

F. E. BERRY & J. PUTMAN.
Check-Rower.

No. 226,700.

Patented April 20, 1880.

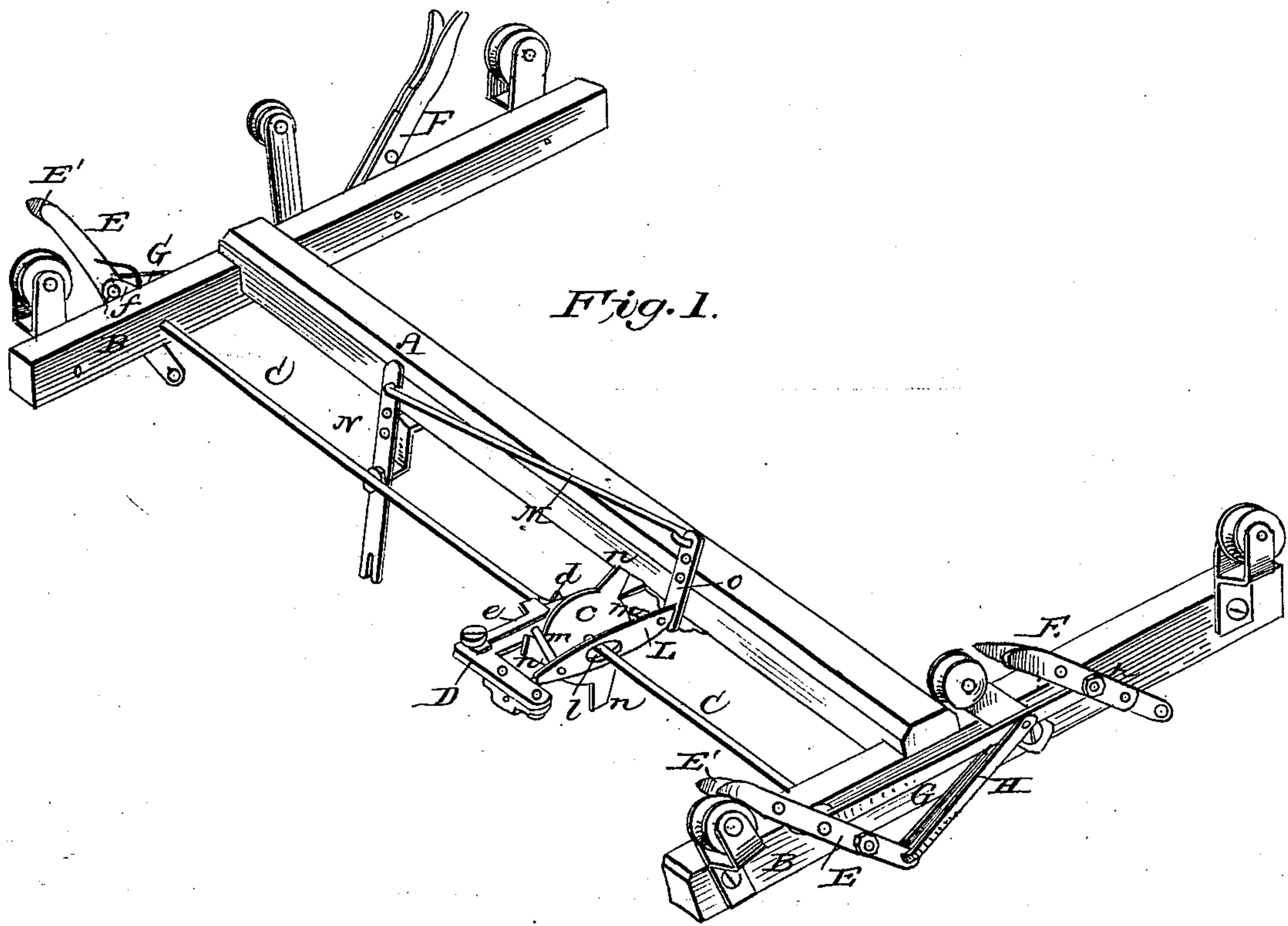
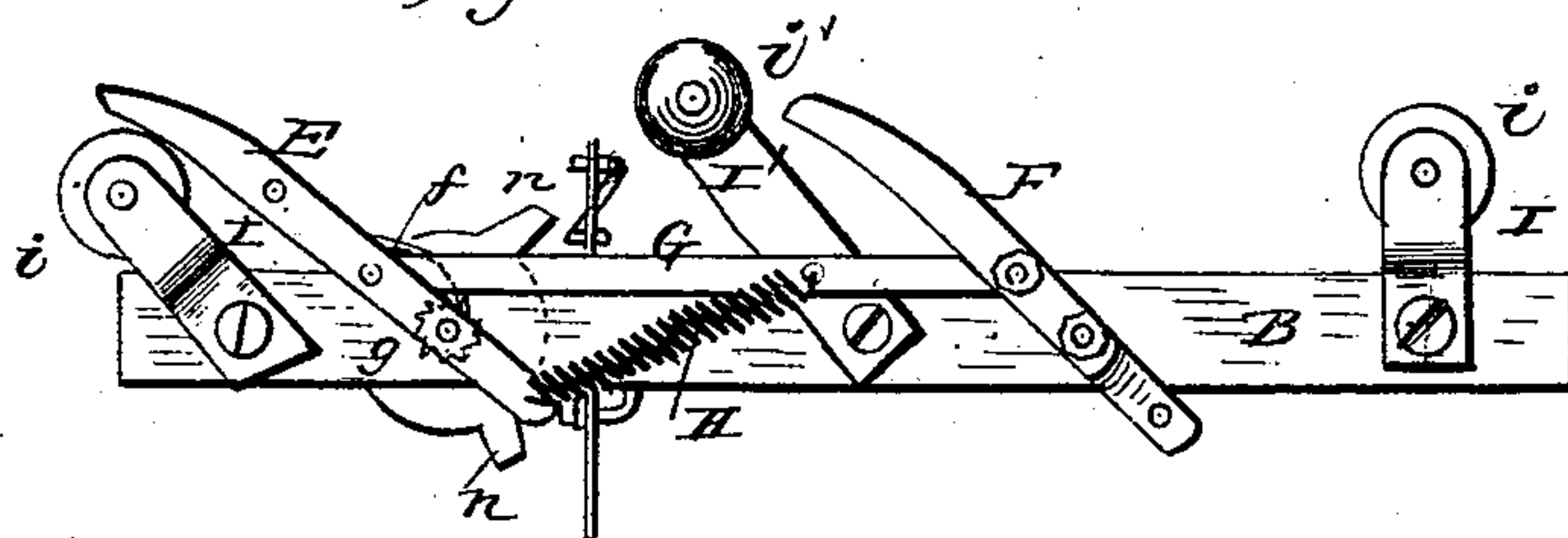


Fig. 2.



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Fig. 3.

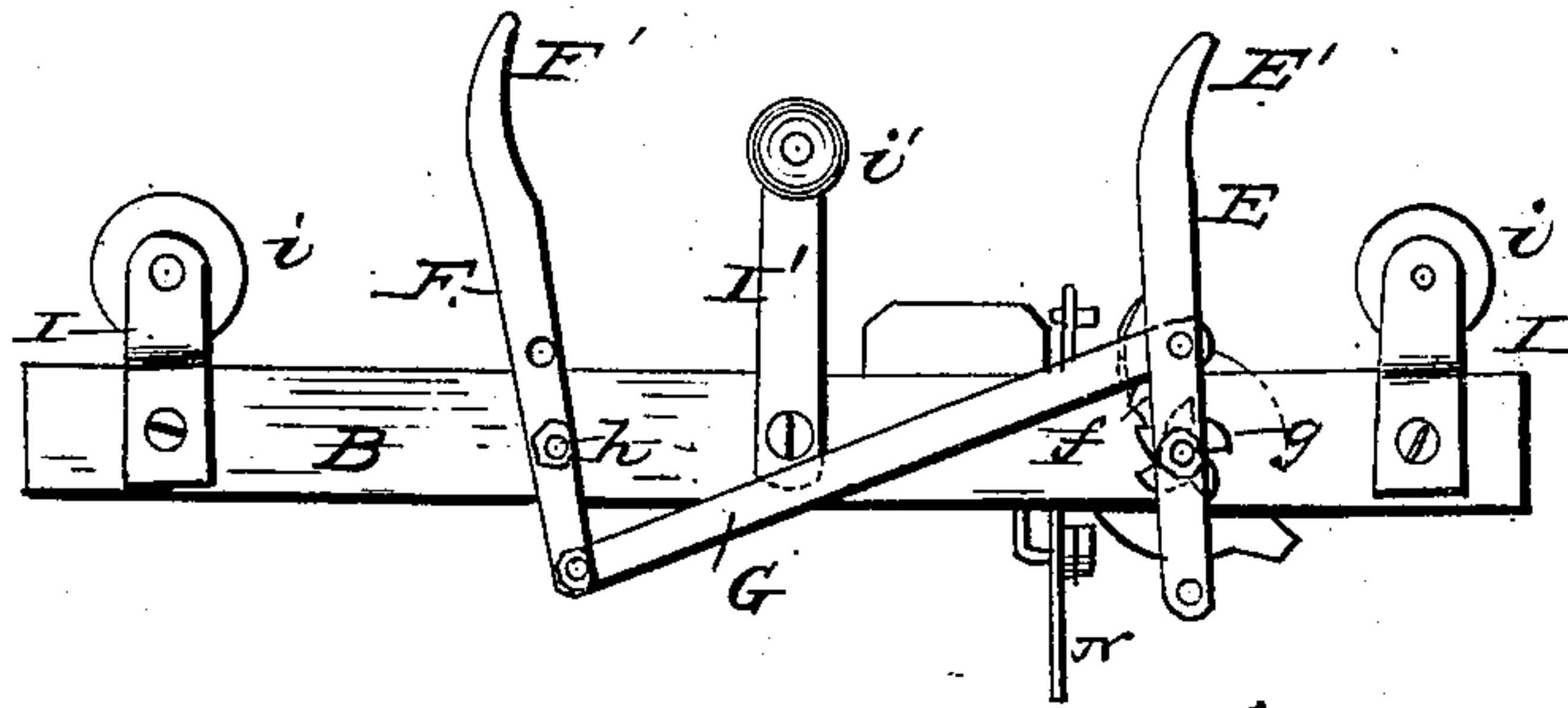


Fig. 4.

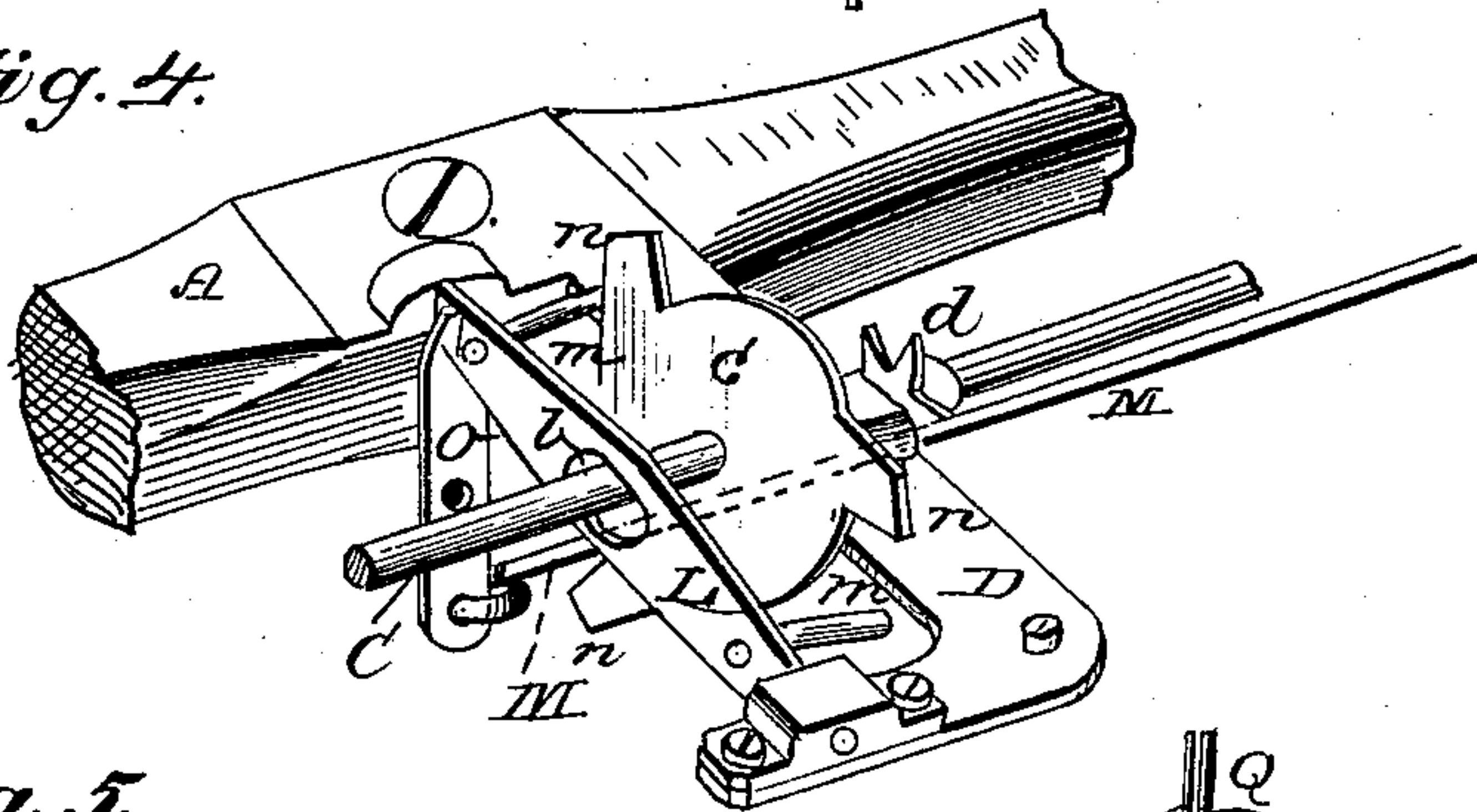


Fig. 5.

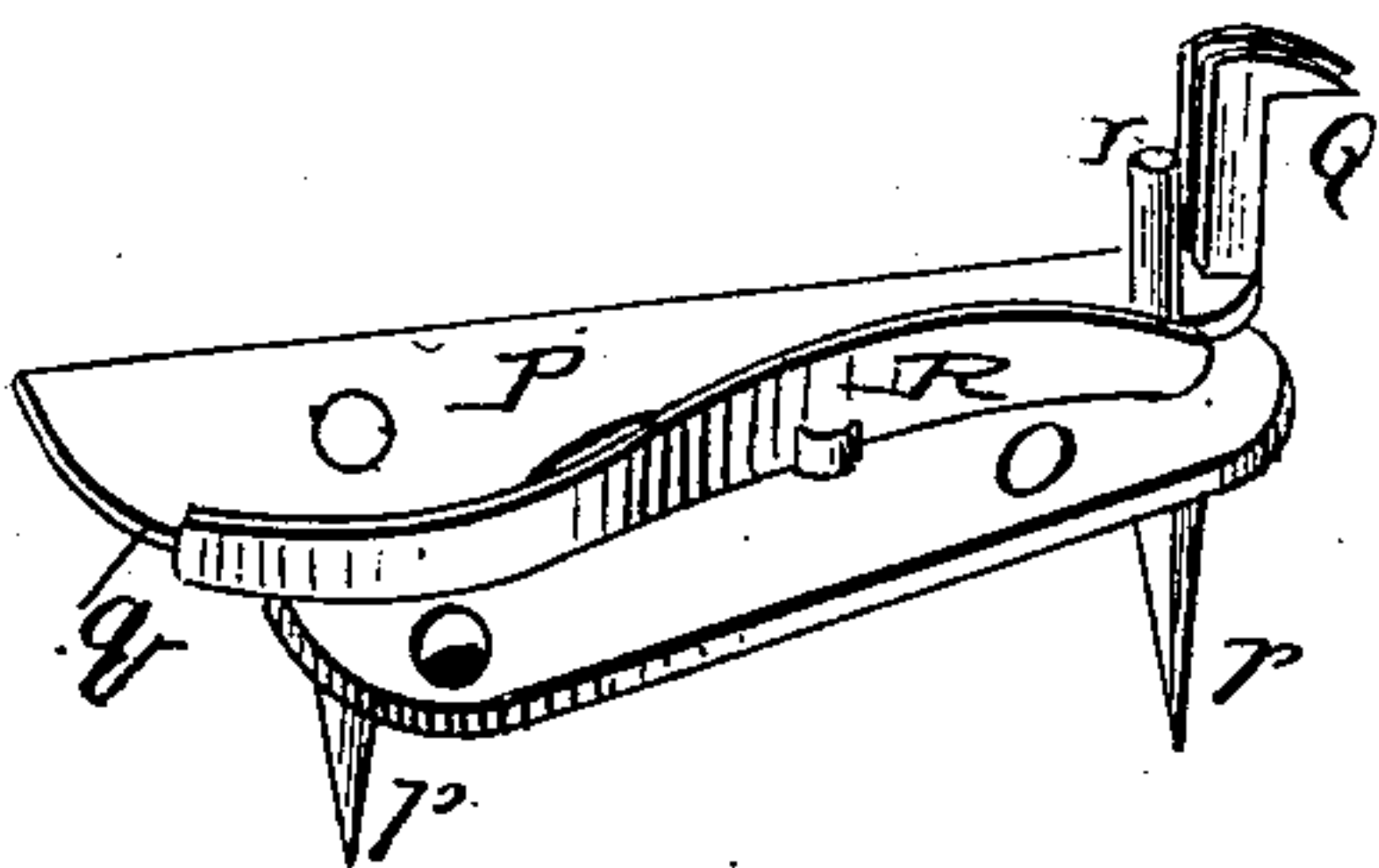


Fig. 6.

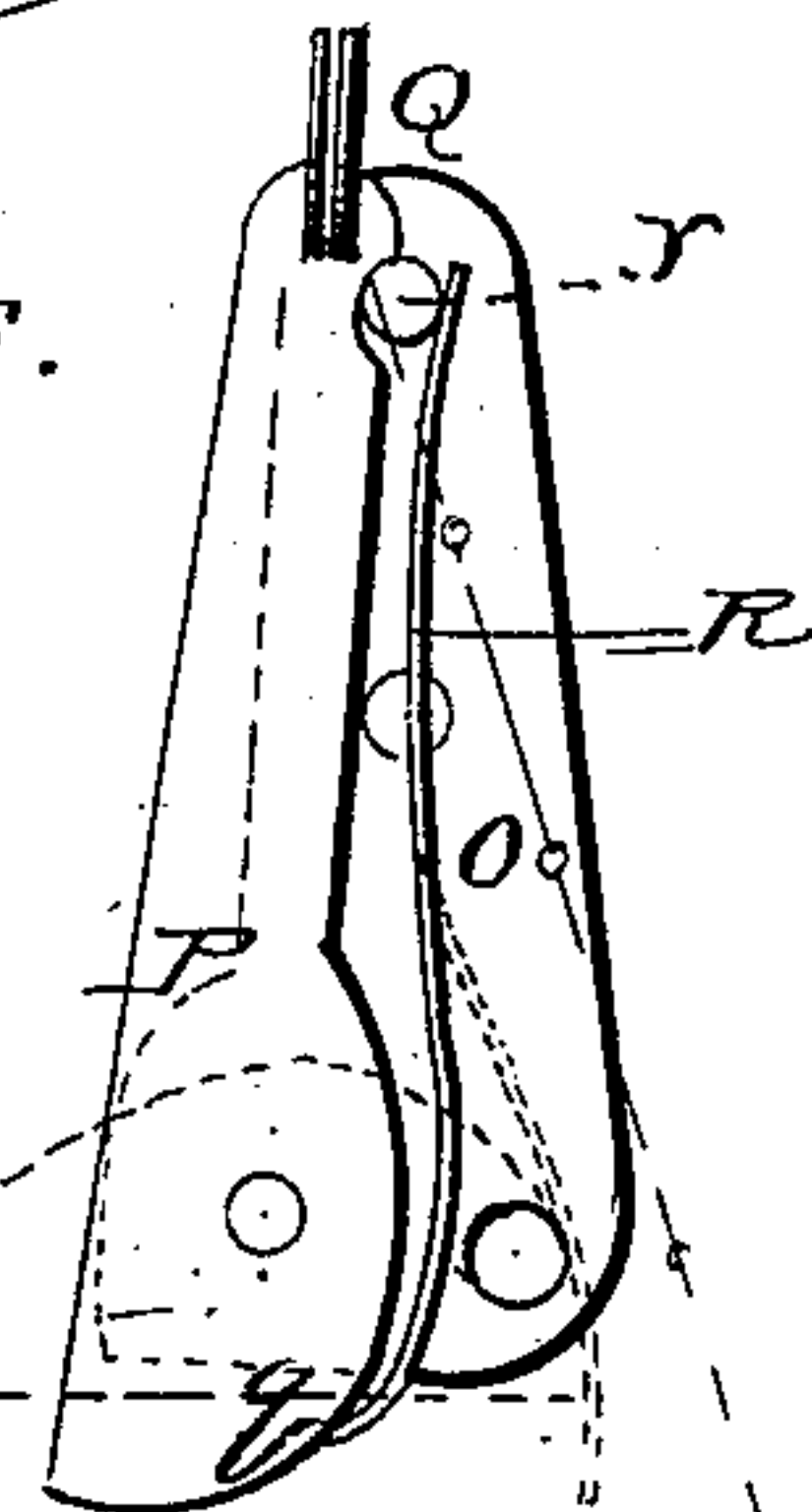
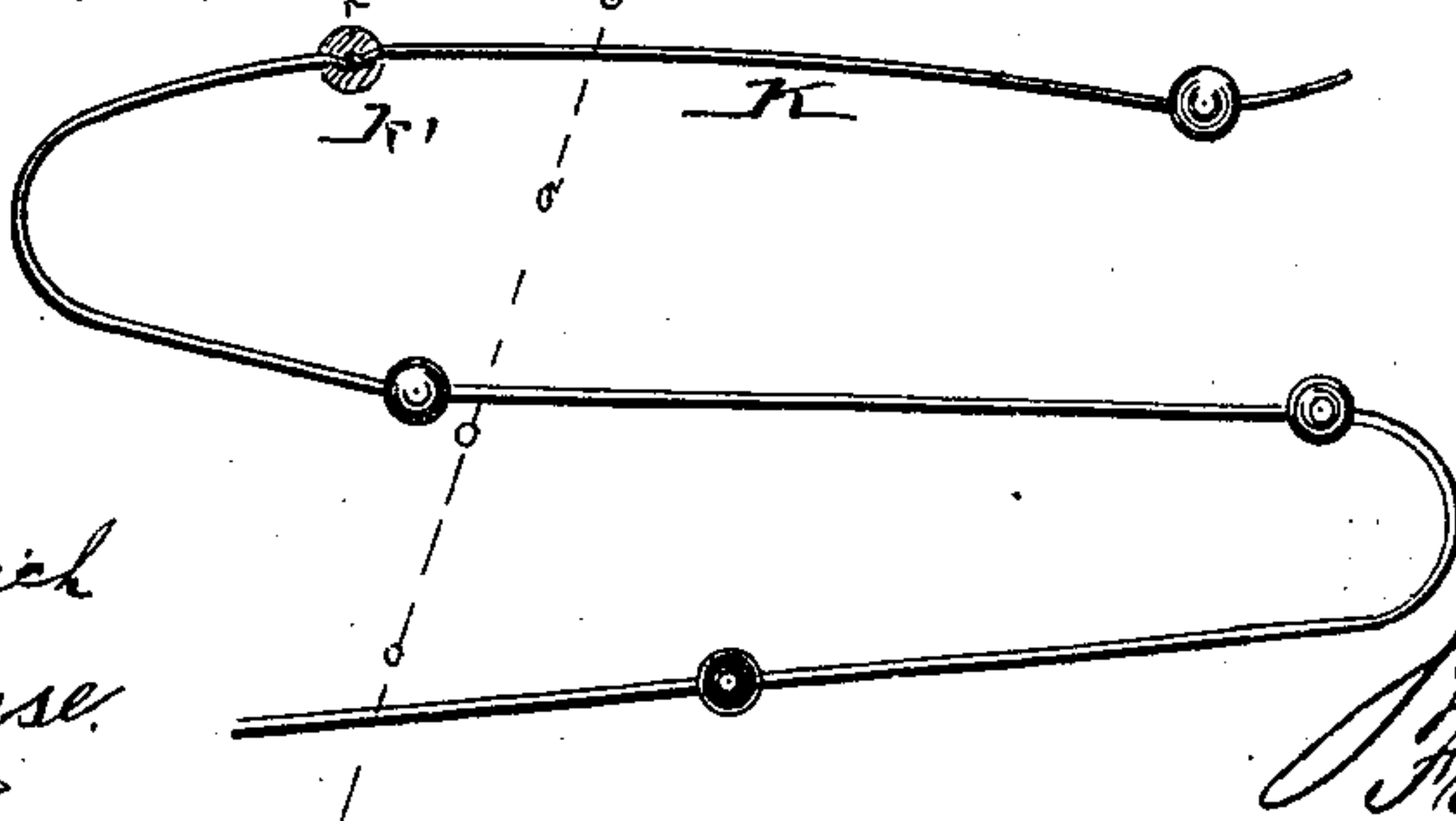


Fig. 7.



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UNITED STATES PATENT OFFICE.

FREDERIC E. BERRY AND JOHN PUTMAN, OF RUSHVILLE, ILLINOIS.

CHECK-ROWER.

SPECIFICATION forming part of Letters Patent No. 226,700, dated April 20, 1880.

Application filed February 24, 1880.

To all whom it may concern:

Be it known that we, FREDERIC E. BERRY and JOHN PUTMAN, of Rushville, in the county of Schuyler and State of Illinois, have invented certain new and useful Improvements in Check-Rowers; and we 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 perspective view of our improved check-row attachment for corn-planters. Fig. 2 is a side view of the same, showing the operating-levers set to drop the corn in hills two feet apart. Fig. 3 is a similar view, with the levers set to drop it four feet apart. Fig. 4 is a perspective detail view of the vibrating bar with the cam for operating it. Fig. 5 is a perspective view of our improved anchor. Fig. 6 is a plan view of the same; and Fig. 7 is a section of the wire rope used for operating the machine.

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

Our invention has relation to check-row attachments for corn-planters; and it consists, first, in the construction and arrangement of parts of the mechanism for operating the seed-slides; and, second, in the construction of the anchor, to which one end of the operating cord or rope is attached, substantially as hereinafter more fully described, and particularly pointed out in the claims.

In the drawings, A is a beam or bar, to each end of which is affixed, at right angles, a cross-piece, B B.

C is a shaft, which is inserted through or boxed in the end pieces, B B, parallel to A, which is provided with a cam, *c*, and a small ratchet-wheel, *d*, that engages with a spring-pawl, *e*, fixed upon a frame or bracket, D, which is secured upon and projects in front of bar A.

Upon each end of the shaft C is secured a lever, E, the upper curved end of which is forked or bifurcated, as shown at E'. Each of the said levers E turns loosely upon the shaft, and is provided with a spring-pawl, *f*, that en-

gages with and operates a ratchet or spur wheel, *g*, keyed upon shaft C, one at each end thereof.

F F are two other levers, of like construction as E E, which are pivoted each upon a stud, *h h*, and connected to lever E by an adjustable cross-bar, G.

H is a spring, one end of which is attached to the lower end of lever E and its other end to the connecting cross-bar G, as clearly shown in Fig. 2 of the drawings; and I I' I are standards or brackets, carrying grooved rollers or sheaves *i i' i*, the rope K for operating the machine passing over the end rollers, *i i*, and under the middle roller, *i'*.

L is a short bar, which is hung in the bracket D transversely across shaft C, which passes through an aperture, *l*, in said bar. This bar or vibrator has two projecting fingers, *m m*, one at each end, which engage with the projections *n n n* on cam *c*, and is further provided with an arm, *o*, in the upper end of which is hinged adjustably a rod, M, which connects with a vibrating arm, N, the lower end of which operates the seed-slide bar. (Not shown in the drawings.) The upper ends of the arms *o N* are perforated to admit of the adjustment of rod M, and thereby regulate the throw of the seed-slide.

When in the field the levers E F are set or adjusted alike on both sides of the machine, their adjustment depending upon what distance it is desired to have between the hills. If, for example, it is desired to drop the corn in hills two feet apart, levers E F are adjusted as shown in Fig. 2, by which they will operate or vibrate parallel to each other, the levers setting themselves automatically to receive the knotted cord by means of the spring H. As the machine passes over the field the forward lever, E, between the forked ends of which the cord is inserted, strikes against one of the knots or balls on the rope K, which tilts the lever back until it (lever E) has passed under it; and as levers E F are connected by the rod G, it follows that lever F will be tilted in a like manner until the forward lever, E, has passed under the knot, when, actuated by the spring, both levers will fly back into their original or normal position, when lever F is

ready to receive and pass under the ball or knot k' , that has just passed over the forward lever, E. Each throw or vibration of the levers E F operates, by means of the spring-pawl f and spur-wheel g , the shaft C, which is prevented from flying back by the ratchet d and its pawl e , thus intermittently rotating the shaft C with its cam c , the projections n of which strike against, alternately, the fingers $m m$ of bar L, rocking or vibrating this with its arm o , through which, by means of the connecting-rod M and pivoted arm N, a vibrating motion is imparted to the seed-slide.

If it is desired to drop the corn four feet apart, spring H is thrown off and the connecting-rod G is shifted into the position shown in Fig. 3—that is, its rear end is coupled to the lower end of lever F below its fulcrum, when the said rear lever, F, operated by the ball or knot on the rope, will set the front lever, E, in position to receive the next knot, without the use of a spring.

The second part of our invention has relation to the anchor or device for securing the end of the knotted rope in the ground at one end of the field. This anchor consists of a plate, O, having attached upon its underside two or more stakes, $p p$, by means of which it is secured in the ground. Upon the upper face or top of plate O is hinged another plate, P, the free end of which is provided with a hooked clamp, Q, in which the rope is secured, and its broad part, where it is pivoted upon the base-plate O, is rounded off to form a shoulder, q , which bears against a spring, R. The free end of the pivoted plate P impinges upon a pin, r , which may form a continuation of one of the stakes p and be made in one piece therewith.

The rope is slipped into the hooked clamp Q, it being prevented from slipping through and out of the clamp by one of its balls or knots, k' . As the planter leaves the starting-point at the end of the field the pull of the rope upon the hinged plate P of the anchor will be in the direction of the arrow shown in Fig. 6; but as the machine comes back, after having traversed the field from end to end, to the starting-point, the hinged plate P is shifted into the position shown in dotted lines in Fig. 6, which relieves the tension upon the rope, the spring R being stiff enough to let the plate yield gradually until it assumes a position at right angles to the base-plate.

The third part of our invention relates to the operating cord or rope, which we make of continuous lengths of twisted wire, made with equidistant knots or kinks k , around which we cast metal balls k' , the knot or kink which forms the center or core of each ball preventing its displacement upon the wire rope.

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

1. In a check-row attachment for corn-planters, the combination of two pairs of bifurcated levers, E F, pivoted at opposite sides of the machine, connecting-rods G, spring-pawls f , spur-wheels g , spring H, and shaft C, substantially as and for the purpose herein shown and set forth.

2. The combination of the intermittently-rotating shaft C, provided with ratchet or spur wheels $g g$, bifurcated levers E E, having spring-pawls $f f$, adjustable connecting-rods G G, levers F F, and side pieces, B B, provided with standards I I' I, supporting the grooved rollers $i i' i$, substantially as and for the purpose herein shown and specified.

3. In combination, the frame A B B, provided with two sets of standards, I I' I, carrying rollers $i i' i$, and having the brackets or bearing D projecting from the main beam A between the parallel side pieces, B B, shaft C, journaled in the side pieces, B B, parallel to A, and provided with spur-wheels $d g g$ and cam c , vibrator L, having fingers $m m$ and arm o , levers E E, having spring-pawls $f f$, adjustable connecting-rods G G, and levers F F, all constructed and combined substantially in the manner and for the purpose herein shown and described.

4. The anchor consisting of the base-plate O, having stakes $p p$, pivoted plate P, provided with the hooked clamp Q, and spring R, substantially as and for the purpose shown and set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

FREDERIC E. BERRY.
JOHN PUTMAN.

Witnesses:

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