

F. G. STITCHMAN.

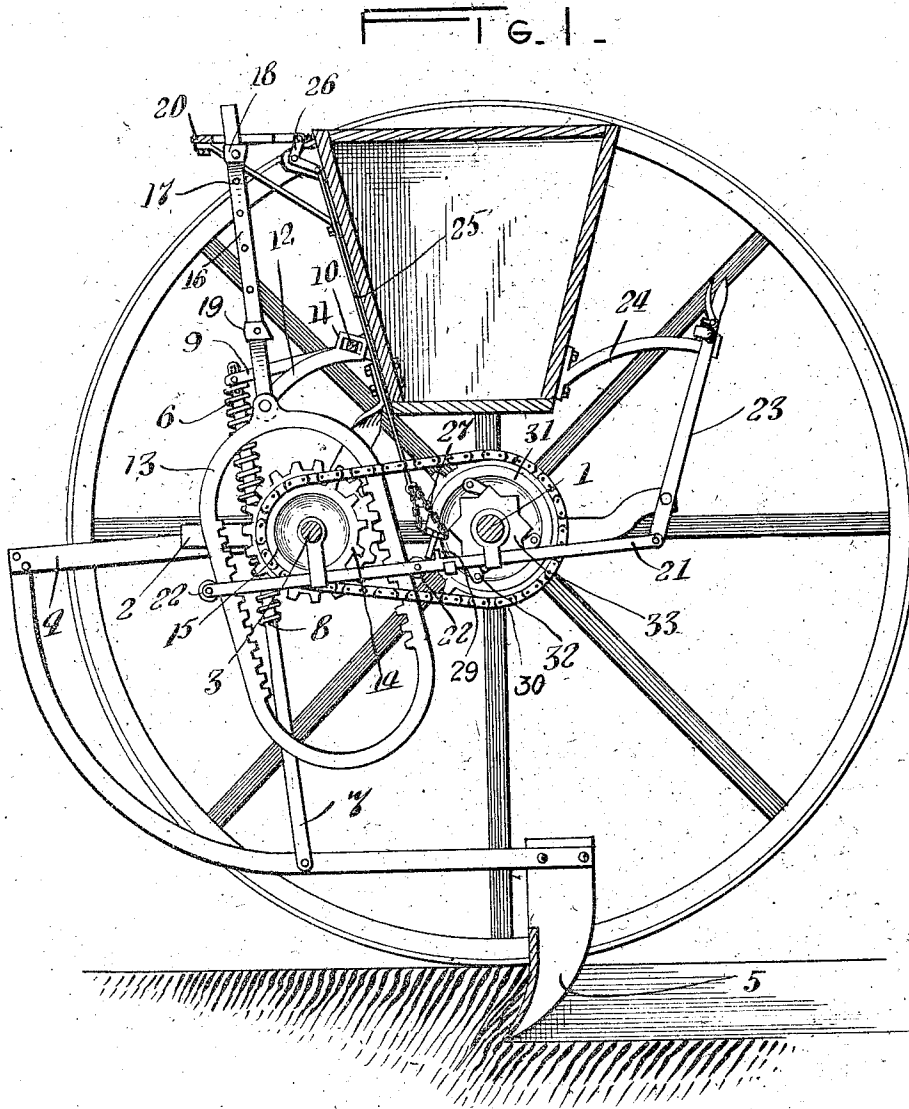
SEEDER.

APPLICATION FILED NOV. 28, 1908.

953,929.

Patented Apr. 5, 1910.

2 SHEETS—SHEET 1.



Witnesses:

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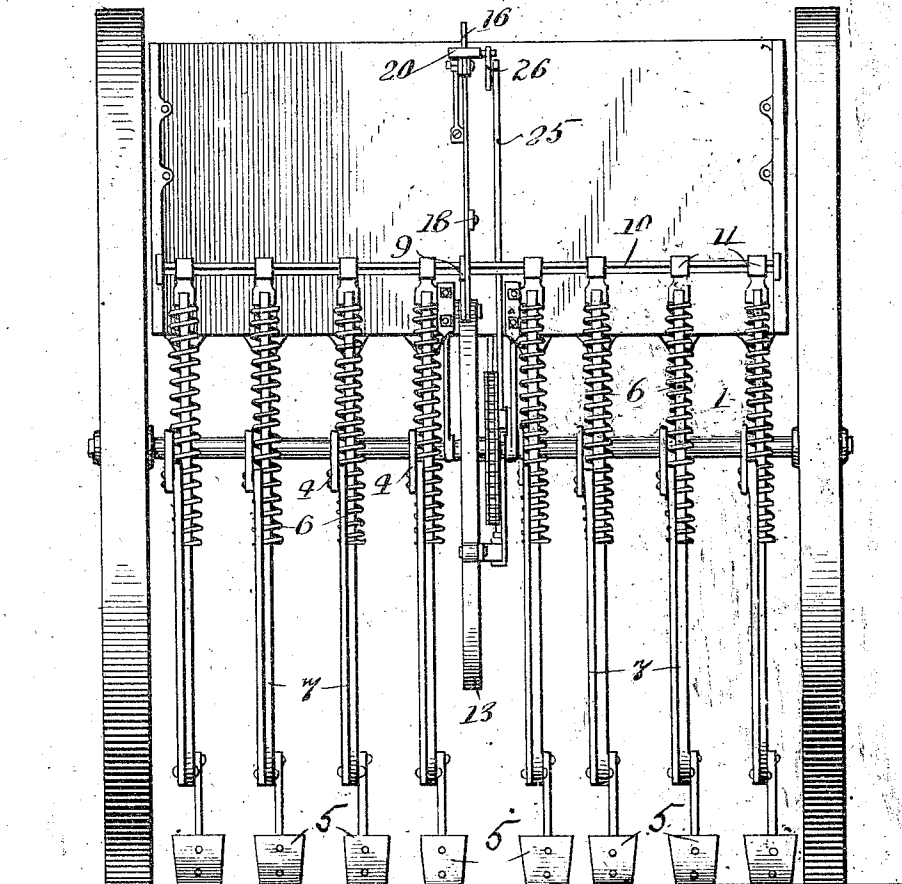


FIG. 2.

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UNITED STATES PATENT OFFICE.

FREDERICK G. STITCHMAN, OF ESTEVAN, SASKATCHEWAN, CANADA, ASSIGNOR TO LA CROSSE PLOW COMPANY, OF LA CROSSE, WISCONSIN.

SEEDER.

953,929.

Specification of Letters Patent.

Patented Apr. 5, 1910.

Application filed November 28, 1908. Serial No. 464,929.

To all whom it may concern:

Be it known that I, FREDERICK G. STITCHMAN, a subject of the King of Great Britain, residing at Estevan, county of Estevan, in the Province of Saskatchewan, Canada, have invented certain new and useful Improvements in Seeders; and I do hereby declare that the following is 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.

The invention to be hereinafter described relates to seeders, and more particularly to mechanism for raising and lowering the drills of the seeder and for keeping them in one or the other of such positions. Broadly speaking, it comprises an operating shaft parallel with the vehicle axle, connections between the axle and operating shaft for driving the shaft, a gear carried by the operating shaft, a rack adapted to mesh with the gear, movably mounted frames adapted to support the drills, a rock shaft, connections between the rack and the rock shaft for operating the rack, and means for moving the rack into and out of engagement with the gear.

In order to enable one skilled in the art to which the invention relates to the more readily understand the construction, operation and use of the same, reference should be had to the accompanying drawings forming part of the application.

Throughout the several views of the drawings, like reference characters designate the same parts.

In the drawings: Figure 1 is a vertical cross section of a seeder, showing the application of the same; and, Fig. 2 is a front view of the same seeder.

Referring to the drawings in detail, 1 indicates the usual axle for supporting the several parts of the machine mounted on the usual bearing wheels. On this axle are pivotally mounted beams 2, in which is journaled the operating shaft 3 of the machine. From the axle are also pivotally suspended frames 4, which carry the drills 5. The drills are normally depressed to operative position by means of a coil spring 6. This spring is disposed about a rod 7, which is pivotally connected to the frame 4 and is confined between a pin 8 on the rod and the arm 9 of a rock shaft 10, the arm 9 being slidably connected to the upper end of the

rod 7. The rock shaft 10 is journaled in suitable bearings on the seeder box, and is squared to fit a socket 11 of an arm 12, which is pivotally connected to a reciprocating interiorly toothed yoke 13. The teeth on this yoke are disposed on opposite sides, and are adapted to be selectively engaged by a cog wheel 14, loose on the shaft 3, the cog being driven by a sprocket 15 fast thereto. The yoke 13 and cog 14 are so proportioned, constructed and disposed that the cog may be moved to such intermediate position between the two sides of the yoke as to be completely free. Furthermore, both ends of the yoke are free of teeth, so that when in raised or lowered position, the yoke will not be engaged by the cog. Movement of the yoke, of course, effects movement of the drills, through the connections 7, 9, 10, 11 and 12.

It is desirable to lock the drills in raised or lowered position when they have been adjusted. To this end, a spring catch device is provided. The catch device comprises a bar 16 pivotally connected to the yoke 13 and provided with a plurality of perforations 17. On this bar are adjustably secured, as by means of pins passing into the perforations 17, an upper and a lower catch 18 and 19 respectively. The upper free end of the bar 16 passes through a horizontally sliding link 20, the rear edge of which is adapted to be engaged by the catches 18 and 19. Engagement of the catch 18 with the edge of the link 20 holds the yoke 13 and drills lowered, while engagement of the catch 19 with the edge of the link 20 holds them raised. The amount of vertical adjustment of the drills may be regulated, of course, by simply adjusting the catches to various points along the bar 16.

In order to swing the yoke 13 to such position that its teeth will be engaged by the cog 14, a lever-operated shifting rod 21 is provided, and is adapted to slide longitudinally through brackets depending from the axle 1 and shaft 3 respectively. This rod is provided with two rollers 22, which engage the front and rear of the yoke respectively. To the rear end of the shifting rod is pivoted the lower end of a hand lever 23, the upper end of which rides freely over an arc 24, for a limited distance.

It is necessary, of course, to free the edge of the link 20 from the catches 18 and 19

mounted on the bar 16 before engaging the teeth of the yoke 13 with the cog 14. In order to effect the release of the catches and the cooperating link simultaneously with the intermeshing of the yoke and cog, a trip device has been provided, which comprises a slide 25 mounted on the seed box and connected at its opposite ends respectively to a spring-pressed bell crank lever 26 and a T lever 27. The opposite sides of the head of the T lever 27 are connected by their chains 28 to the slide 25. The long arm of the T lever is disposed in the path of a stud 29 on the shifting rod 21, and is adapted to be engaged thereby as the rod is reciprocated. In this manner, the link edge may be freed from the catches each time the yoke is moved to engage its cog.

In order to drive the cog 14, a sprocket chain 30 passes over the sprocket 15 and over a second sprocket 31, which is clutched to the axle 1 for forward drive only by the one-way pawl and ratchet clutch 32 and 33.

It is thought that the operation of the machine will be clear from the preceding detailed description.

Changes may be made in the construction, arrangement and disposition of the several parts, without in any way departing from the field and scope of the invention, and it is meant to include all such within this application, wherein only a preferred form has been shown and described.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. A machine of the character described, comprising an axle, a frame mounted thereon, drill frames pivotally suspended from said axle, a reciprocable yoke, means for reciprocating said yoke, a rock bar, connection between said rock bar and yoke, and connections between said rock bar and each of the aforesaid drill frames.

2. A machine of the character described, comprising an axle, drill frames movably suspended therefrom, a reciprocable yoke, means for reciprocating said yoke, a rock bar, connections between said rock bar and yoke, connections between said rock bar and the aforesaid frame, and means for holding said yoke in its extreme positions.

3. A machine of the character described, comprising an axle, drill frames movably suspended therefrom, a reciprocable yoke, means for reciprocating said yoke, a rock bar, connections between said rock bar and yoke, yielding connections between said rock

bar and the aforesaid frame, and means for holding said yoke in its extreme position.

4. A machine of the character described, comprising an axle, drill frames movably suspended therefrom, a reciprocable yoke, means for reciprocating said yoke, a rock bar, connections between said rock bar and yoke, connections between said rock bar and the aforesaid frame, and trip controlled means for holding said yoke in its extreme positions.

5. A machine of the character described, comprising an axle, drill frames movably suspended therefrom, a toothed reciprocable yoke, a gear for operating said yoke, means for intermeshing said gear and yoke, a rock bar, connections between said rock bar and said yoke, and connections between said rock bar and the aforesaid drill frames.

6. A machine of the character described, comprising an axle, drill frames movably suspended therefrom, a toothed reciprocable yoke, a gear for operating said yoke, means for intermeshing said gear and yoke, a rock bar, connections between said rock bar and said yoke, connections between said rock bar and the aforesaid drill frames, and means for holding said yoke in its extreme positions.

7. A machine of the character described, comprising an axle, drill frames movably suspended therefrom, a reciprocable yoke, means for reciprocating said yoke, a rock bar, connections between said rock bar and yoke, connections between said rock bar and the aforesaid frame, and automatically operated means for holding said yoke in its extreme positions.

8. A machine of the character described, comprising an axle, drill frames movably suspended therefrom, a toothed reciprocable yoke, a gear for operating said yoke, means for intermeshing said gear and yoke, a rock bar, connections between said rock bar and said yoke, connections between said rock bar and the aforesaid drill frames, and connections between said means for intermeshing said gear and yoke and said means for holding said yoke in its extreme positions, whereby the holding means is operated by the intermeshing means.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

FREDERICK G. STITCHMAN.

Witnesses:

J. G. PETERSON,
M. J. PIERCE.