

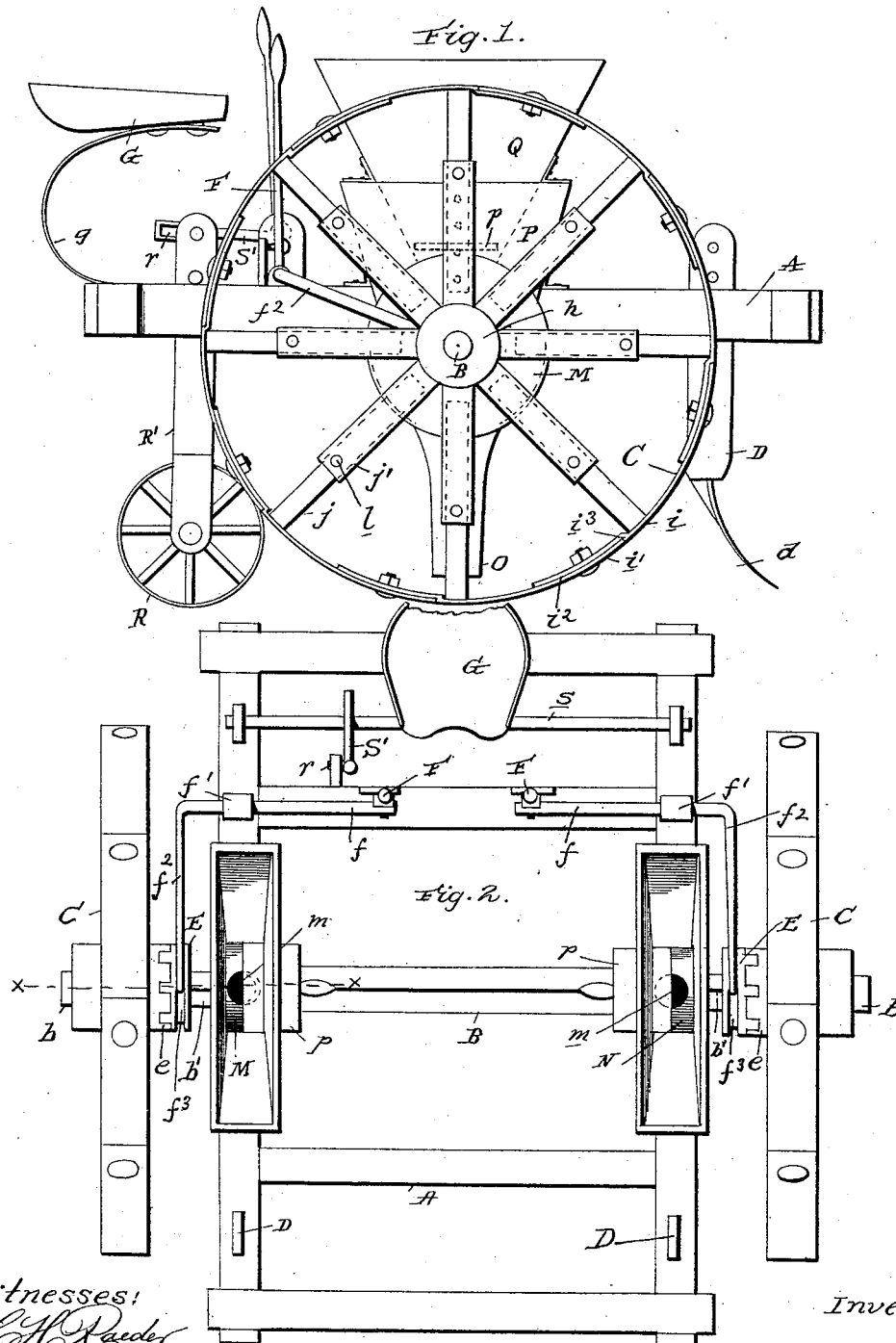
(No Model.)

2 Sheets—Sheet 1.

J. ANDERSON.
CORN PLANTER.

No. 489,446

Patented Jan. 10, 1893.



Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES ANDERSON, OF HARRODSBURG, KENTUCKY.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 489,446, dated January 10, 1893.

Application filed March 18, 1892. Serial No. 425,506. (No model.)

To all whom it may concern:

Be it known that I, JAMES ANDERSON, a citizen of the United States, residing at Harrodsburg, in the county of Mercer and State of Kentucky, have invented certain new and useful Improvements in Corn-Planters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My present invention relates to improvements in corn planters, and the objects, are, first, to provide means for automatically planting the corn in hills at variable distances apart, secondly, to control the planting mechanism and easily throw the same into and out of use; and finally to simplify the construction and cheapen the manufacture of the machine.

With these ends in view the invention consists in the combination and construction of parts which will be hereinafter fully described and claimed.

The invention is fully illustrated in the accompanying drawings, forming a part thereof, and in which:

Figure 1, is a side elevation. Fig. 2, is a top plan view thereof. Fig. 3, is a sectional view on the plane indicated by the dotted line *x, x*, of Fig. 2, and: Fig. 4, is a perspective view of a portion of the tire of the preferred form of my ground wheel.

Like letters of reference denote corresponding parts in the several figures of the drawings, referring to which:

A, designates the frame of the machine which is mounted on the carrying axle B, the ends of which are provided with the usual spindles *b*, the axles within such spindles being made polygonal as at *b'*. On the spindles of the axle are fitted the ground wheels C, C, which sustain the machine, and on the front part of the frame A, is arranged the depending plow stock or stocks D, carrying the furrow opening shovel *d*. Each ground wheel has the inner end of its hub provided with serrations or teeth *e*, and with the toothed hub is adapted to engage a slidable collar E, that is fitted and guided on the polygonal part *b'*, of the axle, whereby the wheel can rotate loosely on the axle or be rigidly connected thereto according as the collar E, is adjusted

out or in engagement with the wheel. This adjustment of the slidable collar E, may be effected by a sliding rod *f*, which is guided in a suitable guide or bearing *f'*, on the main frame, and the outer end of this rod has an angular arm *f*², which fits in an angular groove *f*³, in the collar, while the other end of the rod has an operating handle or lever F, which can be easily grasped and moved by the driver occupying the seat G, mounted on a spring support *g*, attached to the rear part of the main frame.

The ground wheels C, C, of the machine may be the ordinary flat or concave form of wheels, used in this class of machines, but I prefer to employ the novel construction of expansible wheel shown in the drawings, which can be adjusted to plant the corn in the hills at different distances apart.

In my improved ground wheel I employ a solid hub *h*, an expansible felly *i, i'*, and radially adjustable sectional spokes *j, j'*, intermediate between the hub and felly. The felly consists of a series of segments *i, i'*, each of which has one end depressed as at *i*², beyond or within the plane of its tread, and forming an abrupt shoulder *i*³, and this depressed end of the felly section *i*², receives the end of the adjacent section *i'*, whereby the contiguous ends of the felly sections are lapped, and the end of the section *i'*, abuts against the shoulder *i*³, of the section *i*, and the tread of the wheel is substantially continuous. The lapped ends of the felly-sections are slotted longitudinally at *k*, the slots being coincident, and through the slots of the lapped ends passes a bolt *k'*, to adjustably connect the felly sections together. The outer section *j*, of the spoke, one of which is provided for each section of the felly, is rigidly secured in any suitable manner to its felly section *i*, or *i'*, at a point at one side of the abrupt shoulder *i*³, of said felly section, and the inner end of the solid spoke section *j*, is fitted in the hollow inner spoke section *j'*, said sections *j, j'*, of the spoke being held adjustably together by means of a set screw *l*, which works in a threaded opening in the tubular spoke section *j'*, and bears against the solid spoke section *j*, as indicated at Fig. 1.

When it is desired to plant the corn at further intervals apart, the diameter of the

ground wheel is increased by expanding the felly sections and the spokes; but to plant the corn closer together, the wheel is contracted in the manner explained.

5 M. N, are the feeding disks which are carried by the axle B, of the machine; and in the periphery of each disk is provided a series of radial cups *m*, which are adapted to convey
10 the grain from the hopper and deposit the same into the tube O. The intervals between the hills can also be regulated by spacing the cups at different distances in the periphery of the feeding wheel. The feeding wheel operates in a convex recess in the lower side of
15 a support or block P, which is rigid with the main frame A, and through this support passes the lower open part of the hopper Q, in which the feeding wheel operates, said hopper having a regulating cut-off *p*, and being suitably
20 held on the main frame.

At the rear of the machine is a caster wheel R, journaled in the lower end of a vertically adjustable hanger R', which is linked at *r*, to a rock shaft *s*, journaled on the main frame
25 and operated by a lever S'.

The machine is drawn by a tongue (not shown) which is suitably connected to the main frame.

30 The operation of my invention will be readily understood from the foregoing description taken in connection with the drawings.

Having described my invention what I claim is:

35 1. In a corn planter the expansible ground wheel comprising a hub, the extensible spokes, and the sectional felly *i, i'*, each section having one end thereof depressed below or within the plane of its tread, forming an abrupt shoulder, and the adjacent section having its end
40 fitted in said depressed portion, and means for clamping the felly sections, rigidly together, substantially as described.

2. In a corn planter the expansible ground wheel comprising the hub, the sectional felly
45 in which each section has the slotted end *i²*, depressed within the plane of the tread thereof, and forming an abrupt shoulder *i³*, and the adjacent section fitted in said depression

i², the bolts passing through slots in the lapped ends of the felly sections, and the extensible
50 spokes, each having one end secured to the felly section and its other end secured to the hub, the meeting ends of the spoke sections being clamped together, substantially as described.
55

3. In a corn planter the combination with a main frame, an axle, of polygonal form in cross section, the rigid support on the main frame having the convex lower side, the feeding wheel carried by the axle and operating
60 in said convex side of the support, and the hopper mounted on the support and extending through the same; of the expansible ground wheel loosely mounted on the axle and comprising the hub having its inner end serrated or toothed, the extensible spokes and the sectional felly to which the spokes are secured, a slidable toothed collar fitted on the
65 polygonal axle, and a slidable rod guided on the main frame and connected to the slidable collar, substantially as and for the purpose set forth.
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4. In a corn planter, the expansible ground wheel comprising a hub having its inner end toothed, the extensible spokes and the sectional felly *i, i'*, each section having one end
75 thereof depressed below or within the plane of its tread, forming an abrupt shoulder, and the adjacent section having its end fitted in said depressed portion, and means for clamping
80 ing the felly sections rigidly together, in combination with a polygonal axle extending loosely through the hub of the wheel, a slidable toothed collar fitted on the polygonal axle and adapted to engage the toothed end
85 of the hub, and a slidable rod guided on the main frame and connected to the slidable collar, substantially as and for the purpose set forth.

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

JAMES ANDERSON.

Witnesses:

L. P. HARRIS,
H. T. YOUNG.