2 Sheets—Sheet 1.

A. J. WEST.

Seed-Planter.

No. 205,020. Patented June 18, 1878.

Fig. 1.

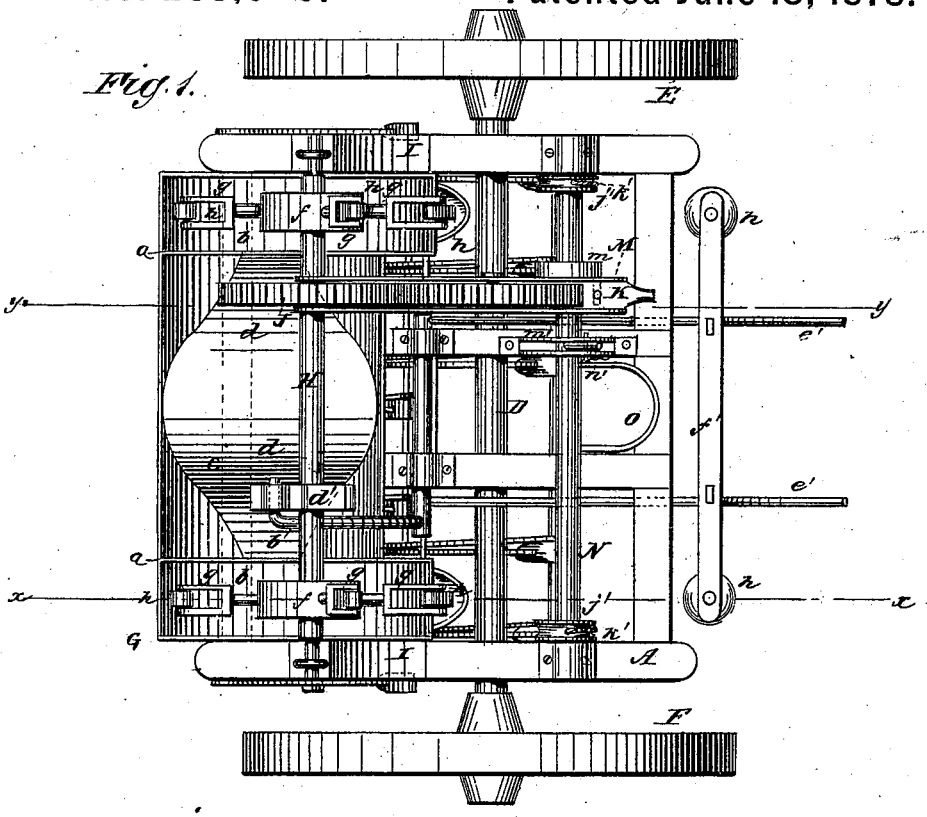
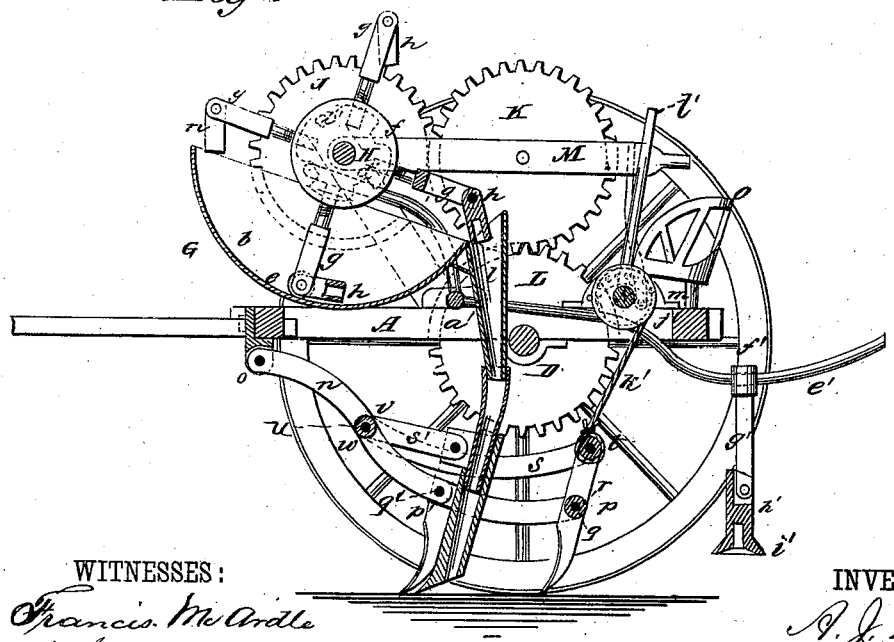


Fig. 2



WITNESSES:

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C. Sedgwick

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Fig. 3.

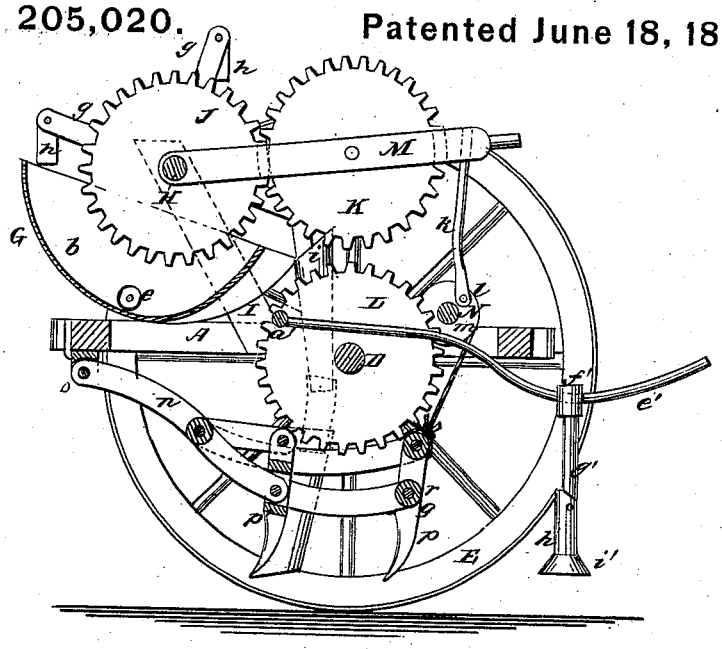
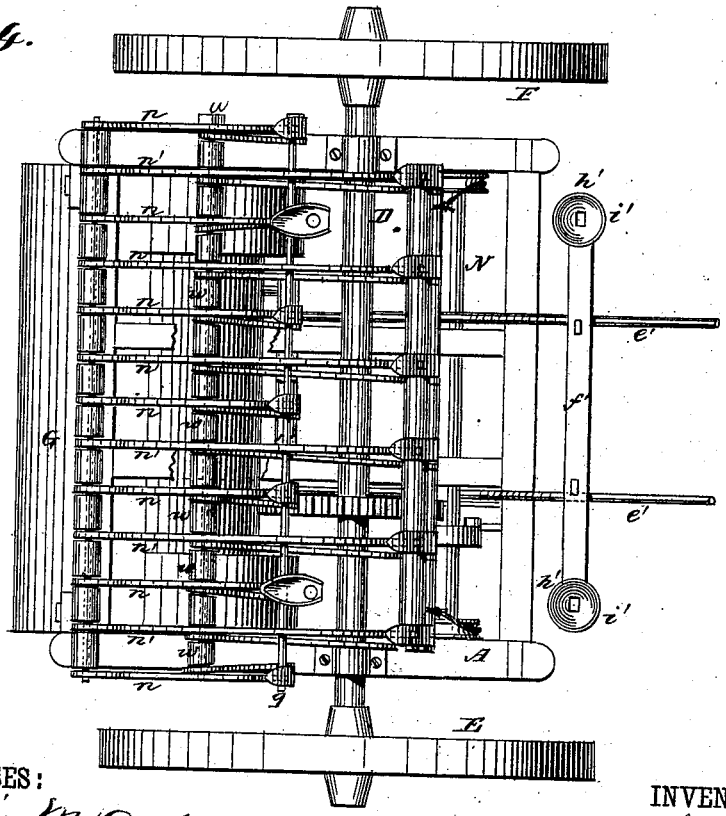


Fig. 4.



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UNITED STATES PATENT OFFICE.

ARNOLD J. WEST, OF WEST'S MILLS, MICHIGAN.

IMPROVEMENT IN SEED-PLANTERS.

Specification forming part of Letters Patent No. **205,020**, dated June 18, 1878; application filed April 6, 1878.

To all whom it may concern:

Be it known that I, ARNOLD J. WEST, of West's Mills, in the county of Saginaw and State of Michigan, have invented a new and Improved Seed-Planter, of which the following is a specification:

Figure 1 is a plan view of my improved seed-planter. Fig. 2 is a vertical transverse section taken on line *x x* in Fig. 1. Fig. 3 is a vertical transverse section taken on line *y y* in Fig 1. Fig. 4 is an inverted plan view.

Similar letters of reference indicate corresponding parts.

The invention will first be described in connection with the drawing, and then pointed out in the claims.

Referring to the drawing, A is the frame, which supports all of the working parts of the machine, and is itself supported by an axle, D, upon which wheels E F are placed. The wheel E is loose on the axle, and the wheel F is secured to it for imparting motion to the axle and driving the moving parts of the machine.

A semi-cylindrical seed-box, G, is mounted on the frame A, and is divided by two partitions, *a*, into three compartments, *b b c*. The middle compartment *c* is provided with a chute, *d*, which inclines from the center downward toward the end compartments *b b*, and the compartment *c* communicates with the compartments *b* through the small apertures *e* in the partitions *a*, near the bottom of the seed-box.

Above the semi-cylindrical seed-box, and concentric therewith, a shaft, H, is journaled in standards I, that project from the frame A. Upon the said shaft there are two bosses, *f*, one over each compartment *b*, and into each boss four equidistant bifurcated radial arms, *g*, are screwed. These arms nearly touch the curved sides of the seed-box G, and in their forked outer ends buckets *h* are pivoted. The pivots on which the buckets swing extend across the bottom of the buckets, so that the buckets assume a vertical position, except when they dip into the compartments *b*, when they follow the curved inner surface of the seed-box. Seeds placed in the middle compartment *c* pass through the holes *e* into the compartments *b*, and partly fill them.

The buckets *h*, as they are rotated, dip the seed from the seed-boxes and carry it to the funnels *i*, secured to the rear side of the seed-box. The buckets, as they pass over the edge of the seed-box, are inverted over the funnel, thereby emptying every particle of seed.

A spur-wheel, J, is secured to the shaft H, and takes its motion through an intermediate wheel, K, from the spur-wheel L on the axle D. The wheel K is journaled in a swinging frame, M, which swings on the shaft H, and is raised or lowered by turning the rock-shaft N, the said frame being connected by a rod, *k*, with a stud, *l*, that projects from the side of the disk *m* on the shaft N.

Below the frame A there are two series of curved bars, *n n'*. These curved bars are pivoted between ears *o*, that project downward from the front bar of the frame A. The curved bars *n* are shorter than the bars *n'*, and the long and short bars are arranged in alternation.

To the rear ends of the longer curved bars cultivator-teeth *p* are secured. The said teeth are mortised near the middle to receive the ends of the bars, and are drilled transversely to receive a rod or long bolt, *q*, which passes through all of the cultivator-teeth and through the bars *n'*, and also through thimbles *r*, placed between the teeth. The upper ends of the teeth are braced by curved braces *s*, which receive the rod *t*, that passes through the upper ends of the teeth *p*, and are secured to the arms *u* by the rod *v*, which passes through the whole series of bars and braces, and the pairs of rods and braces are kept a proper distance apart by thimbles *w*.

The teeth *p'* are mortised and secured to the short curved bars *n* by means of the rod *q'*, which passes through all of the teeth *p'*, and also through the curved bars *n'*. These teeth are further secured by braces *s'*, which are received by the rod. Two of the forward set of teeth *p'* are hollow, or of drill-tooth form, and are located immediately below the funnels *i*, so that they receive the seed discharged into the said funnel and deliver it to a furrow formed by the drill-tooth. The drill-teeth are provided with a double share, which raises the earth and allows it to drop back into the furrow and cover the seed.

A rock-shaft, *a'*, which is journaled in boxes

on the frame A, has an arm, b', that is engaged by a cam, d', on the shaft H. The rock-shaft a' is also provided with two rearwardly-projecting arms, e'. A cross-bar, f', is supported by these arms, and arms g' project downward from the ends of the bar f' to receive the markers or tampers h', which are jointed to the said arms g'. These markers have circular feet i', which press upon the earth over the corn to insure the perfect covering of the hill and to form a mark which indicates the location of the hill.

The joints by which the markers h' are connected with the arms g' are shouldered, so that the markers can swing only in one direction, the object of swinging being to allow the marker to free itself from the hill immediately on making the mark, so that dragging and scraping of the earth are avoided.

The rock-shaft N is provided with two sheaves, j, one at each end, for receiving chains or ropes k', which are attached to the rod that connects the braces s and the teeth p. The shaft N is also provided with a lever, l', which moves between two curved bars, m', attached to the frame A. There are holes through the curved bars and also through the lever, to receive a pin, n', which holds the lever in any required position.

By means of this device the drill and cultivator teeth may be adjusted to any height.

The planter is provided with an ordinary driver's seat, O, and is provided with a tongue, by which it may be drawn forward. It plants the seed regularly and covers it well, leaving the soil in good condition.

By increasing the number of compartments b, bucket-arms g, and drill-teeth, the machine may be adapted to the planting of different kinds of seeds.

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

1. The alternating short and long bars n n', provided with teeth p, in combination with rods q' t and braces s s', as and for the purpose set forth.

2. The two shafts a' H, the former having arms b' e', and the latter a cam, d', in combination with the cross-bar f', arms g', and tampers h' i', as and for the purpose specified.

ARNOLD J. WEST.

Witnesses:
J. W. ROBINSON,
MARGARET LEWIS.