

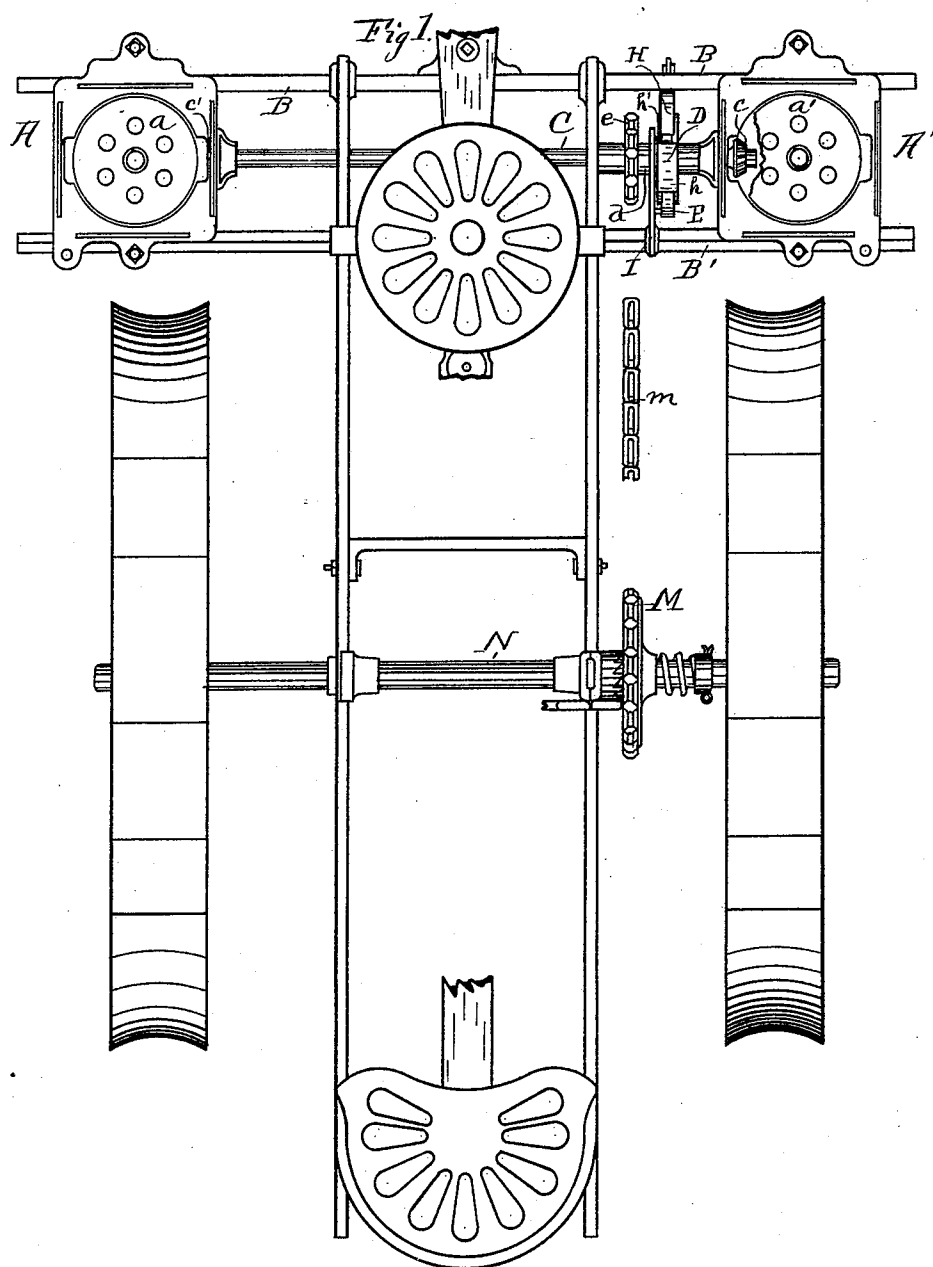
(No Model.)

2 Sheets—Sheet 1.

G. S. GUNDERSEN.
CLUTCH FOR CORN PLANTERS.

No. 538,371.

Patented Apr. 30, 1895.



WITNESSES:

Lester L. Allen.
N. J. Fiorini

INVENTOR

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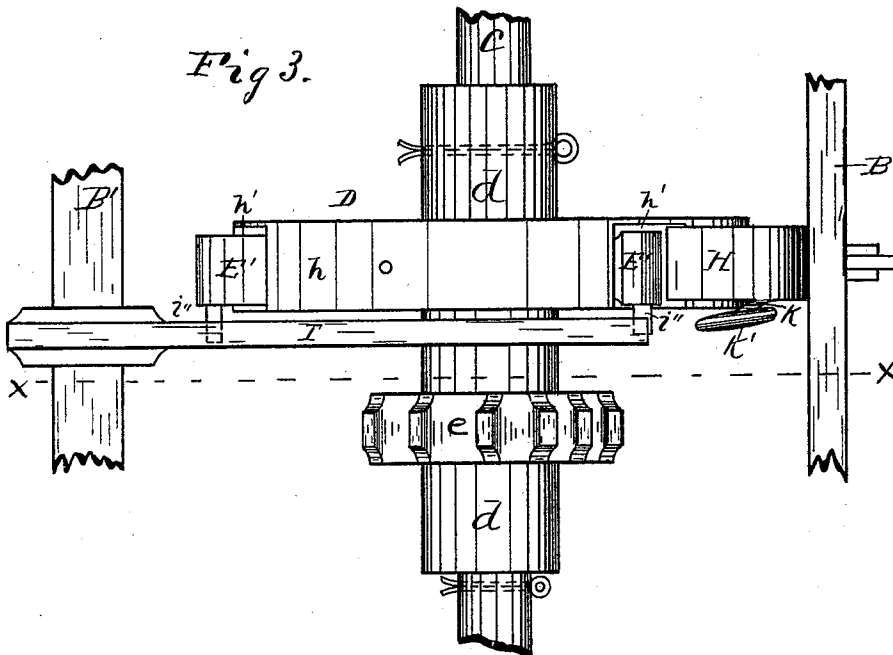
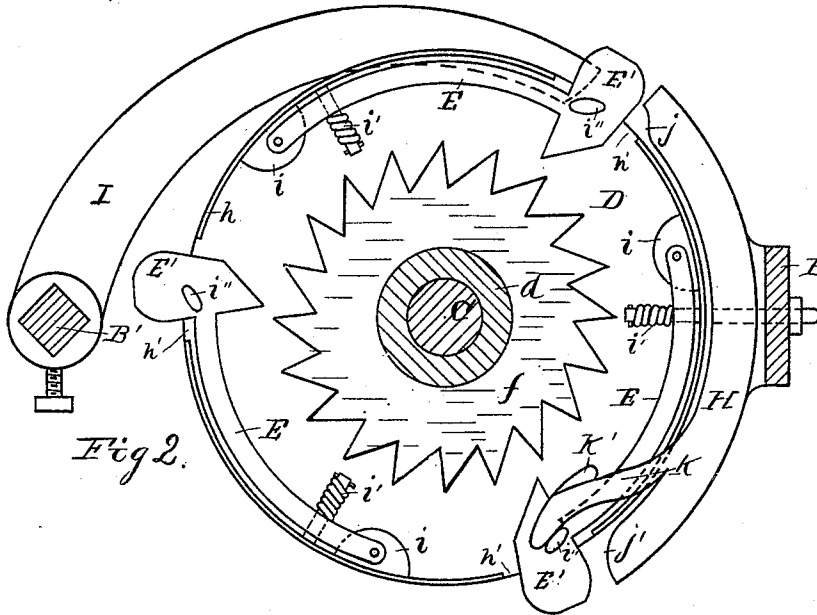
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UNITED STATES PATENT OFFICE.

GILBERT S. GUNDERSEN, OF DAYTON, OHIO.

CLUTCH FOR CORN-PLANTERS.

SPECIFICATION forming part of Letters Patent No. 538,371, dated April 30, 1895.

Application filed November 14, 1894. Serial No. 528,719. (No model.)

To all whom it may concern:

Be it known that I, GILBERT S. GUNDERSEN, of Dayton, county of Montgomery, State of Ohio, have invented a new and useful Improvement in Clutches; 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to new and useful improvements in clutches, and is especially adapted for corn-planting implements, having for its function the transmission of an intermittent rotary movement to the dropping plates that are located in the grain hoppers, as will be hereinafter described.

The object of the invention is to provide a clutch that is positive in its action, therefore will rotate the shaft upon which it is mounted a uniform extent each time that it is brought into operation.

As before stated, the clutch is especially designed for use on a corn-planter, and is located upon the shaft that is instrumental in turning the dropping-plates. Being a small part of the necessary mechanism of a machine of this class, I have only embodied enough of the machine in the drawings to illustrate the location of the clutch.

Referring to said drawings, Figure 1 is a plan view of the frame of a corn-planter having my improved ratchet-clutch attached. Fig. 2 is an enlarged sectional side elevation of the clutch detached on the line *xx*, Fig. 3. Fig. 3 is an enlarged top view of the clutch, the shafts broken away.

The same letters of reference indicate corresponding parts in the several views.

(*a*) and (*a'*) designate the dropping plates; the latter one broken away. These plates are located in the grain hoppers (*A*)—(*A'*) and have the usual openings through which the corn drops to the heels of the runners.

(*B*) and (*B'*) are parallel rails or bars; the latter of which is subjected to an intermittent movement by the buttons on the check wire, which it has not been deemed necessary to illustrate in the drawings, as the check wire

and buttons are well-known features of corn-planters.

(*C*) designates a shaft suitably journaled parallel with and between the rails or bars (*B*)—(*B'*), and has on its ends, bevel-gears (*c*)—(*c'*), that mesh with teeth on the lower face of the dropping-plates to rotate said plates.

The foregoing parts are common in corn-planters, therefore, I do not desire to confuse them with my invention, which consists in the following clutch devices.

(*d*) designates a sleeve.

(*e*) is a sprocket wheel and (*f*) a ratchet wheel both of which are integral parts of said sleeve, and are loosely mounted on the shaft (*C*).

(*D*) designates a circular plate having a circumferential flange (*h*), in which there are slots (*h'*). The ratchet wheel is inclosed in this plate which is keyed to the shaft (*C*).

(*E*) designates dogs of which there are three. These dogs are pivoted to lugs (*i*) projecting from the inner face of the plate (*D*) and are normally pressed against the flange (*h*) by springs (*i'*). The head or engaging portion (*E'*) of said dogs normally project through the slots (*h'*) in the flange (*h*) and has a cam lug (*i''*). These dogs at predetermined times, are made to engage with the ratchet wheel and released from said engagement by means presently described.

(*H*) designates a guide and stop bar, having inner cam surfaces (*j*) and (*j'*). This guide is bolted to the rail (*B*) that connects the runner in a position adjacent and concentric to the plate (*D*), so as to inclose a portion of the flange (*h*). When the heads *E'* of the dogs are in their normal position, projecting through the slots (*h'*), they serve as a lock or rigid stop against the rotation of the plate *D*, by any one of said dogs engaging with the upper end of the guide and stop *H*.

K designates an integral arm projecting from the guide and stop bar *H*, and is provided with a cam lug *K'* that projects into the path of the lugs (*i''*) on the head of the dogs, as said dogs are carried around by the plate *D*, and draws said dogs out of engagement with the ratchet wheel.

I designates a concentric arm rigidly

mounted on the bar B', and lying adjacent to the flange (h) of the plate D. It will be observed in Fig. 3 this arm projects over the cam lugs (i'') on the dogs. When the button on the check wire operates the bar B', the arm I moves against the lugs (i'') and presses the head of the dog inwardly against the cam surface (j) of the guide and stop H. As the plate D continues to rotate, the guide and stop H presses the dog into engagement with the ratchet wheel, and thereby the shaft C is turned until the dog so engaged, comes in contact with the cam lug (k') on the arm (k), when said dog is drawn down out of engagement with the ratchet wheel, and so on until the next dog is pressed under or is stopped by the guide and stop H. It will thus be seen that the shaft (C) is intermittently rotated by means of the above described mechanism, and the dropping plates turned to deliver the corn to the heels of the runners.

(m), Fig. 1, designates a portion of a sprocket chain by which motion is conveyed to the wheel (e) from the driving wheel (M) which is keyed to the axle (N) of the ground wheels.

Having described my invention, I claim—

1. In a corn planter, the combination with the shaft (C) provided with bevel gears; and

the dropping plates rotated by said gears; of a ratchet clutch mounted on the shaft C; a guide and stop H; and an arm I mounted adjacent to said clutch to effect an engagement of the clutch devices to intermittently rotate the shaft C, and dropping plates; the guide and stop H, also serving to check the movement of the clutch devices, substantially as described.

2. In a corn planter, the combination with the dropping plates, and the shaft C; of a plate D; dogs E provided with heads E', pivotally mounted on said plate; a guide and stop bar H provided with cam surfaces, mounted in the path of said dogs, and adapted to guide said dogs inwardly, or to arrest their travel and thereby stop the movement of the plate; a ratchet wheel and a sprocket wheel on an integral sleeve; said ratchet wheel adjacent to the plate; and an arm I, mounted on the bar B', substantially as described.

In testimony whereof I have hereunto set my hand this 29th day of October, 1894.

GILBERT S. GUNDERSEN.

Witnesses:

R. J. MCCARTY,
LESTER L. ALLEN.