

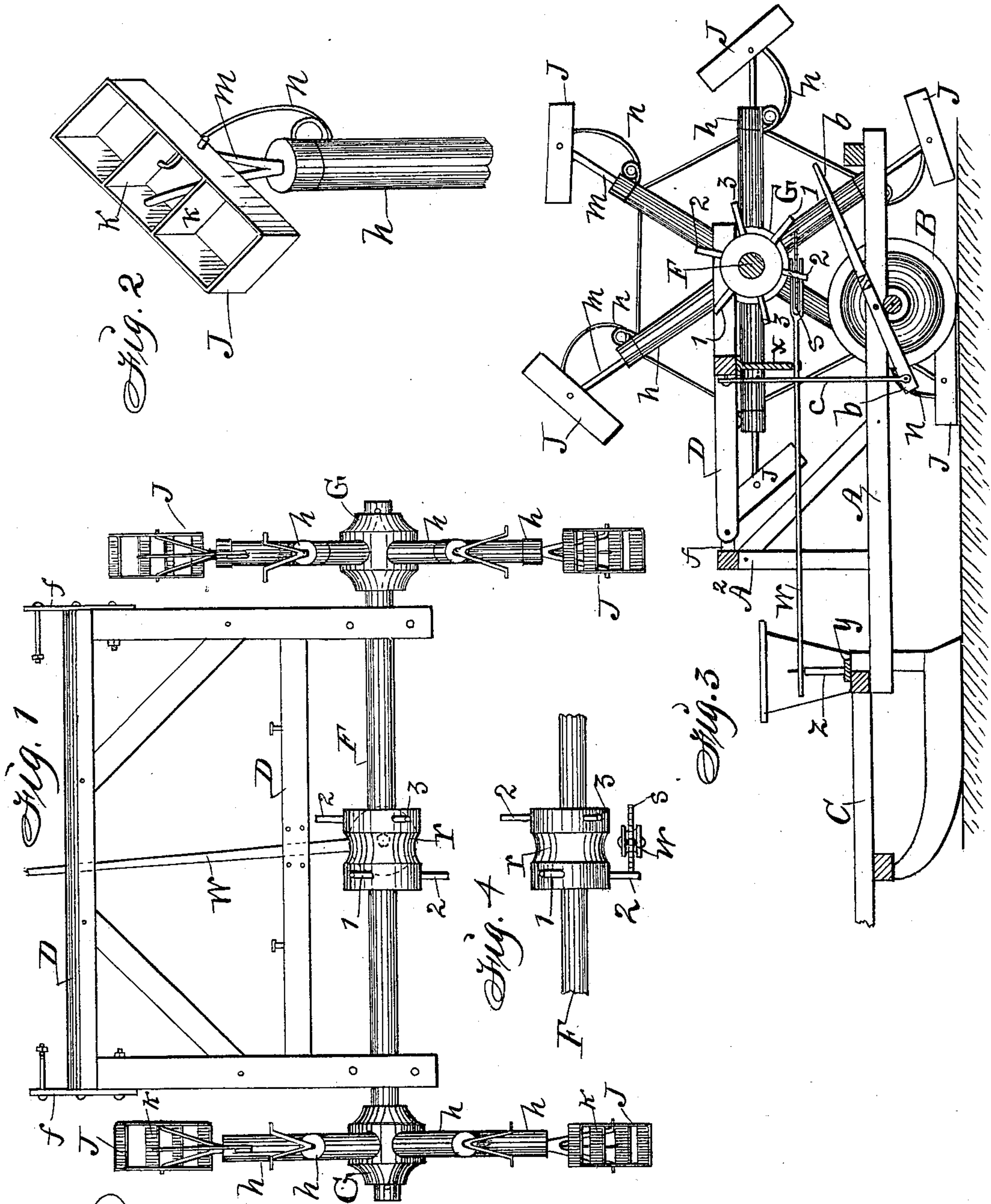
(No Model.)

E. C. CULVER.

AUTOMATIC CHECK ROW CORN PLANTER.

No. 379,634.

Patented Mar. 20, 1888.



Witnesses:
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UNITED STATES PATENT OFFICE.

EBENEZER C. CULVER, OF MADRID, IOWA.

AUTOMATIC CHECK-ROW CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 379,634, dated March 20, 1888.

Application filed May 31, 1887. Serial No. 239,910. (No model.)

To all whom it may concern:

Be it known that I, EBENEZER C. CULVER, a citizen of the United States of America, and a resident of Madrid, in the county of Boone and State of Iowa, have invented an Improved Automatic Check-Row Corn-Planter, of which the following is a specification.

My invention consists in the construction and combination of self-adjusting feet with the spokes or legs of a wheel, in the construction and combination of an auxiliary carriage with a planter-carriage, and mechanism for converting rotary motion into reciprocating rectilinear as required to transmit motion from the rotating axle of the auxiliary carriage to the seed-slide at regular intervals.

Figure 1 of the accompanying drawings is a top view of my auxiliary carriage. Fig. 2 is a perspective view of one of the self-adjusting feet. Fig. 3 is a vertical and longitudinal section of a complete planter, showing the combination of all the parts. Fig. 4 is a detail view of the mechanism for converting motion. Jointly considered, these figures clearly illustrate the construction and operation of my complete invention.

A represents the carriage frame of a planter upon wheels B, and C a runner-frame at the front end of the tractable carriage.

D is the frame of my auxiliary carriage.

F is a rotating axle in bearings fixed to the under side of the rear end of the frame.

G G are hubs fixed to the ends of the axle F. Six spokes or legs, *h*, radiate from the hubs and have adjustable feet on their ends, that will successively tread upon the ground as required to make steps of uniform length as the planter is advanced across a field. The feet are composed of metal frames J, of quadrangular shape, that have transverse pieces *k* to brace them, and also to increase their hold upon the ground when they come in contact therewith. Each foot J is hinged to the end of a leg *h* by means of a forked bearer, *m*, that is fixed to the leg, as shown in Fig. 2, or in any suitable way that will allow the foot to adjust itself as required when it touches the ground. Springs *n* are fixed to the legs *h* and the feet J in such a manner that they will in their normal condition hold the front end or toe of each foot elevated, so that the heel will come in contact with the ground first.

r is a hub fixed to the center of the shaft F. It has pins 1 2 3 projecting radially from its ends in such a manner that they will alternately engage the opposite sides of a toothed wheel, *s*, that is journaled in the bifurcated end of a lever, *w*, as clearly shown in Fig. 3. This lever is suspended upon a fulcrum, *x*, that extends down from a cross-piece in the frame D, and its front end and long arm are connected with the seed-slide *y* by means of a post, *z*, fixed to the center of the slide, or in any suitable way, so that when the lever is vibrated it will actuate the seed-slide as required to drop seeds from the seed-boxes.

b is a lever pivoted to the frame A and connected with the frame D by means of a rod, *c*, in such a manner that a depression of the long arm of the lever will lift the frame D to keep the feet J from contact with the ground as required to make the seed-dropping mechanism inoperative whenever desired.

f are hinge-irons fixed to the front corners of the frame D and pivoted to a vertical extension, *A'*, on the front of the carriage-frame A in such a manner that the seed-dropping attachment will stride the planter-carriage.

In practical use, when the planter is advanced in a field, feet J on each side will simultaneously strike the ground, and one of the pins on one end of the hub *r* will strike the wheel *s* at the same instant, and thereby vibrate the lever *w* as required to operate the seed-slide and to drop seeds in parallel rows at uniform spaces apart, which spaces will correspond with the distances between the centers of the feet J, that press the ground in succession.

I am aware that self-adjusting shoes or feet have been combined with the spokes of a wheel and the wheel connected with a planter-carriage for the purpose of marking the ground.

I am also aware that wheels having pointed spokes have been placed on the ends of an axle that was adjustably hinged to a planter carriage and extended across the planter in such a manner that the axle could be raised and lowered to elevate and retain inoperative the wheels and seed-dropping mechanism connected therewith; but my manner of constructing and combining self-adjusting feet with the spokes of wheels, and my manner of construct-

ing and combining wheels having self-adjust-
ing feet with seed-dropping mechanism and a
planter-carriage, is novel and greatly advan-
tageous, in that the self-adjusting feet prevent
5 the wheels from slipping or sticking and the
irregular movements incident to automatic
seed-planting mechanism.

I claim as my invention—

1. The frame J, having one or more braces,
10 k, the bearer m, and the spring n, in combi-
nation with a spoke or leg, h, substantially as
shown and described, for the purposes stated.

2. An improved planter comprising a tract-

able carriage and a runner-frame, an auxil-
ary frame, D, hinged to the planter-carriage, 15
a rotating axle, F, having fixed hubs G, fixed
legs h, carrying self-adjusting feet J, a hub,
r, having pins 1 2 3 at its ends, a lever, w,
carrying a wheel, s, and a lever, b, arranged
and combined to operate in the manner set 20
forth.

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Witnesses:

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