

Title (en)

AERODYNAMIC AND CENTRIFUGAL SEED ORIENTATION SYSTEM FOR AGRICULTURAL PLANTERS

Title (de)

AERODYNAMISCHES UND ZENTRIFUGALES SAMENORIENTIERUNGSSYSTEM FÜR LANDWIRTSCHAFTLICHE PFLANZMASCHINEN

Title (fr)

SYSTÈME D'ORIENTATION DE GRAINES AÉRODYNAMIQUE ET CENTRIFUGE POUR PLANTEUSES AGRICOLES

Publication

**EP 4376586 A1 20240605 (EN)**

Application

**EP 22747126 A 20220707**

Priority

- US 202117387778 A 20210728
- IB 2022056294 W 20220707

Abstract (en)

[origin: WO2023007284A1] A seed orientation coil assembly (240) is configured to receive randomly oriented seeds (28) from an agricultural row planter and move the seeds through a curved pathway defining a curved seed riding surface (292). An air stream is created by injecting air through air injector nozzles (264) onto the curved seed riding surface, and air is removed by venting air through an air vent (268) radially inward from the curved seed riding surface. The seed is stabilized, aligned, and entrained in the air stream using some combination of aerodynamics, centrifugal force, and path geometry. A seed exit (244) is configured to discharge into a wedge-shaped furrow, detaining the seed from the air stream and wedging the seed in the furrow before being covered by a closing wheel, thereby planting the aligned seed into the soil while achieving tip-down seed orientation with the germ facing an adjacent row.

IPC 8 full level

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CPC (source: EP)

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