2 Sheets—Sheet 1.

J. PLEUKHARP.

CORN-HARVESTER.

No. 187,903. Patented Feb. 27, 1877.

Fig. 1.

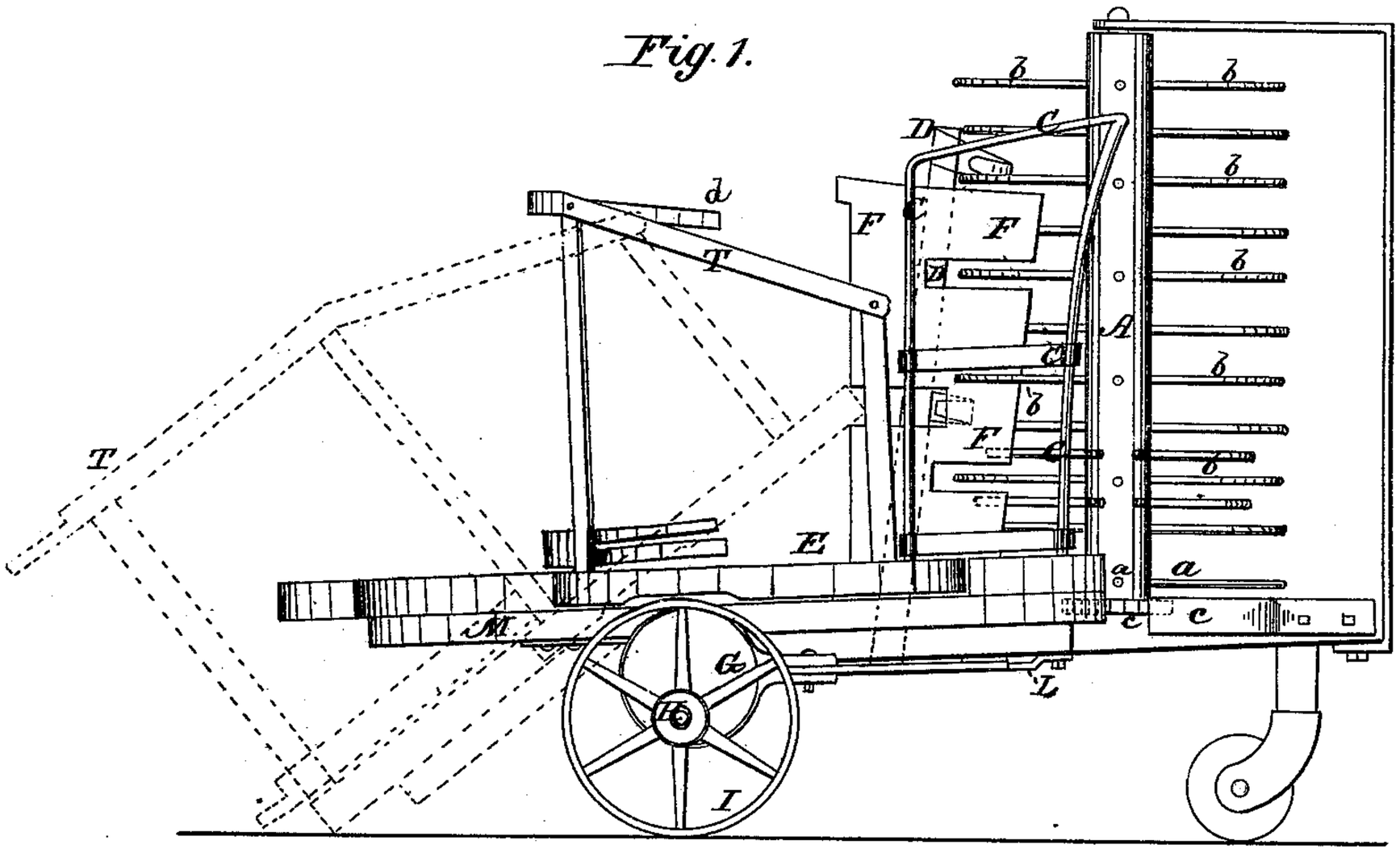
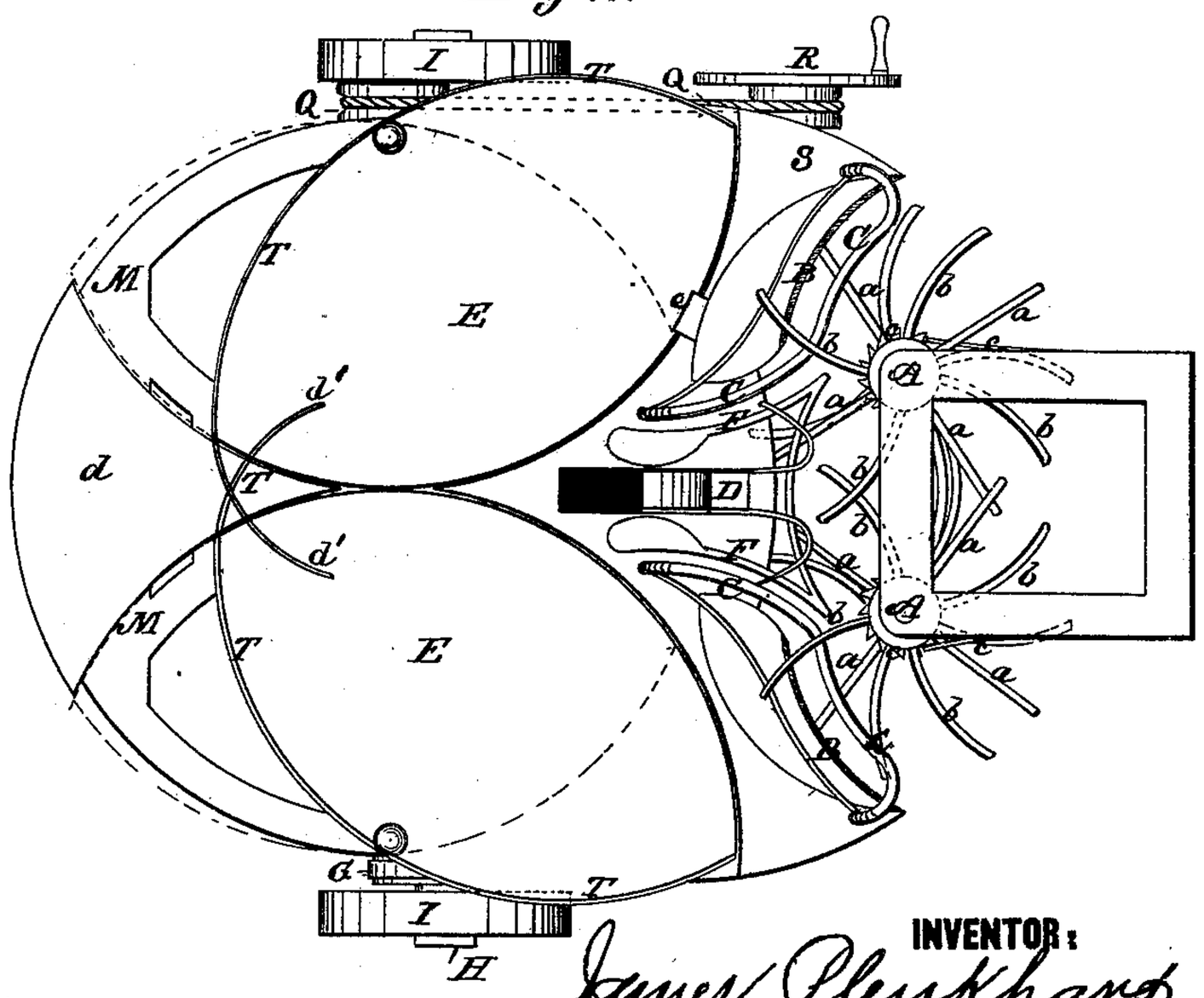


Fig. 2.



WITNESSES:

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Solon C. Kemon

INVENTOR:

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2 Sheets—Sheet 2.

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Fig. 3.

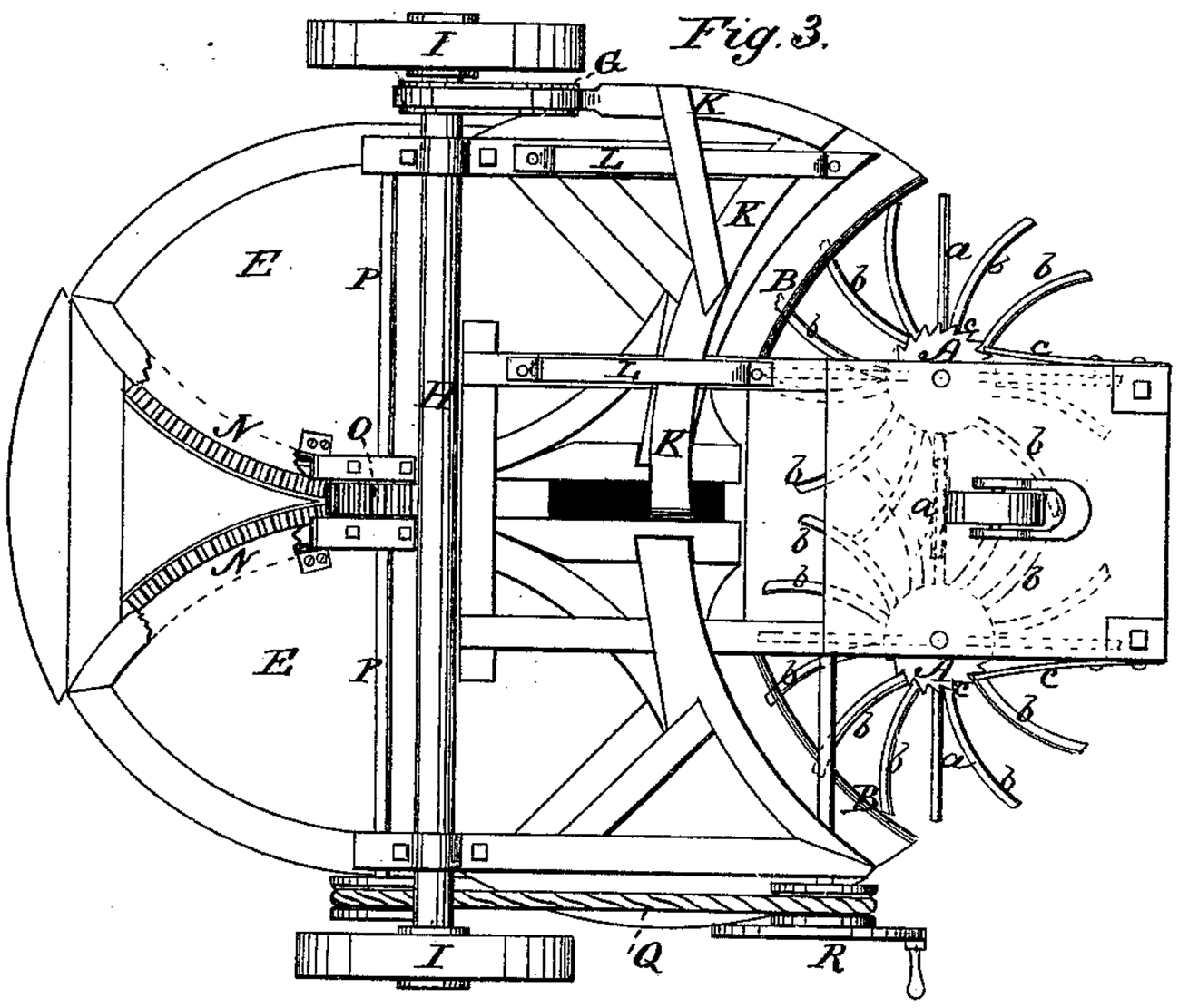


Fig. 4.

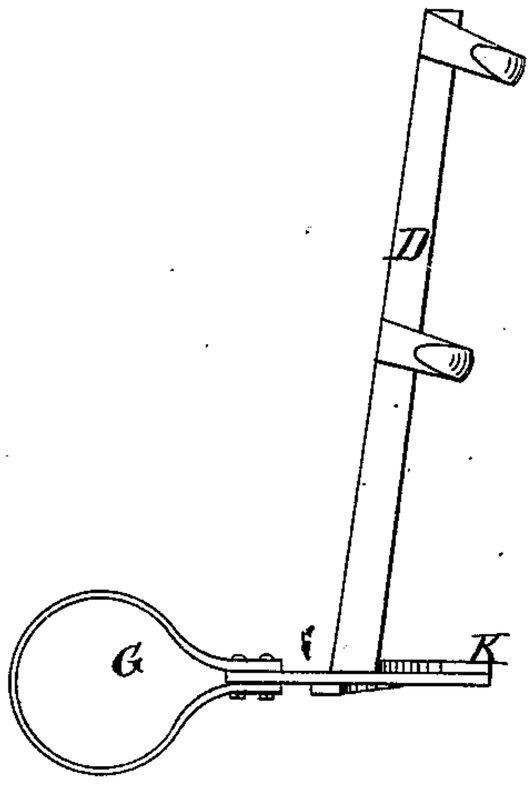
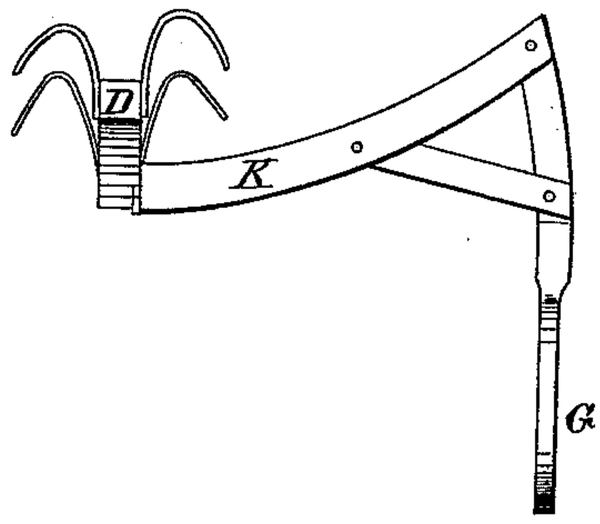


Fig. 5.



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UNITED STATES PATENT OFFICE.

JAMES PLEUKHARP, OF COLUMBUS, OHIO.

IMPROVEMENT IN CORN-HARVESTERS.

Specification forming part of Letters Patent No. **187,903,** dated February 27, 1877; application filed November 13, 1876.

To all whom it may concern:

Be it known that I, JAMES PLEUKHARP, of Columbus, in the county of Franklin and State of Ohio, have invented a new and useful Improvement in Corn-Harvesters; and I do hereby declare that the following is a full, clear, and exact description of the same.

The invention is an improvement in the class of corn-harvesters which are adapted to sever the stalks close to the ground and gather or collect them into shocks or bundles in readiness to be bound.

The invention relates to a gatherer, or vertical roller or shaft, provided with arms and rotated by the contact of said arms with the standing corn, instead of deriving a positive motion from the axle or transporting-wheels through the medium of belts, gears, or other means of connection therewith.

The invention further relates to a reciprocating carrier, in the nature of a vertical standard, provided with hooks for taking or receiving the cut corn-stalks from the gatherer, or rotating armed shaft, and conveying them back onto the table or platform of the machine.

The invention further relates to the construction of said platform in two parts, each of which is adapted to turn partly round horizontally, and then to tilt vertically to discharge the corn-stalks when a bundle or shock has been collected on the platform.

The invention also relates to other devices, constituting the minor features of the organized machine.

In the accompanying drawing, forming part of this specification, Figure 1 is a side elevation of the machine. Fig. 2 is a top-plan view. Fig. 3 is an inverted plan. Fig. 4 is a side view, and Fig. 5 a top view, of the vibrating carrier.

The machine is mounted on wheels, preferably three in number, with a caster-wheel in front. The vertical shafts A are journaled in a suitable frame at the front of the machine, one on each side of the middle, and opposite a fixed horizontal cutter, B. As the machine is drawn along, the standing corn enters the triangular spaces, Fig. 2, between the said armed shafts and cutters, so that two rows of corn are cut and gathered simultaneously. Each shaft A is provided with two sets of arms, those, *a*, of one set being straight and radial, and the other, *b*, curving in the direction opposite that in which the shafts rotate. Ratchets and pawls *c* prevent the backward rotation of the shafts. The rotation of the shafts is effected by contact of the lower set of arms *a* with the butts of the corn-stalks, while the top portion of the same is received between the curved arms *b*, which are set more thickly than the arms *a*.

The contact of the stalks with, and pressure against, the arms *a*, and also the inclination of the guard or fence C toward the shafts, cause the stalks to incline from the cutter B, and put them upon a strain, so that the cutters are enabled to sever them more easily. The rotation of the shafts A, effected by the contact of arms *a* with the corn, causes the arms *b* to sweep the severed stalks backward into position to be taken by the curved arms *d* of the carrier D, by which they are transferred onto the platform E.

The arms of the carrier work through slots or openings in a second guard or fence, F, and the carrier is reciprocated or moved backward and forward in a vertical position by means of an eccentric, G, (on the shaft H of the transporting-wheels I,) and a right-angled bar, K, connected to said eccentric by a strap, and working horizontally in guides L, attached to the under side of the frame of the machine.

The arms of the carrier may, by suitable construction, be caused to project suddenly when about to move forward, and retract when moving backward, after the manner of the arms of a harpoon hay-fork.

The platform is composed of a triangular fixed portion, *d*, and two movable sections, E, which are approximately elliptical in shape, placed side by side, and each pivoted, near its outer side, at a point in the line of its minor axis, to a tilting frame, M. A curved rack-bar, N, Fig. 3, is attached to the inner edge and under side of each section E, and a spur-gear, O, on a cross-shaft, P, meshes with the rack-bars N, so that when the said shaft is rotated the sections will be turned on their pivots. The means of rotating the shaft P are a belt, Q, and hand-wheel R, the latter placed in suitable proximity to the front corner S of the

platform, where the driver or operator is stationed. The frame M is prevented tilting till one of the sections E is released from a catch, *e*, Fig. 2, which is effected when the sections are turned to the position indicated in dotted lines, Fig. 2. A flexible guard or fence, T, is attached vertically to the outer side of each section E, and the rear ends of the respective guards are made detachable from, or rather adjustable with relation to, the sections E, and also extended to form spring-arms *d'*, as shown, Figs. 1 and 2.

When the machine is to be used in the field, the platform-sections E are adjusted to the position shown in Fig. 2—to wit, with their rear ends contiguous, and the arms *d'* of their respective guards T projecting past each other, thus forming a holder or rack to receive and support the corn first cut. As the machine advances and gathered corn accumulates on the platform, the sections E are turned on their pivots till they at length assume the position indicated by dotted lines, Fig. 1, when the catch *e* will release them, and the frame on which they are pivoted will tilt on the axle, and the rear ends of guards T becoming simultaneously detached, the corn will be discharged upon the ground in a bundle, in readiness to be bound and shocked, in the usual way. The weight of the corn causes the platform to tilt, and the tension of springs *f* causes it to resume its original position so soon as the corn has been discharged. The detachable ends of the guards T will then resume their original position, and the operation of cutting, receiving, and discharging corn go on as before.

I propose, in practice, to substitute swinging gates for the elastic extensions *d* of the guards T, and to so pivot the same that they will automatically resume their position when the platform is retracted.

What I claim is—

1. The gatherers composed of vertical shafts A, provided with the upper and lower sets of arms *b a*, the former being more numerous or thickly set, and the ratchets and spring-pawls, in combination with the cutters and guards, as shown and described, to operate as and for the purpose specified.

2. The reciprocating carrier, having arms, as specified, in combination with the gatherer and guard, as shown and described.

3. The combination of eccentric right-angled arm, carrier, and slotted platform, as shown and described.

4. The pivoted swinging and tilting sections E of the platform, and a gear arranged for adjusting their position, combined as and for the purpose specified.

5. The combination of the spring-arms or extensions of the fence and the pivoted tilting sections, as shown and described.

JAMES PLEUKHARP.

Witnesses:

CHAS. E. BURR, Jr.,

L. H. MYERS.