L. E. WATERMAN.

CORN PLANTER.

APPLICATION FILED OCT. 3, 1908.

928,293.

Patented July 20, 1909.

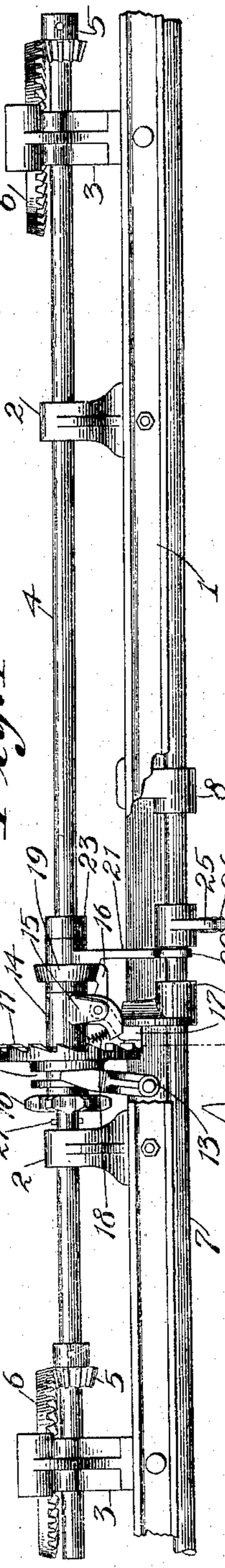

Fig. 1

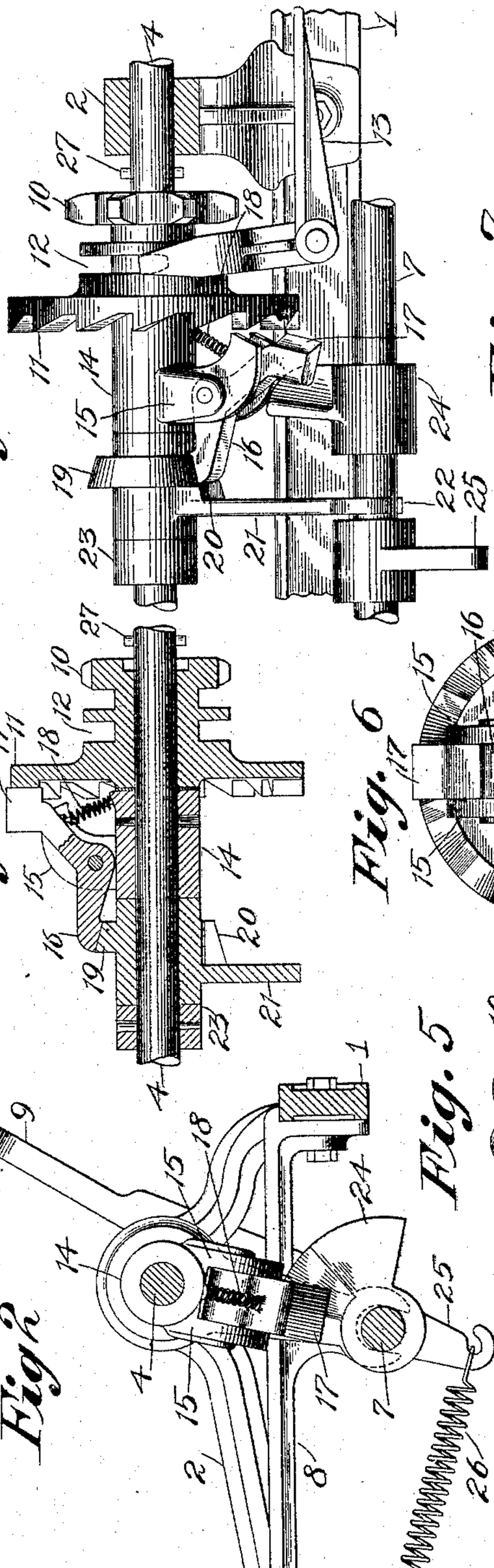

Fig. 4

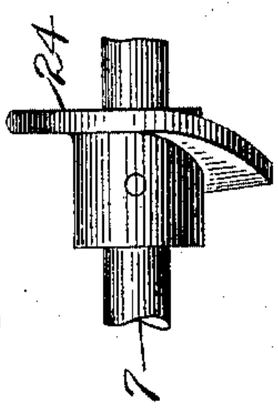

Fig. 7

Fig. 3

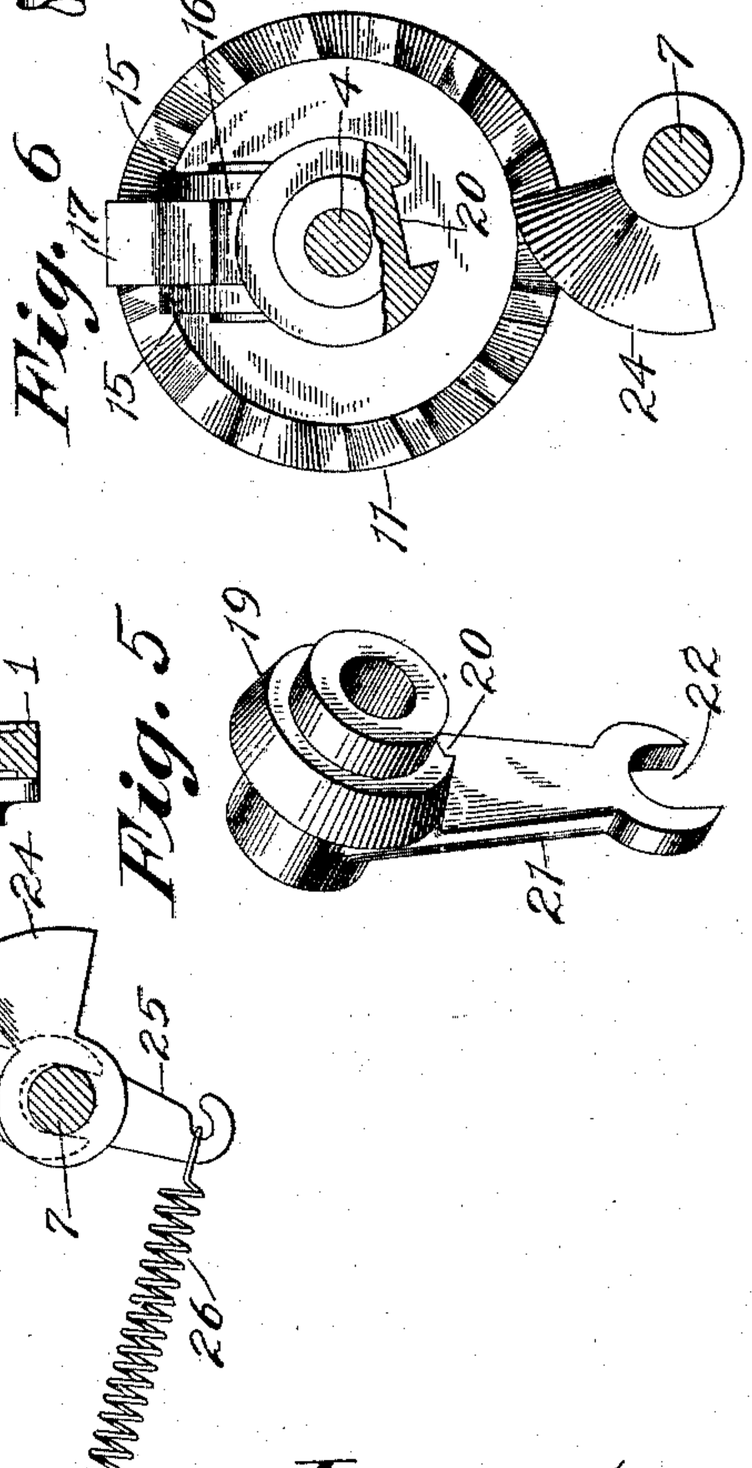

Fig. 6

Fig. 5

Fig. 2

Witnesses:
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UNITED STATES PATENT OFFICE.

LEWIS E. WATERMAN, OF ROCKFORD, ILLINOIS, ASSIGNOR TO EMERSON MANUFACTURING COMPANY, OF ROCKFORD, ILLINOIS, A CORPORATION OF ILLINOIS.

CORN-PLANTER.

No. 928,293. Specification of Letters Patent. Patented July 20, 1909.

Application filed October 3, 1908. Serial No. 455,972.

To all whom it may concern:

Be it known that I, LEWIS E. WATERMAN, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Corn-Planters, of which the following is a specification.

The object of this invention is to construct a clutch for operating the seed dropping mechanism of corn planters.

In the accompanying drawings, Figure 1 is an elevation of the front portion of the furrow opener frame of a corn planter showing my improvements in connection therewith. Fig. 2 is a transverse section of the furrow opener frame on dotted line *a a* Fig. 1. Fig. 3 is a lengthwise vertical section through the operative parts. Fig. 4 is an elevation of the clutch. Fig. 5 is an isometrical representation of the stationary cam. Fig. 6 is a transverse section of the shaft 4 and rock-shaft 7 in which the lower portion of the stationary cam is broken away. Fig. 7 is a top view of the movable cam.

The frame of the furrow opener is of the usual construction and comprises the side-bars 1 connected by the cross braces 2. The braces 2 in connection with the cross-bars 3 support a shaft 4. To this shaft are secured beveled pinions 5 which mesh with the beveled gears 6 which drive the seed dropping mechanism in any suitable manner. A rock-shaft 7 is supported in the bracket 8 connecting the side bars 1, and in end brackets not shown. This rock-shaft is oscillated by the tappet levers 9 one located in connection with each end of the rock-shaft in the ordinary manner.

On the shaft 4 is loosely mounted a combined sprocket wheel 10 and ratchet wheel 11. An annular groove 12 is formed between the sprocket wheel and ratchet wheel. A shipping lever 13 has a fork located in the annular groove 12 and by means of this lever the combined sprocket wheel and ratchet wheel are moved along the shaft 4 for a purpose to appear hereinafter. To the shaft 4 is pinned a collar 14 from which extends two ears 15, between which is pivoted a bell crank composed of the branches 16 and 17. A spring 18 is located between the collar 14 and the branch 17 of the bell crank. On the shaft 4 is loosely mounted a stationary cam 19 having a notch 20 in its face, and from the lower face of this stationary cam extends an arm 21 having its lower end 22 forked and which receives the rock-shaft 7 thereby holding the stationary cam from turning on the shaft 4, as the shaft is being rotated. A collar 23 is pinned to the shaft 4 and is located against the stationary cam which in connection with the collar 14 will hold the stationary cam against lengthwise movement on the shaft 4.

To the rock-shaft 7 is pinned a movable cam 24, and to this rock-shaft is also pinned an arm 25 which has a spring 26 connecting it with one of the side bars 1 of the furrow opener frame.

The sprocket wheel 10 is intended to connect by a suitable chain with the carrying wheels of the planter which will impart a continuous rotary movement to the ratchet wheel 11 independent of the rotations of the shaft 4.

The tappet lever 9 is oscillated by coming in contact with the knobs on a check wire, and when released therefrom the spring 26 will return it to its starting position. The rock-shaft 7 will be oscillated during the movement of the tappet lever which will carry the movable cam 24 against the branch 17 of the bell-crank and force it into engagement with the teeth of the ratchet wheel 11 and will hold it there until the partial rotation of the ratchet wheel has carried the branch 16 of the bell crank free of the notch 20 in the stationary cam 19 when it will move free of the movable cam and the end of the branch 16 of the bell crank will ride on the periphery of the stationary cam 19. The further rotation of the ratchet wheel 11 will carry the bell-crank with it, and as the bell-crank is pinned to the shaft 4, this shaft will be given a complete rotation, which will bring the branch 16 of the bell-crank into the notch 20 of the stationary cam 19 thereby allowing the spring 18 to force the branch 17 of the bell-crank free of the ratchet wheel 11 thereby stopping the rotation of the shaft 4. The complete rotation of the shaft 4 will through the gears 5 and 6 move the seed dropping mechanism sufficiently to drop the proper number of kernels of corn for a hill.

By means of the shipping lever 13 the combined sprocket wheel 10 and ratchet wheel 11 are moved into engagement with the pin 27 thereby forming a connection

between the combined wheels and the shaft 4 which will continuously rotate the shaft 4 and operate the seed dropping mechanism for drilling corn.

I claim as my invention.

In a corn planter seed dropping mechanism, the combination of a revolving shaft for imparting movement to the seed dropping mechanism, a ratchet wheel loosely mounted on the shaft and capable of a driving connection with the supporting wheels, a pivoted bell-crank dog movable with the shaft, a stationary cylindrical surface provided with a peripheral notch, a movable cam engaging one arm of the bell-crank dog and moving it into engagement with the ratchet wheel, and withdrawing the other arm of the bell-crank dog out of the peripheral notch and permitting it to ride on the periphery of the cylindrical surface.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LEWIS E. WATERMAN.

Witnesses:
A. O. BEHEL,
E. D. E. N. BEHEL.