

S. L. LONG.
Corn Stalk Cutter.

No. 230,426.

Patented July 27, 1880.

Fig. 1.

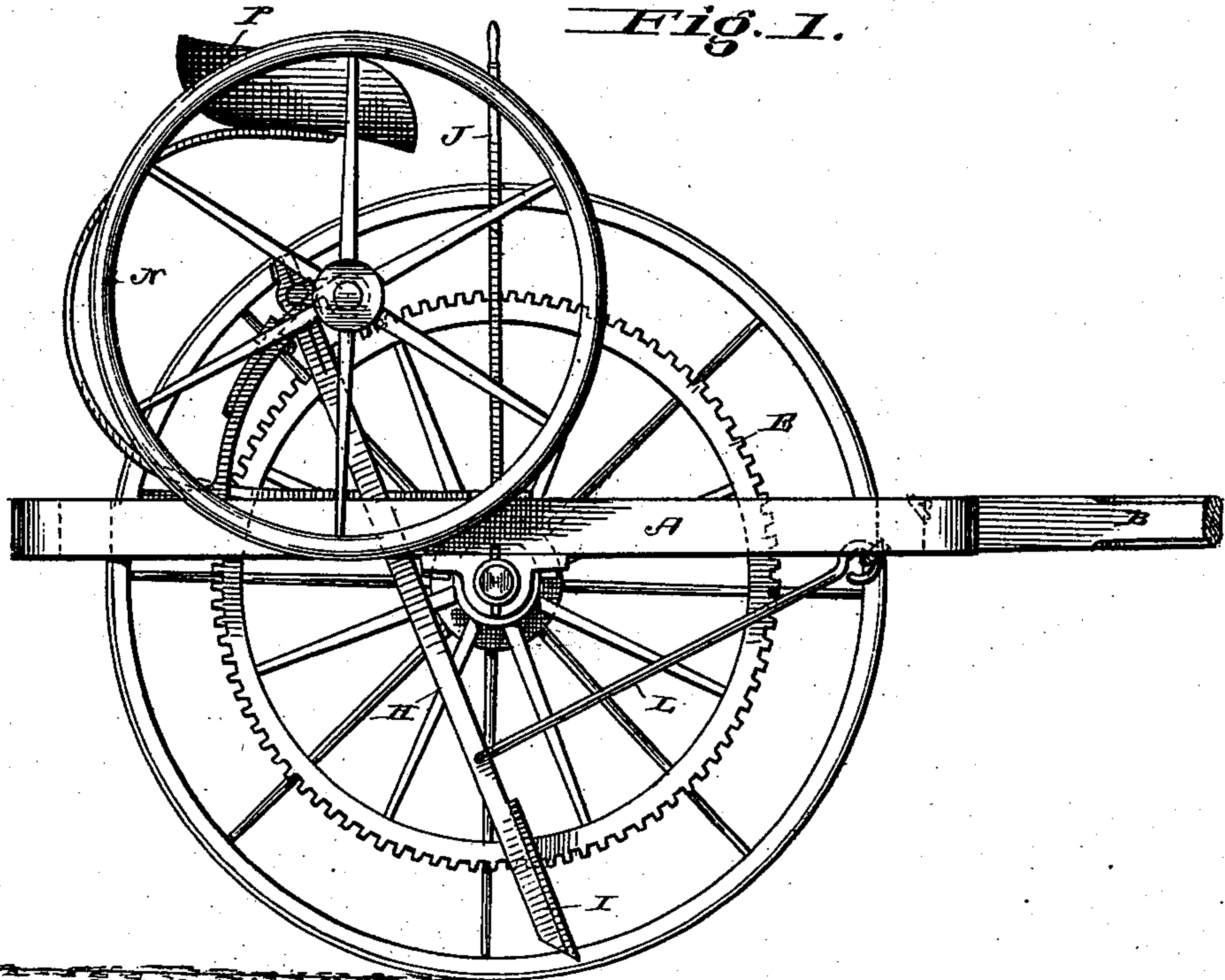
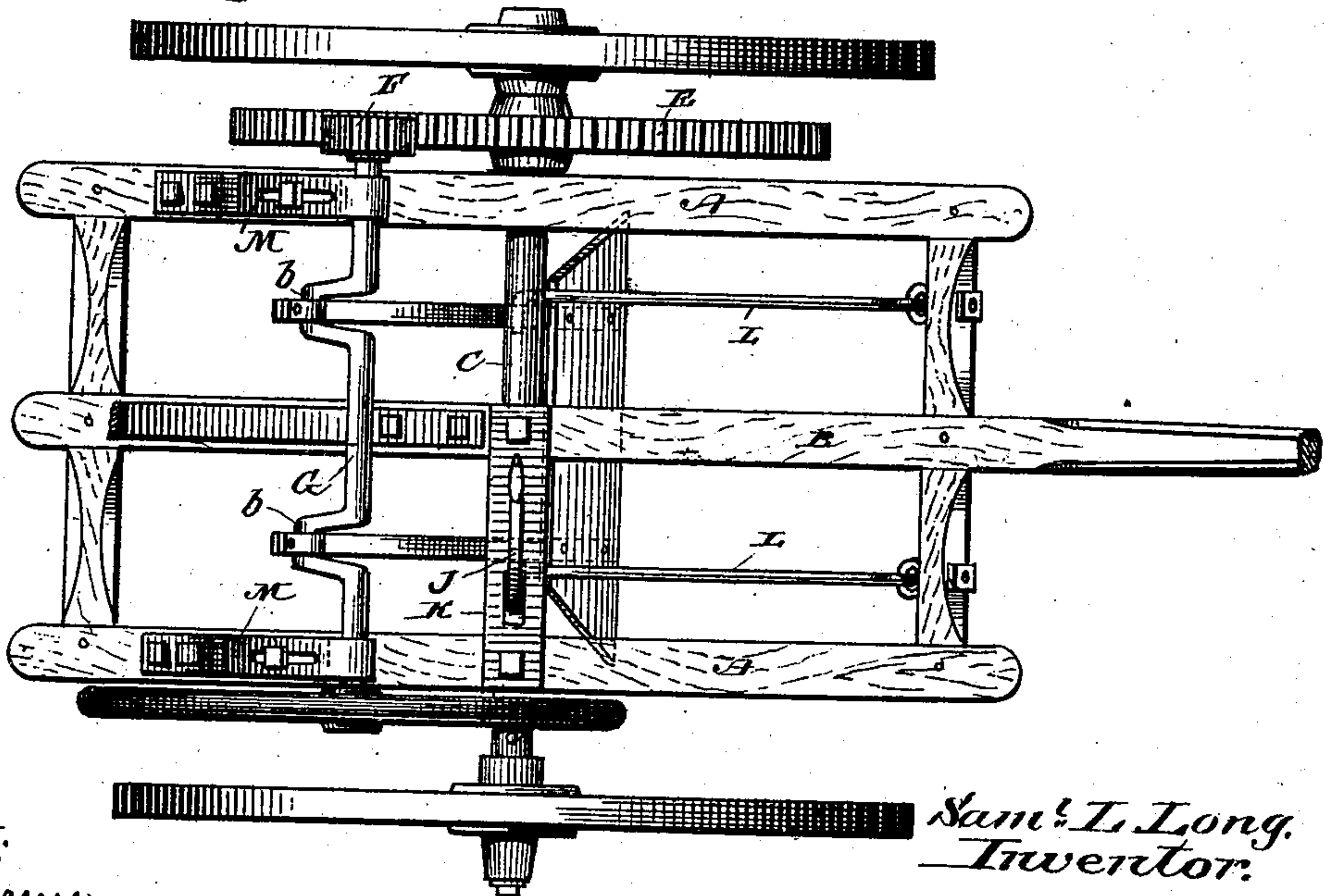


Fig. 2.



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Fig. 3.

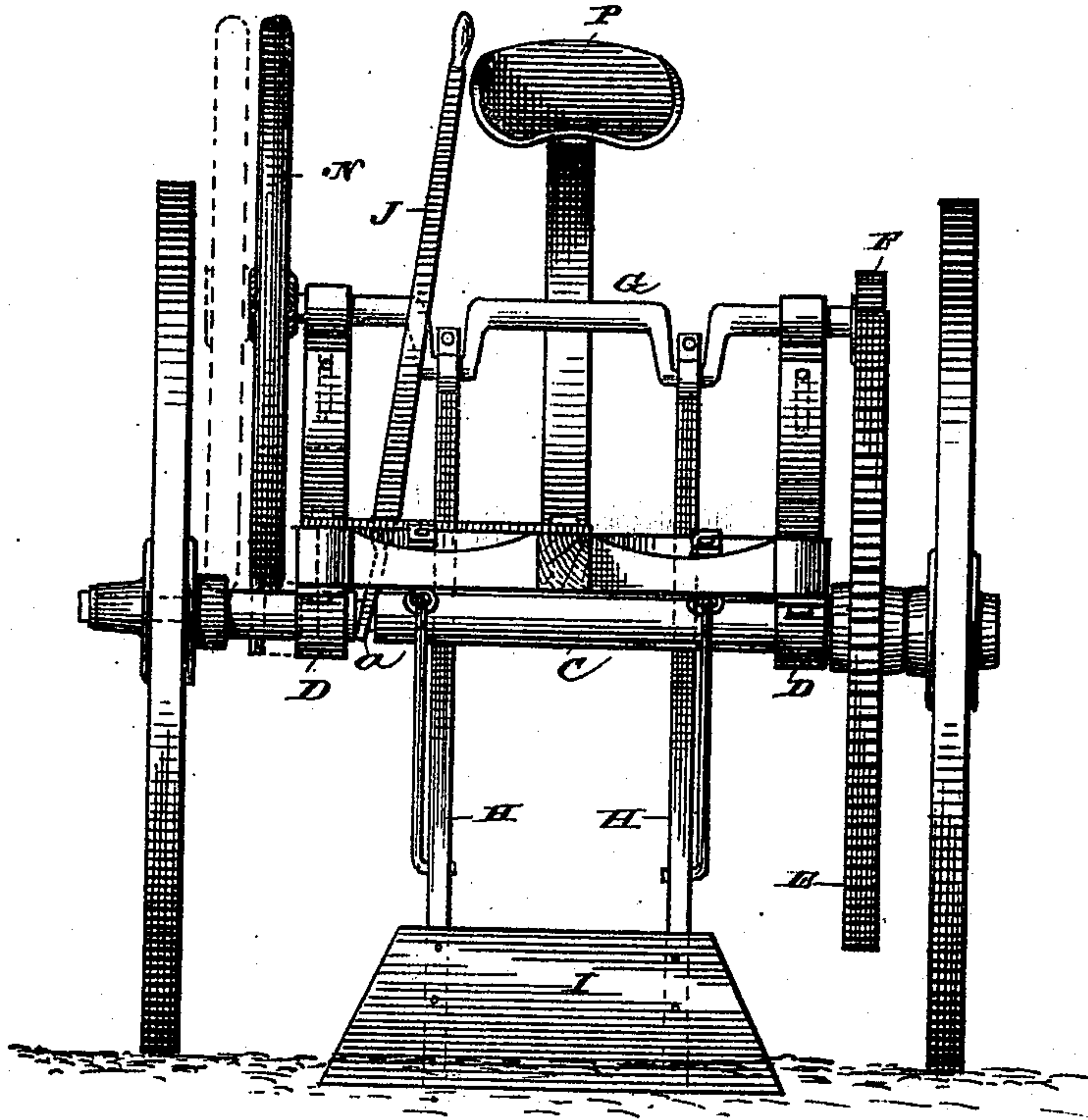


Fig. 4.

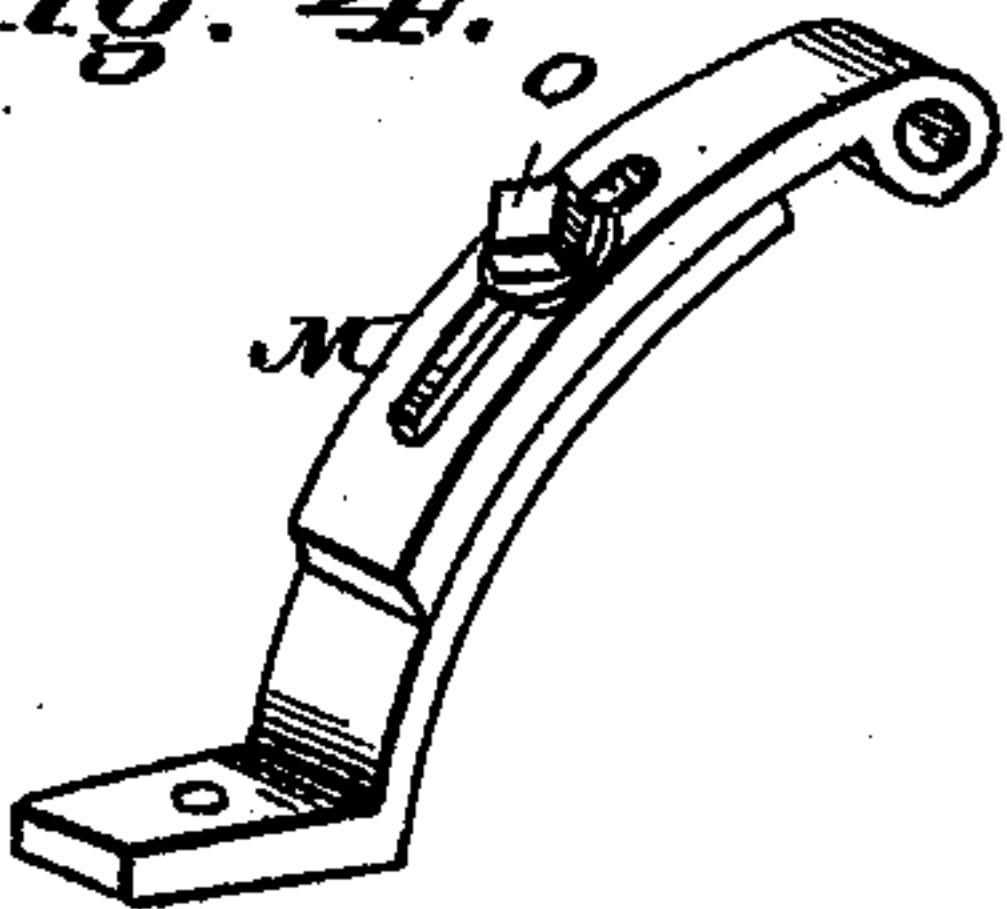
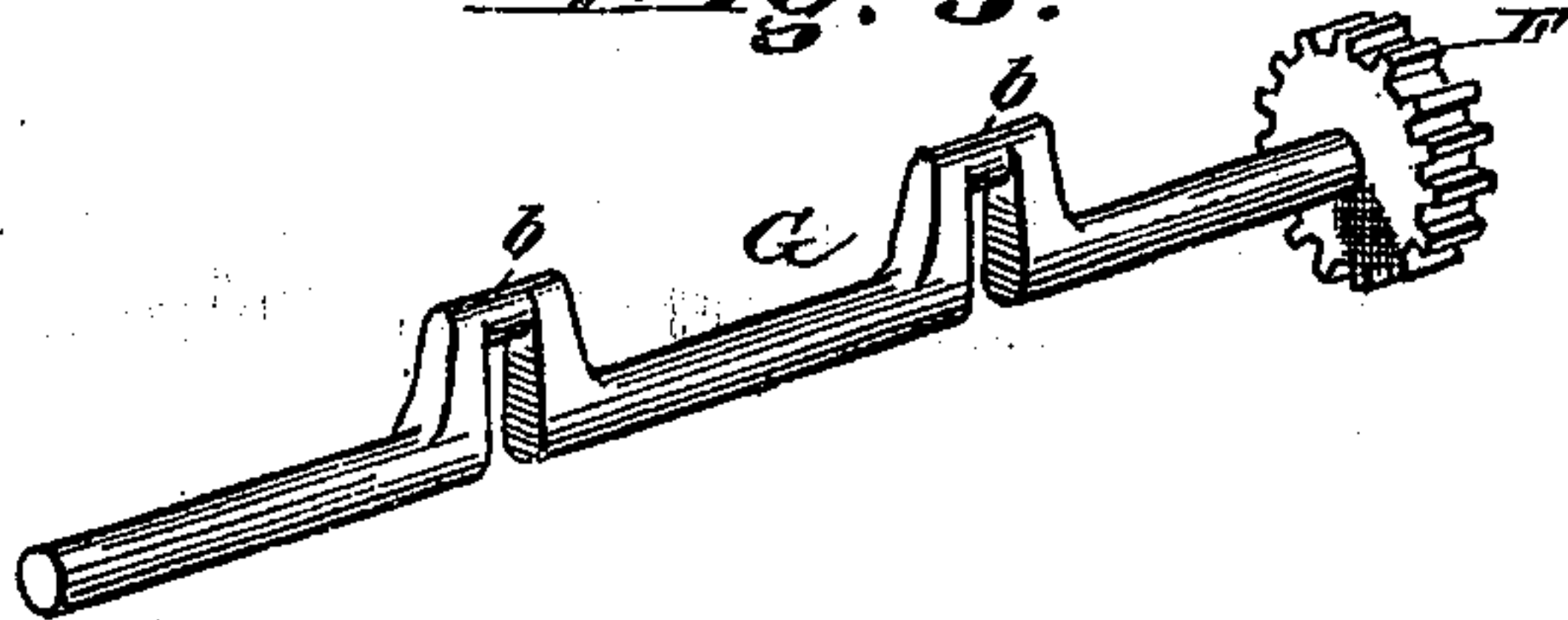


Fig. 5.



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UNITED STATES PATENT OFFICE.

SAMUEL L. LONG, OF KEITHSBURG, ILLINOIS, ASSIGNOR TO GEO B. SAPP, OF SAME PLACE.

CORNSTALK-CUTTER.

SPECIFICATION forming part of Letters Patent No. 230,426, dated July 27, 1880.

Application filed December 12, 1879.

To all whom it may concern:

Be it known that I, SAMUEL L. LONG, of Keithsburg, in the county of Mercer and State of Illinois, have invented certain new and useful Improvements in Cornstalk-Cutters; 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, and to the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 is a side elevation; Fig. 2, a plan view; Fig. 3, a front elevation; Fig. 4, a perspective of one of the adjustable arms for regulating the depth of the cut, and Fig. 5 a perspective of the cross-crank shaft.

My invention relates to cornstalk-cutters; and it consists in the construction and combination of parts, hereinafter particularly specified.

In the accompanying drawings, the letter A indicates the frame of the machine; B, its tongue, and C the axle. The axle is journaled in boxes D secured to the bottom of the sides of frame A in such a manner that the frame may be moved from side to side thereon, so that a cog-wheel, E, on the axle may be thrown in and out of gear with a pinion, F, on a shaft, G, through which motion is imparted to the pitman H of the cutting-blade I.

The frame A is moved from one side to the other by means of a lever, J, in this instance passing through a cross-plate, K, bolted to the frame, the lower end being forked so as to fit over the axle and into a groove, a, formed therein, as shown in Fig. 3. This lever can be held at the point desired by the hand or the leg of the operator, or by other well-known means.

The cog-wheel E is keyed or otherwise rigidly secured to the axle C inside of one of the running wheels, as shown in Figs. 2 and 3, the running and cog wheel turning with the axle; but the hubs of the cog and running wheel might be firmly secured to each other and both be made to turn on the axle, which, in such a case, would not be allowed to turn.

The shaft G has two double cranks, b, as shown in Figs. 2, 3, and 5, and a pinion, F, on one end and a fly-wheel, N, on the other, and when ready for operation it stands as shown in Figs. 2 and 3, its pinion gearing with cog-wheel E. One end of the pitman H is connected to the crank of the shaft, as shown, while to the lower end of both pitmen there is bolted or otherwise secured a cutting-blade, I, the same extending from one pitman to the other.

The pitmen are braced and held at an inclination that will cause the blade I to cut the stalk obliquely by means of two rods, L, in this instance hinged at one end to the front cross-bar of frame A, and at the other end connected to the pitmen.

The shaft G is supported across the frame A by means of two arms, M, in which it is journaled. These arms are made in two parts, the lower part being provided with a flange which is bolted to the side of the frame, and the upper part with an eye through which the shaft is passed. The upper part is also provided with a longitudinal slot, and is held to the lower part by means of a bolt, O, which passes through the slot in the upper part and into the lower part. These parts are preferably curved, as shown, and overhang or incline forward. The arms are made in parts, as described, so that they may be adjustable for the purpose of regulating the depth to which the blade shall cut. The same is effected in this wise: The shaft G, carrying the pinion, is, as already stated, journaled in the movable part of the arm M, and by elevating or lowering said arm the shaft is correspondingly elevated or lowered, and with it the pitman H, which operation in effect shortens or lengthens the pitman, and to that extent controls the depth to which the blade will penetrate the ground and cut the stalk. Whether the shaft be elevated or lowered in the manner described, the pinion thereon gears with the cog-wheel, it being near to or farther from a vertical line drawn through the diameter of the wheel, according as the shaft is elevated or lowered.

The fly-wheel N in this device serves to add

force to the downstroke of the pitman, thereby quickly and effectively cutting the corn-stalk.

In operation the driver sits on the seat P and draws the lever J to the left, which throws the pinion into gear with the cog-wheel E, as shown in Figs. 2 and 3. Now, when the device is drawn forward the running wheels turn and cause the axles to revolve, which turn the cog-wheel, and it the pinion, whereby the crank-shaft is revolved, and as the crank rises and falls it raises and lowers the pitman, which likewise raises and lowers the blade that cuts the stalk.

When the cutting-blade is not be operated the pinion F is thrown out of gear with the cog-wheel by pushing the lever J to the right, which movement carries the frame A and whatever it supports to one side, thereby throwing the pinion out of gear with the cog-wheel, and leaving the running wheels and axle free to turn without operating the cutter. The dotted lines in Fig. 3 illustrate the position of the fly-wheel under such a condition of things.

The depth to which the blade shall cut is governed by the means and in the manner hereinbefore described.

The device is simple, strong, and cheap in construction and very effective in operation, and the spading cut of the blade loosens the ground and leaves it in better condition than other machines do. One blade answers all purposes; but if desired it may be duplicated.

Having described my invention, what I claim is—

1. In a stalk-cutter, the crank-shaft G, provided with pinion F and fly-wheel N, in combination with pitmen H, blade I, and rods L, all substantially as set forth.

2. In a stalk-chopper, the curved sectional adjustable arms M, in combination with crank-shaft G, pinion F, and gear E, substantially as set forth.

3. In a stalk-chopper, the combination of pinion F, gear E, shaft G, sectional adjustable arms M, fly-wheel N, pitmen H, cutting-blade I, and rods L, adapted to operate as described, for the purpose set forth.

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

SAMUEL LEWIS LONG.

Witnesses:

CHARLES A. MERTZ,
GEORGE N. GREEN.