

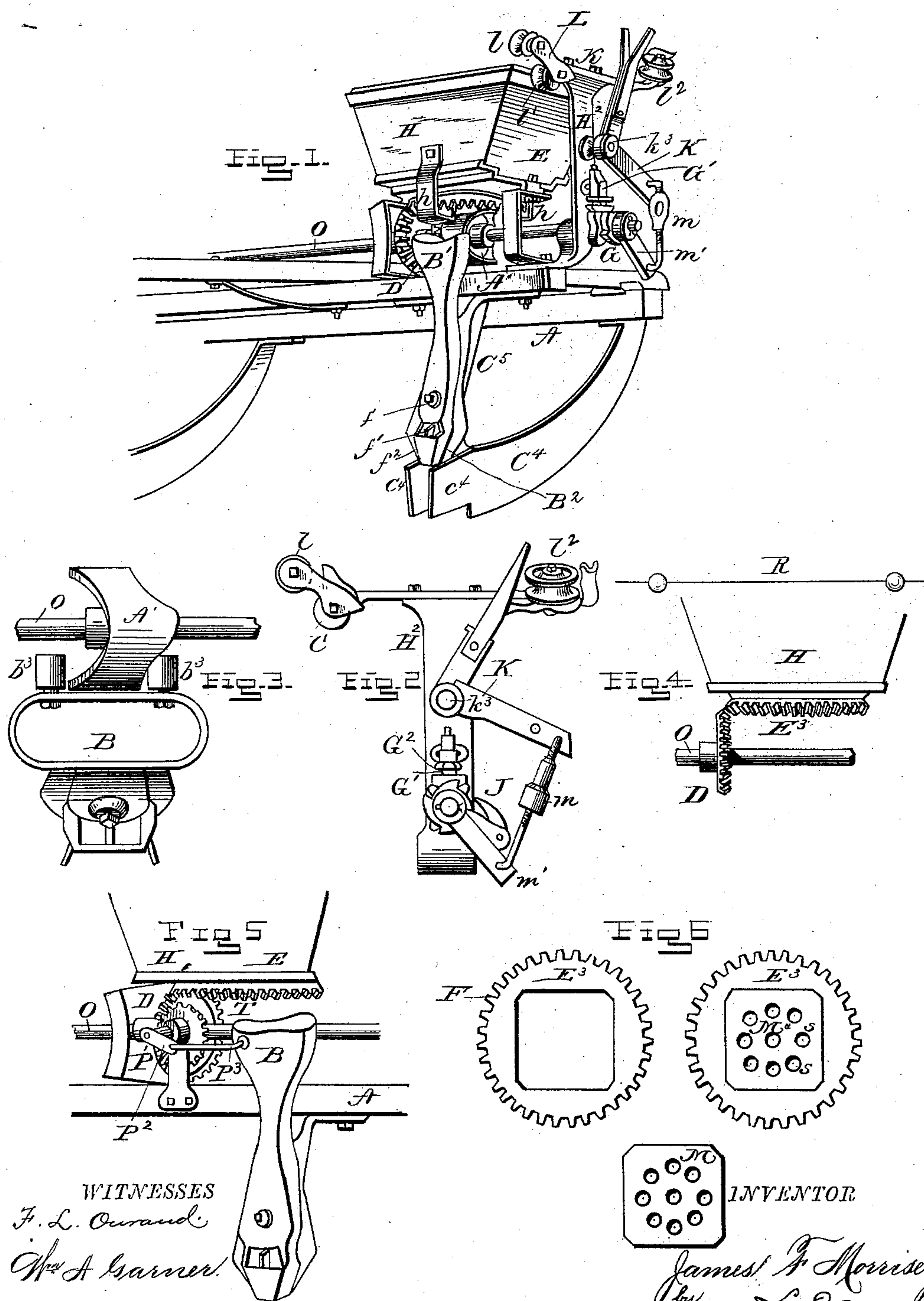
(No Model.)

J. F. MORRISEY.


WIRE CHECK ROWER.

No. 301,826.

Patented July 8, 1884.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

JAMES F. MORRISEY, OF JOLIET, ILL., ASSIGNOR OF TWO-THIRDS TO AMOS N. KLINEFELTER AND ANDREW DILLMAN, BOTH OF SAME PLACE.

## WIRE CHECK-ROWER.

SPECIFICATION forming part of Letters Patent No. 301,826, dated July 8, 1884.

Application filed March 19, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES F. MORRISEY, a citizen of the United States, residing at Joliet, in the county of Will and State of Illinois, have invented certain new and useful Improvements in Wire Check-Rowers, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a perspective view illustrating a rear view of my invention applied to one box and adapted to drop corn. Fig. 2 is a side view, in detail, of the wire-guide rolls and the vibrating forked lever and cut-off connections. Fig. 3 is a top view of the actuating-cam and its roller-connections with the dropping-tube or seed-guide. Fig. 4 is a detail of part of a seed-box and gearing for the dropping-plate. Fig. 5 is a detail showing a modification of the devices for vibrating the seed-tube. Figs. 6 show the gear-wheel and its perforated seed-cell dropping-plate.

This invention relates to what are known as "wire check-row planters," wherein the dropping and check-rowing devices are actuated by a knotted wire stretched over the field; and the nature of my invention consists in certain novel devices adapted to be actuated by a knotted wire, whereby the work of check-rowing and dropping is accurately and expeditiously performed, as will be fully understood from the following description, when taken in connection with the annexed drawings.

In the accompanying drawings, letter A designates the frame of that part of the machine to which my improvements are applied, which frame may be constructed in the usual well-known manner, and adapted to support the seed-boxes H. The box H (only one being shown in the drawings) has applied to its bottom a toothed wheel,  $E^3$ , into which is closely fitted a plate, M, having holes or seed-cells s. The teeth F of wheel  $E^3$  are located as shown in Fig. 4, and engage with a beveled pinion spur-wheel, D, keyed on a shaft, O, which has its bearing in standard  $H^2$  on the frame A.

On the shaft O, I key a cam,  $A'$ , for giving lateral vibration to the seed-tube  $B'$ , as will be hereinafter further explained.

To the bottom of the frame A, I rigidly secure the drill-openers  $C^4$ , which serve as colters, and which are bifurcated at their rear ends, as indicated by  $c^4$   $c^4$ .

Near the rear end of each drill-opener  $C^4$ , I secure a standard,  $C^5$ , which is rigidly bolted to a transverse beam of frame A, and which affords means for attaching a fulcrum-pivot, f, for the spoon or seed-tube  $B'$ , which receives vibration from the cam  $A'$ , above described, acting on anti-friction rolls  $b^3$ , applied to the upper end of said seed-tube, as clearly shown in Fig. 3. The lower discharging end of the seed-tube  $B'$  is prismatic, and it has an opening in its rear wall for the purpose of allowing the driver to see the corn as it falls. This lower end of the tube  $B'$  is also subdivided by a partition,  $f'$ , so that the grains of corn will be regularly dropped from right to left as the tube is vibrated between the extended sides  $c^4$  of the drill-opener.

Instead of using the cam  $A'$ , above described, the seed-tube  $B'$  may be vibrated by means of a supplemental bevel-gear,  $P'$ , on the shaft of which is a crank-arm,  $P^2$ , connected to the upper flaring end of the seed-tube by means of a rod,  $P^3$ . The bevel-gear  $P'$  receives rotation from the bevel-gear D on shaft O, as shown in Fig. 5.

On the outer end of the shaft O is applied an arm,  $m'$ , and also a ratchet-wheel, G. The ratchet-wheel G is keyed on its shaft, but the arm  $m'$  is not, and to this arm is applied a pawl, J, which engages with the teeth of the ratchet-wheel, so that by vibrating arm  $m'$  the shaft O will receive intermittent rotary motion for dropping the grains of corn.

For the purpose of preventing the shaft O from turning backward or too far forward, I employ on this shaft a tappet,  $G'$ , and a gravitating stop,  $G^2$ . (Shown in Figs. 1 and 2.) The vibrating arm  $m'$  is connected by an endwise-adjustable rod or turn-buckle, m, to one arm of an angular lever, K, the upper arm of which is bifurcated, by means of which turn-buckle the throw of the pawl is adjusted. This bifurcated lever has its fulcrum at  $k^3$  on the standard  $H^2$ . At the upper end of this standard  $H^2$  are three grooved rollers,  $l$   $l'$   $l''$ , arranged as shown in Figs. 1 and 2, for the purpose of guiding and retaining in proper posi-



tion the knotted wire R, the knots on which successively engage with the fork of lever K as the machine progresses, and cause this lever to vibrate and the charges of seed to be dropped from the box H. It will thus be observed that as the knots on the wire impinge against the fork of lever K they will force this fork backward, and give a partial rotation to shaft O, which in turn will act through the medium of the gears and cam A', or its equivalent, and drop a charge of seed, and also vibrate the seed-tube. It will also be observed that the said fork will release the knot and fall forward to engage with another knot, and so on the knots will act in succession to effect the dropping.

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

1. In a wire check-rower, the combination of a vibrating bifurcated lever and an adjustable extension connection or turn-buckle adapted to be operated by means of a knotted wire, with corn-dropping devices, substantially as described.

2. The combination of the bifurcated vibrating arm, corn-dropping devices, a cam or its

equivalent, and the anti-friction rollers  $b^3 b^3$ , attached to the fulcrumed seed-tube for the purpose of vibrating the same, substantially as described.

3. The combination of the angular vibrating forked arm, the endwise-adjustable rod  $m$ , the ratchet and pawl, the stop for the shaft O, and the corn-dropping and seed-tube-vibrating devices, substantially as described.

4. In a check-rower, the combination of cam A' on shaft O, the corn-discharging tube actuated by this cam, the arm  $m'$ , ratchet-wheel G, pawl J, tappet G', gravitating stop G<sup>2</sup>, and the vibrating bifurcated arm connected to the arm  $m'$ , substantially as described.

5. A vibrating discharger, a fixed seed-tube, and a toothed wheel having a removable polygonal seed-plate, in combination with a forked vibrating arm, a pinion on the drop-per-shaft, and a gravitating checking device, as specified.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES F. MORRISEY.

Witnesses:

L. E. DILLMAN,  
HENRY HURLBUT.