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

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

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<th>IPC Group</th>
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<td>A01B 69/008</td>
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<td>A01B 69/06</td>
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2. 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.

1/00 Hand tools (edge trimmers for lawns A01G 3/06 (; machines for working soil A01B 35/00; making hand tools B21D))
1/02 . Spades; Shovels (hand-operated dredgers E02F 3/02)
1/022 . {Collapsible; extensible; combinations with other tools}
1/024 . (Foot protectors attached to the blade)
1/026 . {with auxiliary handles for facilitating lifting}
1/028 . {with ground abutment shoes or earth anchors for facilitating lifting}
1/04 . with teeth
1/06 . Hoes; Hand cultivators (rakes A01D 7/00; forks A01D 9/00; picks B25D)
1/065 . {powered}
1/08 . with a single blade
1/10 . with two or more blades
1/12 . with blades provided with teeth
1/14 . with teeth only
1/16 . Tools for uprooting weeds
1/165 . {adapted for extracting a substantially cylindrical plug out of the earth}
1/18 . Tong-like tools
1/20 . Combinations of different kinds of hand tools
1/22 . Attaching the blades or the like to handles (handles for tools, or their attachment, in general B25G); Interchangeable or adjustable blades
1/222 . {Adjustable blades}
1/225 . . . . . {around a substantially horizontal axis}
1/227 . {Interchangeable blades}
1/24 . for treating meadows or lawns
1/243 . . . {for aerating}
1/246 . . . {for cutting sods or turves}

Ploughs

3/00 Ploughs with fixed plough-shares
3/02 . Man-driven ploughs
3/04 . Animal-drawn ploughs
3/06 . . without alternating possibility, i.e. incapable of making an adjacent furrow on return journey (i.e. conventional ploughing)
3/08 . . Swing ploughs
3/10 . . Trussed-beam ploughs; Single-wheel ploughs
3/12 . . Two-wheel beam ploughs
3/14 . . Frame ploughs
3/16 . . Alternating ploughs, i.e. capable of making an adjacent furrow on return journey
3/18 . . Turn-wrest ploughs
3/20 . . Balance ploughs
3/22 . . with parallel plough units used alternately
3/24 . . Tractor-drawn ploughs (A01B 3/04 takes precedence)
3/26 . . without alternating possibility
3/28 . . Alternating ploughs
3/30 . . Turn-wrest ploughs
3/32 . . Balance ploughs
3/34 . . with parallel plough units used alternately
3/36 . . Ploughs mounted on tractors
3/38 . . without alternating possibility
3/40 . . Alternating ploughs
3/42 . . Turn-wrest ploughs
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
Ploughs

3/462 . . [Alternating ploughs with frame rotating about a vertical axis]
3/464 . . [Alternating ploughs with frame rotating about a horizontal axis, e.g. turn-wrest ploughs]
3/466 . . . [the frame comprising an articulated beam]
3/468 . . . [the plough wheels being actively driven]
3/50 . . . Self-propelled ploughs
3/52 . . . with three or more wheels, or endless tracks
3/54 . . . without alternating possibility
3/56 . . . Alternating ploughs [:: Balance ploughs]
3/58 . . . with two wheels
3/60 . . . Alternating ploughs
3/62 . . . . Balance ploughs
3/64 . . . . Cable ploughs; Indicating or signalling devices for cable plough systems {vehicles towed by cable B60D}
3/66 . . . . with motor-driven winding apparatus mounted on the plough
3/68 . . . . Cable systems with one or two engines [:: e.g. electrically-driven or with diesel generating set]
3/70 . . . . Systems with one engine for working uphill
3/72 . . . . Means for anchoring the cables
3/74 . . . Use of electric power for propelling ploughs {for rotary cultivators or the like (electric current collectors B60L 5/00)}
5/00 Ploughs with rolling non-driven tools, e.g. discs
5/02 . . . . drawn by animals
5/04 . . . . drawn by tractors
5/06 . . . . without alternating possibility, e.g. with rotary counters provided with scrapers
5/08 . . . . Alternating ploughs
5/10 . . . . mounted or partly-mounted on tractors
5/12 . . . . without alternating possibility
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
9/00 Ploughs with rotary driven tools (tilling implements with rotary driven tools A01B 33/00)
9/003 . . [with tools on horizontal shaft transverse to direction of travel]
9/006 . . [with tools on horizontal shaft parallel to direction of travel]
11/00 Ploughs with oscillating, digging or piercing tools (driven or not)
13/00 Ploughs or like machines for special purposes
13/02 . . . for making or working ridges, e.g. with symmetrically arranged mouldboards, e.g. ridging plough
13/025 . . . [with passively driven rotating disc-like elements for forming the ridge]
13/04 . . . for working in vineyards, orchards, or the like
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)
13/08 . . . for working subsoil
13/10 . . . Special implements for lifting subsoil layers
13/12 . . . Means for distributing the layers on the surface
13/14 . . . for working soil in two or more layers
13/16 . . . Machines for combating erosion, e.g. basin-diggers, furrow-dammers
15/00 Elements, tools, or details of ploughs
15/02 . . Plough blades; Fixing the blades
15/025 . . . [specially adapted for working subsoil]
15/04 . . . Shares (making ploughshares by rolling B21H)
15/06 . . . Interchangeable or adjustable shares
15/08 . . . Mouldboards
15/10 . . . Interchangeable or adjustable mouldboards
15/12 . . . Beams; Handles (handles for tools or their attachment in general B25G)
15/125 . . . [Articulated beams]
15/14 . . Frames (means or arrangements to facilitate transportation A01B 73/00)
15/145 . . . . [the plough blades being connected to the plough beam for unisono adjustment of the furrow width]
15/16 . . Discs (bearings therefor A01B 71/04); Scrapers for cleaning discs; Sharpening attachments (sharpening in general B24)
15/18 . . Coulters
15/20 . . Special adjusting means for tools of ploughs drawn by, or mounted on tractors working on hillsides or slopes
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
17/002 . . . [Means for putting manure, debris, straw or the like under the soil (to plough-in weeds A01B 39/18)]
17/004 . . . [Clod-crushers]
17/006 . . . . [with driven tools]
17/008 . . . . [rotating about a vertical or steeply inclined axis]

Harrow

19/00 Harrows with non-rotating tools (harrows for working in vineyards A01B 39/16)
19/02 . . . with tools rigidly or elastically attached to a tool-frame
19/04 . . . . with two or more tool-frames
19/06 . . . . . with tools or tool-frames moved to-and-fro mechanically
19/08 . . . . . . with link network supporting tooth-like tools
19/10 . . . . . . Lifting or cleaning apparatus
21/00 Harrows with rotary non-driven tools (tiling implements with rotary driven tools A01B 33/00)
21/02 . . . with tooth-like tools
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
Harrons

23/02 . Teeth; Fixing the teeth
23/04 . Frames (means or arrangements to facilitate transportation A01B 73/00); Drawing-arrangements
23/043 . . [specially adapted for harrows with non-rotating tools]
23/046 . . [Specially adapted for harrows with rotating 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)

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])

Other machines for working soil

27/00 Clod-crushers
27/005 . [comprising roller-type tools moving on the ground]

29/00 Rollers ([rollers for roads E01C])
29/02 . with smooth surface
29/04 . with non-smooth surface formed of rotatably-mounted rings or discs or with projections or ribs on the roller body; Land packers
29/041 . . ["Cambridge"-type, i.e. the soil-pressing rings being stacked on a shaft]
29/043 . . [Tire-packers]
29/045 . . [the soil-pressing body being a drum]
29/046 . . [the soil-pressing body being a helical coil]
29/048 . . [Bar cage rollers]
29/06 . with special additional arrangements

31/00 Drags (graders for field cultivators (graders in general E02D))

33/00 Tilling implements with rotary driven tools [, e.g. in combination with fertiliser distributors or seeders, with grubbing chains, with sloping axes, with driven discs]
33/02 . with tools on horizontal shaft transverse to direction of travel
33/021 . . [with rigid tools]
33/022 . . [with helicoidal tools]
33/024 . . [with disk-like tools]
33/025 . . [with spring tools, i.e. resiliently- or flexibly-attached rigid tools]
33/027 . . [Operator supported tools, e.g. using a harness for supporting the tool or power unit]
33/028 . . [of the walk-behind type (walk-type tractors B62D 51/04)]
33/04 . with tools on horizontal shaft parallel to direction of travel
33/06 . with tools on vertical or steeply-inclined shaft
33/065 . . [comprising a plurality of rotors carried by an elongate, substantially closed transmission casing, transversely connectable to a tractor]
33/08 . Tools; Details, e.g. adaptations of transmissions or gearings
33/082 . . [Transmissions; Gearings; Power distribution]
33/085 . . [specially adapted for tools on a vertical shaft]
33/087 . . [Lifting devices; Depth regulation devices; Mountings]
33/10 . . [Structural or functional features of the tools ; Theoretical aspects of the cutting action]
33/103 . . . [the rotating shaft being oriented horizontally]
33/106 . . . [the rotating shaft being oriented vertically or steeply inclined]
33/12 . Arrangement of the tools; Screening of the tools
33/125 . . . [screening of tools rotating about a vertical shaft]
33/14 . Attaching the tools to the rotating shaft, e.g. resiliently { or flexibly}-attached tools
33/142 . . . [the rotating shaft being oriented horizontally]
33/144 . . . . [with spring tools or resiliently-attached rigid tools]
33/146 . . . . [the rotating shaft being oriented vertically or steeply inclined]
33/148 . . . . [with spring tools or resiliently-attached rigid tools]
33/16 . with special additional arrangements (A01B 49/00 takes precedence ; for sowing or fertilising A01B 49/06)

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])
35/02 . with non-rotating tools
35/04 . . drawn by animal or tractor [or man-power]
35/06 . . with spring tools [or with resiliently- or flexibly-attached rigid tools]
35/08 . . with rigid tools
35/10 . . mounted on tractors
35/12 . . with spring tools [or with resiliently-or flexibly-attached rigid tools]
35/14 . . with rigid tools
35/16 . . with rotating or circulating non-propelled tools
35/18 . . with both rotating and non-rotating tools
35/20 . . Tools; Details
35/22 . . Non-rotating tools; [Resilient or flexible mounting of rigid tools]
35/225 . . . [the tools being adapted to allow the chisel point to be easily fitted or removed from the shank]
35/24 . . . Spring tools
35/26 . . . Rigid tools
35/28 . . . Rotating tools; Mounting rotating tools
35/30 . . . Undercarriages (A01B 23/04 takes precedence)
35/32 . . with special additional arrangements

37/00 Devices for loosening soil compacted by wheels or the like

39/00 Other machines specially adapted for working soil on which crops are growing
39/02 . . with non-rotating tools
39/04 . . drawn by animal or tractor
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]
51/00 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)

59/00 Other machines for working soil

A01B
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)

63/002 [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)]

63/004 [Lateral adjustment of tools]
63/006 [Lateral adjustment of wheels]
63/008 [Vertical adjustment of tools (A01B 63/10 takes precedence)]
63/02 . . . for implements mounted on tractors
63/023 [Lateral adjustment of their tools]
63/026 [Lateral adjustment of their wheels]
63/04 . . . Hand devices; Hand devices with mechanical accumulators, e.g. springs
63/045 . . . [for vertically adjusting wheels or similar rotary supporting elements]
63/06 . . . operated mechanically by tractor motor
63/08 . . . operated by the movement of the tractor
63/10 . . . operated by hydraulic or pneumatic means
63/1006 . . . [the hydraulic or pneumatic means structurally belonging to the tractor]
63/1013 . . . [and being located inside the tractor body]
63/102 . . . characterised by the location of the mounting on the tractor, e.g. on the rear part
63/104 . . . . . . on the middle part, i.e. between front and rear wheels
63/106 . . . . . . on the side
63/108 . . . . . . on the front part
63/11 . . . . . . for controlling weight transfer between implements and tractor wheels
63/111 . . . . . . regulating working depth of implements
63/1115 . . . . . . [using a non-tactile ground distance measurement, e.g. using reflection of waves]
63/1117 . . . . . . [using a mechanical ground contact sensor]
63/112 . . . . . . to control draught load, i.e. tractive force
63/114 . . . . . . to achieve a constant working depth
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

63/20 . . . . . . with gear and rack
63/22 . . . . . . operated by hydraulic or pneumatic means
63/24 . . . . . . Tools or tool-holders adjustable relatively to the frame
63/245 . . . . . . [laterally adjustable]
63/26 . . . . . . by man-power
63/28 . . . . . . operated by the machine or implement
63/30 . . . . . . operated by motor power through a mechanical transmission
63/32 . . . . . . operated by hydraulic or pneumatic means {without automatic control}

67/00 Devices for controlling the tractor motor by resistance of tools (preventing overstrain A01B 61/00)

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)

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

69/001 . . . [Steering by means of optical assistance, e.g. television cameras (steering devices for road marking vehicles E01C 23/163)]
69/002 . . . [Steering or guiding on a substantially circular or spiral path]
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]
69/004 . . . [automatic]
69/005 . . . . . . [by an additional operator]
69/006 . . . . . . [derived from the steering of the tractor]
69/007 . . . . . . [Steering or guiding of agricultural vehicles, e.g. steering of the tractor to keep the plough in the furrow]
69/008 . . . . . . [automatic]
69/02 . . . . . . Ridge-marking or like devices; Checkrow wires; Accessories therefor
69/022 . . . . . . [Ridge marking by deposition of a chemical substance, e.g. foam, on the surface of the soil]
69/024 . . . . . . [adapted to cut and form a ridge or furrow in the soil surface, e.g. with a disc]
69/026 . . . . . . [Checkrow wires]
69/028 . . . . . . [the wire being located above the ground]

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)

71/02 . . . . . . Setting or adjusting mechanisms
71/04 . . . . . . Bearings of rotating parts, e.g. for soil-working discs ((discs A01B 15/16, A01B 23/06); bearings in general F16C)
71/06 . . . . . . Special adaptations of coupling means between power take-off and transmission shaft to the implement or machine (couplings for transmitting rotation F16D)
Parts, details or accessories of agricultural machines or implements, in general

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