

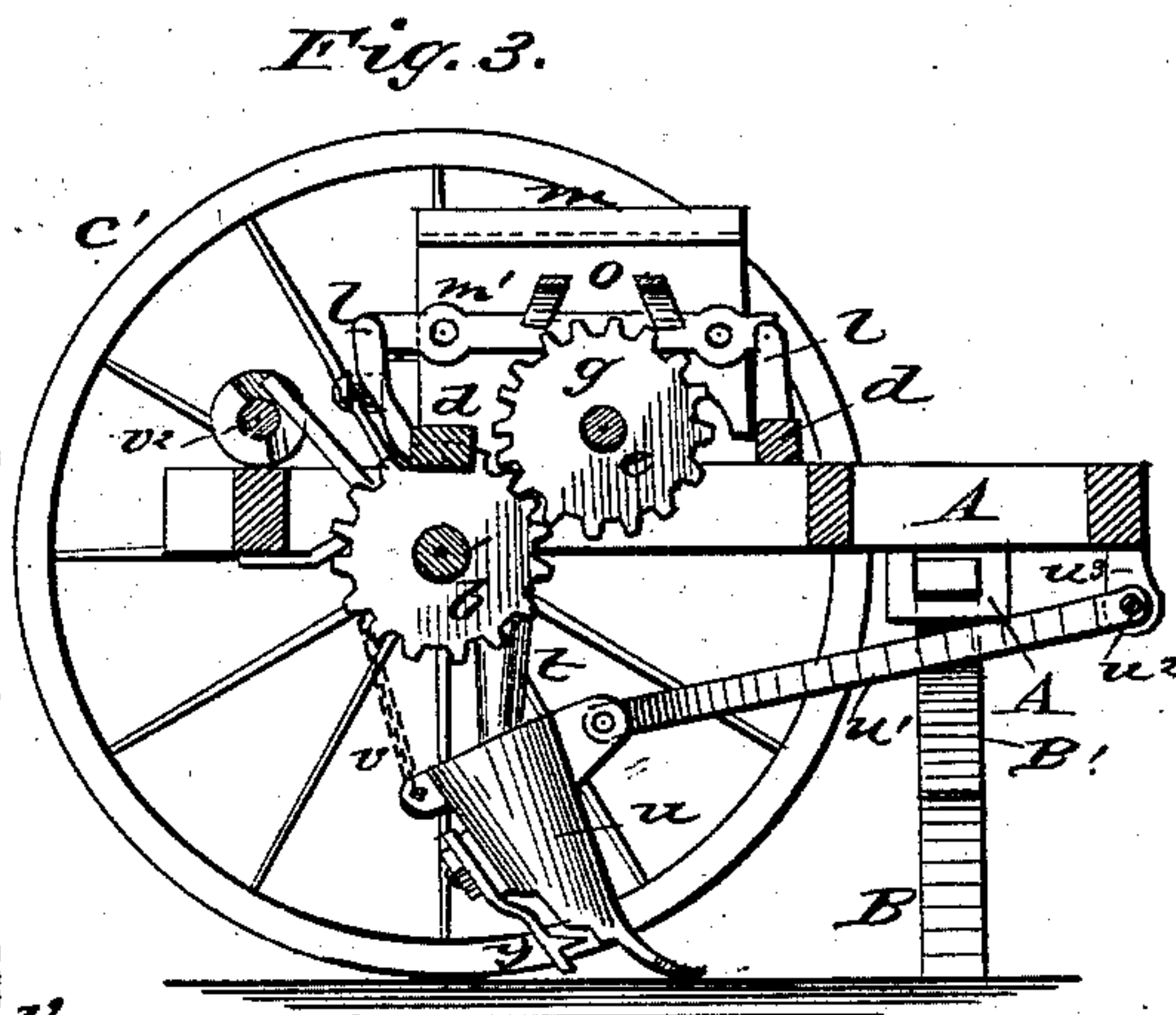
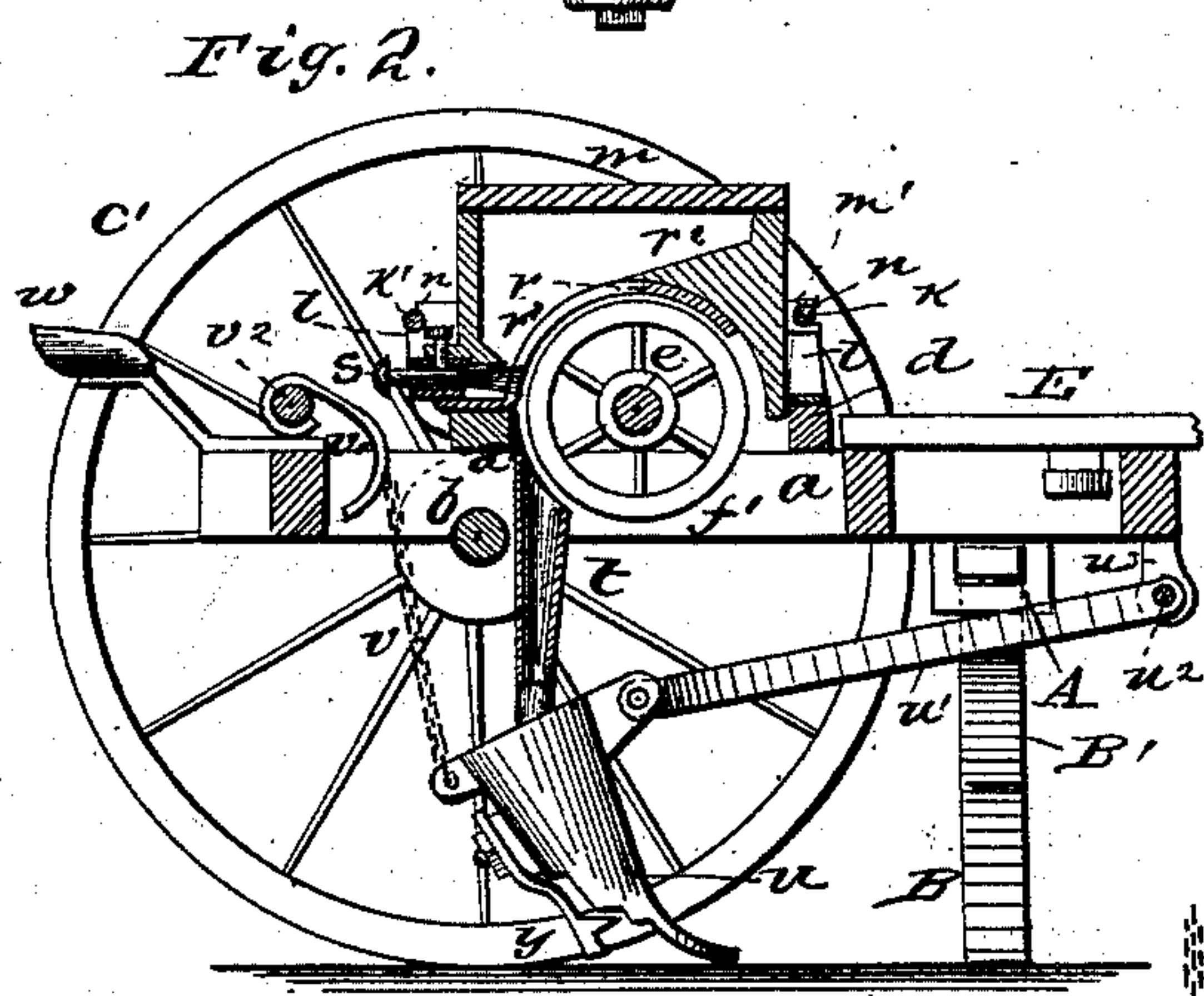
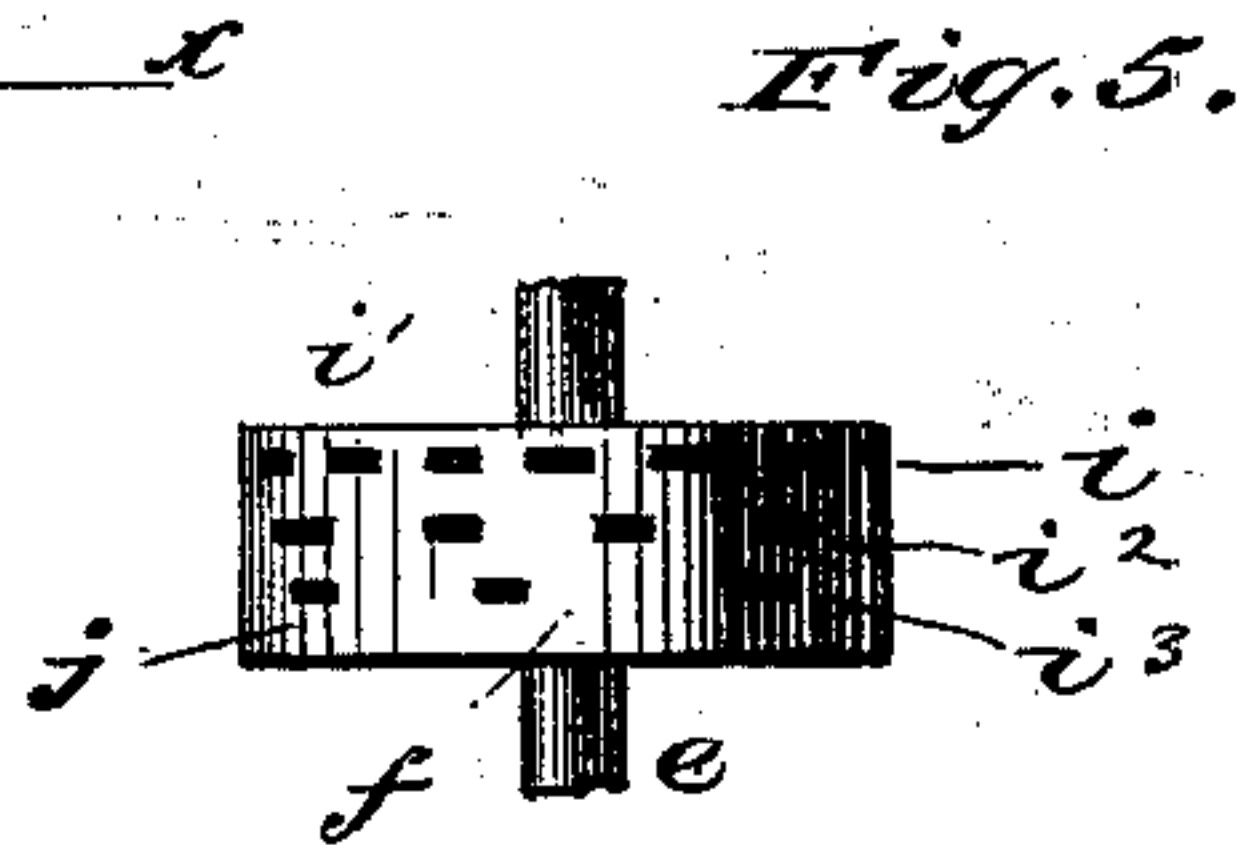
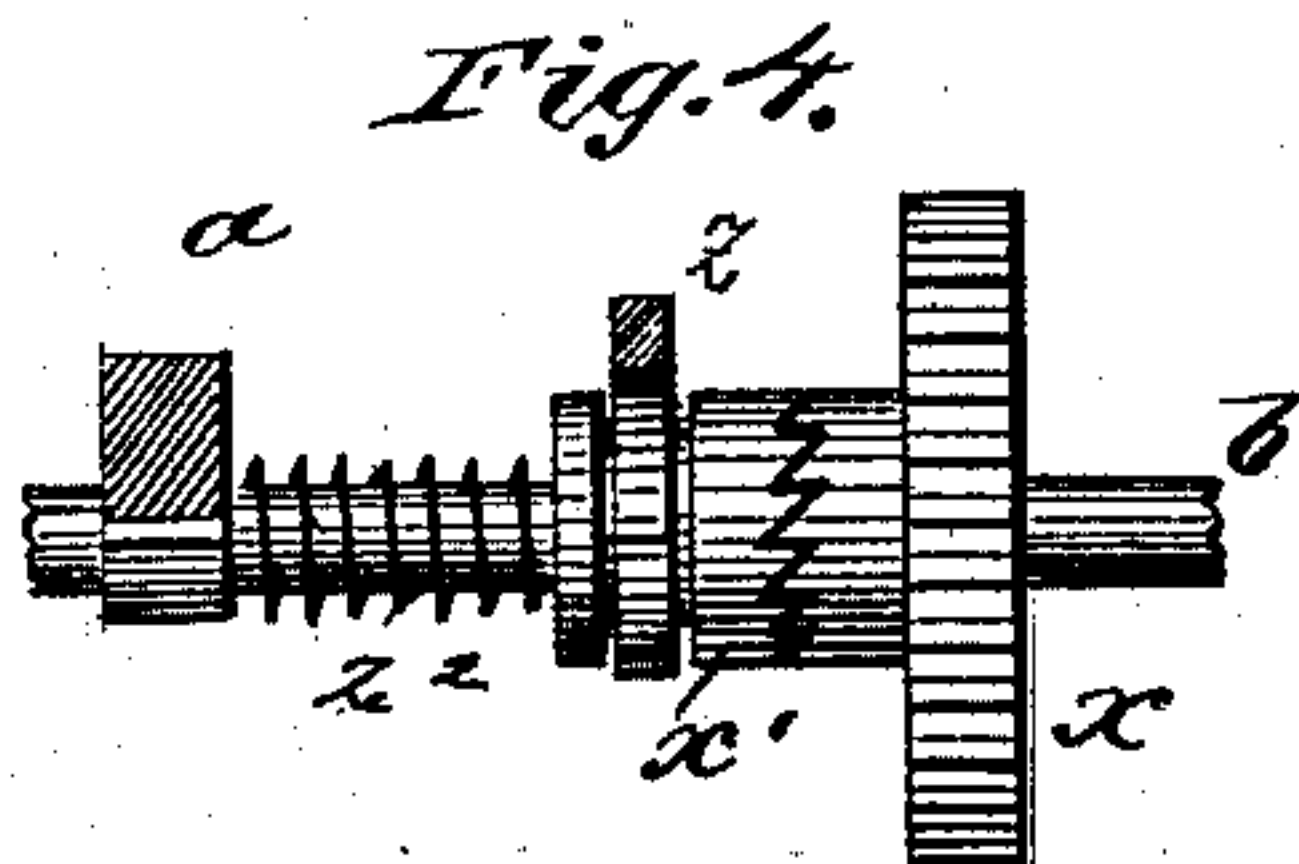
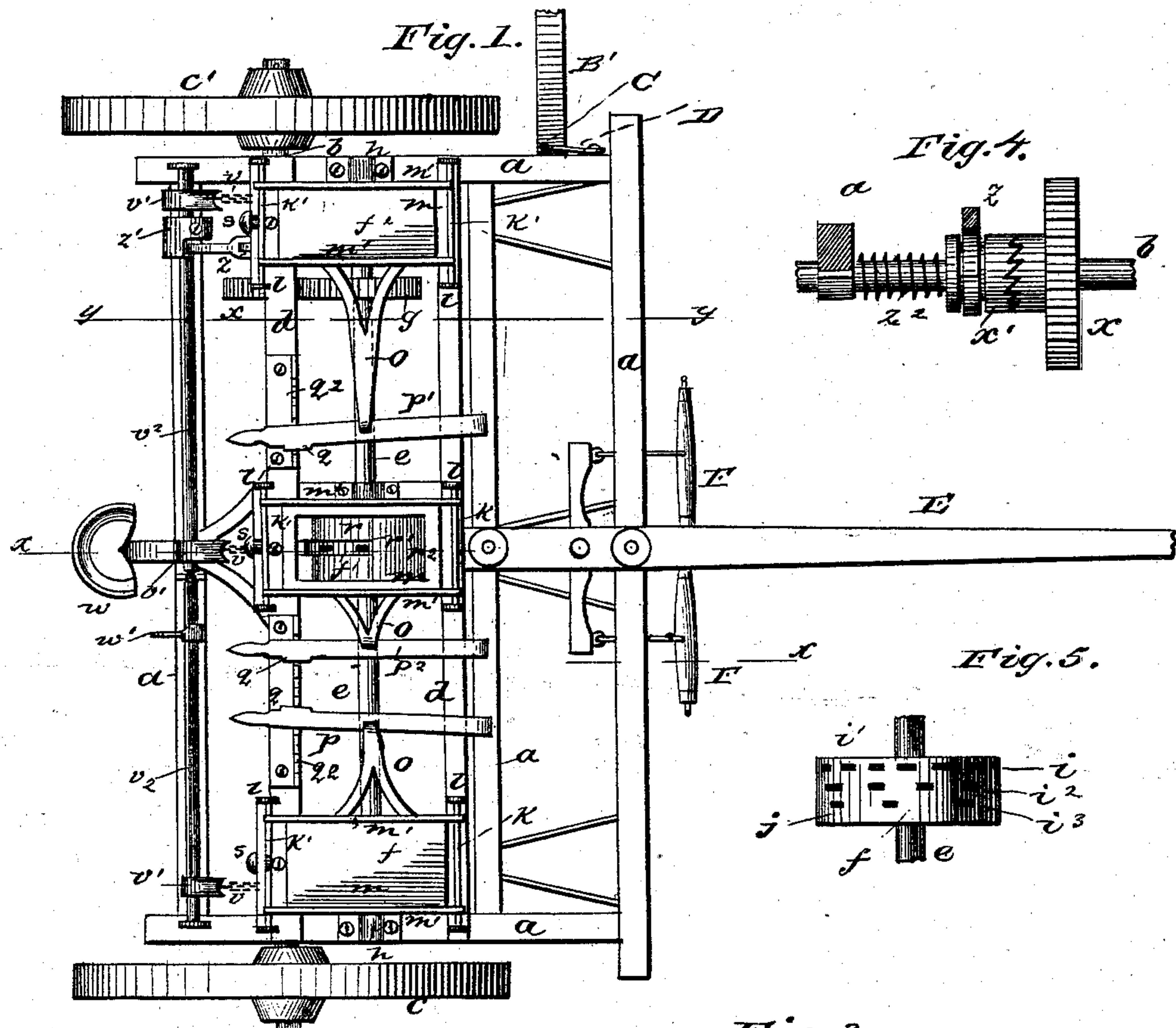
(No Model.)

J. D. ARRAS.

CORN DRILL.

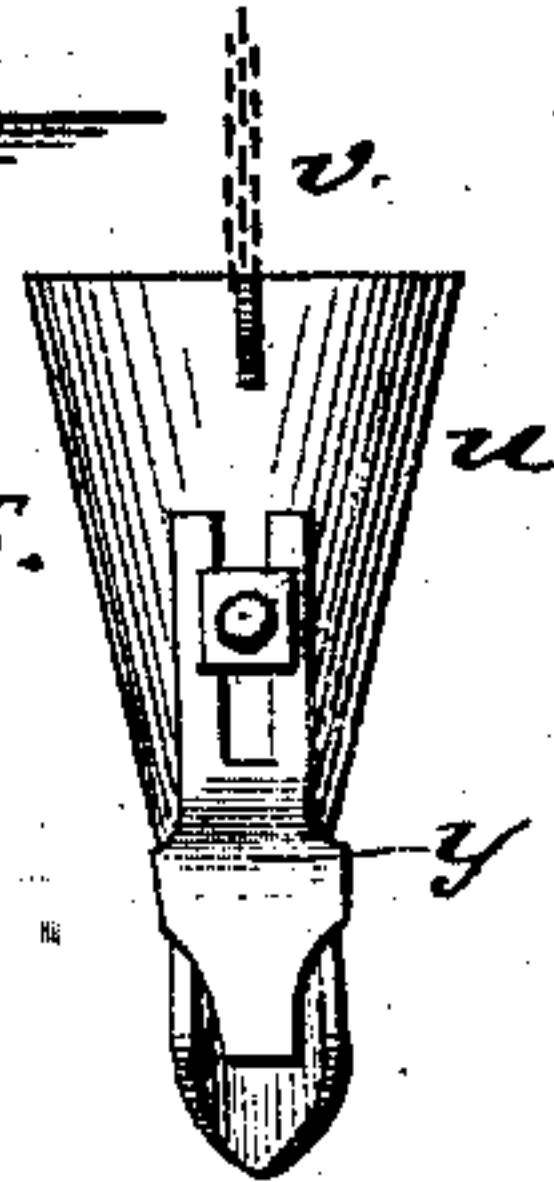
No. 282,433.

Patented July 31, 1883.



Witnesses:
Phil. C. Dietrich.
Wm. R. Keyworth.

Fig. 6.



Inventor:
John D. Arras.
By Theo. Mungen,
his Attorney

UNITED STATES PATENT OFFICE.

JOHN D. ARRAS, OF FINDLAY, ASSIGNOR OF ONE-HALF TO PETER D. ARRAS,
OF CANNONSBURG, OHIO.

CORN-DRILL.

SPECIFICATION forming part of Letters Patent No. 282,433, dated July 31, 1883.

Application filed December 26, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. ARRAS, a citizen of the United States of America, residing at Findlay, in the county of Hancock and State of Ohio, have invented certain new and useful Improvements in Corn-Drills, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a plan view. Fig. 2 is a vertical sectional view on the line $x x$. Fig. 3 is a vertical sectional view on the line $y y$. Figs. 4, 5, and 6 are detail views.

This invention has relation to corn-drills; and it consists in the novel construction and arrangement of parts, as will be hereinafter fully described, and particularly pointed out in the claims.

Referring by letter to the accompanying drawings, a designates the main frame of the drill; b , the axle, and $c c'$ the fixed and loose wheels, the latter being on the right end of the axle, as shown.

d designates the auxiliary frame, which supports the seed-boxes, racks, and adjusting-levers, hereinafter described.

e designates the shaft which carries the seed-wheels $f f' f^2$ and the gear-wheel g , and has its bearings in boxes h , at the ends of the main frame, in front and above the axle b . The peripheries of the seed or feed wheels $f f' f^2$ are divided into four circumferential divisions, the first division, i , of which is provided with seed-cups or indentations i' , spaced to receive and drop the grains of corn at distances of six inches apart. The divisions i^2 and i^3 , respectively, drop the corn at nine and twelve inches apart, and the division j is without indentations, and cuts the feed off entirely when the seed-boxes are properly shifted by their levers.

Guide-rods $k k'$ are supported in arms l , rising from the auxiliary frame d , in front and in rear of the feed-wheels $f f' f^2$, and the seed-boxes m are provided with bars m' , bolted to the sides thereof, having notches n in their ends to engage the rods $k k'$ and permit the seed-boxes m to be shifted to regulate or cut off the feed. Hinged arms o extend from the inner bars, m' , of the end seed-boxes and from the right-hand bar m' of the middle seed-box, and connect with pivoted levers $p p' p^2$, the rear ends of which are provided with flanges

q , which engage notches in the racks $q^2 q^3$, the latter having eight notches and the former four, the one serving for two levers and the other for one. The bottoms of the seed-boxes m are made concave to fit over the feed-wheels $f f' f^2$, and their sheet-metal bottoms r are provided with central slots, r' , extending rearward from an inclined shoulder, r^2 . An adjustable brush, s , is provided at the rearward extremities of the slots r' , a set-screw being employed to hold it in any desired fixed position. The object of the brush is to separate the grains of corn and prevent crowding as they pass to the seed-cups. In placing the seed-boxes upon the guide-rods $k k'$ a concave strip of tin is introduced between the bottoms of the seed-boxes and the peripheries of the feed-wheels temporarily until the bars m' have been bolted to the sides of the seed-boxes, after which the strip is withdrawn, the object being to so adjust the boxes as to leave sufficient space for the wheels to receive the corn and drop it. The drill-tubes t are secured to the rear rails of the auxiliary frame d in rear of the feed-wheels. The drill-teeth u are attached to draw-bars u' , pivoted to a rod, u^2 , having bearings in arms u^3 depending from the front rail of the main frame. The tops of the drill-teeth t have chain-connections v , with cam-levers v' upon a rock-shaft, v^2 , at the rear of the main frame. w designates the driver's seat, and within reach of it a lever, w' , is connected with the rock-shaft v^2 , for elevating and lowering the drill-teeth, and at the same time throwing the feeding devices in and out of gear. The gear-wheel g upon the shaft e meshes with a gear-wheel, x , upon the axle b , said gear-wheel x carrying one-half of a friction-clutch, the other half, x' , being sleeved upon the axle and grooved and provided with a pivoted lever, z , which engages a friction-cam, z' , upon the rock-shaft v^2 . A spiral spring, z^2 , encircles the axle and bears against the half x' of the friction-clutch, and serves to hold the sections in engagement when they are not thrown out by the friction-cam z' . The drill-teeth or hoes u are provided at the rear portions with adjustable coverers and smoothers or eveners y , which may be adjusted vertically to suit varying soils. Loops A depend from the end rails of the main frame for the recep-

tion of a jointed separable marker, B, one section, B', of which is perforated at C, to receive a pivoted hook, D, for holding the marker in place. The sections B B' have chains or other
5 dragging devices attached to their outer ends to mark the ground, so that the drilled rows may be equidistant. The seed-boxes have sliding covers, preferably; but others may be employed. E designates the tongue of the drill,
10 and F the whiffletrees.

A revolving feed-cylinder having seed-cavities with inclined bottoms has been used prior to my invention, and levers for raising the drill-teeth are also old. I claim only the specific constructions herein shown and described.
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Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a corn-drill, the feed-wheels having three cupped divisions and a plain division, 20 in combination with a seed-box having a slotted bottom, and slides and levers for lateral adjustments in connection with holding-racks, substantially as specified.

2. In a corn-drill, the combination of the 25 seed-boxes, guide-rods, notched bars, pivoted connections, adjusting-levers, and holding-racks, substantially as specified.

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

JOHN D. ARRAS.

Witnesses:

W. MUNGEN,
S. J. SIDDALL.