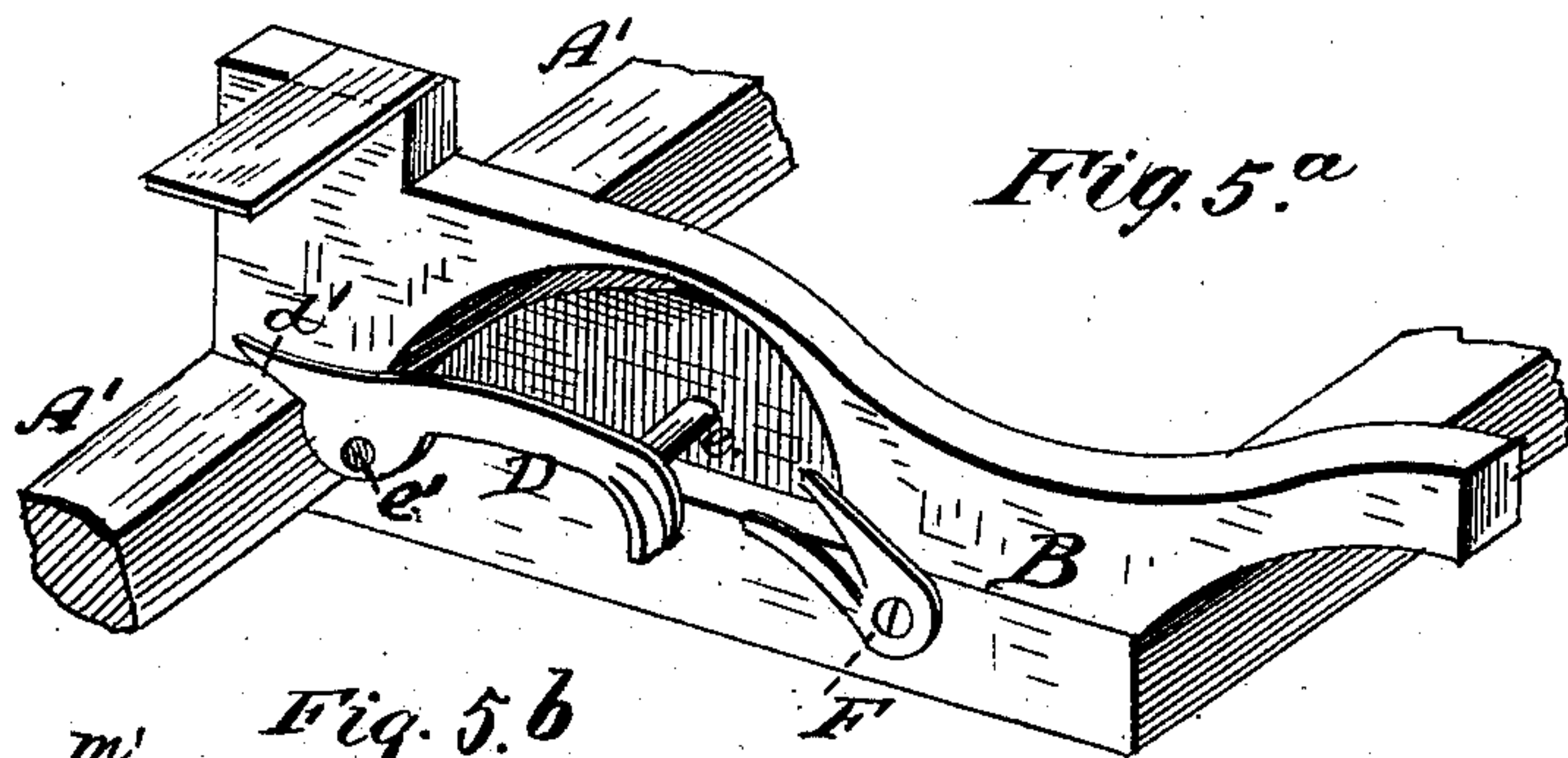
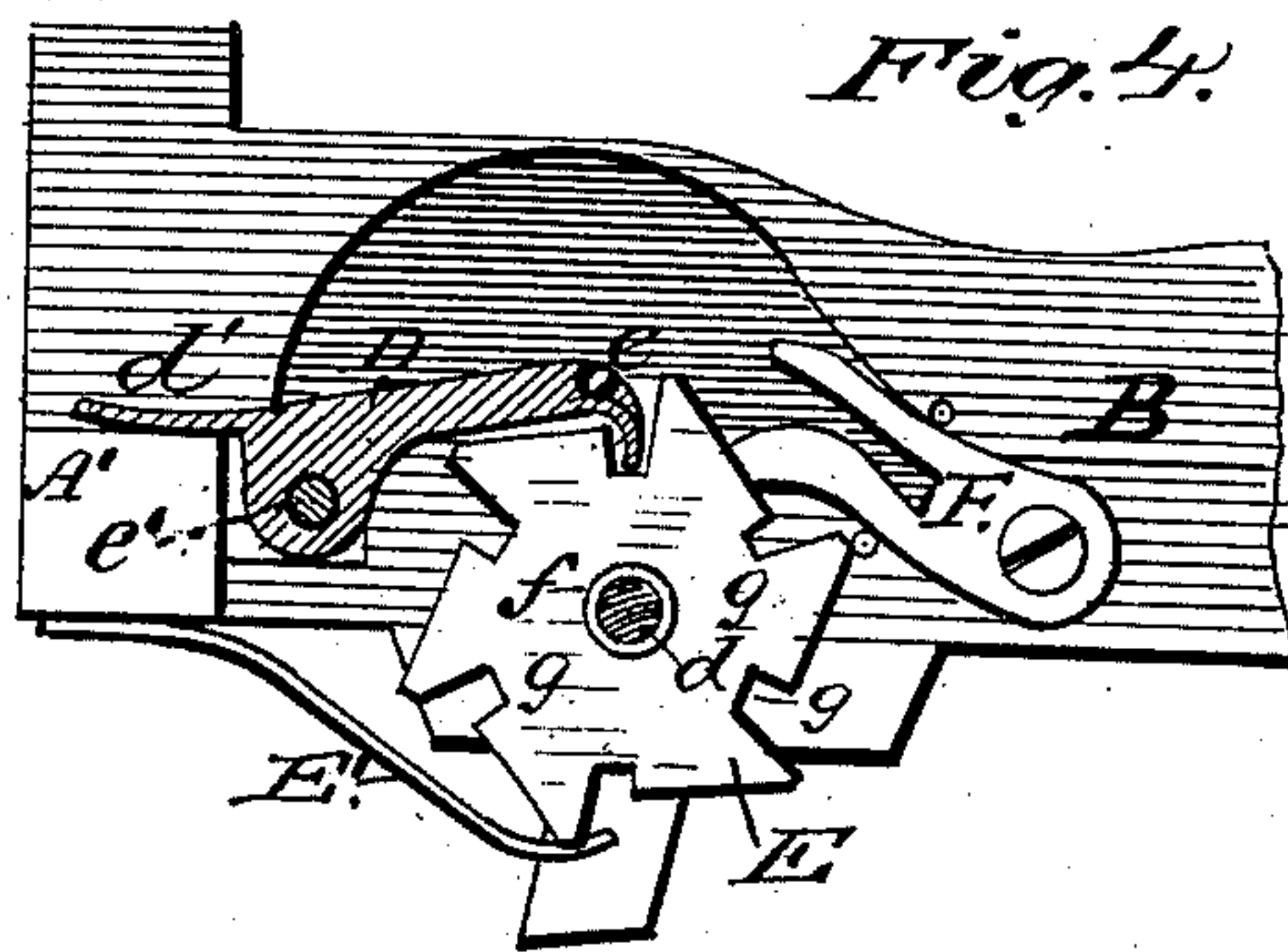
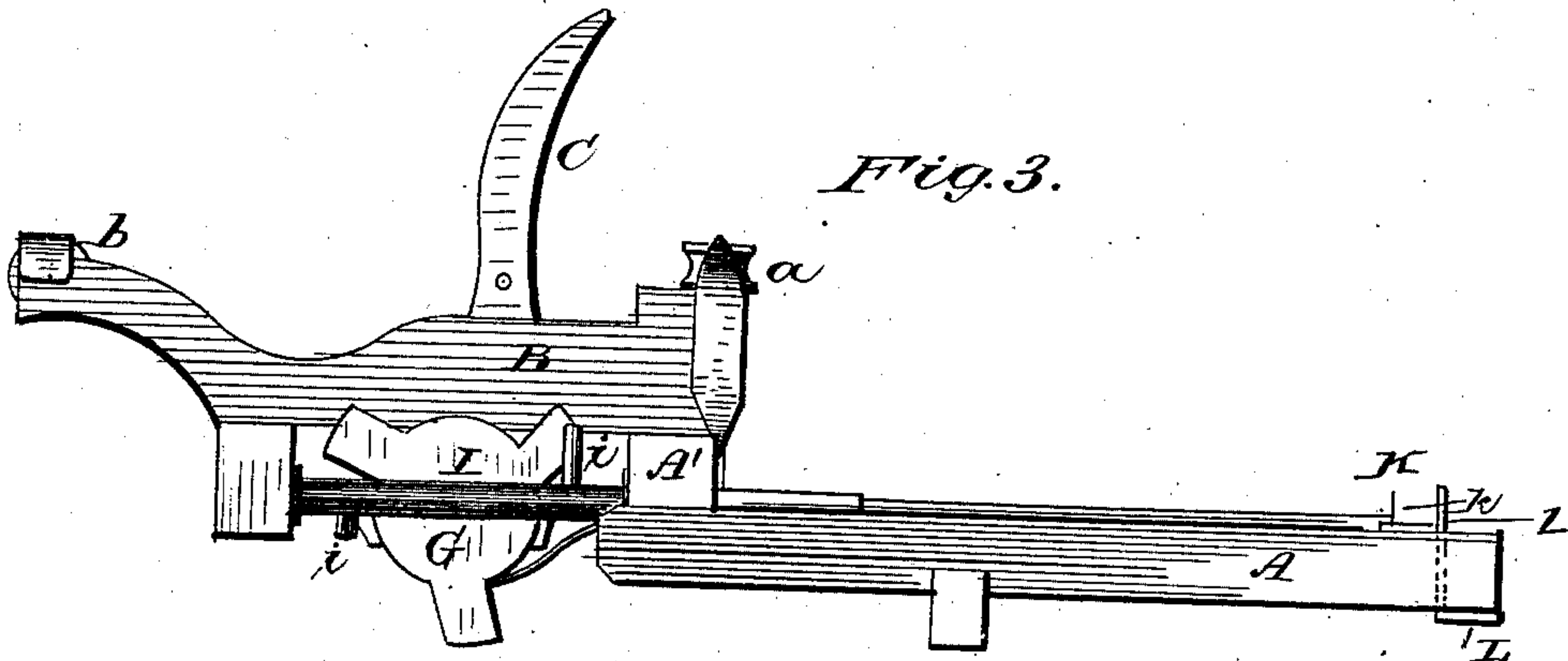


J. PUTMAN.
Check-Rower.

No. 225,165.

Patented Mar. 2, 1880.



Witnesses
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Geo. W. Madigan

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UNITED STATES PATENT OFFICE.

JOHN PUTMAN, OF RUSHVILLE, ILLINOIS, ASSIGNOR OF ONE-HALF OF HIS
RIGHT TO F. E. BERRY, OF SAME PLACE.

CHECK-ROWER.

SPECIFICATION forming part of Letters Patent No. 225,165, dated March 2, 1880.

Application filed December 27, 1879.

To all whom it may concern:

Be it known that I, JOHN PUTMAN, of Rushville, in the county of Schuyler and State of Illinois, have invented certain new and useful Improvements in Check-Rowers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a plan or top view. Fig. 2 is a side elevation. Fig. 3 is a similar view of the opposite side. Fig. 4 is a vertical section on line *x x*, Fig. 1; and Figs. 5^a, 5^b, and 5^c are perspective detail views.

Similar letters of reference indicate corresponding parts in all the figures.

This invention has relation to check-row attachments for corn-planters; and it consists in the construction and arrangement of operating parts, substantially as hereinafter more fully set forth.

In the drawings, A A represent part of the frame of a corn-planter provided with my improved check-row attachment. Upon the rear part of this frame is bolted a beam, A', having uprights at each end, upon which are pivoted horizontal pulleys *a a*. A bracket, B, projects rearwardly from beam A', upon the extreme end of which is another vertical pulley, *b*, while in a laterally-projecting reversible arm secured upon the front end of bracket B is a horizontal pulley, *c*.

C is a forked lever, which is pivoted at its lower end upon a pin, *d*, which projects laterally from the bracket-plate B. D' is a spring placed under lever C and bent or curved upward, as shown in Fig. 2, so as to impinge upon the lower end of the lever and force this forward against the frame.

Upon a pin, *e'*, affixed upon the inner side of lever C, facing the bracket-plate B, is pivoted a pawl, D, the construction of which will be better understood by reference to Fig. 5^a of the drawings, from which it will be seen that it has a forwardly-projecting lip, *d'*, while its opposite end is bent downward and provided with a laterally-projecting arm, *e*.

E is a ratchet-wheel, the central hub or sleeve, *f*, of which is inserted upon pin *d*, be-

tween lever C and the bracket-plate B, in such a position that pawl D will engage with its notches.

F is a slotted guide-plate secured in a slanting position upon the bracket-plate B, which is recessed to accommodate the laterally-projecting arm *e* of pawl D.

The notches in the ratchet-wheel E are made with square slots *g g*, to receive and interlock with the bent end or cam of the pawl.

G is a verge or spur wheel, which is keyed upon a shaft, *h*, forming a continuation of the hub of sleeve of the ratchet-wheel E, so as to rotate with this. The spurs or projections upon the verge-wheel G strike alternately lugs *i i* upon a shaft, I, which passes through a boxing in the cross-beam A', and has hinged in its forward end a crank-rod, K, inserted through a slotted boxing, *k*.

The crank of rod K is inserted through a vertical slotted upright, *l*, secured upon the seed-slide-operating bar L of the planter-frame.

From the foregoing description, taken in connection with the drawings, the operation of my invention will be readily understood.

A cord or wire rope, M, provided with knots *m* at regular intervals, is fastened to a stake at one end of the field and its free end passed over the pulleys *a c b* and between the forked arms of lever C, as clearly shown in Fig. 1 of the drawings. As the machine advances over the ground the knotted cord or wire M is drawn through the forked lever C, the upper end of which is made flaring, or with ends diverging from each other; and as the space or slot formed between the fork of lever C is too narrow at its lower end to allow the knots to pass through, the lever is tilted backward into a horizontal position, which allows the knot to slip through the upper enlarged part of the slot or fork, after which the lever is forced back into its normal or upright position by the spring D'. As the lever is being turned backward by the cord or wire in the manner described, its pawl D, engaging with the ratchet-wheel E, will turn this and the verge-wheel G, thus operating the rock-shaft I, crank-rod K, and vibrating slide-bar L. Pawl D is released from the ratchet-wheel by its laterally-projecting arm *e* entering the slot of the guide-plate F, which lifts it out of the notches,

thus enabling the forked lever to fly back after the knot has passed through it, while the ratchet is retained in position by a spring, E', upon its under side. As lever C flies back, carrying pawl D with it, the lip *d'* of the latter will strike against the cross-beam A', and thereby force the bent rear end of the pawl down into the next squared notch, *g*, of the ratchet-wheel, when the operation of turning or tilting lever C backward by the next knot on the cord or wire is repeated, and so on.

It is obvious that either cord or wire rope may be used to operate this machine, or a single wire of sufficient strength may be used. In either case the knot or enlargement *m* upon the cord or wire is produced by twisting detached pieces of wire around the cord or wire rope at equal distances apart, and then again twisting the cord or wire once around one of these, as shown by the detail views, Figs. 5^b and 5^c, which represent, respectively, sections of a four-strand wire rope and of a single wire, upon which the knots are formed in the manner described.

To form a double knot I use two short pieces of spiral-twisted wire, *m m'*, as shown in Fig. 5^b, one of which is linked into the other, after which the wire is twisted once around both, thus binding them firmly in place and forming a solid and substantial double knot.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In combination, and operating substantially as described, the forked lever C, having its fulcrum at *d*, and provided with the laterally-projecting pin *e'*, vibrating pawl D, pivoted upon said pin *e'*, and provided with the lip or extension *d'* and laterally-projecting arm *e*, cross-beam A', forming a stop for the said lip *d'*, slotted guide-plate F, adapted to receive arm *e* on the rearward throw of lever C and pawl D, slotted wheel E, and springs D' E'.

2. As an improvement in check-rows of the described class, the cross-beam A', supporting the guide-pulleys *a a*, and provided with the rearwardly-extending vertical bracket-plate B, carrying the pulleys *c b*, slotted guide-plate F, and pivot *d*, provided with the hub or sleeve *f*, forked lever C, pivoted upon pin *d* and vibrating in a vertical plane parallel to that of the vertical bracket-plate B, vibrating pawl D, pivoted upon pin *e'* of lever C, and provided with the lip *d'* and arm *e*, slotted wheel E, operating the sleeve or hub *f*, and springs D' E', all constructed and combined to operate in the manner and for the purpose substantially as herein shown and specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN PUTMAN.

Witnesses:

GEO. W. SCRIPPS,
W. I. LARASH.