

(No Model.)

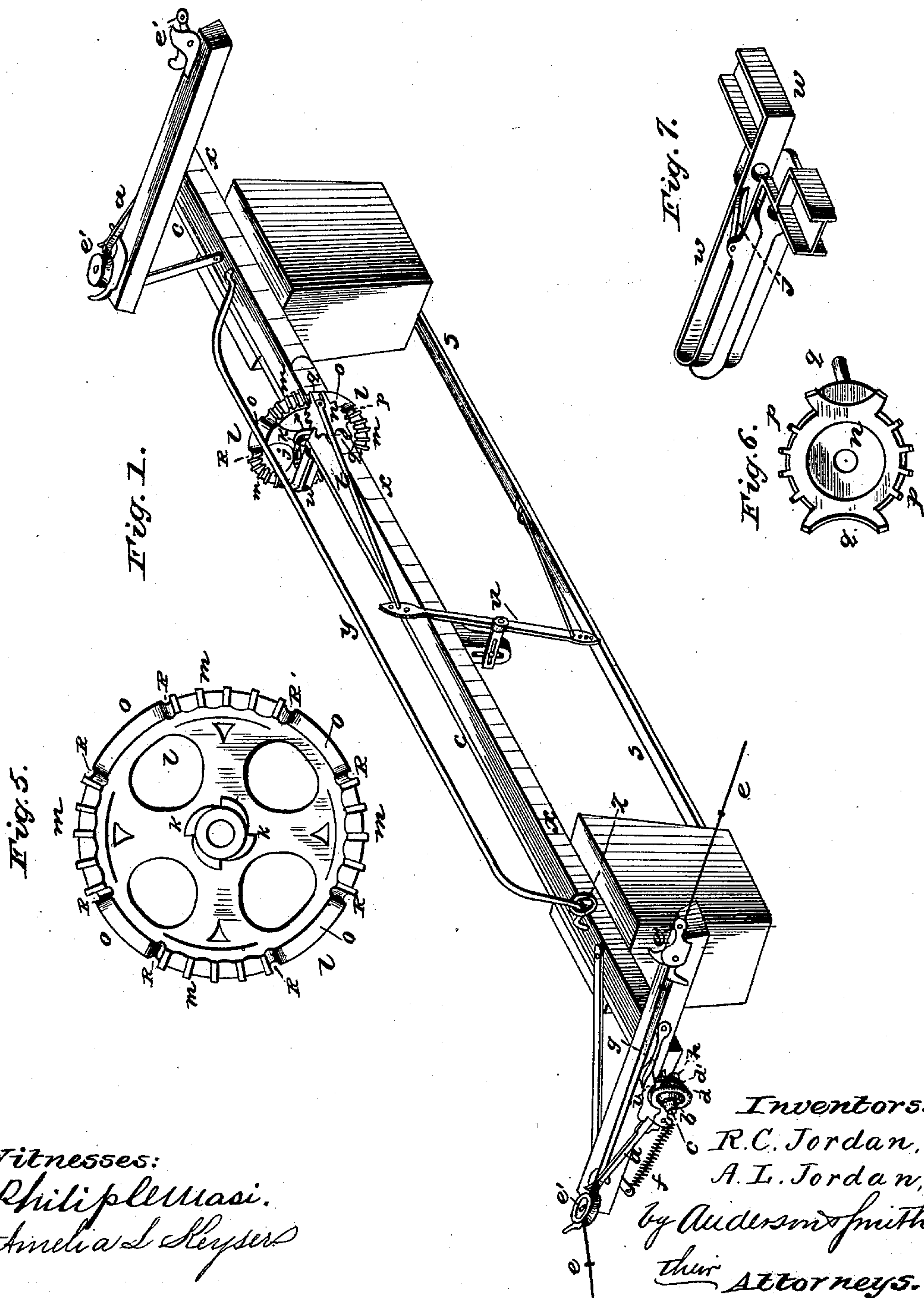
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R. C. & A. L. JORDAN.

CHECK ROW.

No. 268,241.

Patented Nov. 28, 1882.



Witnesses:

Philip Levasi.
Amelia L. Keyser

Inventors:

R. C. Jordan,

A. L. Jordan,

by Anders Smith
their Attorneys.

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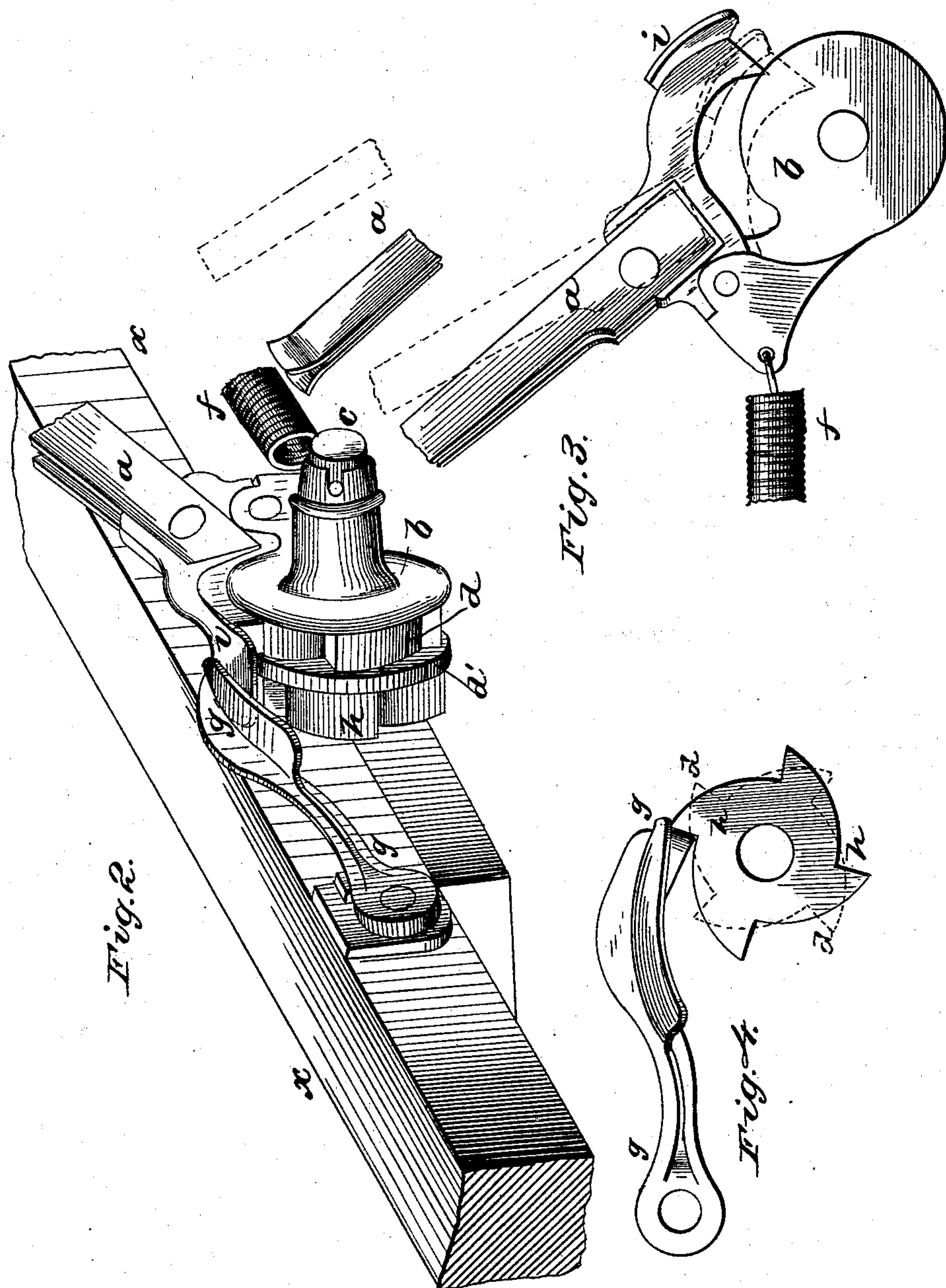
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UNITED STATES PATENT OFFICE.

RICHARD C. JORDAN AND AMBROSE L. JORDAN, OF OTTAWA, ILLINOIS.

CHECK-ROWER.

SPECIFICATION forming part of Letters Patent No. 268,241, dated November 28, 1882.

Application filed July 22, 1882. (No model.)

To all whom it may concern:

Be it known that we, RICHARD C. JORDAN and AMBROSE L. JORDAN, citizens of the United States, residents of Ottawa, in the county of La Salle and State of Illinois, have invented a new and valuable Improvement in Check-Rowers; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a perspective view of our device. Fig. 2 is also a perspective view. Fig. 3 is a side view. Fig. 4 is a detail view. Fig. 5 is a face view of the wheel. Figs. 6 and 7 are detail views.

This invention has relation to check-rowers; and it consists in the construction and novel arrangement of parts, as will be hereinafter fully described, and particularly pointed out in the claims appended.

This check-rower is adapted to be attached to different kinds of seed-planters, and is operated by a wire or rope stretched across the field and fastened at both ends. This wire or rope *e* is provided with knobs, balls, or projections at certain distances apart, and is held in place upon the end of the check-rower by means of guide-pulleys or sheaves *e'*, so located as to cause the wire or rope to pass through the bifurcated ends of levers *a*, of which there is one at each end of the check-rower. The levers *a* are hinged near their lower ends to pivoted fulcrums *b*, which articulate near and upon the ends of a horizontal shaft, *c*, which crosses the planter transversely. The lower ends of the levers *a* engage the teeth *d*, of a ratchet-wheel, *d'*, at each end of the shaft *c*, just inside of the fulcrums *b*. The shaft *c* is rotated intermittently as the planter moves forward by one of the bifurcated levers *a* coming in contact with the balls, knobs, or projections on the wire or rope *e*, which forces the lower end of said lever *a* into engagement with the ratchet-wheel *d'*, and when moved sufficiently far (carrying with it the shaft *c* by means of the ratchet-wheel) the projection slides off from the lever, and the lever is drawn back over the ratchet-wheel *d'* by means of a spring, *f*, into position for contact with the next projection

upon the wire or rope *e*. The motion of the shaft *c* is arrested by a pawl or dog, *g*, which at the proper time drops and engages the ratchet *h* upon the ratchet-wheel *d'*, the teeth of which are in reverse position to the teeth of the ratchet *d*, and the shaft *c* is positively arrested until the influence causing said motion has ceased, and until freed by the pawl *g* being lifted by the receding movement of the lever *a*, when near the terminus of its retreat, by means of a projection or cam, *i*, upon and projecting from the inside of the lever *a*. The shaft *c* is prevented from returning with the lever *a* by another pawl, *j*, engaging ratchets *k*, placed upon the hub of a stop-gear drive-wheel, *l*, in a position reverse to the ratchet-teeth *h*. By the movement of the shaft *c* the stop-gear drive-wheel *l*, which is secured thereon, is rotated perpendicularly and uniformly with said shaft. The drive-wheel *l* is provided with sections of cogs *m* for driving a stop-gear crank-pinon, *n*, the sections of cogs *m* being distributed equidistant upon the drive-wheel, as shown, and having between them smooth surfaces *o* for arresting the motion of the crank-pinon *n*. The crank-pinon *n* is provided with two sets of cogs, *p*, one on each side, separated by long cogs or spaces *q*, directly opposite each other. In passing one set of cogs *m* on the drive-wheel *l* the crank-pinon *n* is caused to perform one half-revolution, after which its spread cogs *q* rest upon the smooth surface *o* of the drive-wheel *l*, and in this position it remains stationary until it is caused to come in contact with another section of cogs on the drive-wheel *l*.

On each side of the sections *m* of the drive-wheel *l* are recesses *R*, of a depth sufficient to receive the long cogs *q* of the crank-pinon *n*. At each half-revolution of the crank-pinon *n* motion is communicated through a pitman, *t*, and a perpendicular lever, *u*, pivoted near its center to the frame *x*, to the shake-bars *s*, which moves the seed-plates. Hence, as the planter moves forward, each time a bifurcated lever *a* comes in contact with a knob, ball, or projection on the wire or rope *e*, the seed is dropped. The stop-gear drive-wheel *l* and crank-pinon *n* are held in position by a yoke or frame, *w*, which also supports and holds in position the horizontal shaft *c*, the inside ends of the wooden bars *x* or frame of the check-rower, and the

dog or pawl *j*, which prevents a return movement of the shaft *c*.

A rod of iron or steel, *y*, is arched over the center gear—*i. e.*, the drive-wheel and crank-pin⁵—in the direction of the horizontal shaft *c*, and is fastened at each end to the frame *x*, as shown.

Attached to and made to play freely upon the arched rod *y* is the end of a rope or chain, ¹⁰ *z*, which drags the gage or marker of the planter, and when said gage is raised to the opposite side of the planter the rope or chain travels over the arch and accommodates itself to the line of draft. This arch also supports ¹⁵ the driving-reins.

Among the advantages of this check-rower are the following:

The stop-pawls *g* at the ends of the check-rower positively arrest the movement of the ²⁰ shaft *c* before the crank-pin *n* can leave the smooth surface *o* on the drive-wheel *l*, and the pawl *j*, acting upon the ratchet *k* on the hub of the drive-wheel *l*, positively prevents the return of the shaft far enough to admit of the ²⁵ crank-pin *n* leaving the smooth surface of the drive-wheel *l*, thus insuring a positive locking of the shake-bar after the shake has been made without the aid of springs.

The stop-gear drive-wheel *l*, having sections ³⁰ of cogs alternating with smooth surfaces, upon which the sprocketed crank-pin rests and may slide, affords opportunity for surplus movement—*i. e.*, lost motion—of the ratchets without affecting the shake-bar of the planter, ³⁵ a positive lock and full stroke of which is thereby always insured.

The lever *a* itself at its lower end, being

made to engage the ratchet that moves the shaft, is forced into engagement with the teeth ⁴⁰ of the ratchet, and causes a positive engagement not attainable in machines of this class as heretofore constructed.

The spring for drawing the levers *a* back to place is not taxed to return the shaft also, ⁴⁵ as in some other machines.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a check-rower, the crank-pin *n*, with ⁵⁰ sections of cogs *p*, separated by long wide-spread cogs or sprockets *q*, in combination with the drive-wheel *l* and yoke *w*, substantially as specified.

2. In a check-rower, the combination, with the ⁵⁵ yoke *w*, supporting the driving-gear inside of the ends of the check-rower frame, of the pawl *j* and shaft *c*, substantially as specified.

3. In a check-rower, the combination of the ⁶⁰ bifurcated lever *a*, having cam-projection *i* at its lower end, the ratchets *d* and *h* on hub *b*, the dog *g*, and spring *f*, substantially as specified.

4. In a check-rower, the combination, with ⁶⁵ the shaft *c*, lever *a*, ratchets *h* and *d*, and spring *f*, of the drive-wheel *l*, ratchet *k*, pawl *j*, and yoke *w*, substantially as specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

RICHARD C. JORDAN.

AMBROSE L. JORDAN.

Witnesses:

A. F. ROBERTS,

C. H. COWLES.