

# CPC COOPERATIVE PATENT CLASSIFICATION

## A HUMAN NECESSITIES

### AGRICULTURE

#### A01 AGRICULTURE; FORESTRY; ANIMAL HUSBANDRY; HUNTING; TRAPPING; FISHING

#### A01C PLANTING; SOWING; FERTILISING (combined with general working of soil [A01B 49/04](#); parts, details or accessories of agricultural machines or implements, in general [A01B 51/00](#) - [A01B 75/00](#); {apparatus for spreading sand or salt [E01C](#); sowing and fertilising with aircraft [B64D 1/16](#) - [B64D 1/20](#)})

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| <p><b>1/00</b> Apparatus, or methods of use thereof, for testing or treating seed, roots, or the like, prior to sowing or planting (chemicals therefor <a href="#">A01N 25/00</a> - <a href="#">A01N 65/00</a> {irradiation in general <a href="#">B01J 19/08</a>})</p> <p>1/005 . {Potato seed cutters}</p> <p>1/02 . Germinating apparatus; Determining germination capacity of seeds or the like (germinating in preparation of malt <a href="#">C12C 1/027</a>)</p> <p>1/025 . . {Testing seeds for determining their viability or germination capacity}</p> <p>1/04 . Arranging seeds on carriers, e.g. on tapes, on cords {Carrier compositions}</p> <p>1/042 . . {Tapes, bands or cords}</p> <p>1/044 . . {Sheets, multiple sheets or mats}</p> <p>1/046 . . {Carrier compositions}</p> <p>2001/048 . . {Machines}</p> <p>1/06 . Coating or dressing seed ({encapsulated embryos or artificial seeds <a href="#">A01H 4/006</a>; seed coating compositions <a href="#">C09D</a>})</p> <p>1/08 . Immunising seed</p> <p><b>3/00</b> Treating manure; Manuring ({ploughs with additional arrangements for putting manure under the soil <a href="#">A01B 17/002</a>}; dung forks <a href="#">A01D 9/00</a>}; treating of waste water, sewage or sludge <a href="#">C02F</a> organic fertilisers from waste or refuse <a href="#">C05F</a>)</p> <p>3/02 . Storage places for manure, e.g. cisterns for liquid manure; Installations for fermenting manure (sewerage structures <a href="#">E03F 5/00</a>; silos, bunkers <a href="#">E04H 7/22</a>)</p> <p>3/021 . . {for composted manure}</p> <p>3/023 . . {Digesters}</p> <p>3/025 . . {with heat recuperation means}</p> <p>3/026 . . {with mixing or agitating devices}</p> <p>3/028 . . {Covers, roofs or other structures for covering manure storage places (production of methane or biogas <a href="#">C02F 11/04</a>; coverings for swimming or splash baths or pools <a href="#">E04H 4/10</a>})</p> <p>3/04 . Manure loaders (loaders in general <a href="#">B65G</a>)</p> <p>3/06 . Manure distributors, e.g. dung distributors</p> <p>3/063 . . {Side-spreaders}</p> <p>3/066 . . {Spreading by using worm or screw conveyors}</p> <p>3/08 . . for manure already laying on the soil</p> | <p><b>5/00</b> Making or covering furrows or holes for sowing, planting or manuring</p> <p>5/02 . Hand tools for making holes for sowing, planting or manuring (transplanting devices for trees <a href="#">A01G 23/02</a>)</p> <p>5/04 . Machines for making or covering holes for sowing or planting</p> <p>5/045 . . {with piercing buckets (devices for laying-out or removing protective coverings for plants <a href="#">A01G 13/02</a>})</p> <p>5/06 . Machines for making or covering drills or furrows for sowing or planting ({seeders depositing seeds in rows <a href="#">A01C 7/08</a>}; ploughs for making ridges <a href="#">A01B 13/02</a>; {lifting devices for agricultural machines <a href="#">A01B 63/00</a>})</p> <p>5/062 . . {Devices for making drills or furrows}</p> <p>5/064 . . . {with rotating tools}</p> <p>5/066 . . {Devices for covering drills or furrows}</p> <p>5/068 . . . {Furrow packing devices, e.g. press wheels}</p> <p>5/08 . Machines for both manuring and sowing or both manuring and planting</p> <p><b>7/00</b> Sowing ({with centrifugal wheels <a href="#">A01C 17/00</a>}) arrangements for driving working parts <a href="#">A01C 19/00</a>)</p> <p>7/002 . {Dibble seeders}</p> <p>7/004 . {using liquid seeding techniques}</p> <p>7/006 . {Minimum till seeding}</p> <p>7/008 . {Sod or grassland seeding (<a href="#">A01C 7/08</a> takes precedence)}</p> <p>7/02 . Hand sowing implements ({fertiliser distributors for hand use <a href="#">A01C 15/02</a>; tools for cultivation <a href="#">A01G 1/12</a>})</p> <p>7/04 . Single-grain seeders with or without suction devices ({regulation <a href="#">A01C 7/10</a>; for quantities of seed <a href="#">A01C 7/18</a>})</p> <p>7/042 . . {using pneumatic means}</p> <p>7/044 . . . {Pneumatic seed wheels}</p> <p>7/046 . . . . {with perforated seeding discs}</p> <p>7/048 . . {Seed tape planters}</p> <p>7/06 . Seeders combined with fertilising apparatus ({conducting and depositing seed <a href="#">A01C 7/20</a>; apparatus for two kinds of fertiliser <a href="#">A01C 15/00</a>}; combinations with soil working tools <a href="#">A01B 49/04</a>)</p> |
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7/08	• Broadcast seeders; Seeders depositing seeds in rows {(machines for making furrows <a href="#">A01C 5/06</a> ; combination of seed machines with other soil-working tools <a href="#">A01B 49/06</a> ; foldable apparatus <a href="#">A01B 73/00</a> )}	<b>11/00</b>	<b>Transplanting machines</b> ({hand sowing <a href="#">A01C 7/02</a> }; carriers for supporting persons <a href="#">A01B 75/00</a> ; transplanting devices for trees <a href="#">A01G 23/02</a> )
7/081	• . {Seeders depositing seeds in rows using pneumatic means}	11/003	• {for aquatic plants; for planting underwater, e.g. rice}
7/082	• . . {Ducts, distribution pipes or details thereof for pneumatic seeders (non-pneumatic seed pipes <a href="#">A01C 7/206</a> )}	11/006	• {Other parts or details or planting machines}
7/084	• . . . {Pneumatic distribution heads for seeders}	11/02	• for seedlings
7/085	• . {Broadcast seeders}	11/025	• . {Transplanting machines using seedling trays; Devices for removing the seedlings from the trays}
7/087	• . {Tramlining}	11/04	• for deeper setting or shifting of plants
7/088	• . {Sectional seeding}	<b>13/00</b>	<b>Machines or apparatus for consolidating soil around plants</b>
7/10	• . Devices for adjusting the seed-box {Regulation of machines for depositing quantities at intervals}	<b>14/00</b>	<b>Methods or apparatus for planting not provided for in other groups of this subclass</b>
7/102	• . . {Regulating or controlling the seed rate}	<b>15/00</b>	<b>Fertiliser distributors</b> ( <a href="#">A01C 7/06</a> takes precedence; {combined with seeders <a href="#">A01C 7/06</a> }; arrangements for driving working parts <a href="#">A01C 19/00</a> ; {harrows with special additional arrangements <a href="#">A01B 19/00</a> }; sand, gravel or salt spreaders for roads <a href="#">E01C 19/20</a> )
7/105	• . . . {Seed sensors}	15/001	• {with slowly turning wheels}
7/107	• . . {Calibration of the seed rate}	15/002	• {with oscillating distributing spouts}
7/12	• . Seeders with feeding wheels	15/003	• {Bulk fertiliser or grain handling in the field or on the farm}
7/121	• . . {for sowing seeds of different sizes}	15/005	• {Undercarriages, tanks, hoppers, stirrers specially adapted for seeders or fertiliser distributors}
7/122	• . . . {using more than one feeding wheel; using double-run feeding wheels}	15/006	• . {Hoppers}
7/123	• . . . {Housings for feed rollers or wheels}	15/007	• . . {with agitators in the hopper}
7/124	• . . . {with top delivery of the seeds}	15/008	• . {Aprons; Deflecting plates; Band-spreading attachments}
7/125	• . . . {with bottom delivery of the seeds}	15/02	• for hand use {(hand sowing <a href="#">A01C 7/02</a> )}
7/126	• . . {Stubbed rollers or wheels}	15/04	• using blowers
7/127	• . . {Cell rollers, wheels, discs or belts}	15/06	• with distributing slots{, i.e. for dosing, e.g. adjustable openings}
7/128	• . . . {Cell discs}	15/08	• . with pushers or stirrers in the slots
7/14	• . . Seeders with spoon or bucket wheels	15/10	• . . with reciprocating pushers {or stirrers in front of the slots (with endless chains <a href="#">A01C 15/18</a> )}
7/16	• . Seeders with other distributing devices, e.g. brushes, discs, screws, slides {(with distributing slots <a href="#">A01C 15/06</a> ; with slides <a href="#">A01C 15/124</a> }; with chains <a href="#">A01C 15/18</a> )}	15/12	• with movable parts of the receptacle
7/163	• . . {Gravity distributors}	15/122	• . {with moving floor parts (with endless chains <a href="#">A01C 15/18</a> )}
7/166	• . . {Centrifugal distributors (pneumatic distributors <a href="#">A01C 15/04</a> )}	15/124	• . {with adjustable shutters or slits}
7/18	• Machines for depositing quantities of seed at intervals {(dibble seeders <a href="#">A01C 7/002</a> ; single-grain seeders <a href="#">A01C 7/04</a> ; regulation <a href="#">A01C 7/102</a> ; ridge marking <a href="#">A01B 69/02</a> )}	15/126	• . . {with pushers or stirrers in the slits}
7/185	• . {Foot valves}	15/128	• . . {with pushers or stirrers in front of the slits (with endless chains <a href="#">A01C 15/18</a> )}
7/20	• Parts of seeders for conducting and depositing seed {(combined with fertilising apparatus <a href="#">A01C 7/06</a> )}	15/14	• with means for lifting out the fertiliser {(feeding wheels, cell wheels, discs <a href="#">A01C 7/12</a> , bucket wheels <a href="#">A01C 7/14</a> )}
7/201	• . {Mounting of the seeding tools}	15/16	• with means for pushing out the fertiliser, e.g. by a roller
7/203	• . . {comprising depth regulation means}	15/18	• with endless chains{, i.e. side transporting elements, e.g. auger or screw conveyors, swash plates}
7/205	• . . {comprising pressure regulation means}	<b>17/00</b>	<b>Fertilisers or seeders with centrifugal wheels</b> ({hand-used implements <a href="#">A01C 7/02</a> , <a href="#">A01C 15/02</a> ; fertiliser distributors <a href="#">A01C 15/00</a> ; mechanical throwing machines for articles or solid bulk materials, in general <a href="#">B65G 31/00</a> ; sand, gravel or salt spreaders <a href="#">E01C 19/20</a> )}
7/206	• . {Seed pipes}	17/001	• {Centrifugal throwing devices with a vertical axis}
7/208	• . {Chassis; Coupling means to a tractor or the like; Lifting means; Side markers (hoppers for seeders or spreaders <a href="#">A01C 15/006</a> )}	17/003	• {Centrifugal throwing devices with a horizontal axis}
<b>9/00</b>	<b>Potato planters</b> ({planting by hand <a href="#">A01C 7/02</a> }; combinations with soil working tools <a href="#">A01B 49/04</a> )		
9/02	• with conveyor belts		
9/04	• with bucket wheels {(with other distributing devices <a href="#">A01C 9/08</a> )}		
9/06	• with piercing or grasping devices		
9/08	• with other distributing devices, e.g. flaps, screws, horizontal turning plates {(with bucket wheels <a href="#">A01C 9/04</a> )}		

- 17/005 . {Driving mechanisms for the throwing devices}
- 17/006 . {Regulating or dosing devices}
- 17/008 . . {Devices controlling the quantity or the distribution pattern}
- 19/00 Arrangements for driving working parts of fertilisers or seeders** {(A01C 17/005 takes precedence)}
- 19/02 . by a motor
- 19/04 . by a ground-engaging wheel
- 19/045 . . {the drive coupling being controlled by lifting or lowering of the seeding tools}
- 21/00 Methods of fertilizing, {sowing or planting}** (fertilisers C05; soil-conditioning or soil-stabilising materials C09K 17/00)
- 21/002 . {Apparatus for sowing fertiliser; Fertiliser drill}
- 21/005 . {Following a specific plan, e.g. pattern (precision agriculture in general A01B 79/005; steering or guiding agricultural machines or implements A01B 69/00)}
- 21/007 . {Determining fertilization requirements}
- 23/00 Distributing devices specially adapted for liquid manure or other fertilising liquid, including ammonia, e.g. transport tanks, sprinkling wagons** (watering fields in general A01G 25/00; spraying or applying liquids or other fluent materials in general B05)
- 23/001 . {Sludge spreaders, e.g. liquid manure spreaders}
- 23/002 . . {provided with auxiliary arrangements, e.g. pumps, agitators, cutters}
- 23/003 . . {Distributing devices, e.g. for rotating, throwing}
- 23/005 . . . {Nozzles, valves, splash plates}
- 23/006 . {Distribution of liquid fertilisers by gravity flow (distribution of liquid ammonia in or on the soil A01C 23/024; under pressure A01C 23/04)}
- 23/007 . {Metering or regulating systems}
- 23/008 . {Tanks, chassis or related parts}
- 23/02 . Special arrangements for delivering the liquid directly into the soil
- 23/021 . . {Sludge injectors, i.e. liquid manure injectors}
- 23/022 . . . {Continuous injection tools (devices for making drill or furrows A01C 5/066)}
- 23/023 . . {for liquid or gas fertilisers}
- 23/024 . . . {for ammonia}
- 23/025 . . . {Continuous injection tools}
- 23/026 . . . {Localised non-continuous injection tools, e.g. pal injectors, spike wheels}
- 23/027 . . {Other methods for delivering fertiliser into the soil (sowing granular fertiliser A01C 21/002; subirrigation A01G 25/06)}
- 23/028 . . . {Contactless injection into the soil}
- 23/04 . Distributing under pressure; Distributing mud; Adaptation of watering systems for fertilising-liquids
- 23/042 . . {Adding fertiliser to watering systems (adding insecticides or herbicides A01M 7/00)}
- 23/045 . . {Filling devices for liquid manure or slurry tanks (arrangements for connecting hoses of the quick-acting type F16L 37/00)}
- 23/047 . . {Spraying of liquid fertilisers (gravity flow A01C 23/006; watering gardens, fields, sports grounds or the like A01G 25/00)}