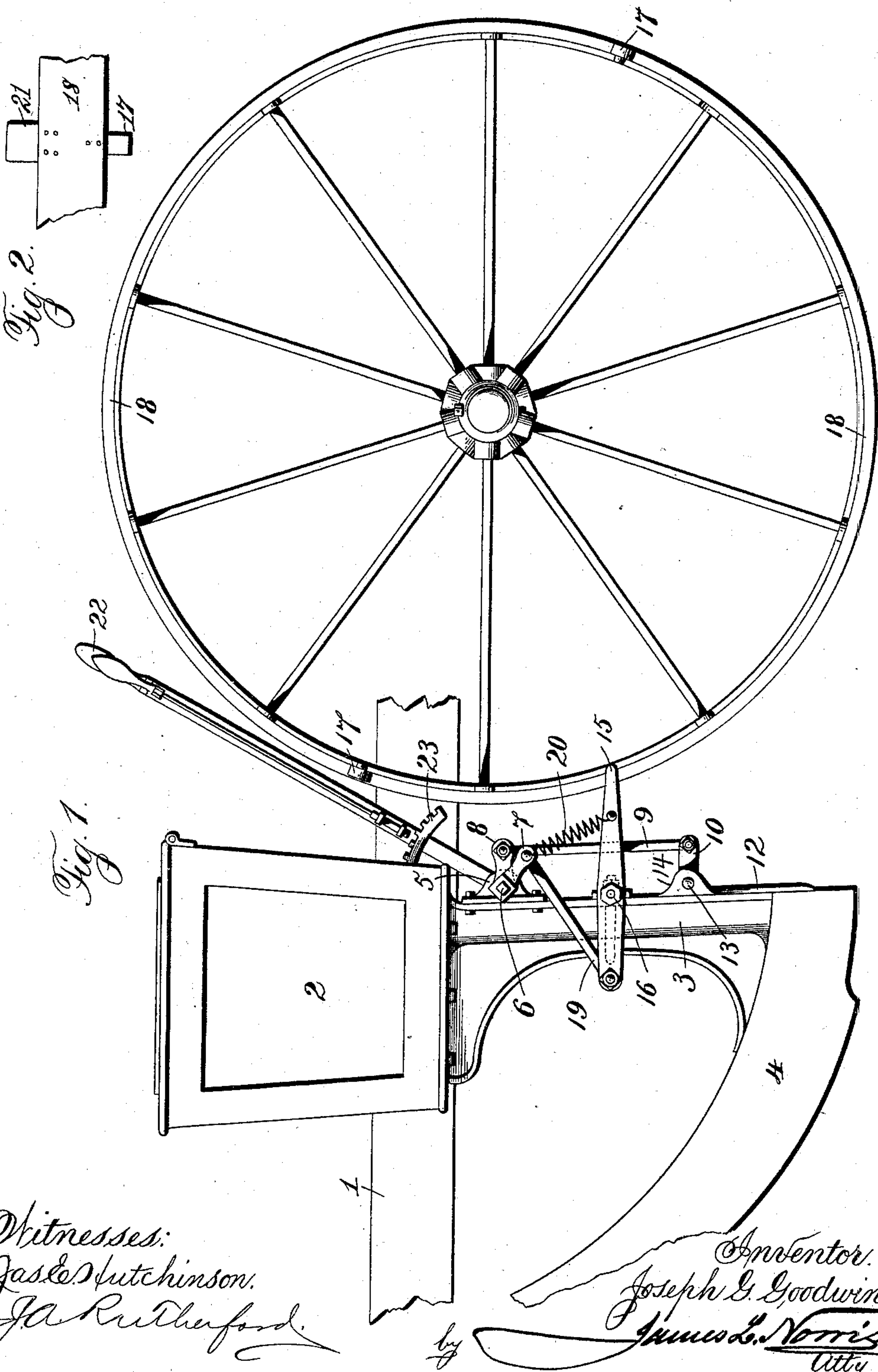


(No Model.)

J. G. GOODWIN.
CORN PLANTER.

No. 477,531.

Patented June 21, 1892.



Witnesses:
Jas. Hutchinson.
J. A. Rutherford.

Inventor.
Joseph G. Goodwin,
James L. Norris,
Atty.

UNITED STATES PATENT OFFICE.

JOSEPH G. GOODWIN, OF LEXINGTON, KENTUCKY.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 477,531, dated June 21, 1892.

Application filed December 2, 1891. Serial No. 413,793. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH G. GOODWIN, a citizen of the United States, residing at Lexington, in the county of Fayette and State of Kentucky, have invented new and useful Improvements in Corn-Planters, of which the following is a specification.

This invention has for its object to improve check-row corn-planters by providing novel, simple, and efficient means for controlling the passage of grain from the lower end of the seed-conducting tube through the medium of the ground-wheel, whereby the employment of check wires or cords is avoided.

To accomplish this object my invention involves the features of construction and the combination or arrangement of devices hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a side elevation showing sufficient of a corn-planter to illustrate my invention, and Fig. 2 is a detail plan view showing a portion of the ground-wheel.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, wherein—

The numeral 1 indicates a portion of the main frame of a corn-planter, and 2 a hopper mounted on the main frame and having a vertical seed-conducting tube 3, connected at its lower end to the rear portion of a runner 4. These parts are of usual construction and the devices by which the corn or grain is delivered into the upper end of the tube may be of any well-known construction, for which reason I do not deem it essential to more fully explain the same, as my invention consists, essentially, in the novel means whereby the passage of the grain from the lower end of the tube or shoe is controlled.

The seed-conducting tube 3 is provided at its upper end portion with a lateral bracket or lug 5, in which is journaled a shaft having a square or other angular-shaped portion 6, which engages an inclined lever-arm 7. The angular portion of the shaft is also provided with a rearwardly-projecting lever-arm 8, pivotally attached to the upper end of a vertical

rod 9, which is pivoted at its lower extremity to an arm or lug 10 on the upper end of a flap or valve 12, which is pivoted at 13 to a bracket 14 on the seed-conducting tube in such manner that when the lever-arm 8 rises the connecting-rod 9 will swing the flap or valve 12 rearward to its open position for uncovering the seed-delivery orifice at the lower end of the tube.

An oscillatory lever 15 is pivoted intermediate its extremities, as at 16, to the seed-conducting tube and the rear end of this lever is arranged in the path of lateral projections 17 provided on the ground-wheel 18. The front end of the oscillatory lever is pivotally connected by a link 19 with the inclined lever-arm 7, and a suitable spring 20 connects the lever-arm with the rear extremity of the oscillatory lever, all in such manner that when the planter is advancing the lateral projections 17 of the ground-wheel operate to depress the rear end of the oscillatory lever 15, and thereby swing the lever-arms 7 and 8 in an upward direction for the purpose of moving the flap or valve 12 to its open position for the passage of the corn or grain into the furrow. After each of the projections 17 passes the rear extremity of the oscillatory lever the latter is restored to its normal position by the action of the spring 20 for the purpose of moving the flap or valve to its closed position, as indicated in the drawings.

The ground-wheel is provided at a suitable point with a marking finger or plate 21, Fig. 2, to indicate on the ground the starting-point. As the planter traverses the ground the projections 17 of the ground-wheel intermittently depress the rear extremity of the oscillatory lever 15 and thereby cause it to swing the lever-arms 7 and 8 in an upward direction for opening the flap or valve 12. By this means the passage of the corn from the lower end of the seed-conducting tube is controlled in a simple and efficient manner, so that the necessity of employing check wires or cords is entirely avoided. The shaft having the angular portion 6 is provided with an upright lever 22, having a suitable pawl to engage a ratchet-plate 23, so that by shifting the lever forward the shaft 6 is rotated in a

direction to elevate the lever-arms 7 and 8, thereby placing the rear extremity of the oscillatory lever 15 in such position that the planter can be backed without the projections 17 actuating the oscillatory lever.

The invention provides a very simple and economical corn-planter which renders the usual check wires or cords unnecessary and places the flap or valve in such relation to the peculiar actuating mechanism that the ground-wheel fulfills all the conditions required to open the flap or valve at the proper time for the passage of the corn or grain into the furrow.

Having thus described my invention, what I claim is—

1. The combination, with a seed-conducting tube and a flap or valve which governs the passage of grain into the furrow, of a shaft 6, having lever-arms 7 and 8, an oscillatory lever 15, pivoted intermediate its extremities to the tube, a link connecting the oscillatory lever with one of the lever-arms, a rod connecting the other lever-arm with the flap or valve, and a ground-wheel having a projection which acts on one extremity of the oscillatory lever to open the flap or valve, substantially as described.

2. The combination, with a seed-conducting tube and a pivoted swinging flap or valve at the lower end portion thereof, of a shaft 6, having lever-arms 7 and 8, an oscillatory lever 15, pivoted intermediate its extremities, a link 19, pivotally connecting the front extremity of the oscillatory lever with one of the lever-arms, a rod 9, pivotally connecting the other lever-arm with a portion of the pivoted

swinging flap or valve, a spring 20, acting to hold the oscillatory lever in its normal position, and a ground-wheel having a projection which acts on the rear extremity of the oscillatory lever to swing the flap or valve to its open position, substantially as described.

3. The combination, with a seed-conducting tube and a movable flap or valve arranged at the lower end portion thereof to govern the passage of grain from the tube into the furrow, a ground-wheel having a projection, valve-operating mechanism actuated by the projection of the ground-wheel, and a hand-lever and locking devices for holding the valve in its closed position while the machine is moving backward, substantially as described.

4. The combination, with a seed-conducting tube and a movable valve at the lower portion thereof, of a shaft 6, having lever-arms 7 and 8, a hand-lever secured to the said shaft, mechanism for holding the hand-lever in a fixed position to lock the shaft stationary, an oscillatory lever pivoted intermediate its extremities, a link connecting one extremity of the oscillatory lever with one of the lever-arms, a rod connecting the other lever-arm with the flap or valve, and a ground-wheel having a projection which acts on the oscillatory lever to open the flap or valve, substantially as described.

In testimony whereof I have hereunto set my hand and affixed my seal in presence of two subscribing witnesses.

JOSEPH G. GOODWIN. [L. S.]

Witnesses:

R. W. SHEHY,

T. L. HOLLADAY.