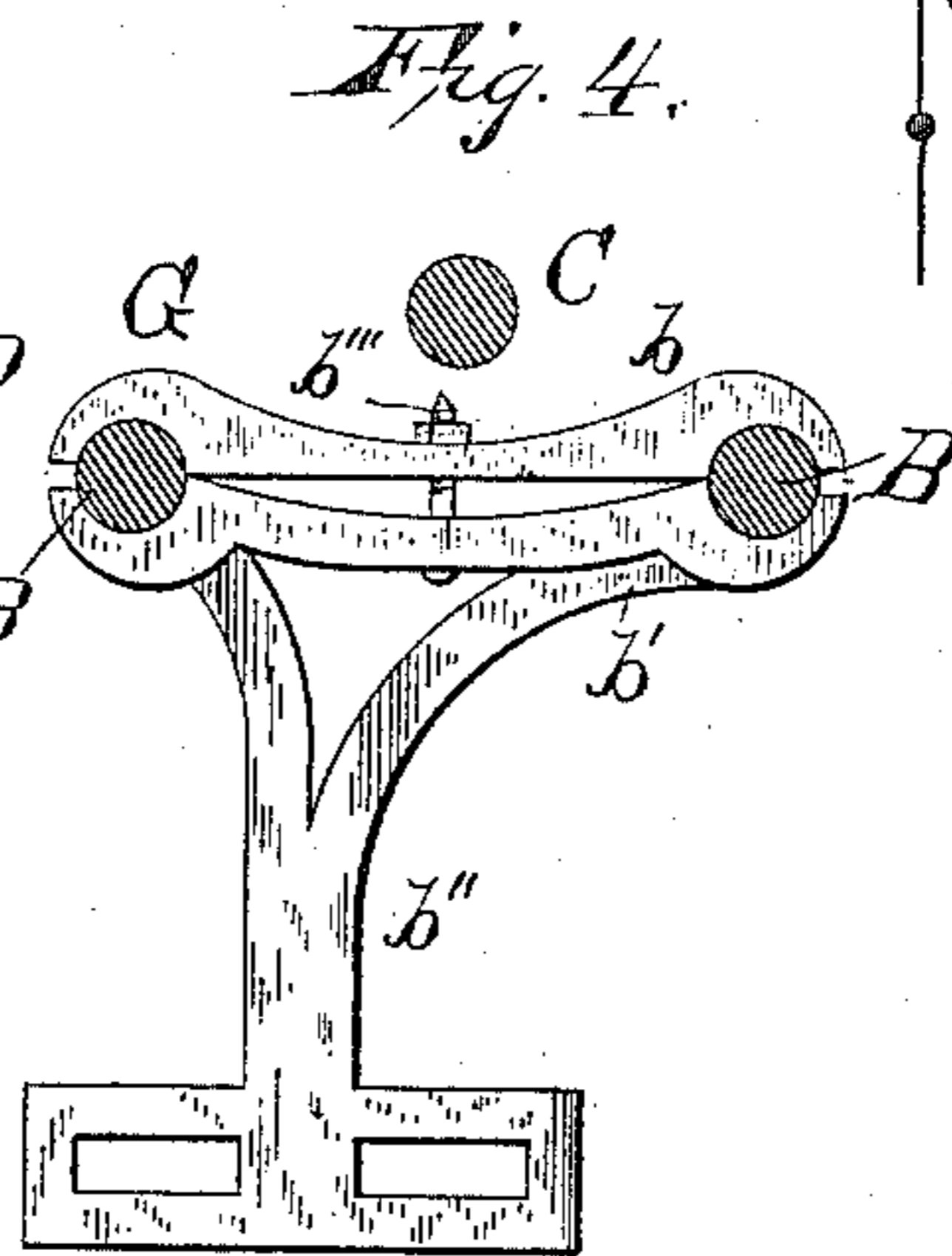
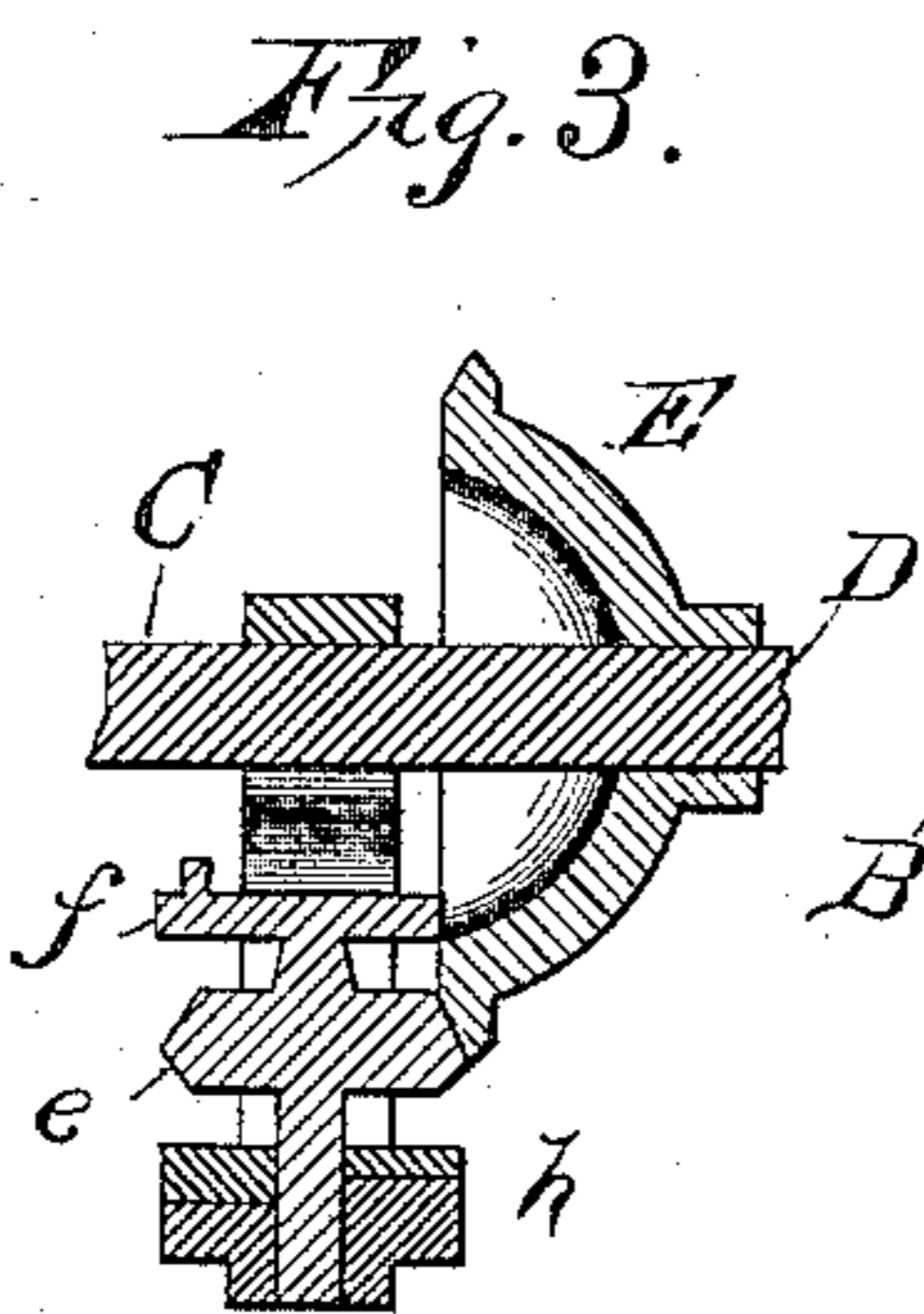
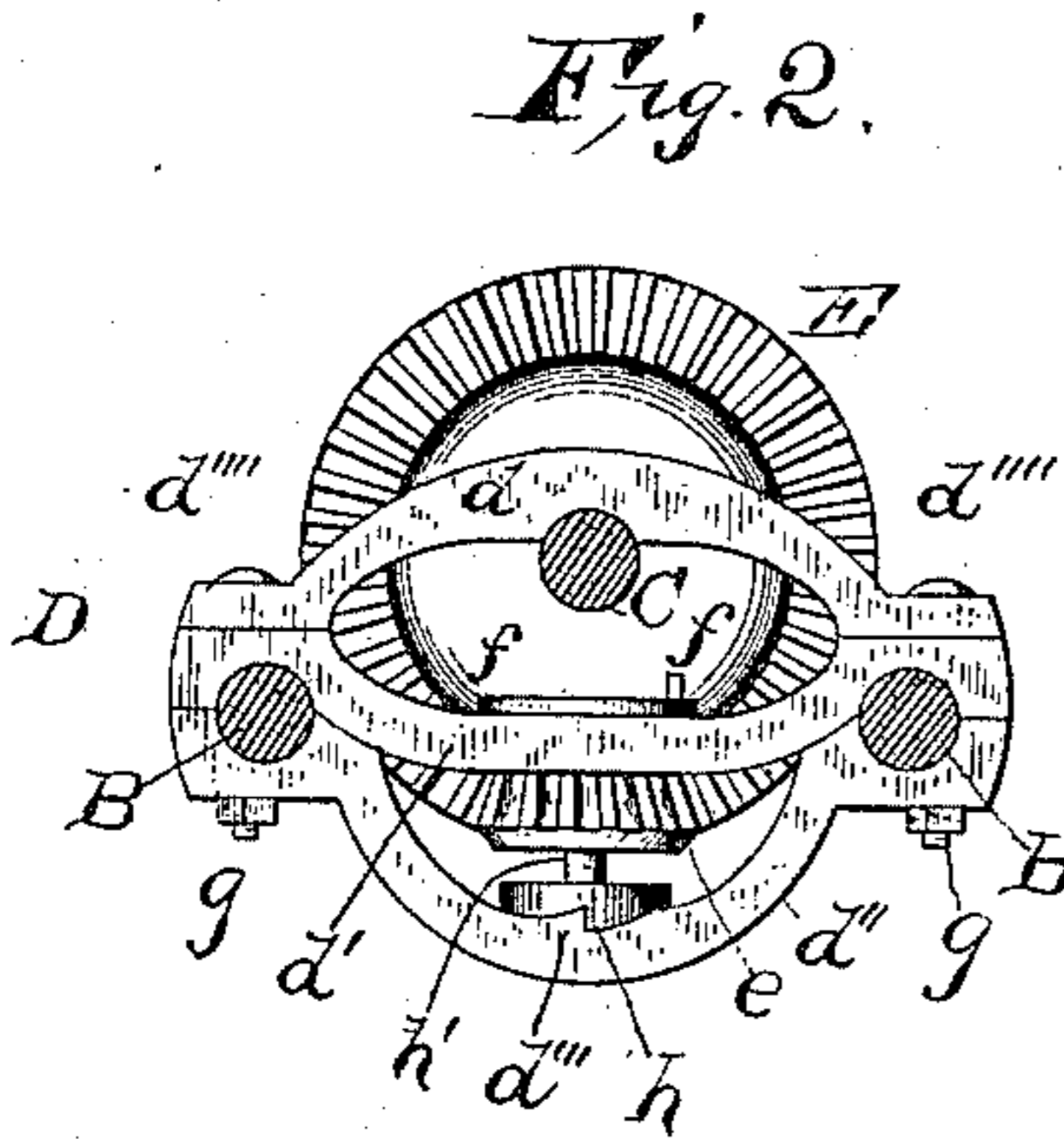
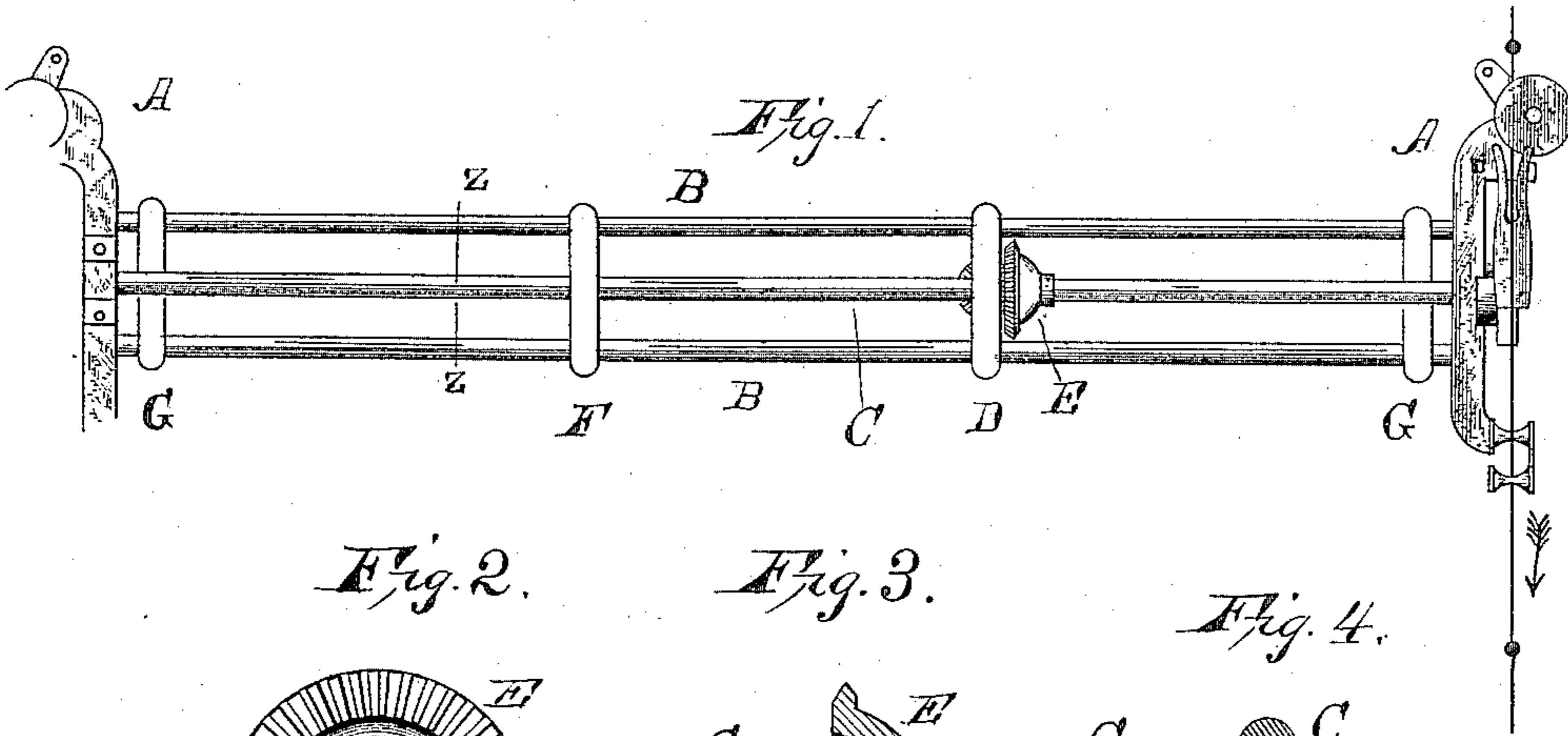


J. KAYLOR.

CHECK ROWER FOR CORN PLANTERS.

No. 344,116.

Patented June 22, 1886.



Witnesses
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R. G. Ames.

John Kaylor Inventor
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(No Model.)

2 Sheets—Sheet 2.

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Fig. 7.

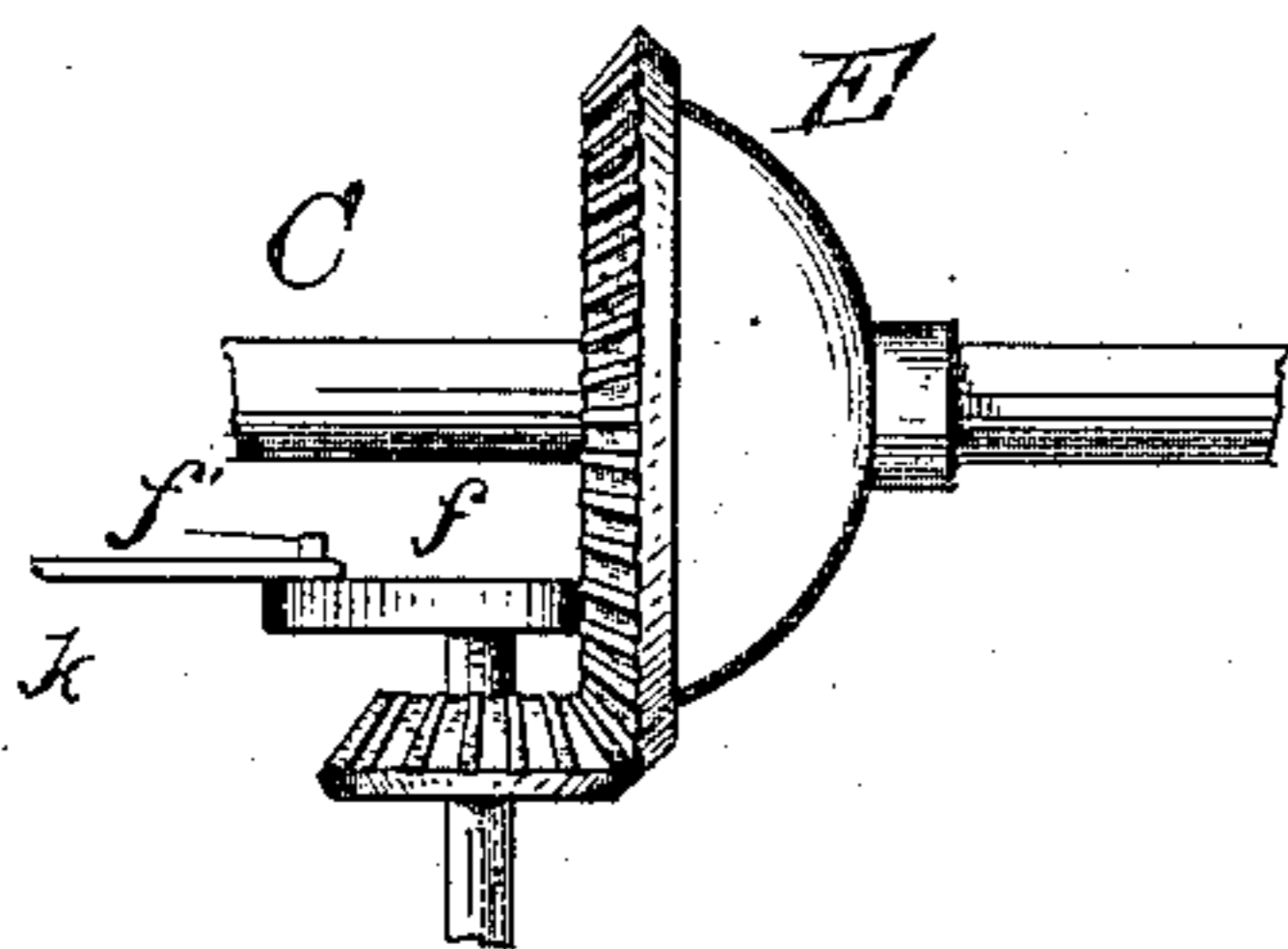


Fig. 8.

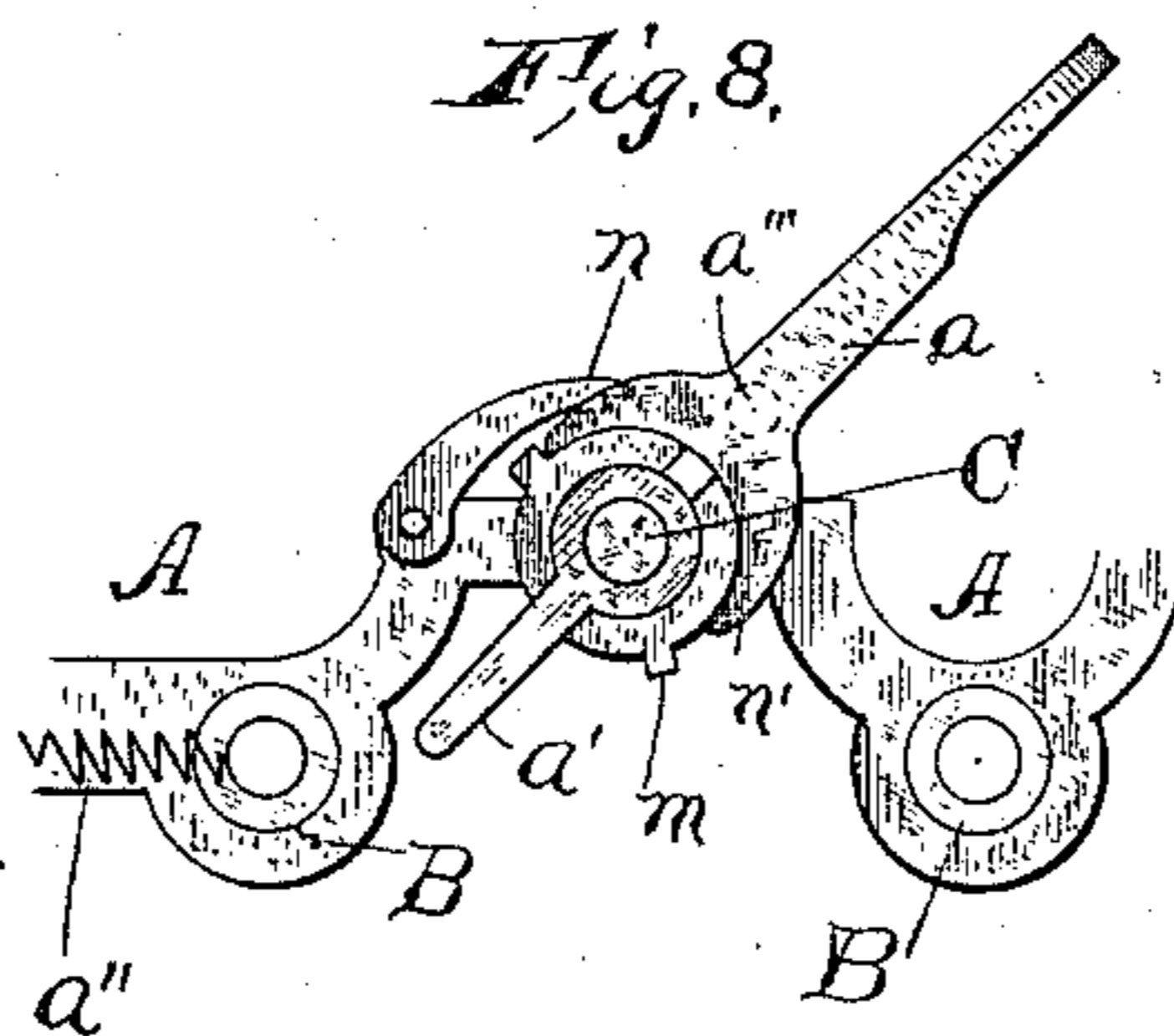
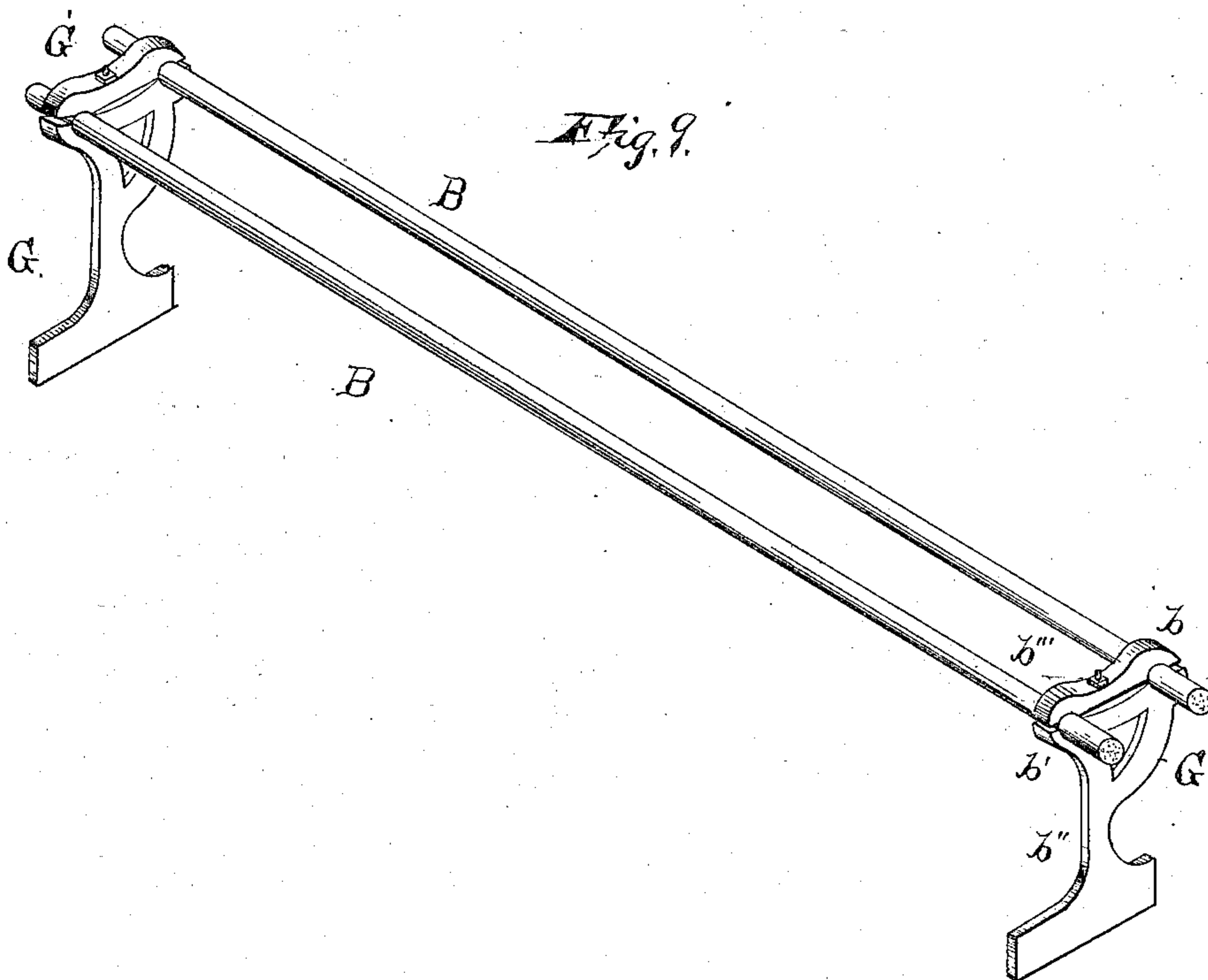


Fig. 9.



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UNITED STATES PATENT OFFICE.

JOHN KAYLOR, OF DECATUR, ILLINOIS.

CHECK-ROWER FOR CORN-PLANTERS.

SPECIFICATION forming part of Letters Patent No. 344,116, dated June 22, 1886.

Application filed December 10, 1883. Renewed February 1, 1886. Serial No. 190,556. (No model.)

To all whom it may concern:

Be it known that I, JOHN KAYLOR, a citizen of the United States, residing at Decatur, in the county of Macon and State of Illinois, have invented certain new and useful Improvements in Corn-Planter Check-Rowers, of which the following is a specification.

My present invention relates to improvements in corn-planter check-rowers; and it consists in an improved construction of frame on which the check-row devices are mounted, an improved lock for the check-row rock-shaft, improved means for transmitting motion from the rock-shaft to the seed-slides of the planter, an improved construction of the forked lever which actuates the rock-shaft, and improvements in the attaching-brackets, and other improvements, all as hereinafter more fully described, and specially designated in the claims hereto annexed.

In the accompanying drawings, which illustrate one method of applying my invention, Figure 1 is a top plan of the frame and attachments; Fig. 2, a sectional elevation in the line *x x* in Fig. 1, and an elevation of the mechanism for transmitting motion from the rock-shaft to the seeding devices of the planter; Fig. 3, a sectional elevation of the parts shown in Fig. 2 in a plane parallel with the rock-shaft; Fig. 4, a side elevation of the clamp and bracket used in the construction of my check-row frame and in attaching it to the planter, and also shows the frame-bars in section; Fig. 5, a sectional elevation in the line *z z* in Fig. 1, and an elevation of the lever which connects the check-row devices and the planter devices, and of the bracket which furnishes a pivotal support for said lever; Fig. 6, an elevation of the bracket and other parts shown in Fig. 5, seen at right angles with the view taken for Fig. 5; Fig. 7, a side elevation of parts shown in Fig. 3; Fig. 8, a side elevation of the forked lever and adjacent parts; Fig. 9, a perspective of the check-row frame alone.

Referring to the drawings by letters, the same letter indicating the same part in the different figures, A A represent the heads, used at each end of my improved frame, to furnish bearings for the rock-shaft for the ordinary pulleys to guide the check-row line, and for the pawl to limit the motion of the check-row shaft.

My improved frame, on which the check-row devices are mounted, is formed of bars or rods B B, secured together, as hereinafter described.

C is the check-row rock-shaft, provided with bearings in the main frame, and otherwise intermediately supported.

D is a bracket formed of clamp-plates *d d'*, located on the bars B, and clamp-plates *d'' d'''*, located beneath said bars, and all held securely on said bars by bolts and nuts *d''''*.

E is a bevel-pinion fixed on the rock-shaft C, and has a concave face on its toothed side.

F is a bracket secured by clamps and bolts *g'* on the bars B, as shown in Fig. 5. Arms *F'* project downwardly from the bracket F.

G G are the end pieces of my improved frame, each of which consists of a clamp, *b*, located above the bars B, and a clamp, *b'*, located beneath them. The clamps *b b'* are secured to the bars B by a bolt, *b'''*, and the clamp *b'* has a pendent bracket, *b''*, for attachment to a planter. The drive-pinion E gears with a smaller pinion, *e*, which has suitable bearings in the parts of the bracket D, and a crank-wheel, *f*, on the shaft of the wheel *e*, has a crank-pin, *f'*, which a connecting-rod, *k*, connects with the upper end of a lever, *i*, the lower end of which lever is provided with an arm, *i'''*, for connecting it with the seed slide bar of the planter. The lever *i* has trunnions *i''* near its mid-length portion, by which it is journaled in the pendants *F'*. The arm *i'''* is adjustable in a slot at the lower end of the lever *i*, as shown at Fig. 5.

In operation the pinion E is moved by the forked lever at each impulse received therefrom to that extent which will give a semi-rotation to the pinion *e*, which will in turn, through the crank-wheel rod *k* and lever *i*, impart movement to the seed-slides of the planter, each throw of the forked lever giving a throw to the lever *i*.

To prevent backward movement of the rock-shaft, that part of the shaft of pinion *e* designated by the letter *h'* in Fig. 2 is formed square in its cross-section and carries a ratchet-plate, *h*, which has free vertical sliding motion on said shaft, and which forms a lock after each motion of the shaft and gearing by dropping behind the projection *d'''* on the part *d''* of bracket D.

The forked lever *a* is formed of two parts, an upper forked end part (designated by the letter *a*) hinged to a lower part, *a'*, where indicated by the dotted lines *a''*. The part *a'* is pivoted on the rock-shaft C. A spring, *a''*, is connected with a downward extension from the part *a'* of the forked lever, to return said lever after each backward throw given it by the tappets on a check-row line in the ordinary manner. The upper part of the forked lever is provided with curved projections *n n'*, one of which, *n*, is provided with a projection that engages with the teeth of a ratchet, *m*, which is fixed on the rock-shaft C, while the other, *n'*, by coming in contact with the circular portion of *a'*, limits the hinge motion of *a* on *a'* while the same is being returned by the spring to its normal position after a stroke has been effected by contact of the forked lever with a tappet on the check-row line.

The pawl (indicated by letter *l*) is represented as being held out of contact with ratchet *m* by a lateral projection on the part *n*; but at the termination of every stroke of the forked lever, produced by the check-row line, the pawl *l* slides off said projection, and is thereby permitted to come in contact with the ratchet *m* and effect a lock, both of said ratchet and the rock-shaft C.

I prefer to use clamps, as shown in the drawings, for securing the attachments to the bars B, except where greater rigidity is desired, as at *g g* in Fig. 2.

The construction herein shown and described of the frame on which the check-row devices are mounted is simple, durable, and furnishes a frame which is very strong, and to which the attachments are not only simply and easily attached, but on which they are easily adjustable by moving them on the bars B, and securing them, after the desired adjustment is effected, by means of the clamps and binding-screws. The increased width and space between the bars B affords a strong support for the attachments and makes it possible to sustain the same centrally, as shown.

Any desired number of bars B may be used.

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

1. In combination, to form a frame or support for check-row attachments, a series of parallel bars which extend across a planter and provide points of attachment for the check-row devices, a series of clamps for holding said bars in place, and brackets by means of which the frame may be attached to a planter, substantially as described.

2. In combination, in a check-row frame, a series of parallel bars, B, brackets *b''*, clamps *b b'*, and binding bolts *b'''*, substantially as described.

3. In combination, bars B, bracket-frames G, heads A A, and rock-shaft C, substantially as described, and for the purpose specified.

4. In combination, bars B B, bracket-frames G G, rock-shaft C, and bracket D, substantially as and for the purpose described.

5. In combination, bars B B, frames G G, rock-shaft C, and bracket F, substantially as and for the purpose specified.

6. The lever *a*, formed in two parts hinged to each other, and its upper part provided with a curved extension, *n'*, which coacts with the lower part, *a'*, to limit the hinge motion of the parts of the lever, substantially as described.

7. In combination with the drive-pinion E, fixed to the rock-shaft, pinion *e*, and the crank-wheel, a ratchet-plate, *h*, which slides on the shaft of pinion *e*, and projections *a'''*, substantially as and for the purpose specified.

8. In combination, brackets D F, rock-shaft C, drive-pinion E, pinion *e*, crank-plate *f*, rod *k*, and lever *i*, substantially as and for the purpose specified.

9. In combination, in a check-rower, the forked lever formed in two parts hinged to each other, its upper part provided with curved extensions *n n'*, and lower part with a downward extension, to which the spring *a''* is secured, rock-shaft C, ratchet *m*, and pawl *b*, substantially as and for the purpose specified.

10. In combination, the rock-shaft, lever loosely mounted thereon and adapted to act on a ratchet fixed to the rock-shaft, the pinion E, fixed to the rock-shaft, and pinion *e*, supported in pendants geared with pinion E, and provided with a crank-wheel, *f*, substantially as and for the purpose specified.

11. In combination, bars B B, frames G G, rock-shaft C, bracket D, providing bearings for the pinions E *e*, and bracket F, providing bearings for the lever *i*, substantially as and for the purpose specified.

12. In a check-rower, in combination, bars B, rock-shaft C, and clamps adapted to hold the bars B together and to provide bearings for the rock-shaft, substantially as and for the purpose specified.

JOHN KAYLOR.

Attest:

I. D. WALKER,
A. J. WALLACE.