

(No Model.)

A. LINDGREN.
CORN PLANTER.

No. 412,108.

Patented Oct. 1, 1889.

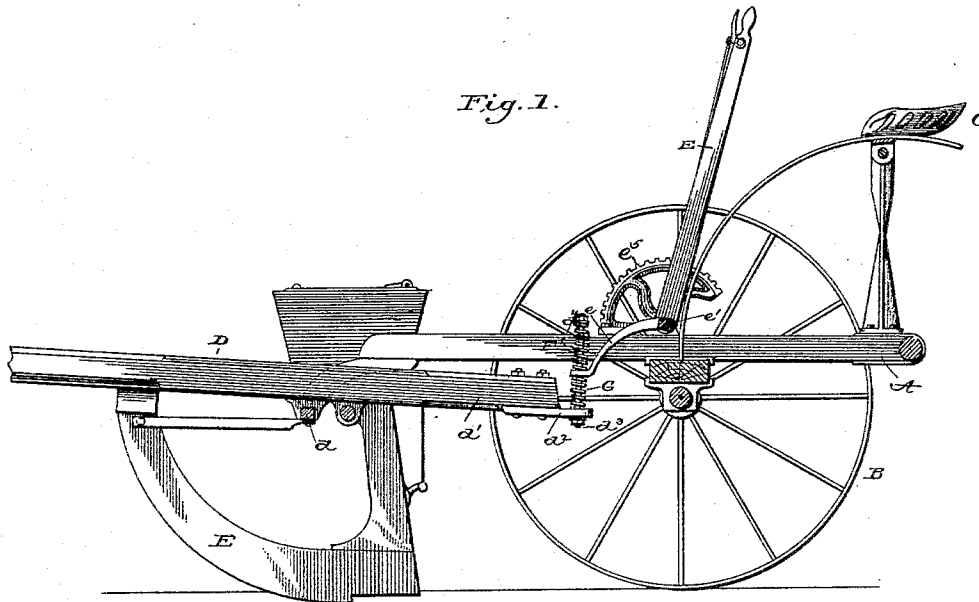
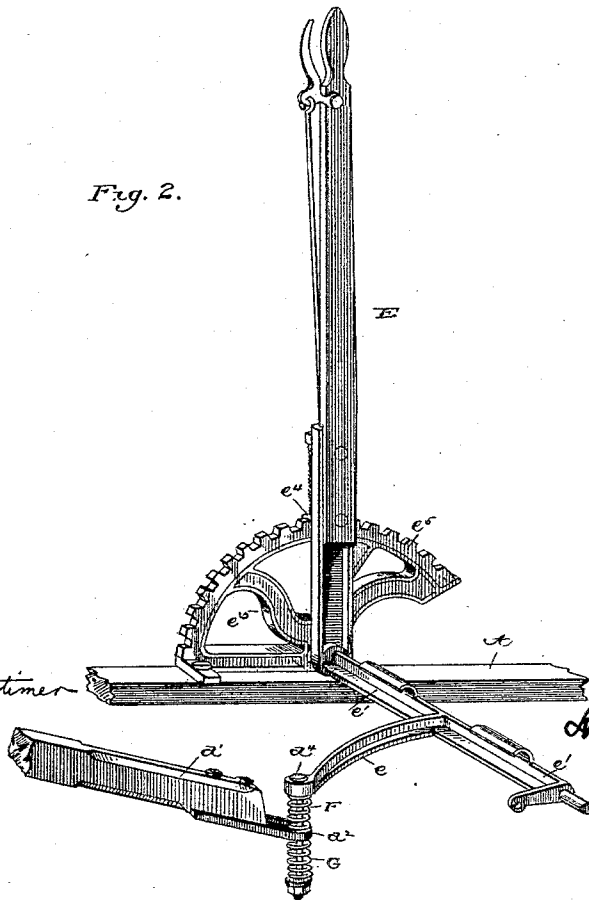


Fig. 2.



Attest:

N. N. Mortimer

A. R. Kennedy,

Inventor:

Aug Lindgren
By his Atty
Phil. T. Dodge

UNITED STATES PATENT OFFICE.

AUGUST LINDGREN, OF MOLINE, ILLINOIS, ASSIGNOR TO THE MOLINE PLOW COMPANY, OF SAME PLACE.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 412,108, dated October 1, 1889.

Application filed July 12, 1889. Serial No. 317,338. (No model.)

To all whom it may concern:

Be it known that I, AUGUST LINDGREN, of Moline, in the county of Rock Island and State of Illinois, have invented certain Improvements in Corn-Planting Machines, of which the following is a specification.

This invention relates to that class of corn-planters in which a wheeled frame carrying the operator's seat at the rear end is jointed at its front end to a draft-frame provided with furrow-opening runners and a seed-dropping mechanism, the two frames being connected by adjusting devices which admit of their relations being changed to control the action of the runners.

The improvement consists in an improved spring-connection by which the rear end of the runner-frame is permitted to tip either upward or downward from the normal position against a spring-pressure. In Letters Patent No. 403,119, issued to me on the 14th day of May, 1889, I illustrated a coupling for this purpose containing a single spring. Under the present invention I provide two springs, one to resist the upward and the other to resist the downward motion of the runner-frame. This enables me to use a simpler and less expensive construction than that shown in the patent.

In the accompanying drawings, Figure 1 is a side elevation of a planter having my improvement applied, certain of the parts being broken away to expose the coupling to view. Fig. 2 is perspective view of the coupling in modified form.

Referring to the drawings, A represents the rear or main frame, which will be mounted on two ground-wheels B and provided with a driver's seat C. D is the front or runner frame connected to the front end of the wheel-frame by a horizontal pivot d and provided with a furrow-opening runner E and a suitable seed-delivering mechanism.

The foregoing parts may all be of ordinary construction. As they constitute no part of my invention, they need not be further described herein.

In Fig. 1, d' represents an arm extending backward rigidly from the runner-frame and provided at its rear end with an eye-plate d^2 ,

bolted rigidly thereto and encircling a vertical bolt d^3 , which passes loosely through the end of a crank-arm e , extending from a rock-shaft e' , mounted transversely in bearings on the wheel-frame and provided with a hand-lever E. The vertical bolt is provided with a head d^4 at its upper end above the crank-arm. Between the crank-arm and the eye-plate of the runner-frame it is encircled by a spiral spring G. Between the crank-arm and the nut on the upper end the bolt is encircled by a spiral spring F'. The hand-lever is provided with an ordinary locking-dog e^4 , which engages a fixed notched plate e^5 for the purpose of locking the hand-lever, the rock-shaft, and the crank-arm rigidly in position.

It will be seen that owing to the pivotal connection between the runner and the wheel-frames the runner-frame may be lifted by rocking or tilting the wheel-frame on its axis, and that the runner-frame may be rocked forward and backward independently of the wheel-frame, subject only to the controlling influence of the springs. Owing to their counteraction the runner-frame is held normally in an intermediate position, but is permitted to move upward or downward by compressing one or the other of the springs. By adjusting the hand-lever the springs may be thrown upward or downward and fixed so as to hold the runner-frame normally in one position or another, as may be required. By tightening the nut on the lower end of the bolt the tension and resistance of the springs may be increased or diminished, as the nature of the soil may demand.

In some cases it is advisable to have the upper spring lighter or weaker than the lower, in order that the runner-frame may move in one direction more easily than in the other.

The construction shown in Fig. 2 is the same as that in Fig. 1, except that the bolt is passed through the eye-plate of the runner-frame, the two springs mounted above and below the eye-plate, and the crank-arm seated on the upper end of the bolt above the two springs.

The essence of my invention resides in combining with the runner-frame and the wheel-frame of a planter of the type herein shown two springs, one to resist the upward and the

other to resist the downward movement of the rear end of the runner-frame in relation to the wheel-frame.

Having thus described my invention, what I claim is—

1. In a corn-planter, the wheeled frame and the front runner-frame jointed thereto, in combination with two intermediate springs, one resisting the upward and the other resisting the downward movement of the runner-frame.

2. In a corn-planter, the wheeled rear frame and the front runner-frame hinged thereto, in combination with a vertically-adjustable arm on the runner-frame and two springs connecting said arm with the runner-frame, one to resist the upward and the other to resist the downward movement of the runner-frame.

3. In a corn-planter, the wheeled rear frame having the hand-lever, the rock-shaft, the crank-arm, and lever-locking mechanism thereon, in combination with the front runner-frame hinged to the wheeled frame and pro-

vided with a rearwardly-extending arm, a vertical bolt passing through the arm of the runner-frame and the crank-arm of the wheeled frame, and two springs applied to said bolt, one to resist the upward and the other to resist the downward movement of the arm of the runner-frame.

4. In a corn-planter, the combination of the wheeled rear frame, the runner-frame jointed to its front and provided with a rearwardly-extending arm, two springs interposed between said arm and the wheel-frame, acting one to resist upward and the other to resist downward motion of said arm, and a bolt for regulating the tension of said springs.

In testimony whereof I hereunto set my hand, this 1st day of June, 1889, in the presence of two attesting witnesses.

AUGUST LINDGREN.

Witnesses:

S. M. HILL,

W. V. RICHARDS.