

CPC COOPERATIVE PATENT CLASSIFICATION

A HUMAN NECESSITIES

AGRICULTURE

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

A01B SOIL WORKING IN AGRICULTURE OR FORESTRY; PARTS, DETAILS, OR ACCESSORIES OF AGRICULTURAL MACHINES OR IMPLEMENTS, IN GENERAL (making or covering furrows or holes for sowing, planting, or manuring [A01C 5/00](#); soil working for engineering purposes [E01](#), [E02](#), [E21](#); {measuring areas for agricultural purposes [G01B](#)})

WARNINGS

- The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:
[A01B 69/04](#) covered by [A01B 69/008](#)
[A01B 69/06](#) covered by [A01B 69/005](#)
[A01B 69/08](#) covered by [A01B 69/006](#)
- In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

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| 1/00 | Hand tools (edge trimmers for lawns A01G 3/06 ; machines for working soil A01B 35/00 ; making hand tools B21D)) | Ploughs | |
| 1/02 | . Spades; Shovels {(hand-operated dredgers E02F 3/02)} | 3/00 | Ploughs with fixed plough-shares |
| 1/022 | . . {Collapsible; extensible; combinations with other tools} | 3/02 | . Man-driven ploughs |
| 1/024 | . . {Foot protectors attached to the blade} | 3/04 | . Animal-drawn ploughs |
| 1/026 | . . {with auxiliary handles for facilitating lifting} | 3/06 | . . without alternating possibility, i.e. incapable of making an adjacent furrow on return journey {, i.e. conventional ploughing } |
| 1/028 | . . {with ground abutment shoes or earth anchors for facilitating lifting} | 3/08 | . . . Swing ploughs |
| 1/04 | . . with teeth | 3/10 | . . . Trussed-beam ploughs; Single-wheel ploughs |
| 1/06 | . Hoes; Hand cultivators {(rakes A01D 7/00 ; forks A01D 9/00 ; picks B25D)} | 3/12 | . . . Two-wheel beam ploughs |
| 1/065 | . . {powered} | 3/14 | . . . Frame ploughs |
| 1/08 | . . with a single blade | 3/16 | . . Alternating ploughs, i.e. capable of making an adjacent furrow on return journey |
| 1/10 | . . with two or more blades | 3/18 | . . . Turn-wrest ploughs |
| 1/12 | . . with blades provided with teeth | 3/20 | . . . Balance ploughs |
| 1/14 | . . with teeth only | 3/22 | . . . with parallel plough units used alternately |
| 1/16 | . Tools for uprooting weeds | 3/24 | . Tractor-drawn ploughs (A01B 3/04 takes precedence) |
| 1/165 | . . {adapted for extracting a substantially cylindrical plug out of the earth} | 3/26 | . . without alternating possibility |
| 1/18 | . . Tong-like tools | 3/28 | . . Alternating ploughs |
| 1/20 | . Combinations of different kinds of hand tools | 3/30 | . . . Turn-wrest ploughs |
| 1/22 | . Attaching the blades or the like to handles (handles for tools, or their attachment, in general B25G); Interchangeable or adjustable blades | 3/32 | . . . Balance ploughs |
| 1/222 | . . {Adjustable blades} | 3/34 | . . . with parallel plough units used alternately |
| 1/225 | . . . {around a substantially horizontal axis} | 3/36 | . Ploughs mounted on tractors |
| 1/227 | . . {Interchangeable blades} | 3/38 | . . without alternating possibility |
| 1/24 | . for treating meadows or lawns | 3/40 | . . Alternating ploughs |
| 1/243 | . . {for aerating} | 3/42 | . . . Turn-wrest ploughs |
| 1/246 | . . {for cutting sods or turves} | 3/421 | with a headstock frame made in one piece |
| | | 3/4215 | {the headstock being provided with two or more hydraulic cylinders} |
| | | 3/426 | with a headstock frame made of two or more parts |
| | | 3/44 | . . . with parallel plough units used alternately |
| | | 3/46 | . Ploughs supported partly by tractor and partly by their own wheels |

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| 3/462 | . . {Alternating ploughs with frame rotating about a vertical axis} | 13/08 | . for working subsoil |
| 3/464 | . . {Alternating ploughs with frame rotating about a horizontal axis, e.g. turn-wrest ploughs} | 13/10 | . . Special implements for lifting subsoil layers |
| 3/466 | . . . {the frame comprising an articulated beam} | 13/12 | . . . Means for distributing the layers on the surface |
| 3/468 | . . {the plough wheels being actively driven} | 13/14 | . for working soil in two or more layers |
| 3/50 | . Self-propelled ploughs | 13/16 | . Machines for combating erosion, e.g. basin-diggers, furrow-dammers |
| 3/52 | . . with three or more wheels, or endless tracks | 15/00 | Elements, tools, or details of ploughs |
| 3/54 | . . . without alternating possibility | 15/02 | . Plough blades; Fixing the blades |
| 3/56 | . . . Alternating ploughs {; Balance ploughs} | 15/025 | . . {specially adapted for working subsoil} |
| 3/58 | . . with two wheels | 15/04 | . . Shares {(making ploughshares by rolling B21H)} |
| 3/60 | . . . Alternating ploughs | 15/06 | . . . Interchangeable or adjustable shares |
| 3/62 | Balance ploughs | 15/08 | . . Mouldboards |
| 3/64 | . Cable ploughs; Indicating or signalling devices for cable plough systems {(vehicles towed by cable B60D)} | 15/10 | . . . Interchangeable or adjustable mouldboards |
| 3/66 | . . with motor-driven winding apparatus mounted on the plough | 15/12 | . Beams; Handles (handles for tools or their attachment in general B25G) |
| 3/68 | . . Cable systems with one or two engines {; e.g. electrically-driven or with diesel generating set} | 15/125 | . . {Articulated beams} |
| 3/70 | . . . Systems with one engine for working uphill | 15/14 | . Frames (means or arrangements to facilitate transportation A01B 73/00) |
| 3/72 | . . Means for anchoring the cables | 15/145 | . . {the plough blades being connected to the plough beam for unisono adjustment of the furrow width} |
| 3/74 | . Use of electric power for propelling ploughs {for rotary cultivators or the like (electric current collectors B60L 5/00)} | 15/16 | . Discs (bearings therefor A01B 71/04); Scrapers for cleaning discs; Sharpening attachments (sharpening in general B24) |
| 5/00 | Ploughs with rolling non-driven tools, e.g. discs (with rotary driven tools A01B 9/00) | 15/18 | . Coulters |
| 5/02 | . drawn by animals | 15/20 | . Special adjusting means for tools of ploughs drawn by, or mounted on tractors working on hillsides or slopes |
| 5/04 | . drawn by tractors | 17/00 | Ploughs with special additional arrangements, e.g. means for putting manure under the soil, clod-crushers (A01B 49/00 takes precedence); {Means for breaking the subsoil} |
| 5/06 | . . without alternating possibility {, e.g. with rotary counters provided with scrapers} | 17/002 | . {Means for putting manure, debris, straw or the like under the soil (to plough-in weeds A01B 39/18)} |
| 5/08 | . . Alternating ploughs | 17/004 | . {Clod-crushers} |
| 5/10 | . mounted or partly-mounted on tractors | 17/006 | . . {with driven tools} |
| 5/12 | . . without alternating possibility | 17/008 | . . . {rotating about a vertical or steeply inclined axis} |
| 5/14 | . . Alternating ploughs | | |
| 5/16 | . Self-propelled disc or like ploughs | | |
| 7/00 | Disc-like soil-working implements usable either as ploughs or as harrows, or the like | Harrows | |
| 9/00 | Ploughs with rotary driven tools (tilling implements with rotary driven tools A01B 33/00) | 19/00 | Harrows with non-rotating tools {(harrows for working in vineyards A01B 39/16)} |
| 9/003 | . {with tools on horizontal shaft transverse to direction of travel} | 19/02 | . with tools rigidly or elastically attached to a tool-frame |
| 9/006 | . {with tools on horizontal shaft parallel to direction of travel} | 19/04 | . . with two or more tool-frames |
| 11/00 | Ploughs with oscillating, digging or piercing tools {driven or not} | 19/06 | . . with tools or tool-frames moved to-and-fro mechanically |
| 13/00 | Ploughs or like machines for special purposes (for drainage E02B 11/02) {; Ditch diggers, trench ploughs, forestry ploughs, ploughs for land or marsh reclamation (machines for aerating meadows A01B 45/02; making furrows A01C 5/00; dredging machines in general E02F)} | 19/08 | . with link network supporting tooth-like tools |
| 13/02 | . for making or working ridges, e.g. with symmetrically arranged mouldboards {, e.g. ridging plough} | 19/10 | . Lifting or cleaning apparatus |
| 13/025 | . . {with passively driven rotating disc-like elements for forming the ridge} | 21/00 | Harrows with rotary non-driven tools (tilling implements with rotary driven tools A01B 33/00) |
| 13/04 | . for working in vineyards, orchards, or the like | 21/02 | . with tooth-like tools |
| 13/06 | . . Arrangements for preventing damage to the vines, or the like {, e.g. hydraulic (machines specially adapted for working in vineyards A01B 39/16)} | 21/04 | . . on horizontally-arranged axles |
| | | 21/06 | . . on vertically-arranged axles |
| | | 21/08 | . with disc-like tools |
| | | 21/083 | . . {of the type comprising four individual disk groups each pivotally connected at fixed locations to a substantially rigid frame} |
| | | 21/086 | . . {of the type in which the disc-like tools are individually mounted} |
| | | 23/00 | Elements, tools, or details of harrows |

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| 23/02 | • Teeth; Fixing the teeth | 33/10 | • • Structural or functional features of the tools {; Theoretical aspects of the cutting action} |
| 23/04 | • Frames (means or arrangements to facilitate transportation A01B 73/00); Drawing-arrangements | 33/103 | • • • {the rotating shaft being oriented horizontally} |
| 23/043 | • • {specially adapted for harrows with non-rotating tools} | 33/106 | • • • {the rotating shaft being oriented vertically or steeply inclined} |
| 23/046 | • • {Specially adapted for harrows with rotating tools} | 33/12 | • • Arrangement of the tools; Screening of the tools |
| 23/06 | • Discs (A01B 15/16 takes precedence; bearings therefor A01B 71/04); Scrapers for cleaning discs; Sharpening attachments; {Lubrication of bearings} (sharpening in general B24) | 33/125 | • • • {screening of tools rotating about a vertical shaft} |
| 25/00 | Harrows with special additional arrangements, e.g. means for distributing fertilisers; Harrows for special purposes (A01B 39/00 takes precedence {; fertiliser distributors A01C 15/00)} | 33/14 | • • Attaching the tools to the rotating shaft, e.g. resiliently {or flexibly}-attached tools |
| Other machines for working soil | | 33/142 | • • • {the rotating shaft being oriented horizontally} |
| 27/00 | Clod-crushers | 33/144 | • • • • {with spring tools or resiliently-attached rigid tools} |
| 27/005 | • {comprising roller-type tools moving on the ground} | 33/146 | • • • {the rotating shaft being oriented vertically or steeply inclined} |
| 29/00 | Rollers {(rollers for roads E01C)} | 33/148 | • • • • {with spring tools or resiliently-attached rigid tools} |
| 29/02 | • with smooth surface | 33/16 | • with special additional arrangements (A01B 49/00 takes precedence; for sowing or fertilising A01B 49/06) |
| 29/04 | • with non-smooth surface formed of rotatably-mounted rings or discs or with projections or ribs on the roller body; Land packers | 35/00 | Other machines for working soil {not specially adapted for working soil on which crops are growing} (A01B 37/00, A01B 39/00, A01B 77/00 take precedence {; hand tools A01B 1/00)} |
| 29/041 | • • {of "Cambridge"-type, i.e. the soil-pressing rings being stacked on a shaft} | 35/02 | • with non-rotating tools |
| 29/043 | • • • {Tire-packers} | 35/04 | • • drawn by animal or tractor {or man-power} |
| 29/045 | • • {the soil-pressing body being a drum} | 35/06 | • • • with spring tools {or with resiliently- or flexibly-attached rigid tools} |
| 29/046 | • • {the soil-pressing body being a helical coil} | 35/08 | • • • with rigid tools |
| 29/048 | • • {Bar cage rollers} | 35/10 | • • mounted on tractors |
| 29/06 | • with special additional arrangements | 35/12 | • • • with spring tools {or with resiliently- or flexibly-attached rigid tools} |
| 31/00 | Drags {graders for field cultivators (graders in general E02F)} | 35/14 | • • • with rigid tools |
| 33/00 | Tilling implements with rotary driven tools {, e.g. in combination with fertiliser distributors or seeders, with grubbing chains, with sloping axles, with driven discs} | 35/16 | • with rotating or circulating non-propelled tools |
| 33/02 | • with tools on horizontal shaft transverse to direction of travel | 35/18 | • with both rotating and non-rotating tools |
| 33/021 | • • {with rigid tools} | 35/20 | • Tools; Details |
| 33/022 | • • • {with helicoidal tools} | 35/22 | • • Non-rotating tools; {Resilient or flexible mounting of rigid tools} |
| 33/024 | • • • {with disk-like tools} | 35/225 | • • • {the tools being adapted to allow the chisel point to be easily fitted or removed from the shank} |
| 33/025 | • • {with spring tools, i.e. resiliently- or flexibly-attached rigid tools} | 35/24 | • • • Spring tools |
| 33/027 | • • {Operator supported tools, e.g. using a harness for supporting the tool or power unit} | 35/26 | • • • Rigid tools |
| 33/028 | • • {of the walk-behind type (walk-type tractors B62D 51/04)} | 35/28 | • • Rotating tools; Mounting rotating tools |
| 33/04 | • with tools on horizontal shaft parallel to direction of travel | 35/30 | • • Undercarriages (A01B 23/04 takes precedence) |
| 33/06 | • with tools on vertical or steeply-inclined shaft | 35/32 | • with special additional arrangements |
| 33/065 | • • {comprising a plurality of rotors carried by an elongate, substantially closed transmission casing, transversely connectable to a tractor} | 37/00 | Devices for loosening soil compacted by wheels or the like |
| 33/08 | • Tools; Details, e.g. adaptations of transmissions or gearings | 39/00 | Other machines specially adapted for working soil on which crops are growing |
| 33/082 | • • {Transmissions; Gearings; Power distribution} | 39/02 | • with non-rotating tools |
| 33/085 | • • • {specially adapted for tools on a vertical shaft} | 39/04 | • • drawn by animal or tractor |
| 33/087 | • • {Lifting devices; Depth regulation devices; Mountings} | 39/06 | • • Self-propelled machines |
| | | 39/08 | • with rotating tools {such as weeding machines} |
| | | 39/085 | • • {the rotating tools being actively driven} |
| | | 39/10 | • with oscillating tools {driven or not} |
| | | 39/12 | • for special purposes {, e.g. for special culture} |
| | | 39/14 | • • for working ridges {, e.g. for rows of plants and/or furrows} |

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| 39/16 | . . for working in vineyards, orchards, or the like {; Arrangements for preventing damage to vines (ploughs adapted for working in vineyards A01B 13/06)} | 51/026 | . . {of the automotive vehicle type, e.g. including driver accommodation (A01B 51/023 takes precedence)} |
| 39/163 | . . . {comprising rotating tools} | 51/04 | . drawn by animal or tractor |
| 39/166 | {actively driven} | 51/045 | . . {drawn by animals} |
| 39/18 | . . for weeding | 59/00 | Devices specially adapted for connection between animals or tractors and agricultural machines or implements (A01B 63/00 takes precedence; vehicle connections in general B60D; draught assemblies for animal drawn vehicles, in general B62C 5/00) |
| 39/19 | . . . Rod weeders, i.e. weeder with rotary rods propelled beneath the soil surface | 59/002 | . {Details, component parts} |
| 39/20 | . Tools; Details | 59/004 | . . {Length-adjustable links} |
| 39/22 | . . Tools; Mounting tools | 59/006 | . . {Latched hooks} |
| 39/24 | . . Undercarriages (A01B 23/04 takes precedence) | 59/008 | . . {Link connectors with spherical surfaces} |
| 39/26 | . . Arrangements for protecting plants {, e.g. fenders} | 59/02 | . for animal-drawn machines |
| 39/28 | . with special additional arrangements (A01B 49/00 takes precedence) | 59/04 | . for machines pulled or pushed by a tractor |
| 41/00 | Thinning machines | 59/041 | . . preventing or limiting side-play of implements (preventing overstrain A01B 61/00) |
| 41/02 | . with oscillating tools | 59/0415 | . . . {by hydraulic or pneumatic means acting on the lower draft links} |
| 41/04 | . with rotating tools | 59/042 | . . having pulling means arranged on the rear part of the tractor |
| 41/06 | . with electric, e.g. photo-electric control of thinning operations | 59/043 | . . . supported at three points, e.g. by quick-release couplings (A01B 59/06 takes precedence) |
| 43/00 | Gatherers for removing stones, undesirable roots or the like from the soil, e.g. tractor-drawn rakes {(for harvesting root crops A01D)} | 59/044 | . . having pulling means arranged on the middle part of the tractor |
| 43/005 | . {Windrower-type machines} | 59/046 | . . having pulling or pushing means arranged on the side of the tractor |
| 45/00 | Machines for treating meadows or lawns {, e.g. for sports grounds} | 59/048 | . . having pulling or pushing means arranged on the front part of the tractor |
| 45/02 | . for aerating | 59/06 | . for machines mounted on tractors |
| 45/023 | . . {Perforators comprising spiking tools actively driven in a reciprocating movement through a crankshaft or eccentric mechanism} | 59/061 | . . {specially adapted for enabling connection or disconnection controlled from the driver's seat (not used, see subgroups)} |
| 45/026 | . . {Scarifiers comprising a knife reel actively driven around a substantially horizontal shaft} | 59/062 | . . . {the connection comprising a rigid interface frame on the tractor} |
| 47/00 | Soil-working with electric potential applied between tools and soil | 59/063 | . . . {the connection comprising longitudinally oriented tang-and-sheath elements} |
| 49/00 | Combined machines (auxiliary devices attached to machines of a different kind, e.g. harrows attached to ploughs, see the relevant groups for the machines) | 59/064 | . . {for connection to the front of the tractor} |
| 49/02 | . with two or more soil-working tools of different kind | 59/065 | . . {for ploughs or like implements (A01B 59/061 and subgroups take precedence)} |
| 49/022 | . . {at least one tool being actively driven} | 59/066 | . . {of the type comprising at least two lower arms and one upper arm generally arranged in a triangle (e.g. three-point hitches)} |
| 49/025 | . . . {about a substantially vertical axis} | 59/067 | . . . {the lower arms being lifted or lowered by power actuator means internally incorporated in the tractor} |
| 49/027 | . . {with a rotating, soil working support element, e.g. a roller} | 59/068 | . . . {the lower arms being lifted or lowered by power actuator means provided externally on the tractor} |
| 49/04 | . Combinations of soil-working tools with non- soil-working tools, e.g. planting tools {(seeding machines A01C 7/00 ; harvesters combined with soil-working implements A01D 43/12)} | 59/069 | . . {with means for weighing the implement} |
| 49/06 | . . for sowing or fertilising | 61/00 | Devices for, or parts of, agricultural machines or implements for preventing overstrain (preventing overstrain in vehicle connections, in general B60D; preventing overstrain in couplings per se F16D) |
| 49/065 | . . . {the soil-working tools being actively driven} | 61/02 | . of the coupling devices between tractor and machine |
| Parts, details or accessories of agricultural machines or implements, in general (seat constructions A47C; wheels B60B; shelters for drivers B60J; seats specially adapted for vehicles B60N 2/00; wheel scrapers B60S 1/68) | | 61/025 | . . {the driving connections} |
| 51/00 | Undercarriages specially adapted for mounting- on various kinds of agricultural tools or apparatus (general vehicle aspects, see the relevant subclass of class B60 or B62) | 61/04 | . of the connection between tools and carrier beam or frame |
| 51/02 | . propelled by a motor | 61/042 | . . {with shearing devices} |
| 51/023 | . . {of the Gantry-type} | 61/044 | . . {the connection enabling a yielding pivoting movement around a substantially horizontal and transverse axis} |

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| 61/046 | . . . {the device including an energy accumulator for restoring the tool to its working position} | 63/20 | . . . with gear and rack |
| 61/048 | {the connection or the energy accumulator being active in two opposite directions, e.g. for reversible plows} | 63/22 | . . . operated by hydraulic or pneumatic means |
| 63/00 | Lifting or adjusting devices or arrangements for agricultural machines or implements (lifting mechanisms for the cutter-bar of a mower A01D 34/24 ; adjusting devices for the cutter-bar of a mower A01D 34/28 ; constructional features of lifting devices per se B66F) | 63/24 | . . Tools or tool-holders adjustable relatively to the frame |
| 63/002 | . {Devices for adjusting or regulating the position of tools or wheels (preventing overstrain A01B 61/00 ; wheels adjustable relatively to the frame for drawn implements A01B 3/16 ; tools or tool holders adjustable relatively to the frame for drawn implements A01B 63/24)} | 63/245 | . . . {laterally adjustable} |
| 63/004 | . . {Lateral adjustment of tools} | 63/26 | . . . by man-power |
| 63/006 | . . {Lateral adjustment of wheels} | 63/28 | . . . operated by the machine or implement |
| 63/008 | . . {Vertical adjustment of tools (A01B 63/10 takes precedence)} | 63/30 | . . . operated by motor power through a mechanical transmission |
| 63/02 | . for implements mounted on tractors | 63/32 | . . . operated by hydraulic or pneumatic means {without automatic control} |
| 63/023 | . . {Lateral adjustment of their tools} | 67/00 | Devices for controlling the tractor motor by resistance of tools (preventing overstrain A01B 61/00) |
| 63/026 | . . {Lateral adjustment of their wheels} | 69/00 | Steering of agricultural machines or implements; Guiding agricultural machines or implements on a desired track (vehicle course control in general G05D 1/02) |
| 63/04 | . . Hand devices; Hand devices with mechanical accumulators, e.g. springs | NOTE | In this group it is obligatory to classify subject-matter in the first appropriate place. It is however allowed to apply multiple classification where considered useful for search |
| 63/045 | . . . {for vertically adjusting wheels or similar rotary supporting elements} | 69/001 | . {Steering by means of optical assistance, e.g. television cameras (steering devices for road marking vehicles E01C 23/163)} |
| 63/06 | . . operated mechanically by tractor motor | 69/002 | . {Steering or guiding on a substantially circular or spiral path} |
| 63/08 | . . operated by the movement of the tractor | 69/003 | . {Steering or guiding of machines or implements pushed or pulled by or mounted on agricultural vehicles such as tractors, e.g. by lateral shifting of the towing connection} |
| 63/10 | . . operated by hydraulic or pneumatic means | 69/004 | . . {automatic} |
| 63/1006 | . . . {the hydraulic or pneumatic means structurally belonging to the tractor} | 69/005 | . . {by an additional operator} |
| 63/1013 | {and being located inside the tractor body} | 69/006 | . . {derived from the steering of the tractor} |
| 63/102 | . . . characterised by the location of the mounting on the tractor, e.g. on the rear part | 69/007 | . {Steering or guiding of agricultural vehicles, e.g. steering of the tractor to keep the plough in the furrow} |
| 63/104 | on the middle part, i.e. between front and rear wheels | 69/008 | . . {automatic} |
| 63/106 | on the side | 69/02 | . Ridge-marking or like devices; Checkrow wires; Accessories therefor |
| 63/108 | on the front part | 69/022 | . . {Ridge marking by deposition of a chemical substance, e.g. foam, on the surface of the soil} |
| 63/11 | . . . for controlling weight transfer between implements and tractor wheels | 69/024 | . . {adapted to cut and form a ridge or furrow in the soil surface, e.g. with a disc} |
| 63/111 | . . . regulating working depth of implements | 69/026 | . . {Checkrow wires} |
| 63/1112 | {using a non-tactile ground distance measurement, e.g. using reflection of waves} | 69/028 | . . . {the wire being located above the ground} |
| 63/1115 | {using a mechanical ground contact sensor} | 71/00 | Construction or arrangement of setting or adjusting mechanisms, of implement or tool drive or of power take-off; Means for protecting parts against dust, or the like; Adapting machine elements to or for agricultural purposes {(adjusting mechanisms in general G05G)} |
| 63/1117 | {using a hitch position sensor} | 71/02 | . Setting or adjusting mechanisms |
| 63/112 | to control draught load, i.e. tractive force | 71/04 | . Bearings of rotating parts, e.g. for soil-working discs ({discs A01B 15/16 , A01B 23/06 }; bearings in general F16C) |
| 63/114 | to achieve a constant working depth | 71/06 | . Special adaptations of coupling means between power take-off and transmission shaft to the implement or machine (couplings for transmitting rotation F16D) |
| 63/1145 | {for controlling weight transfer between implements and tractor wheels} | | |
| 63/118 | . . . Mounting implements on power-lift linkages (A01B 59/043 takes precedence; preventing or limiting side-play of implements A01B 59/041 ; preventing overstrain A01B 61/00) | | |
| 63/12 | . . operated by an electric motor | | |
| 63/14 | . for implements drawn by animals or tractors | | |
| 63/145 | . . {for controlling weight transfer between implements and tractor wheels} | | |
| 63/16 | . . with wheels adjustable relatively to the frame | | |
| 63/163 | . . . {laterally adjustable} | | |
| 63/166 | . . . {manually adjustable} | | |
| 63/18 | . . . with clutch between Z-type axle and wheel | | |

- 71/063 . . {for enabling transmission coupling and connection between tractor and implements to be controlled from the driver's seat}
- 71/066 . . {for enabling pitch, roll or yaw movements of trailed implements or machines}
- 71/08 . Means for protecting against dust, or the like, or for cleaning agricultural implements ([A01B 15/16](#), [A01B 19/10](#) and [A01B 23/06](#) take precedence; screening of rotary driven tilling tools [A01B 33/12](#); screening of rotary parts in general [F16P 1/00](#))
- 73/00 Means or arrangements to facilitate transportation of agricultural machines or implements, e.g. folding frames to reduce overall width** (arrangements of lifting devices for soil working implements [A01B 63/00](#); {carriers for harvesters or mowers [A01D 75/002](#); arrangements or carriers for haymakers [A01D 78/1007](#), [A01D 80/005](#); } vehicles adapted for load transportation or to transport, to carry or to comprise special loads or objects [B60P](#); motor vehicles, trailers [B62D](#))
- 73/005 . {for endwise transportation, i.e. the direction of transport being substantially perpendicular to the direction of agricultural operation ([A01B 73/02](#) takes precedence)}
- 73/02 . Folding frames
- 73/04 . . foldable about a horizontal axis
- 73/042 . . . {specially adapted for actively driven implements}
- 73/044 . . . {the axis being oriented in a longitudinal direction ([A01B 73/042](#) takes precedence)}
- 73/046 {each folding frame part being foldable in itself}
- 73/048 . . . {the axis being oriented in transverse direction ([A01B 73/042](#) takes precedence)}
- 73/06 . . foldable about a vertical axis
- 73/062 . . . {of the type comprising four vertical folding axes each disposed at a substantially fixed location of a supporting frame}
- 73/065 . . . {to a position essentially forward of the axis, in relation to the direction of travel}
- 73/067 . . . {to a position essentially rearward of the axis, in relation to the direction of travel}
- 75/00 Carriers for supporting persons when working in the field, e.g. while thinning beet**
- 76/00 Parts, details or accessories of agricultural machines or implements, not provided for in groups [A01B 51/00](#) - [A01B 75/00](#)**
- 77/00 Machines for lifting and treating soil (biocides, pest repellants or attractants, plant growth regulators [A01N 25/00](#) - [A01N 65/00](#); fertilisers [C05](#); soil-conditioning or soil-stabilising materials [C09K 17/00](#))**
- 79/00 Methods for working soil (essentially requiring the use of particular machines, [see](#) the relevant groups for the machines)**
- 79/005 . {Precision agriculture}
- 79/02 . combined with other agricultural processing, e.g. fertilising, planting