

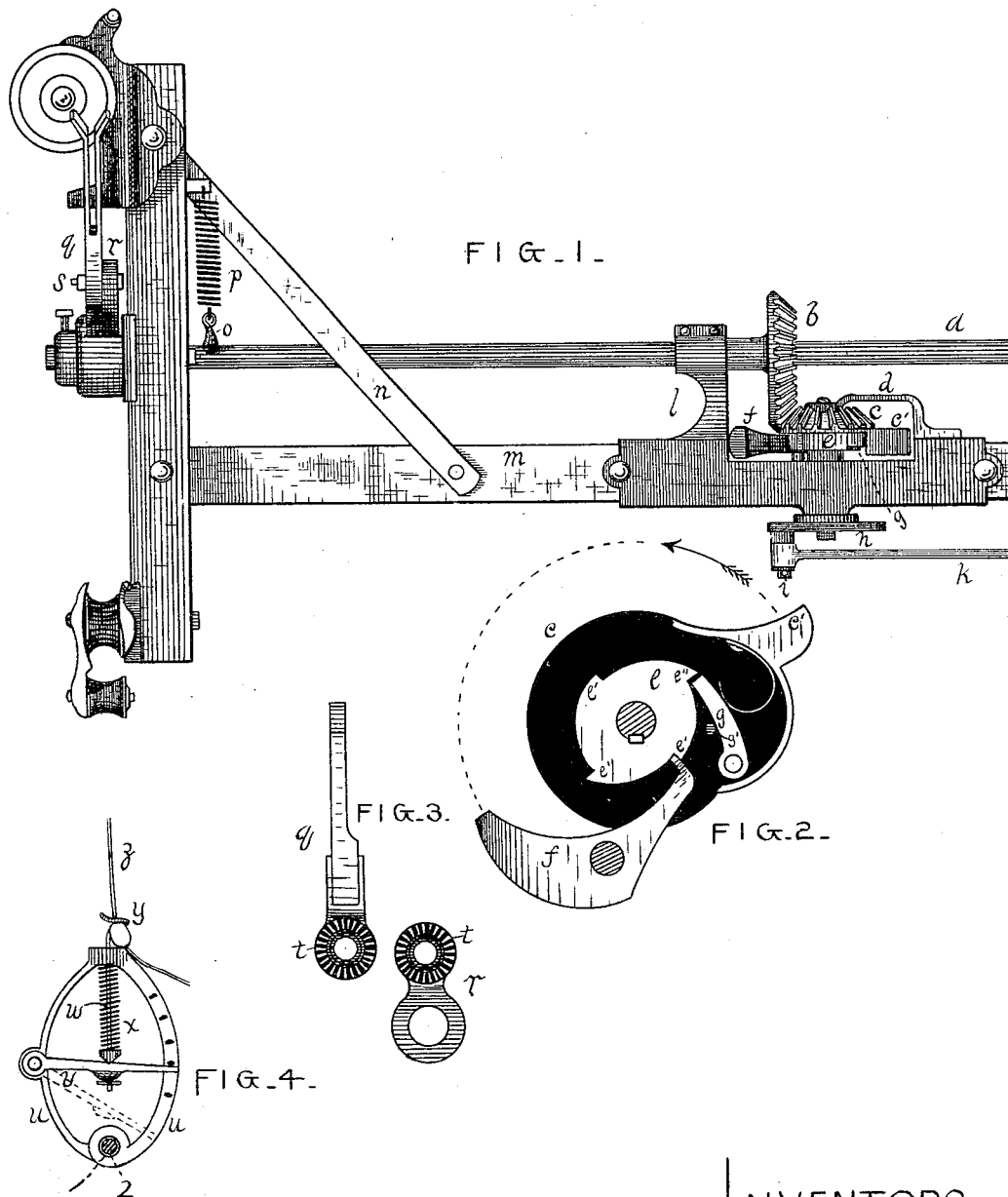
(No Model.)

F. LITTERER & L. McKINNISS.

CHECK ROWER FOR CORN PLANTERS.

No. 348,470.

Patented Aug. 31, 1886.



WITNESSES.

*Weyman*  
*E. F. Fink.*

INVENTORS.  
FRED LITTERER.  
L. McKINNISS.  
By *L. P. Graham*  
att.

# UNITED STATES PATENT OFFICE.

FRED LITTERER AND LEWIS MCKINNISS, OF DECATUR, ILLINOIS.

## CHECK-ROWER FOR CORN-PLANTERS.

SPECIFICATION forming part of Letters Patent No. 348,470, dated August 31, 1886.

Application filed November 6, 1885. Serial No. 182,049. (No model.)

*To all whom it may concern:*

Be it known that we, FRED LITTERER and LEWIS MCKINNISS, residents of the city of Decatur, county of Macon, and State of Illinois, have invented certain new and useful Improvements in Check-Rowers for Corn-Planters, of which the following is a specification.

Our invention relates to the construction and arrangement of the mechanism used to convey motion from the check-row line to the seed-slide of a corn-planter, and to the construction and arrangement of the mechanism used to test and regulate the tension of the check-row line.

In the drawings accompanying and forming a part of this specification, Figure 1 is a plan of an end of a check-rower constructed in accordance with our invention. Fig. 2 is a side elevation of the locking mechanism. Fig. 3 is a detached lever in side elevation, and Fig. 4 is a plan of the tension-testing device.

*a* is a rocking shaft adapted to be extended across the planter when in operation.

*b* is a sector of a bevel gear-wheel rigidly mounted on shaft *a*.

*c* is a pinion in mesh with sector *b*, and provided with rigid projection *c'*. The projection *c'* is radially arranged with reference to pinion *c*, and its function is to limit the rotation of said pinion by coming in contact with the pawl *f*.

*d* is a brace that supports the projecting end of the shaft on which pinion *c* is mounted.

*e* is a ratchet-wheel.

*f* is a weighted pawl that prevents "backlash" in ratchet-wheel *e* and acts as a stop to the rotation of pinion *c*.

*g* is a drive-pawl pivoted on pinion *c*.

*h* is a crank-arm on the shaft with ratchet *e*.

*i* is a crank-pin on arm *h*.

*k* is a rod that connects the crank-pin *i* with the seed-slide of a corn-planter.

*l* is a bracket that holds shaft *a* in position.

*m* is the check-row bar.

*n* is a brace on the same.

*o* is a vertical arm on shaft *a*.

*p* is a spring attached to arm *o*, that holds the check-row mechanism in the position shown.

*q* is the bifurcated lever, by means of which motion is imparted from the knots of a check-row line to the check-rower mechanism.

*r* is a portion of lever *q*.

*s* is a bolt that co-operates with the corrugated faces *t* (see Fig. 3) to hold the parts *q* and *r* in any relative position.

*w* is a rod that swivels freely in frame *u* and lever *v*.

*v* is a lever pivoting in one side of frame *u*, while its free end acts as an indicating pointer on the opposite side of the frame.

*x* is a spring surrounding rod *w* and offering resistance to the tension of the check-row wire *z*.

The hole 1 in frame *u* is to receive the anchor-pin 2, which may be of any suitable form and construction. That part of frame *u* adjacent to the swinging end of the lever is graduated for the purpose of indicating the degree of tension in the check-row line.

In operating the tension device a certain degree of tension is decided on and the indicating-pointer *v* is made to approach the same mark at each and every insertion of the anchor-pin. The graduations on frame *u* are preferably depressed, in order that there may be no interference with the free operation of the indicating pointer.

By constructing the rod *w* to swivel in its frame all kinks and twists in the check-row line will be automatically corrected. The lever *q* is oscillated by the positive throw of the knots on the check-row line and the automatic return. The shaft *a* and gear-wheel *b* are rocked by the oscillating lever and impart their motion to pinion *c*, which is adjusted to work loosely on its shaft. Ratchet *e* is rigid on its shaft, and is intermittently rotated in one direction by the pawl *g* on pinion *c*. The rotary motion of the pinion-shaft is converted into reciprocating motion, and at the same time conveyed to the seed-slide of a corn-planter by means of arm *h*, pin *i*, and rod *k*. At each stroke of lever *q* the projection *c'* on pinion *c* strikes against the end of pawl *f* and produces an absolute stop in the ratchet and the pinion.

The parts *q* and *r* may, by means of their corrugated faces, be adjusted at various angles, in order to compensate for wear in the various parts of the machine.

We claim as new, and desire to secure by Letters Patent—

1. The combination of an oscillating lever,

a rocking shaft provided with a gear-wheel, *b*, a rocking pinion, *c*, provided with stop-projection *c'* and drive-pawl *g*, an intermittently-rotating ratchet-wheel, *e*, backlash - pawl *f*,  
5 and suitable means of conveying the motion of the ratchet to the seed-slide of a corn-planter, as set forth.

2. Jointed lever *q* *r*, having intervening corrugated faces and a securing-bolt, *s*, as and  
10 for the purpose set forth.

3. A tension-testing device for check-row lines, consisting in the combination of frame

*u*, having denoting-points on one side, lever *v*, pivoted to frame *u* in a manner to permit its free end to swing over the denoting-points, 15  
swivel-rod *w*, secured to lever *v* while passing through frame *u*, and tension-spring *x* on rod *w*, between lever *v* and frame *u*, as set forth.

FRED LITTERER.  
LEWIS MCKINNISS.

Witnesses:

C. C. CLARK,  
L. P. GRAHAM.