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 <u>A01C 5/00</u>; soil working for engineering purposes <u>E01</u>, <u>E02</u>, <u>E21</u>; {measuring areas for agricultural purposes <u>G01B</u>})

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:

 A01B 69/04
 covered by
 A01B 69/008

 A01B 69/06
 covered by
 A01B 69/005

 A01B 69/08
 covered by
 A01B 69/006

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 {;	Ploughs Ploughs	
	machines for working soil A01B 35/00; making hand	J	
	tools <u>B21D</u> })	3/00	Ploughs with fixed plough-shares
1/02	Spades; Shovels {(hand-operated dredgers)}	3/02	Man-driven ploughs
	E02F 3/02)}	3/04	Animal-drawn ploughs
1/022	• • {Collapsible; extensible; combinations with other tools}	3/06	• • without alternating possibility, i.e. incapable of making an adjacent furrow on return journey {,
1/024	• {Foot protectors attached to the blade}	2/00	i.e. conventional ploughing}
1/026	• { with auxiliary handles for facilitating lifting}	3/08	Swing ploughs
1/028	• • {with ground abutment shoes or earth anchors for	3/10	Trussed-beam ploughs; Single-wheel ploughs
	facilitating lifting}	3/12	Two-wheel beam ploughs
1/04	with teeth	3/14	Frame ploughs
1/06	 Hoes; Hand cultivators {(rakes <u>A01D 7/00</u>; forks <u>A01D 9/00</u>; picks <u>B25D</u>)} 	3/16	 Alternating ploughs, i.e. capable of making an adjacent furrow on return journey
1/065	• · {powered}	3/18	Turn-wrest ploughs
1/08	• with a single blade	3/20	Balance ploughs
1/10	• • with two or more blades	3/22	with parallel plough units used alternately
1/12	with blades provided with teeth	3/24	• Tractor-drawn ploughs (A01B 3/04 takes
1/14	• • with teeth only		precedence)
1/16	Tools for uprooting weeds	3/26	 without alternating possibility
1/165	• • {adapted for extracting a substantially cylindrical	3/28	Alternating ploughs
	plug out of the earth}	3/30	Turn-wrest ploughs
1/18	Tong-like tools	3/32	Balance ploughs
1/20	Combinations of different kinds of hand tools	3/34	with parallel plough units used alternately
1/22	• Attaching the blades or the like to handles (handles	3/36	 Ploughs mounted on tractors
	for tools, or their attachment, in general <u>B25G</u>);	3/38	 without alternating possibility
	Interchangeable or adjustable blades	3/40	Alternating ploughs
1/222	• • {Adjustable blades}	3/42	Turn-wrest ploughs
1/225	• • • {around a substantially horizontal axis}	3/421	with a headstock frame made in one piece
1/227 1/24	. {Interchangeable blades}. for treating meadows or lawns	3/4215	• • • • {the headstock being provided with two or more hydraulic cylinders}
1/243	• • {for aerating}	3/426	with a headstock frame made of two or more
1/246	• {for cutting sods or turves}		parts
1, 2-10	· · (101 outling bods of tur (00)	3/44	with parallel plough units used alternately
		3/46	 Ploughs supported partly by tractor and partly by

CPC - 2024.05

their own wheels

Ploughs A01B

3/462		4.0.00	
	• • {Alternating ploughs with frame rotating about a	13/08	for working subsoil
2111	vertical axis}	13/10	Special implements for lifting subsoil layers
3/464	• • {Alternating ploughs with frame rotating about a	13/12	Means for distributing the layers on the surface
	horizontal axis, e.g. turn-wrest ploughs}	13/14	 for working soil in two or more layers
3/466	• • • {the frame comprising an articulated beam}	13/16	 Machines for combating erosion, e.g. basin-diggers,
3/468	• • {the plough wheels being actively driven}		furrow-dammers
3/50	Self-propelled ploughs	15/00	Elements, tools, or details of ploughs
3/52	with three or more wheels, or endless tracks	15/02	Plough blades; Fixing the blades
3/54	• • • without alternating possibility		
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 <u>B21H</u>)}
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	15/10	Interchangeable or adjustable mouldboards
	cable plough systems {(vehicles towed by cable B60D)}	15/12	 Beams; Handles (handles for tools or their attachment in general <u>B25G</u>)
3/66	with motor-driven winding apparatus mounted on	15/125	• • {Articulated beams}
	the plough	15/14	• Frames (means or arrangements to facilitate
3/68	• Cable systems with one or two engines {; e.g. electrically-driven or with diesel generating set}	15/145	transportation A01B 73/00) • • {the plough blades being connected to the plough
3/70	Systems with one engine for working uphill		beam for unisono adjustment of the furrow
3/72	Means for anchoring the cables	15/17	width}
3/74	• Use of electric power for propelling ploughs	15/16	• Discs (bearings therefor A01B 71/04); Scrapers for
	{for rotary cultivators or the like (electric current		cleaning discs; Sharpening attachments (sharpening
	collectors <u>B60L 5/00</u>)}	15/10	in general <u>B24</u>)
<i>51</i> 00	Dlougha with welling non-driven tools of disease	15/18	• Coulters
5/00	Ploughs with rolling non-driven tools, e.g. discs (with rotary driven tools <u>A01B 9/00</u>)	15/20	. Special adjusting means for tools of ploughs drawn
<i>5 (</i> 02			by, or mounted on tractors working on hillsides or
5/02	drawn by animals		slopes
5/04	drawn by tractors	17/00	Ploughs with special additional arrangements, e.g.
5/06	• without alternating possibility {, e.g. with rotary counters provided with scrapers}		means for putting manure under the soil, clod- crushers (A01B 49/00 takes precedence); {Means
5/08	. Alternating ploughs		for breaking the subsoil}
5/10	• mounted or partly-mounted on tractors	17/002	• {Means for putting manure, debris, straw or the like
5/12	without alternating possibility		under the soil (to plough-in weeds A01B 39/18)}
5/14	Alternating ploughs	17/004	• {Clod-crushers}
5/16	Self-propelled disc or like ploughs	17/006	• • {with driven tools}
7/00	Disc-like soil-working implements usable either as ploughs or as harrows, or the like	17/008	• • {rotating about a vertical or steeply inclined axis}
9/00	Plaughe with retery driven tools (tilling implements	Harrows	
9/00	Ploughs with rotary driven tools (tilling implements with rotary driven tools A01B 33/00)	<u>Harrows</u>	
	with rotary driven tools <u>A01B 33/00</u>)	Harrows 19/00	Harrows with non-rotating tools {(harrows for
9/00 9/003	with rotary driven tools <u>A01B 33/00</u>) • {with tools on horizontal shaft transverse to		working in vineyards A01B 39/16)}
	 with rotary driven tools A01B 33/00) with tools on horizontal shaft transverse to direction of travel with tools on horizontal shaft parallel to direction 		
9/003	 with rotary driven tools A01B 33/00) • {with tools on horizontal shaft transverse to direction of travel} • {with tools on horizontal shaft parallel to direction of travel} 	19/00	working in vineyards <u>A01B 39/16</u>)} with tools rigidly or elastically attached to a tool-
9/003	 with rotary driven tools A01B 33/00) with tools on horizontal shaft transverse to direction of travel with tools on horizontal shaft parallel to direction 	19/00 19/02	 working in vineyards A01B 39/16)} with tools rigidly or elastically attached to a tool-frame with two or more tool-frames with tools or tool-frames moved to-and-fro mechanically
9/003 9/006 11/00	 with rotary driven tools A01B 33/00) with tools on horizontal shaft transverse to direction of travel} with tools on horizontal shaft parallel to direction of travel} Ploughs with oscillating, digging or piercing tools {driven or not} 	19/00 19/02 19/04	 working in vineyards A01B 39/16)} with tools rigidly or elastically attached to a tool-frame with two or more tool-frames with tools or tool-frames moved to-and-fro
9/003 9/006	 with rotary driven tools A01B 33/00) with tools on horizontal shaft transverse to direction of travel} with tools on horizontal shaft parallel to direction of travel} Ploughs with oscillating, digging or piercing tools {driven or not} Ploughs or like machines for special purposes 	19/00 19/02 19/04 19/06	 working in vineyards A01B 39/16)} with tools rigidly or elastically attached to a tool-frame with two or more tool-frames with tools or tool-frames moved to-and-fro mechanically
9/003 9/006 11/00	with rotary driven tools A01B 33/00) • {with tools on horizontal shaft transverse to direction of travel} • {with tools on horizontal shaft parallel to direction of travel} Ploughs with oscillating, digging or piercing tools {driven or not} Ploughs or like machines for special purposes (for drainage E02B 11/02){; Ditch diggers, trench ploughs, forestry ploughs, ploughs for land or	19/00 19/02 19/04 19/06 19/08	 working in vineyards A01B 39/16)} with tools rigidly or elastically attached to a tool-frame with two or more tool-frames with tools or tool-frames moved to-and-fro mechanically with link network supporting tooth-like tools
9/003 9/006 11/00	with rotary driven tools A01B 33/00) • {with tools on horizontal shaft transverse to direction of travel} • {with tools on horizontal shaft parallel to direction of travel} Ploughs with oscillating, digging or piercing tools {driven or not} 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	19/00 19/02 19/04 19/06 19/08 19/10	 working in vineyards A01B 39/16)} with tools rigidly or elastically attached to a tool-frame with two or more tool-frames with tools or tool-frames moved to-and-fro mechanically with link network supporting tooth-like tools Lifting or cleaning apparatus
9/003 9/006 11/00	with rotary driven tools A01B 33/00) • {with tools on horizontal shaft transverse to direction of travel} • {with tools on horizontal shaft parallel to direction of travel} Ploughs with oscillating, digging or piercing tools {driven or not} 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	19/00 19/02 19/04 19/06 19/08 19/10	 working in vineyards A01B 39/16)} with tools rigidly or elastically attached to a tool-frame with two or more tool-frames with tools or tool-frames moved to-and-fro mechanically with link network supporting tooth-like tools Lifting or cleaning apparatus Harrows with rotary non-driven tools (tilling
9/003 9/006 11/00 13/00	with rotary driven tools A01B 33/00) • {with tools on horizontal shaft transverse to direction of travel} • {with tools on horizontal shaft parallel to direction of travel} Ploughs with oscillating, digging or piercing tools {driven or not} 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)}	19/00 19/02 19/04 19/06 19/08 19/10 21/00	 working in vineyards A01B 39/16)} with tools rigidly or elastically attached to a tool-frame with two or more tool-frames with tools or tool-frames moved to-and-fro mechanically with link network supporting tooth-like tools Lifting or cleaning apparatus Harrows with rotary non-driven tools (tilling implements with rotary driven tools A01B 33/00)
9/003 9/006 11/00	 with rotary driven tools A01B 33/00) { with tools on horizontal shaft transverse to direction of travel} { with tools on horizontal shaft parallel to direction of travel} Ploughs with oscillating, digging or piercing tools {driven or not} 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)} for making or working ridges, e.g. with 	19/00 19/02 19/04 19/06 19/08 19/10 21/00	 working in vineyards A01B 39/16)} with tools rigidly or elastically attached to a tool-frame with two or more tool-frames with tools or tool-frames moved to-and-fro mechanically with link network supporting tooth-like tools Lifting or cleaning apparatus Harrows with rotary non-driven tools (tilling implements with rotary driven tools A01B 33/00) with tooth-like tools
9/003 9/006 11/00 13/00	 with rotary driven tools A01B 33/00) {with tools on horizontal shaft transverse to direction of travel} {with tools on horizontal shaft parallel to direction of travel} Ploughs with oscillating, digging or piercing tools {driven or not} 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)} for making or working ridges, e.g. with symmetrically arranged mouldboards {, e.g. ridging 	19/00 19/02 19/04 19/06 19/08 19/10 21/00 21/02 21/04	 working in vineyards A01B 39/16)} with tools rigidly or elastically attached to a tool-frame with two or more tool-frames with tools or tool-frames moved to-and-fro mechanically with link network supporting tooth-like tools Lifting or cleaning apparatus Harrows with rotary non-driven tools (tilling implements with rotary driven tools A01B 33/00) with tooth-like tools on horizontally-arranged axles
9/003 9/006 11/00 13/00	 with rotary driven tools A01B 33/00) {with tools on horizontal shaft transverse to direction of travel} {with tools on horizontal shaft parallel to direction of travel} Ploughs with oscillating, digging or piercing tools {driven or not} 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)} for making or working ridges, e.g. with symmetrically arranged mouldboards {, e.g. ridging plough} 	19/00 19/02 19/04 19/06 19/08 19/10 21/00 21/02 21/04 21/06	working in vineyards A01B 39/16)} with tools rigidly or elastically attached to a tool-frame with two or more tool-frames with tools or tool-frames moved to-and-fro mechanically with link network supporting tooth-like tools Lifting or cleaning apparatus Harrows with rotary non-driven tools (tilling implements with rotary driven tools A01B 33/00) with tooth-like tools on horizontally-arranged axles on vertically-arranged axles with disc-like tools
9/003 9/006 11/00 13/00	 with rotary driven tools A01B 33/00) {with tools on horizontal shaft transverse to direction of travel} {with tools on horizontal shaft parallel to direction of travel} Ploughs with oscillating, digging or piercing tools {driven or not} 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)} for making or working ridges, e.g. with symmetrically arranged mouldboards {, e.g. ridging plough} {with passively driven rotating disc-like elements for forming the ridge} 	19/00 19/02 19/04 19/06 19/08 19/10 21/00 21/02 21/04 21/06 21/08	 working in vineyards A01B 39/16)} with tools rigidly or elastically attached to a tool-frame with two or more tool-frames with tools or tool-frames moved to-and-fro mechanically with link network supporting tooth-like tools Lifting or cleaning apparatus Harrows with rotary non-driven tools (tilling implements with rotary driven tools A01B 33/00) with tooth-like tools on horizontally-arranged axles on vertically-arranged axles with disc-like tools {of the type comprising four individual disk groups each pivotally connected at fixed locations
9/003 9/006 11/00 13/00	 with rotary driven tools A01B 33/00) {with tools on horizontal shaft transverse to direction of travel} {with tools on horizontal shaft parallel to direction of travel} Ploughs with oscillating, digging or piercing tools {driven or not} 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)} for making or working ridges, e.g. with symmetrically arranged mouldboards {, e.g. ridging plough} {with passively driven rotating disc-like elements for forming the ridge} for working in vineyards, orchards, or the like 	19/00 19/02 19/04 19/06 19/08 19/10 21/00 21/02 21/04 21/06 21/08 21/083	working in vineyards A01B 39/16) with tools rigidly or elastically attached to a tool-frame with two or more tool-frames with tools or tool-frames moved to-and-fro mechanically with link network supporting tooth-like tools Lifting or cleaning apparatus Harrows with rotary non-driven tools (tilling implements with rotary driven tools A01B 33/00) with tooth-like tools on horizontally-arranged axles on vertically-arranged axles with disc-like tools fof the type comprising four individual disk groups each pivotally connected at fixed locations to a substantially rigid frame
9/003 9/006 11/00 13/00	 with rotary driven tools A01B 33/00) {with tools on horizontal shaft transverse to direction of travel} {with tools on horizontal shaft parallel to direction of travel} Ploughs with oscillating, digging or piercing tools {driven or not} 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)} for making or working ridges, e.g. with symmetrically arranged mouldboards {, e.g. ridging plough} {with passively driven rotating disc-like elements for forming the ridge} 	19/00 19/02 19/04 19/06 19/08 19/10 21/00 21/02 21/04 21/06 21/08	 working in vineyards A01B 39/16)} with tools rigidly or elastically attached to a tool-frame with two or more tool-frames with tools or tool-frames moved to-and-fro mechanically with link network supporting tooth-like tools Lifting or cleaning apparatus Harrows with rotary non-driven tools (tilling implements with rotary driven tools A01B 33/00) with tooth-like tools on horizontally-arranged axles on vertically-arranged axles with disc-like tools {of the type comprising four individual disk groups each pivotally connected at fixed locations

Harrows A01B

23/02	• Teeth; Fixing the teeth	33/10	Structural or functional features of the tools $\{;$
23/04	• Frames (means or arrangements to facilitate		Theoretical aspects of the cutting action}
22/0/2	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	33/12	• • Arrangement of the tools; Screening of the tools
	tools}	33/125	• • • {screening of tools rotating about a vertical
23/06	• Discs (A01B 15/16 takes precedence; bearings		shaft}
	therefor A01B 71/04); Scrapers for cleaning	33/14	. Attaching the tools to the rotating shaft, e.g.
	discs; Sharpening attachments; {Lubrication of bearings}(sharpening in general <u>B24</u>)	33/142	resiliently {or flexibly}-attached tools
		33/142	 {the rotating shaft being oriented horizontally} {with spring tools or resiliently-attached
25/00	Harrows with special additional arrangements,	33/144	rigid tools }
	e.g. means for distributing fertilisers; Harrows for	33/146	• • • {the rotating shaft being oriented vertically or
	special purposes (A01B 39/00 takes precedence {; fertiliser distributors A01C 15/00})	22,212	steeply inclined}
	returned distributors <u>Aute 15/00</u> })	33/148	• • • • { with spring tools or resiliently-attached
Other machi	ines for working soil		rigid tools}
27/00	Clod-crushers	33/16	• with special additional arrangements (A01B 49/00
27/005	• {comprising roller-type tools moving on the		takes precedence; for sowing or fertilising
27/003	ground}		<u>A01B 49/06</u>)
	,	35/00	Other machines for working soil {not specially
29/00	Rollers {(rollers for roads <u>E01C</u>)}		adapted for working soil on which crops are
29/02	with smooth surface		growing}(A01B 37/00, A01B 39/00, A01B 77/00
29/04	 with non-smooth surface formed of rotatably- mounted rings or discs or with projections or ribs on 	25/02	take precedence {; hand tools <u>A01B 1/00</u> })
	the roller body; Land packers	35/02 35/04	with non-rotating toolsdrawn by animal or tractor {or man-power}
29/041	• • {of "Cambridge"-type, i.e. the soil-pressing rings	35/04	with spring tools {or with resiliently- or
	being stacked on a shaft}	33/00	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
29/048	• • {Bar cage rollers}		flexibly-attached rigid tools}
29/06	 with special additional arrangements 	35/14	• • with rigid tools
31/00	Drags {graders for field cultivators (graders in	35/16	 with rotating or circulating non-propelled tools
	general <u>E02F</u>)}	35/18	 with both rotating and non-rotating tools
33/00	Tilling implements with rotary driven tools {,	35/20	• Tools; Details
33/00	e.g. in combination with fertiliser distributors or	35/22	• Non-rotating tools; {Resilient or flexible
	seeders, with grubbing chains, with sloping axles,	35/225	mounting of rigid tools } {the tools being adapted to allow the chisel
	with driven discs}	331223	point to be easily fitted or removed from the
33/02	· with tools on horizontal shaft transverse to direction		shank}
	of travel	35/24	Spring tools
33/021	• • {with rigid tools}	35/26	Rigid tools
33/022	• • • {with helicoidal tools}	35/28	Rotating tools; Mounting rotating tools
33/024	• • • {with disk-like tools}	35/30	• • Undercarriages (<u>A01B 23/04</u> takes precedence)
33/025	• • {with spring tools, i.e. resiliently- or flexibly-	35/32	 with special additional arrangements
33/027	attached rigid tools} • {Operator supported tools, e.g. using a harness for	37/00	Devices for loosening soil compacted by wheels or
33/021	supporting the tool or power unit}	21,75	the like
33/028	• • {of the walk-behind type (walk-type tractors	20/00	
	<u>B62D 51/04</u>)}	39/00	Other machines specially adapted for working soil on which crops are growing
33/04	· with tools on horizontal shaft parallel to direction of	39/02	with non-rotating tools
	travel	39/04	drawn by animal or tractor
33/06	 with tools on vertical or steeply-inclined shaft 	39/06	Self-propelled machines
33/065	• • {comprising a plurality of rotors carried by an	39/08	with rotating tools {such as weeding machines}
	elongate, substantially closed transmission casing, transversely connectable to a tractor}	39/085	• • {the rotating tools being actively driven}
33/08	Tools; Details, e.g. adaptations of transmissions or	39/10	with oscillating tools {driven or not}
33/00	gearings	39/12	• for special purposes {, e.g. for special culture}
33/082	• • {Transmissions; Gearings; Power distribution}	39/14	• • for working ridges {, e.g. for rows of plants and/
33/085	• • {specially adapted for tools on a vertical shaft}		or furrows}
33/087	• • {Lifting devices; Depth regulation devices;		
	Mountings}		

39/16	for working in vineyards, orchards, or the like	51/04	. drawn by animal or tractor
37/10	{; Arrangements for preventing damage to vines	51/045	{drawn by animals}
	(ploughs adapted for working in vineyards		
	<u>A01B 13/06</u>)}	59/00	Devices specially adapted for connection between animals or tractors and agricultural machines or
39/163	• • {comprising rotating tools}		implements (A01B 63/00 takes precedence; vehicle
39/166	• • • {actively driven}		connections in general <u>B60D</u> ; draught assemblies for
39/18	for weeding		animal drawn vehicles, in general <u>B62C 5/00</u>)
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}
39/20	Tools; Mounting tools	59/006	• • {Latched hooks}
39/24	 Tools, Woulding tools Undercarriages (A01B 23/04 takes precedence) 	59/008	• • {Link connectors with spherical surfaces}
39/26	Arrangements for protecting plants {, e.g.	59/02	. for animal-drawn machines
57720	fenders}	59/04	 for machines pulled or pushed by a tractor
39/28	• with special additional arrangements (A01B 49/00	59/041	• preventing or limiting side-play of implements
	takes precedence)	50/0415	(preventing overstrain A01B 61/00)
41/00	Thinning machines	59/0415	 . • {by hydraulic or pneumatic means acting on the lower draft links}
41/02	• with oscillating tools	59/042	 having pulling means arranged on the rear part of
41/04	 with oscillating tools 	37/042	the tractor
41/06	with rotating tools with electric, e.g. photo-electric control of thinning	59/043	• • • supported at three points, e.g. by quick-release
	operations		couplings (A01B 59/06 takes precedence)
42/00	•	59/044	having pulling means arranged on the middle part
43/00	Gatherers for removing stones, undesirable roots or the like from the soil, e.g. tractor-drawn rakes		of the tractor
43/005	• {Windrower-type machines}	59/046	having pulling or pushing means arranged on the
43/003			side of the tractor
45/00	Machines for treating meadows or lawns {, e.g. for	59/048	• having pulling or pushing means arranged on the
	sports grounds}	50/06	front part of the tractor
45/02	• for aerating	59/06	• for machines mounted on tractors
45/023	• • {Perforators comprising spiking tools actively	59/061	 {specially adapted for enabling connection or disconnection controlled from the driver's seat
	driven in a reciprocating movement through a crankshaft or eccentric mechanism}		(not used, see subgroups)}
45/026	Scarifiers comprising a knife reel actively driven	59/062	• • • {the connection comprising a rigid interface
43/020	around a substantially horizontal shaft}	237002	frame on the tractor}
	•	59/063	{the connection comprising longitudinally
47/00	Soil-working with electric potential applied		oriented tang-and-sheath elements}
	between tools and soil	59/064	• • {for connection to the front of the tractor}
49/00	Combined machines (auxiliary devices attached to	59/065	• • {for ploughs or like implements (A01B 59/061
	machines of a different kind, e.g. harrows attached to		and subgroups take precedence)}
	ploughs, <u>see</u> the relevant groups for the machines)	59/066	• • {of the type comprising at least two lower arms
49/02	 with two or more soil-working tools of different 		and one upper arm generally arranged in a
	kind	50/067	triangle (e.g. three-point hitches)}
49/022	• • {at least one tool being actively driven}	59/067	• • • {the lower arms being lifted or lowered by power actuator means internally incorporated in
49/025	• • {about a substantially vertical axis}		the tractor}
49/027	• • {with a rotating, soil working support element,	59/068	• • • {the lower arms being lifted or lowered by
40/04	e.g. a roller}Combinations of soil-working tools with non-soil-		power actuator means provided externally on
49/04	working tools, e.g. planting tools		the tractor}
49/06	• for sowing or fertilising	59/069	• • {with means for weighing the implement}
49/065	• • • { the soil-working tools being actively driven }	61/00	Devices for, or parts of, agricultural machines or
.,,,,,,,,	(the soil working tools come actively driver)	01/00	implements for preventing overstrain (preventing
	s or accessories of agricultural machines or		overstrain in vehicle connections, in general <u>B60D</u> ;
	<u>in general</u> (seat constructions <u>A47C</u> ; wheels <u>B60B</u> ;		preventing overstrain in couplings per se F16D)
	rivers <u>B60J</u> ; seats specially adapted for vehicles	61/02	• of the coupling devices between tractor and machine
<u>B60N 2/00</u> ; w	wheel scrapers <u>B60S 1/68</u>)	61/025	• • {the driving connections}
51/00	Undercarriages specially adapted for mounting-	61/04	. of the connection between tools and carrier beam or
	on various kinds of agricultural tools or apparatus		frame
	(general vehicle aspects, see the relevant subclass of	61/042	• • {with shearing devices}
	class <u>B60</u> or <u>B62</u>)	61/044	• • {the connection enabling a yielding pivoting
51/02	 propelled by a motor 		movement around a substantially horizontal and
51/023	• • {of the Gantry-type}	(1/04)	transverse axis}
51/026	• • {of the automotive vehicle type, e.g. including	61/046	• • • { the device including an energy accumulator
	driver accommodation (<u>A01B 51/023</u> takes		for restoring the tool to its working position}
	precedence)}		

61/048	• • • • {the connection or the energy accumulator being active in two opposite directions, e.g.	63/24	• • Tools or tool-holders adjustable relatively to the frame
	for reversible plows}	63/245	• • { laterally adjustable }
63/00	Lifting or adjusting devices or arrangements	63/26	by man-power
	for agricultural machines or implements	63/28	operated by the machine or implement
	(lifting mechanisms for the cutter-bar of a mower	63/30	• • • operated by motor power through a mechanical
	A01D 34/24; adjusting devices for the cutter-bar of a		transmission
	mower A01D 34/28; constructional features of lifting	63/32	operated by hydraulic or pneumatic means
	devices per se B66F)		{without automatic control}
63/002	 {Devices for adjusting or regulating the position of tools or wheels (preventing overstrain <u>A01B 61/00</u>; wheels adjustable relatively to the frame for drawn 	67/00	Devices for controlling the tractor motor by resistance of tools (preventing overstrain
	implements A01B 3/16; tools or tool holders		<u>A01B 61/00</u>)
	adjustable relatively to the frame for drawn	69/00	Steering of agricultural machines or implements;
	implements <u>A01B 63/24</u>)}		Guiding agricultural machines or implements on a
63/004	• • {Lateral adjustment of tools}		desired track
63/006	• • {Lateral adjustment of wheels}		NOTE
63/008	• • {Vertical adjustment of tools (A01B 63/10 takes		
	precedence)}		In this group it is obligatory to classify subject-
63/02	for implements mounted on tractors		matter in the first appropriate place. It is however
63/023	• • {Lateral adjustment of their tools}		allowed to apply multiple classification where
63/026	• • {Lateral adjustment of their wheels}		considered useful for search
63/04	Hand devices; Hand devices with mechanical	69/001	• {Steering by means of optical assistance, e.g.
	accumulators, e.g. springs		television cameras (steering devices for road
63/045	• • • {for vertically adjusting wheels or similar		marking vehicles E01C 23/163)}
	rotary supporting elements}	69/002	• {Steering or guiding on a substantially circular or
63/06	operated mechanically by tractor motor		spiral path}
63/08	• operated by the movement of the tractor	69/003	• {Steering or guiding of machines or implements
63/10	operated by hydraulic or pneumatic means		pushed or pulled by or mounted on agricultural
63/1006	{the hydraulic or pneumatic means structurally		vehicles such as tractors, e.g. by lateral shifting of
	belonging to the tractor}		the towing connection}
63/1013	• • • { and being located inside the tractor body }	69/004	• • {automatic}
63/102	characterised by the location of the mounting	69/005	• • {by an additional operator}
	on the tractor, e.g. on the rear part	69/006	• • {derived from the steering of the tractor}
63/104	on the middle part, i.e. between front and	69/007	• {Steering or guiding of agricultural vehicles, e.g.
	rear wheels		steering of the tractor to keep the plough in the
63/106	on the side		furrow}
63/108	• • • on the front part	69/008	• • {automatic}
63/11	• • • for controlling weight transfer between	69/02	• Ridge-marking or like devices; Checkrow wires;
	implements and tractor wheels	40 ID 4	Accessories therefor
63/111	• • regulating working depth of implements	69/022	• • {Ridge marking by deposition of a chemical
63/1112	• • • { using a non-tactile ground distance	60/024	substance, e.g. foam, on the surface of the soil}
	measurement, e.g. using reflection of waves}	69/024	• • {adapted to cut and form a ridge or forrow in the
63/1115	• • • {using a mechanical ground contact sensor}	60/026	soil surface, e.g. with a disc}
63/1117	• • • {using a hitch position sensor}	69/026	• {Checkrow wires}
63/112	• • • to control draught load, i.e. tractive force	69/028	• • • {the wire being located above the ground}
63/114	to achieve a constant working depth	71/00	Construction or arrangement of setting or
63/1145	• • • • {for controlling weight transfer between		adjusting mechanisms, of implement or tool
	implements and tractor wheels}		drive or of power take-off; Means for protecting
63/118	Mounting implements on power-lift linkages		parts against dust, or the like; Adapting machine
	(A01B 59/043 takes precedence; preventing or		elements to or for agricultural purposes {(adjusting
	limiting side-play of implements A01B 59/041;		mechanisms in general <u>G05G</u>)}
	preventing overstrain A01B 61/00)	71/02	 Setting or adjusting mechanisms
63/12	operated by an electric motor	71/04	 Bearings of rotating parts, e.g. for soil-working
63/14	. for implements drawn by animals or tractors		discs ({discs <u>A01B 15/16</u> , <u>A01B 23/06</u> }; bearings
63/145	• . {for controlling weight transfer between		in general <u>F16C</u>)
	implements and tractor wheels}	71/06	Special adaptations of coupling means between
63/16	with wheels adjustable relatively to the frame		power take-off and transmission shaft to the
63/163	{laterally adjustable}		implement or machine (couplings for transmitting
63/166	• • {manually adjustable}	71/0/2	rotation <u>F16D</u>)
63/18	with clutch between Z-type axle and wheel	71/063	• • { for enabling transmission coupling and
63/20	with gear and rack		connection between tractor and implements to be
63/22	operated by hydraulic or pneumatic means		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 (<u>A01B 15/16</u>, <u>A01B 19/10</u> and <u>A01B 23/06</u> take precedence; screening of rotary driven tilling tools <u>A01B 33/12</u>; screening of rotary parts in general <u>F16P 1/00</u>)

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 $\underline{A01B~63/00}$; {carriers for harvesters or mowers $\underline{A01D~75/002}$; arrangements or carriers for haymakers $\underline{A01D~78/1007}$, $\underline{A01D~80/005}$; } vehicles adapted for load transportation or to transport, to carry or to comprise special loads or objects $\underline{B60P}$; motor vehicles, trailers $\underline{B62D}$)

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

13/02 • Folding frame

73/04 . . foldable about a horizontal axis

73/042 . . . {specially adapted for actively driven implements}

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 <u>A01N 25/00</u> - <u>A01N 65/00</u>; fertilisers <u>C05</u>; soil-conditioning or soil-stabilising materials <u>C09K 17/00</u>)

79/00 Methods for working soil

79/005

• {Precision agriculture}

79/02

combined with other agricultural processing, e.g. fertilising, planting