

CPC COOPERATIVE PATENT CLASSIFICATION

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](#)})

WARNING

The following IPC groups are not used in the CPC system. Subject matter covered by these 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

1/00	Hand tools (edge trimmers for lawns A01G 3/06 ; {machines for working soil A01B 35/00 ; making hand tools B21D })	3/16	. . Alternating ploughs, i.e. capable of making an adjacent furrow on return journey
1/02	. Spades; Shovels {(hand-operated dredgers E02F 3/02)}	3/18	. . . Turn-wrest ploughs
1/022	. . {Collapsible; extensible; combinations with other tools}	3/20	. . . Balance ploughs
1/024	. . {Foot protectors attached to the blade}	3/22	. . . with parallel plough units used alternately
1/026	. . {with auxiliary handles for facilitating lifting}	3/24	. Tractor-drawn ploughs (A01B 3/04 takes precedence)
1/028	. . {with ground abutment shoes or earth anchors for facilitating lifting}	3/26	. . without alternating possibility
1/04	. . with teeth	3/28	. . Alternating ploughs
1/06	. Hoes; Hand cultivators {(rakes A01D 7/00 ; forks A01D 9/00 ; picks B25D)}	3/30	. . . Turn-wrest ploughs
1/065	. . {powered}	3/32	. . . Balance ploughs
1/08	. . with a single blade	3/34	. . . with parallel plough units used alternately
1/10	. . with two or more blades	3/36	. Ploughs mounted on tractors
1/12	. . with blades provided with teeth	3/38	. . without alternating possibility
1/14	. . with teeth only	3/40	. . Alternating ploughs
1/16	. Tools for uprooting weeds	3/42	. . . Turn-wrest ploughs
1/165	. . {adapted for extracting a substantially cylindrical plug out of the earth}	3/421 with a headstock frame made in one piece
1/18	. . Tong-like tools	3/4215 {the headstock being provided with two or more hydraulic cylinders}
1/20	. Combinations of different kinds of hand tools	3/426 with a headstock frame made of two or more parts
1/22	. Attaching the blades or the like to handles (handles for tools, or their attachment, in general B25G); Interchangeable or adjustable blades	3/44	. . . with parallel plough units used alternately
1/222	. . {Adjustable blades}	3/46	. Ploughs supported partly by tractor and partly by their own wheels
1/225	. . . {around a substantially horizontal axis}	3/462	. . {Alternating ploughs with frame rotating about a vertical axis}
1/227	. . {Interchangeable blades}	3/464	. . {Alternating ploughs with frame rotating about a horizontal axis, e.g. turn-wrest ploughs}
1/24	. for treating meadows or lawns	3/466	. . . {the frame comprising an articulated beam}
1/243	. . {for aerating}	3/468	. . {the plough wheels being actively driven}
1/246	. . {for cutting sods or turves}	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

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

3/74	<ul style="list-style-type: none"> Use of electric power for propelling ploughs {for rotary cultivators or the like (electric current collectors B60L 5/00)} 	15/16	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Coulters
5/02	<ul style="list-style-type: none"> drawn by animals 	15/20	<ul style="list-style-type: none"> Special adjusting means for tools of ploughs drawn by, or mounted on tractors working on hillsides or slopes
5/04	<ul style="list-style-type: none"> drawn by tractors 		
5/06	<ul style="list-style-type: none"> without alternating possibility, {e.g. with rotary counters provided with scrapers} 	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}
5/08	<ul style="list-style-type: none"> Alternating ploughs 	17/002	<ul style="list-style-type: none"> {Means for putting manure, debris, straw or the like under the soil (to plough-in weeds A01B 39/18)}
5/10	<ul style="list-style-type: none"> mounted or partly-mounted on tractors 	17/004	<ul style="list-style-type: none"> {Clod-crushers}
5/12	<ul style="list-style-type: none"> without alternating possibility 	17/006	<ul style="list-style-type: none"> {with driven tools}
5/14	<ul style="list-style-type: none"> Alternating ploughs 	17/008	<ul style="list-style-type: none"> {rotating about a vertical or steeply inclined axis}
5/16	<ul style="list-style-type: none"> 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)	Harrows	
9/003	<ul style="list-style-type: none"> {with tools on horizontal shaft transverse to direction of travel} 	19/00	Harrows with non-rotating tools {(harrows for working in vineyards A01B 39/16)}
9/006	<ul style="list-style-type: none"> {with tools on horizontal shaft parallel to direction of travel} 	19/02	<ul style="list-style-type: none"> with tools rigidly or elastically attached to a tool-frame
11/00	Ploughs with oscillating, digging or piercing tools {driven or not}	19/04	<ul style="list-style-type: none"> with two or more tool-frames
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)}	19/06	<ul style="list-style-type: none"> with tools or tool-frames moved to-and-fro mechanically
13/02	<ul style="list-style-type: none"> for making or working ridges, e.g. with symmetrically arranged mouldboards, {e.g. ridging plough} 	19/08	<ul style="list-style-type: none"> with link network supporting tooth-like tools
13/025	<ul style="list-style-type: none"> {with passively driven rotating disc-like elements for forming the ridge} 	19/10	<ul style="list-style-type: none"> Lifting or cleaning apparatus
13/04	<ul style="list-style-type: none"> for working in vineyards, orchards, or the like 	21/00	Harrows with rotary non-driven tools (tilling implements with rotary driven tools A01B 33/00)
13/06	<ul style="list-style-type: none"> Arrangements for preventing damage to the vines, or the like, {e.g. hydraulic (machines specially adapted for working in vineyards A01B 39/16)} 	21/02	<ul style="list-style-type: none"> with tooth-like tools
13/08	<ul style="list-style-type: none"> for working subsoil 	21/04	<ul style="list-style-type: none"> on horizontally-arranged axles
13/10	<ul style="list-style-type: none"> Special implements for lifting subsoil layers 	21/06	<ul style="list-style-type: none"> on vertically-arranged axles
13/12	<ul style="list-style-type: none"> Means for distributing the layers on the surface 	21/08	<ul style="list-style-type: none"> with disc-like tools
13/14	<ul style="list-style-type: none"> for working soil in two or more layers 	21/083	<ul style="list-style-type: none"> {of the type comprising four individual disk groups each pivotally connected at fixed locations to a substantially rigid frame}
13/16	<ul style="list-style-type: none"> Machines for combating erosion, e.g. basin-diggers, furrow-dammers 	21/086	<ul style="list-style-type: none"> {of the type in which the disc-like tools are individually mounted}
15/00	Elements, tools, or details of ploughs	23/00	Elements, tools, or details of harrows
15/02	<ul style="list-style-type: none"> Plough blades; Fixing the blades 	23/02	<ul style="list-style-type: none"> Teeth; Fixing the teeth
15/025	<ul style="list-style-type: none"> {specially adapted for working subsoil} 	23/04	<ul style="list-style-type: none"> Frames (means or arrangements to facilitate transportation A01B 73/00); Drawing-arrangements
15/04	<ul style="list-style-type: none"> Shares {(making ploughshares by rolling B21H)} 	23/043	<ul style="list-style-type: none"> {specially adapted for harrows with non-rotating tools}
15/06	<ul style="list-style-type: none"> Interchangeable or adjustable shares 	23/046	<ul style="list-style-type: none"> {Specially adapted for harrows with rotating tools}
15/08	<ul style="list-style-type: none"> Mouldboards 	23/06	<ul style="list-style-type: none"> Discs (A01B 15/16 takes precedence; bearings therefor A01B 71/04); Scrapers for cleaning discs; Sharpening attachments; {Lubrication of bearings} (sharpening in general B24)
15/10	<ul style="list-style-type: none"> Interchangeable or adjustable mouldboards 	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)}
15/12	<ul style="list-style-type: none"> Beams; Handles (handles for tools or their attachment in general B25G) 		
15/125	<ul style="list-style-type: none"> {Articulated beams} 	Other machines for working soil	
15/14	<ul style="list-style-type: none"> Frames (means or arrangements to facilitate transportation A01B 73/00) 	27/00	Clod-crushers
15/145	<ul style="list-style-type: none"> {the plough blades being connected to the plough beam for unison adjustment of the furrow width} 	27/005	<ul style="list-style-type: none"> {comprising roller-type tools moving on the ground}

29/00	Rollers {(rollers for roads E01C)}	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 })
29/02	• with smooth surface	35/02	• with non-rotating tools
29/04	• with non-smooth surface formed of rotatably-mounted rings or discs or with projections or ribs on the roller body; Land packers	35/04	• . . drawn by animal or tractor {or man-power}
29/041	• . {of "Cambridge"-type, i.e. the soil-pressing rings being stacked on a shaft}	35/06	• . . . with spring tools {or with resiliently- or flexibly-attached rigid tools}
29/043	• . . . {Tire-packers}	35/08	• . . . with rigid tools
29/045	• . {the soil-pressing body being a drum}	35/10	• . mounted on tractors
29/046	• . {the soil-pressing body being a helical coil}	35/12	• . . with spring tools {or with resiliently- or flexibly-attached rigid tools}
29/048	• . {Bar cage rollers}	35/14	• . . . with rigid tools
29/06	• with special additional arrangements	35/16	• with rotating or circulating non-propelled tools
31/00	Drags {graders for field cultivators (graders in general E02F)}	35/18	• with both rotating and non-rotating 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}	35/20	• Tools; Details
33/02	• with tools on horizontal shaft transverse to direction of travel	35/22	• . non-rotating tools; {Resilient or flexible mounting of rigid tools}
33/021	• . {with rigid tools}	35/225	• . . {the tools being adapted to allow the chisel point to be easily fitted or removed from the shank}
33/022	• . . {with helicoidal tools}	35/24	• . . . Spring tools
33/024	• . . {with disk-like tools}	35/26	• . . . Rigid tools
33/025	• . {with spring tools, i.e. resiliently- or flexibly-attached rigid tools}	35/28	• . Rotating tools; Mounting rotating tools
33/027	• . {Operator supported tools, e.g. using a harness for supporting the tool or power unit}	35/30	• . Undercarriages (A01B 23/04 takes precedence)
33/028	• . {of the walk-behind type (walk-type tractors B62D 51/04)}	35/32	• with special additional arrangements
33/04	• with tools on horizontal shaft parallel to direction of travel	37/00	Devices for loosening soil compacted by wheels or the like
33/06	• with tools on vertical or steeply-inclined shaft	39/00	Other machines specially adapted for working soil on which crops are growing
33/065	• . {comprising a plurality of rotors carried by an elongate, substantially closed transmission casing, transversely connectable to a tractor}	39/02	• with non-rotating tools
33/08	• Tools; Details, e.g. adaptations of transmissions or gearings	39/04	• . drawn by animal or tractor
33/082	• . {Transmissions; Gearings; Power distribution}	39/06	• . Self-propelled machines
33/085	• . . {specially adapted for tools on a vertical shaft}	39/08	• with rotating tools {such as weeding machines}
33/087	• . {Lifting devices; Depth regulation devices; Mountings}	39/085	• . {the rotating tools being actively driven}
33/10	• . Structural or functional features of the tools; {Theoretical aspects of the cutting action}	39/10	• with oscillating tools {driven or not}
33/103	• . . {the rotating shaft being oriented horizontally}	39/12	• for special purposes, {e.g. for special culture}
33/106	• . . {the rotating shaft being oriented vertically or steeply inclined}	39/14	• . for working ridges, {e.g. for rows of plants and/or furrows}
33/12	• . Arrangement of the tools; Screening of the tools	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)}
33/125	• . . {screening of tools rotating about a vertical shaft}	39/163	• . . . {comprising rotating tools}
33/14	• . Attaching the tools to the rotating shaft, e.g. resiliently {or flexibly}-attached tools	39/166	• . . . {actively driven}
33/142	• . . {the rotating shaft being oriented horizontally}	39/18	• . for weeding
33/144	• . . . {with spring tools or resiliently-attached rigid tools}	39/19	• . . Rod weeders, i.e. weeder with rotary rods propelled beneath the soil surface
33/146	• . . {the rotating shaft being oriented vertically or steeply inclined}	39/20	• Tools; Details
33/148	• . . . {with spring tools or resiliently-attached rigid tools}	39/22	• . Tools; Mounting tools
33/16	• with special additional arrangements (A01B 49/00 takes precedence; for sowing or fertilising A01B 49/06)	39/24	• . Undercarriages (A01B 23/04 takes precedence)
		39/26	• . Arrangements for protecting plants, {e.g. fenders}
		39/28	• with special additional arrangements (A01B 49/00 takes precedence)
		41/00	Thinning machines
		41/02	• with oscillating tools
		41/04	• with rotating tools
		41/06	• with electric, e.g. photo-electric control of thinning operations

43/00	Gatherers for removing stones, undesirable roots of the like from the soil, e.g. tractor-drawn rakes {(for harvesting root crops A01D)}	59/041	. . preventing or limiting side-play of implements (preventing overstrain A01B 61/00)
43/005	. {Windrower-type machines}	59/0415	. . . {by hydraulic or pneumatic means acting on the lower draft links}
45/00	Machines for treating meadows or lawns, {e.g. for sports grounds}	59/042	. . having pulling means arranged on the rear part of the tractor
45/02	. for aerating	59/043	. . . supported at three points, e.g. by quick-release couplings (A01B 59/06 takes precedence)
45/023	. . {Perforators comprising spiking tools actively driven in a reciprocating movement through a crankshaft or eccentric mechanism}	59/044	. . having pulling means arranged on the middle part of the tractor
45/026	. . {Scarifiers comprising a knife reel actively driven around a substantially horizontal shaft}	59/046	. . having pulling or pushing means arranged on the side of the tractor
45/04	. for cutting sods or turves {(machines for lifting and treating soil A01B 77/00)}	59/048	. . having pulling or pushing means arranged on the front part of the tractor
45/045	. . {the machine being adapted for stacking sods or sod rolls}	59/06	. for machines mounted on tractors
47/00	Soil-working with electric potential applied between tools and soil	59/061	. . {specially adapted for enabling connection or disconnection controlled from the driver's seat (not used, see subgroups)}
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)	59/062	. . . {the connection comprising a rigid interface frame on the tractor}
49/02	. with two or more soil-working tools of different kind	59/063	. . . {the connection comprising longitudinally oriented tang-and-sheath elements}
49/022	. . {at least one tool being actively driven}	59/064	. . {for connection to the front of the tractor}
49/025	. . . {about a substantially vertical axis}	59/065	. . {for ploughs or like implements (A01B 59/061 and subgroups take precedence)}
49/027	. . {with a rotating, soil working support element, e.g. a roller}	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)}
49/04	. 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)}	59/067	. . . {the lower arms being lifted or lowered by power actuator means internally incorporated in the tractor}
49/06	. . for sowing or fertilising	59/068	. . . {the lower arms being lifted or lowered by power actuator means provided externally on the tractor}
49/065	. . . {the soil-working tools being actively driven}	59/069	. . {with means for weighing the implement}
<u>Parts, details or accessories of agricultural machines or implements, in general</u> (seat constructions A47C ; wheels B60B ; shelters for drivers B60J ; seats specially adapted for vehicles B60N 2/00 ; wheel scrapers B60S 1/68)		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)
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)	61/02	. of the coupling devices between tractor and machine
51/02	. propelled by a motor	61/025	. . {the driving connections}
51/023	. . {of the Gantry-type}	61/04	. of the connection between tools and carrier beam or frame
51/026	. . {of the automotive vehicle type, e.g. including driver accommodation (A01B 51/023 takes precedence)}	61/042	. . {with shearing devices}
51/04	. drawn by animal or tractor	61/044	. . {the connection enabling a yielding pivoting movement around a substantially horizontal and transverse axis}
51/045	. . {drawn by animals}	61/046	. . . {the device including an energy accumulator for restoring the tool to its working position}
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)	61/048 {the connection or the energy accumulator being active in two opposite directions, e.g. for reversible plows}
59/002	. {Details, component parts}	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)
59/004	. . {Length-adjustable links}		
59/006	. . {Latched hooks}		
59/008	. . {Link connectors with spherical surfaces}		
59/02	. for animal-drawn machines		
59/04	. for machines pulled or pushed by a tractor		

63/002	<ul style="list-style-type: none"> • {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)} 	67/00	Devices for controlling the tractor motor by resistance of tools (preventing overstrain A01B 61/00)
63/004	<ul style="list-style-type: none"> • . {Lateral adjustment of tools} 	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)
63/006	<ul style="list-style-type: none"> • . {Lateral adjustment of wheels} 		NOTE
63/008	<ul style="list-style-type: none"> • . {Vertical adjustment of tools (A01B 63/10 takes precedence)} 		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
63/02	<ul style="list-style-type: none"> • for implements mounted on tractors 	69/001	<ul style="list-style-type: none"> • {Steering by means of optical assistance, e.g. television cameras (steering devices for road marking vehicles E01C 23/163)}
63/023	<ul style="list-style-type: none"> • . {Lateral adjustment of their tools} 	69/002	<ul style="list-style-type: none"> • {Steering or guiding on a substantially circular or spiral path}
63/026	<ul style="list-style-type: none"> • . {Lateral adjustment of their wheels} 	69/003	<ul style="list-style-type: none"> • {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}
63/04	<ul style="list-style-type: none"> • . Hand devices; Hand devices with mechanical accumulators, e.g. springs 	69/004	<ul style="list-style-type: none"> • . {automatic}
63/045	<ul style="list-style-type: none"> • . . {for vertically adjusting wheels or similar rotary supporting elements} 	69/005	<ul style="list-style-type: none"> • . {by an additional operator}
63/06	<ul style="list-style-type: none"> • . operated mechanically by tractor motor 	69/006	<ul style="list-style-type: none"> • . {derived from the steering of the tractor}
63/08	<ul style="list-style-type: none"> • . operated by the movement of the tractor 	69/007	<ul style="list-style-type: none"> • {Steering or guiding of agricultural vehicles, e.g. steering of the tractor to keep the plough in the furrow}
63/10	<ul style="list-style-type: none"> • . operated by hydraulic or pneumatic means 	69/008	<ul style="list-style-type: none"> • . {automatic}
63/1006	<ul style="list-style-type: none"> • . . {the hydraulic or pneumatic means structurally belonging to the tractor} 	69/02	<ul style="list-style-type: none"> • Ridge-marking or like devices; Checkrow wires; Accessories therefor
63/1013	<ul style="list-style-type: none"> • . . . {and being located inside the tractor body} 	69/022	<ul style="list-style-type: none"> • . {Ridge marking by deposition of a chemical substance, e.g. foam, on the surface of the soil}
63/102	<ul style="list-style-type: none"> • . . characterised by the location of the mounting on the tractor, e.g. on the rear part 	69/024	<ul style="list-style-type: none"> • . {adapted to cut and form a ridge or furrow in the soil surface, e.g. with a disc}
63/104	<ul style="list-style-type: none"> • . . . on the middle part, i.e. between front and rear wheels 	69/026	<ul style="list-style-type: none"> • . {Checkrow wires}
63/106	<ul style="list-style-type: none"> • . . . on the side 	69/028	<ul style="list-style-type: none"> • . . {the wire being located above the ground}
63/108	<ul style="list-style-type: none"> • . . . on the front part 	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)}
63/11	<ul style="list-style-type: none"> • . . for controlling weight transfer between implements and tractor wheels 	71/02	<ul style="list-style-type: none"> • Setting or adjusting mechanisms
63/111	<ul style="list-style-type: none"> • . . regulating working depth of implements 	71/04	<ul style="list-style-type: none"> • Bearings of rotating parts, e.g. for soil-working discs ({discs A01B 15/16, A01B 23/06}; bearings in general F16C)
63/1112	<ul style="list-style-type: none"> • . . . {using a non-tactile ground distance measurement, e.g. using reflection of waves} 	71/06	<ul style="list-style-type: none"> • Special adaptations of coupling means between power take-off and transmission shaft to the implement or machine (couplings for transmitting rotation F16D)
63/1115	<ul style="list-style-type: none"> • . . . {using a mechanical ground contact sensor} 	71/063	<ul style="list-style-type: none"> • . {for enabling transmission coupling and connection between tractor and implements to be controlled from the driver's seat}
63/1117	<ul style="list-style-type: none"> • . . . {using a hitch position sensor} 	71/066	<ul style="list-style-type: none"> • . {for enabling pitch, roll or yaw movements of trailed implements or machines}
63/112	<ul style="list-style-type: none"> • . . . to control draught load, i.e. tractive force 	71/08	<ul style="list-style-type: none"> • 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)
63/114	<ul style="list-style-type: none"> • . . . to achieve a constant working depth 		
63/1145	<ul style="list-style-type: none"> • {for controlling weight transfer between implements and tractor wheels} 		
63/118	<ul style="list-style-type: none"> • . . 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	<ul style="list-style-type: none"> • . operated by an electric motor 		
63/14	<ul style="list-style-type: none"> • for implements drawn by animals or tractors 		
63/145	<ul style="list-style-type: none"> • . {for controlling weight transfer between implements and tractor wheels} 		
63/16	<ul style="list-style-type: none"> • . with wheels adjustable relatively to the frame 		
63/163	<ul style="list-style-type: none"> • . . {laterally adjustable} 		
63/166	<ul style="list-style-type: none"> • . . {manually adjustable} 		
63/18	<ul style="list-style-type: none"> • . . with clutch between Z-type axle and wheel 		
63/20	<ul style="list-style-type: none"> • . . with gear and rack 		
63/22	<ul style="list-style-type: none"> • . . operated by hydraulic or pneumatic means 		
63/24	<ul style="list-style-type: none"> • . Tools or tool-holders adjustable relatively to the frame 		
63/245	<ul style="list-style-type: none"> • . . {laterally adjustable} 		
63/26	<ul style="list-style-type: none"> • . . by man-power 		
63/28	<ul style="list-style-type: none"> • . . operated by the machine or implement 		
63/30	<ul style="list-style-type: none"> • . . operated by motor power through a mechanical transmission 		
63/32	<ul style="list-style-type: none"> • . . operated by hydraulic or pneumatic means {without automatic control} 		

- 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