

# CPC COOPERATIVE PATENT CLASSIFICATION

## A HUMAN NECESSITIES

### AGRICULTURE

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

#### A01D HARVESTING; MOWING

##### NOTES

1. This subclass covers the shredding or pulverising of stubble, e.g. for the purpose of producing mulch, but does not cover other mechanical destruction of unwanted vegetation, which is covered by group [A01M 21/02](#)
2. In this subclass, in groups [A01D 34/00](#), [A01D 42/00](#), [A01D 43/00](#), [A01D 57/00](#), [A01D 67/00](#), [A01D 69/00](#) and [A01D 75/00](#), it is desirable to add the indexing code of group [A01D 2101/00](#)

##### WARNING

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.

**Hand implements** (devices for picking apples or like fruit [A01D 46/24](#); soil-working implements not specially adapted for harvesting [A01B 1/00](#))

**1/00 Hand-cutting implements for harvesting** (hedge trimming means [A01G 3/04](#); {hand-cutting in general [B26](#); making from sheet metal [B21D 53/72](#); making by rolling [B21H 7/10](#)})

- 1/02 . Scythes
- 1/04 . Sickles
- 1/06 . Knives
- 1/08 . Attaching means for blades
- 1/10 . . with fastening by means of eccentric levers
- 1/12 . . with blades adjustable in several ways
- 1/14 . Handles; Accessories, e.g. scythe baskets, safety devices

**3/00 Non-abrasive sharpening devices for scythes, sickles or the like**

- 3/02 . with percussive tools
- 3/04 . with pressing jaws
- 3/06 . with pressing rollers or pressing discs
- 3/08 . Details, e.g. scythe anvils, scythe guides

**5/00 Containers for whetstones for use during harvesting**

**7/00 Rakes** (mowers convertible to rakes or capable of raking [A01D 42/02](#); mowers combined with rakes [A01D 43/02](#))

##### WARNING

Groups [A01D 7/00](#), [A01D 7/02](#), [A01D 7/04](#), [A01D 7/06](#), [A01D 7/08](#) and [A01D 7/10](#) are incomplete pending reclassification of documents from group [A01G 20/40](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 7/02 . with tines rigidly connected to the rake-bar
- 7/04 . with adjustable rake-bar

- 7/06 . with tines specially shaped or attached
- 7/08 . with exchangeable tines
- 7/10 . combined with strippers, grippers or the like

**9/00 Forks** {(making forks from sheet metal [B21D 53/68](#); making forks by rolling [B21H 7/08](#))}

- 9/02 . with tines rigidly connected to the handle
- 9/04 . with exchangeable tines
- 9/06 . combined with strippers, grippers or the like

**11/00 Other hand implements** {(for maize [A01D 45/026](#), for cotton [A01D 46/087](#))}

- 11/02 . for lifting or cropping beet, potatoes or other root crops
- 11/025 . . {Knives for topping beets}
- 11/04 . for handling root crops, e.g. shovels, fork-like shovels
- 11/06 . Combined implements, e.g. fork and rake

##### Machines for harvesting root crops

**13/00 Diggers, e.g. potato ploughs**

**15/00 Digging machines with sieve graters but without conveying mechanisms**

- 15/02 . with rigid graters
- 15/04 . with moving or vibrating graters

**17/00 Digging machines with sieving and conveying mechanisms**

- 17/02 . with conveyors arranged above the sieving device
- 17/04 . with conveyors arranged below the sieving device
- 17/06 . with rollers or disc screens
- 17/08 . with shaker type screens
- 17/10 . with smooth conveyor belts, lath bands or rake bands

- 17/101 . . {with two superposed conveyor belts}
- 2017/103 . . {Constructional details of conveyor belts}
- 2017/105 . . {Driving means for the belt}
- 2017/106 . . {Belts with fingers mounted on them}
- 2017/108 . . {Belts with paddles mounted on them}

17/12	• with bucket conveyors	33/02	• Foliage-separating mechanisms
17/14	• with cylindrical screens	33/04	• Stone-separating mechanisms
17/16	• . with a conveyor spiral	33/06	• Haulm-cutting mechanisms
17/18	• . without a conveyor spiral	33/08	• Special sorting and cleaning mechanisms
17/20	• . with several co-operating screens	33/10	• Crop collecting devices, with or without weighing apparatus
17/22	• . with several co-operating sifter bands	33/105	• . {Devices for gathering the crop in a row}
<b>19/00</b>	<b>Digging machines with centrifugal wheels, drums or spinners</b>	33/12	• Driving mechanisms, with or without motor
19/02	• with working tools rotating around a horizontal axis arranged transverse to the direction of travel	33/14	• Lifting or lowering mechanisms for the tools
19/04	• with working tools rotating around a horizontal axis arranged parallel to the direction of travel	<b>Harvesters or mowers for grass, cereals, or other crops</b> (component parts thereof <a href="#">A01D 57/00</a> - <a href="#">A01D 69/00</a> ; accessories therefor <a href="#">A01D 75/00</a> )	
19/06	• . with scoop wheels or drums	<b>34/00</b>	<b>Mowers</b> (combined with apparatus performing additional operations while mowing <a href="#">A01D 37/00</a> - <a href="#">A01D 41/00</a> , <a href="#">A01D 43/00</a> ; convertible to apparatus for purposes other than mowing or capable of performing operations other than mowing <a href="#">A01D 42/00</a> ); <b>Mowing apparatus of harvesters</b>
19/08	• . with scoop tine chains	34/001	• {Accessories not otherwise provided for}
19/10	• . with receiving screens; Implements for depositing the root crops	34/003	• . {Means for cleaning the machine}
19/12	• with working tools arranged on an approximately vertical axis	34/005	• . {Mulching means}
19/14	• . with one screening wheel	34/006	• {Control or measuring arrangements}
19/16	• . with several screening wheels	34/008	• . {for automated or remotely controlled operation}
19/18	• . with screen tine chains	34/01	• characterised by features relating to the type of cutting apparatus
<b>21/00</b>	<b>Digging machines with potato-picking implements</b>	34/015	• . {Cutting mechanisms not covered by another group}
21/02	• with picking tools moved up-and-down	34/02	• . having reciprocating cutters
21/04	• with rotating picking tools	34/03	• . . mounted on a vehicle, e.g. a tractor, or drawn by an animal or a vehicle
<b>23/00</b>	<b>Topping machines</b>	34/032	• . . . {drawn by an animal or a vehicle}
23/02	• cutting the tops before being lifted	34/035	• . . . . {with cutter bars driven by a power take-off from the vehicle}
2023/022	• . {Rotatable cleaning devices, e.g. brushes, for removing the rests of vegetal material on the root-crops not yet harvested (with cutters <a href="#">A01D 2023/026</a> )}	34/037	• . . . . {with additional power-supply}
2023/024	• . {Devices with fix blades for topping}	34/04	• . . . . with cutters at the front
2023/026	• . {Devices with movable knives for topping, e.g. rotatable cutting disks}	34/043	• . . . . {for cutting at the side}
2023/028	• . . {Cutters rotating around a shaft forming a cutting rotor}	34/046	• . . . . {drawn by an animal or a vehicle}
23/04	• cutting the tops after being lifted	34/06	• . . . . with cutters at the side
23/06	• with collecting and depositing devices for the tops; Devices for protecting the tops against damage	34/065	• . . . . {drawn by an animal or a vehicle}
<b>25/00</b>	<b>Lifters for beet or like crops</b>	34/07	• . . . . with cutters at the back
25/005	• {Auxiliary devices for the lifters}	34/08	• . . hand-guided by a walking operator
25/02	• Machines with rigid tools	34/10	• . . . with motor driven cutters or wheels
25/04	• Machines with moving or rotating tools	34/125	• . . with means for discharging mown material ( <a href="#">A01D 57/26</a> - <a href="#">A01D 57/30</a> take precedence; combined with means for gathering or loading mown material <a href="#">A01D 43/06</a> )
25/042	• . {with driven tools}	34/13	• . . . Cutting apparatus
25/044	• . . {with driven rotating tools}	34/135	• . . . . having oppositely movable cooperating knife-bars
25/046	• . . {with oscillating tools}	34/14	• . . . . Knife-bars
25/048	• . . {with endless chains}	34/145	• . . . . {Devices for connecting the knife-bars to the driving mechanism}
<b>27/00</b>	<b>Machines with both topping and lifting mechanisms</b>	34/16	• . . . . Guides for the knife-bar in the ledger-plate
27/02	• with rigid tools	34/17	• . . . . Holding-down devices for the knife
27/04	• with moving or rotating tools	34/18	• . . . . Guard fingers; Ledger-plates
<b>29/00</b>	<b>Harvesters for peanuts</b>	34/20	• . . . . Ledger-plate bars
<b>31/00</b>	<b>Other digging harvesters</b> {(for harvesting asparagus <a href="#">A01D 45/007</a> )}	34/22	• . . . . Shoes therefor
31/02	• combined with other agricultural machines, e.g. drilling, planting, hay-harvesting machines	34/23	• . . . . with additional vertical cutter-bar
<b>33/00</b>	<b>Accessories for digging harvesters</b>	34/24	• . . . Lifting devices for the cutter-bar
2033/005	• {Yield crop determination mechanisms for root-crop harvesters}	34/243	• . . . . {Mechanical lifting devices ( <a href="#">A01D 34/26</a> takes precedence)}

- 34/246 . . . . {Hydraulic lifting devices}
- 34/26 . . . . manually actuated
- 34/27 . . . . Devices for disengaging the knife-driving mechanisms during the lifting of the cutter-bar
- 34/28 . . . . Adjusting devices for the cutter-bar
- 34/283 . . . . {Adjustment of the cutter bar in a vertical plane, i.e. to adjust the angle between the cutter bar and the soil}
- 34/286 . . . . {Adjustment of the cutter bar on a horizontal plane, i.e. to adjust the angle between the cutter bar and the tractor}
- 34/30 . . . . Driving mechanisms for the cutters
- 34/305 . . . . {Balancing}
- 34/32 . . . . Connecting-rods for knife-driving mechanisms
- 34/33 . . . . . Devices for connecting the rod to the knife-bar
- 34/34 . . . . . Devices for connecting the rod to the crank-pin of the driving mechanism
- 34/36 . . . . . actuated by advance of the machine
- 34/37 . . . . . electric
- 34/38 . . . . . fluid
- 34/40 . . . . Other details
- 34/404 . . . . having cutters driven to oscillate in a horizontal plane
- 34/408 . . . . and cooperating with counter-cutters
- 34/412 . . . . having rotating cutters
- 34/416 . . . . Flexible line cutters
- 34/4161 . . . . {Means for feeding cutter line}
- 34/4162 . . . . {automatically}
- 34/4163 . . . . {by triggered line feedout, e.g. bump-feeding}
- 34/4165 . . . . {Mounting of the cutter head}
- 34/4166 . . . . {Mounting or replacement of the lines}
- 34/4167 . . . . {Protection devices}
- 34/4168 . . . . {Constructional details of the flexible lines}
- 34/42 . . . . having cutters rotating about a horizontal axis, e.g. cutting-cylinders
- 34/43 . . . . mounted on a vehicle, e.g. a tractor, or drawn by an animal or a vehicle
- 34/435 . . . . . {Flail harvesters or mowers (cutting flails [A01D 34/535](#))}
- 34/44 . . . . . with two or more cutters
- 34/46 . . . . . hand-guided by a walking operator
- 34/47 . . . . . with motor driven cutters or wheels
- 34/475 . . . . . {Driving mechanisms (for the cutters [A01D 34/56](#))}
- 34/49 . . . . . with means for discharging mown material ([A01D 57/26 - A01D 57/30 take precedence; combined with means for gathering or loading mown material \[A01D 43/06\]\(#\)](#))
- 34/52 . . . . . Cutting apparatus
- 34/53 . . . . . Helically shaped cutting members
- 34/535 . . . . . with cutting members pivotally attached to the rotating axle, e.g. flails
- 34/54 . . . . . Cutting-height adjustment
- 34/56 . . . . . Driving mechanisms for the cutters
- 34/57 . . . . . actuated by advance of the machine
- 34/58 . . . . . electric
- 34/60 . . . . . fluid
- 34/62 . . . . . Other details
- 34/63 . . . . . having cutters rotating about a vertical axis
- 34/64 . . . . . mounted on a vehicle, e.g. a tractor, or drawn by an animal or a vehicle ([A01D 34/695 takes precedence](#))
- 2034/645 . . . . . {Lifting means for the cutter of the lawnmower mounted at the front of the vehicle for inspection and maintenance}
- 34/66 . . . . . with two or more cutters
- 34/661 . . . . . {Mounting means}
- 34/662 . . . . . {to the front of the vehicle}
- 34/664 . . . . . {Disc cutter bars}
- 34/665 . . . . . {modular}
- 34/667 . . . . . {Means for directing the cut crop}
- 34/668 . . . . . {rotating}
- 34/67 . . . . . hand-guided by a walking operator
- 34/68 . . . . . with motor driven cutters or wheels
- 34/6806 . . . . . {Driving mechanisms (for the cutters [A01D 34/76](#))}
- 34/6812 . . . . . {Braking or clutching mechanisms}
- 34/6818 . . . . . {Motor starting mechanisms}
- 2034/6825 . . . . . {being tyre driven}
- 2034/6831 . . . . . {being fluid driven}
- 2034/6837 . . . . . {Drive connections}
- 2034/6843 . . . . . {Control levers on the handle of the mower}
- 34/685 . . . . . with two or more cutters
- 34/69 . . . . . with motor driven wheels
- 34/695 . . . . . supported by an air cushion
- 34/71 . . . . . with means for discharging mown material ([A01D 57/26 - A01D 57/30 take precedence; combined with means for gathering or loading mown material \[A01D 43/06\]\(#\)](#))
- 34/73 . . . . . Cutting apparatus
- 34/733 . . . . . {Cutting-blade mounting means}
- 34/736 . . . . . {Flail type}
- 34/74 . . . . . Cutting-height adjustment
- 34/76 . . . . . Driving mechanisms for the cutters
- 34/77 . . . . . actuated by advance of the machine
- 34/78 . . . . . electric
- 34/80 . . . . . fluid
- 34/81 . . . . . Casings; Housings ([A01D 34/71 takes precedence](#))
- 34/82 . . . . . Other details
- 34/822 . . . . . {Devices for guiding or supporting cables}
- 34/824 . . . . . {Handle arrangements}
- 34/826 . . . . . {Noise reduction means}
- 34/828 . . . . . {Safety devices}
- 34/83 . . . . . having cutting members on endless belts or sprocket chains
- 34/831 . . . . . {with blades on endless belts}
- 34/833 . . . . . {with blades on endless sprocket chains}
- 34/835 . . . . . specially adapted for particular purposes
- 34/8355 . . . . . {for cutting up or crushing remaining standing stalks, e.g. stubble (mowers combined with means for cutting up, crushing or bruising, the mown crop [A01D 43/08](#), [A01D 43/10](#); apparatus for crushing or bruising mown stalks [A01D 82/00](#); apparatus for cutting up the mown crop [A01F 29/00](#))}
- 34/84 . . . . . for edges of lawns or fields, e.g. for mowing close to trees or walls ({for embankments [A01D 34/86 takes precedence](#); } edge trimmers [A01G 3/00](#))

- 34/86 . . for use on sloping ground, e.g. on embankments  
{or in ditches}(undercarriages or frames specially  
adapted for harvesters or mowers [A01D 67/00](#);  
control mechanisms for harvesters or mowers  
when moving on slopes [A01D 75/28](#))
- 34/863 . . . {and for mowing around obstacles, e.g. posts,  
trees, fences or the like ([A01D 34/866](#) takes  
precedence)}
- 34/866 . . . {Mounting means}
- 34/90 . . for carrying by the operator
- 34/902 . . . {Ergonomic provisions}
- 34/905 . . . {Vibration dampening means}
- 2034/907 . . . {Control levers for portable mowing machines}
- 37/00 Reaper-binders (equipment thereon for binding  
harvested produce, e.g. knotters, [A01D 59/00](#))**
- 37/02 . with receiving platform and binding apparatus but  
without elevating canvases
- 37/04 . conveying the stalks in vertical position
- 37/06 . binding with stalks or straw bands
- 39/00 Independent binders, e.g. for hay; Binders  
attachable to mowers (equipment thereon for  
binding harvested produce, e.g. knotters, [A01D 59/00](#);  
stationary apparatus or hand tools for forming  
or binding hay or straw into bundles [A01F 1/00](#);  
{bundling articles [B65B 13/00](#); knotting [D04G](#)})**
- 39/005 . {Binders combined with devices for picking-up the  
harvest}
- 41/00 Combines, i.e. harvesters or mowers combined  
with threshing devices**
- 41/02 . Self-propelled combines
- 41/04 . Tractor-driven combines
- 41/06 . Combines with headers
- 41/08 . Combines with thresh before the stalk is cut
- 41/10 . Field threshers with windrow pick-up apparatus
- 41/12 . Details of combines
- 41/1208 . . {Tanks for grain or chaff (for threshing machines  
[A01F 12/60](#))}
- 41/1217 . . . {Unloading mechanisms}
- 41/1226 . . . {Extension mechanisms}
- 41/1235 . . {Platforms for sacking}
- 41/1243 . . {Devices for laying-out or distributing the straw}
- 41/1252 . . {Anti-dust devices}
- 41/1261 . . {Access devices for personnel}
- 41/127 . . Control or measuring arrangements specially  
adapted for combines
- 41/1271 . . . {for measuring crop flow}
- 41/1272 . . . . {for measuring grain flow}
- 41/1273 . . . . . {for measuring grain loss}
- 41/1274 . . . {for drives}
- 41/1275 . . . {for the level of grain in grain tanks}
- 41/1276 . . . {for cleaning mechanisms}
- 41/1277 . . . {for measuring grain quality}
- 41/1278 . . . {for automatic steering}
- 41/133 . . Drying devices
- 41/14 . . Mowing tables
- 41/141 . . . {Automatic header control}
- 41/142 . . . {Header drives}
- 41/144 . . . {Foldable headers}
- 41/145 . . . {Header lifting devices}
- 41/147 . . . {Sunflower header attachments}
- 41/148 . . . {Telescopic headers}
- 41/16 . . . Devices for coupling mowing tables to  
conveyors
- 42/00 Mowers convertible to apparatus for purposes  
other than mowing; Mowers capable of  
performing operations other than mowing (mowers  
combined with apparatus performing additional  
operations while mowing [A01D 43/00](#))**
- 42/005 . {Mulching (shredders or like cutting implements for  
comminuting plant waste [per se](#) [A01G 3/002](#))}
- 42/02 . Raking
- 42/04 . Soil working
- 42/06 . Sweeping or cleaning lawns or other surfaces  
{(sweeping apparatus for lawns [per se](#) [A01G 20/43](#))}
- 42/08 . . Sweeping snow
- 43/00 Mowers combined with apparatus performing  
additional operations while mowing ([A01D 37/00](#),  
[A01D 39/00](#), [A01D 41/00](#), take precedence)**
- 43/003 . {with devices for drying or burning}
- 43/006 . {with devices for pressing or compacting}
- 43/02 . with rakes
- 43/04 . with haymakers, e.g. tedders
- 43/06 . with means for collecting, gathering or loading  
mown material {( [A01D 43/086](#) takes precedence)}
- 43/063 . . in or into a container carried by the mower;  
Containers therefor ([A01D 43/077](#) takes  
precedence)
- 43/0631 . . . {Control devices specially adapted therefor}
- 43/0633 . . . {with compacting means}
- 43/0635 . . . {with emptying means}
- 43/0636 . . . {Flexible containers}
- 43/0638 . . . {Rigid containers}
- 43/07 . . in or into a trailer ([A01D 43/077](#) takes  
precedence)
- 43/073 . . . with controllable discharge spout
- 43/077 . . with auxiliary means, e.g. fans, for transporting  
the mown crop
- 43/0775 . . . {for airborne lawn-mowers}
- 43/08 . with means for cutting up the mown crop {, e.g.  
forage harvesters}
- 43/081 . . {specially adapted for ensilage of maize}
- 43/082 . . . {Gathering units}
- 43/083 . . . . {with belts or chains}
- 43/085 . . {Control or measuring arrangements specially  
adapted therefor}
- 43/086 . . {and means for collecting, gathering or loading  
mown material}
- 43/087 . . . {with controllable discharge spout}
- 43/088 . . {Mounting means}
- 43/10 . with means for crushing or bruising the mown crop
- 43/102 . . {Bruising control devices}
- 43/105 . . {Driving mechanisms}
- 43/107 . . {Mounting means}
- 43/12 . with soil-working implements, e.g. ploughs
- 43/14 . with dispensing apparatus, e.g. for fertilisers,  
herbicides or preservatives
- 43/16 . with lawn edgers
- 44/00 Harvesting of underwater plants, e.g. harvesting of  
seaweed**
- 44/02 . of laver



**45/00 Harvesting of standing crops** ([A01D 44/00](#) takes precedence; threshing machines adapted for special crops, threshing devices for combines adapted for special crops [A01F 11/00](#); harvesting of mushrooms [A01G 18/70](#))

- 45/001 . {with arrangements for transport of personnel}
- 45/002 . {of pineapples}
- 45/003 . {of millet, sorghum}
- 45/006 . {of tomatoes}
- 45/007 . {of asparagus}
- 45/008 . {of cucumbers}
- 45/02 . of maize {, i.e. kernel harvesting (for ensilage maize [A01D 43/081](#))}
- 45/021 . . {Cornheaders}
- 45/023 . . . {Gathering chains of belts}
- 45/025 . . . {Snapping rolls}
- 45/026 . . {Hand implements}
- 45/028 . . {Harvesting devices mounted to a vehicle}
- 45/04 . of rice
- 45/06 . of flax {or similar fibrous plants}
- 45/065 . . {of fibrous plants other than flax, e.g. ramie, sisal, hemp, jute, Spanish grass, raffia}
- 45/10 . of sugar cane {(for digging sugar cane [A01D 31/00](#))}
- 45/16 . of tobacco
- 45/22 . of beans
- 45/24 . of peas
- 45/26 . of cabbage or lettuce
- 45/263 . . {of lettuce}
- 45/266 . . {of Brussels sprouts}
- 45/28 . of spinach
- 45/30 . of grass-seeds or like seeds

**46/00 Picking of fruits, vegetables, hops, or the like; Devices for shaking trees or shrubs**

**NOTE**

In this group, group [A01D 46/30](#) takes precedence over groups [A01D 46/02](#) - [A01D 46/28](#)

- 46/005 . {picking or shaking pneumatically (of cotton [A01D 46/10](#))}
- 46/02 . of hops
- 46/04 . of tea
- 46/06 . of coffee
- 46/08 . of cotton
- 46/081 . . {with harvesters characterised by transversally adjustable row units}
- 46/082 . . {with harvesters characterised by basket means}
- 46/084 . . . {with compacting means}
- 46/085 . . {Control or measuring arrangements specially adapted for cotton harvesters}
- 46/087 . . {Hand implements}
- 46/088 . . {with harvesters characterised by the lubricant distribution systems}
- 46/10 . . pneumatically {([A01D 46/081](#) - [A01D 46/088](#) take precedence)}
- 46/12 . . using boll-from-plant strippers
- 46/14 . . using lint-from-plant pickers
- 46/16 . . . using rotary or oscillating spindles
- 46/18 . . . . mounted on rotary carrier
- 46/20 . Platforms with lifting and lowering devices
- 46/22 . Baskets or bags attachable to the picker

- 46/24 . Devices for picking apples or like fruit ([A01D 46/28](#) {and [A01D 46/005](#)} takes precedence)
- 46/243 . . {Accessories specially adapted for manual picking, e.g. ladders, carts}
- 46/247 . . Manually operated fruit-picking tools ([A01D 46/26](#) takes precedence)
- 46/253 . . Portable motorised fruit pickers
- 46/26 . Devices for shaking trees or shrubs; Fruit catching devices to be used therewith ([A01D 46/28](#) takes precedence)
- 2046/262 . . {Collecting surfaces extended around a tree in order to catch the fruit}
- 46/264 . . {Devices for beating or vibrating the foliage; Fruit catching devices to be used therewith}
- 2046/266 . . {Portable devices to shake branches}
- 2046/268 . . {Devices to shake the branches pneumatically powered}
- 46/28 . Vintaging machines, i.e. grape harvesting machines
- 46/285 . . {with means for separating leaves and grapes, e.g. pneumatical means like blowing or aspirating devices}
- 46/30 . Robotic devices for individually picking crops

**47/00 Headers {for topping of plants, e.g. stalks with ears}**

**51/00 Apparatus for gathering together crops spread on the soil, e.g. apples, beets, nuts, potatoes {, cotton, cane sugar}**

- 51/002 . {for apples or nuts}
- 51/005 . {Loaders for beets, beetleaf or potatoes}
- 51/007 . {for grains}

**Components of harvesters or mowers for grass or cereals** (mowing apparatus [A01D 34/00](#); wheels [B60B](#); wheel scrapers [B60S 1/68](#))

**57/00 Delivering mechanisms for harvesters or mowers**

- 57/01 . Devices for leading crops to the mowing apparatus
- 57/02 . . using reels
- 57/025 . . . {with synchronised driving means}
- 57/03 . . . with supplementary controlled movement of the crop-engaging members, e.g. of the tines {([A01D 57/025](#) takes precedence)}
- 57/04 . . . Arrangements for changing the position of the reels
- 57/05 . . . Detachable reels for converting a mower into a harvester
- 57/06 . . using endless conveyors
- 57/08 . . using swinging rakes
- 57/10 . . using fans
- 57/12 . Rotating rakes
- 57/14 . Single-platform rakes
- 57/16 . Tilting tables
- 57/18 . Bunching devices, e.g. with tipping bars
- 57/20 . with conveyor belts
- 57/22 . for standing stalks
- 57/24 . Grass-boards
- 57/26 . Plates arranged behind the cutter-bar for guiding the cut grass or straw
- 57/28 . Windrower attachments with tines
- 57/30 . Rotating attachments for forming windrows

**59/00 Equipment for binding harvested produce** (specially adapted for baling presses [A01F 15/14](#))

- 59/02 . Packers
- 59/04 . Knotters
- 59/06 . Needles
- 59/08 . Discharge arms
- 59/10 . Devices for separating cohering sheaves
- 59/12 . Containers for the twine
- 59/14 . Sheaf counters
- 61/00 Elevators or conveyors for binders or combines**
- 61/002 . {transversal conveying devices}
- 61/004 . . {with cylindrical tools}
- 61/006 . . {with rollers, e.g. adjustable}
- 61/008 . {for longitudinal conveying, especially for combines}
- 61/02 . Endless belts
- 61/04 . Chains
- 63/00 Outside dividers**
- 63/02 . Rotating dividers
- 63/04 . Non-rotating dividers
- 65/00 Grain-crop lifters**
- 65/02 . Lifting fingers
- 65/04 . with revolving staffs
- 65/06 . Lifting devices arranged on the inner side of the cutter-bar
- 65/08 . Guard attachments for the wheels
- 67/00 Undercarriages or frames specially adapted for harvesters or mowers (coupling arrangements between animal or tractor and harvester or mower [A01B 59/00](#)); Mechanisms for adjusting the frame (adjusting devices for the cutter-bar [A01D 34/28](#)); Platforms**
- 67/005 . {Arrangements of coupling devices}
- 67/02 . Protection against weather
- 67/04 . Seats
- 69/00 Driving mechanisms or parts thereof for harvesters or mowers (driving mechanisms for the cutters of mowers or harvesters [A01D 34/00](#))**
- 69/002 . {driven by power take-off}
- 69/005 . {Non electric hybrid systems, e.g. comprising mechanical and/or hydraulic and/or pneumatic drives}
- 69/007 . {with separate hand drive for cutting tools}
- 69/02 . electric
- 69/025 . . {Electric hybrid systems}
- 69/03 . fluid
- 69/06 . Gearings
- 69/08 . Clutches
- 69/10 . Brakes
- 69/12 . Lubrication
- 75/00 Accessories for harvesters or mowers**
- 75/002 . {Carriers for the transport of harvesters or mowers}
- 75/004 . . {for mowers}
- 75/006 . . {for lawn-mowers}
- 75/008 . {Tool-carrying means}
- 75/02 . Implements for collecting grain crop
- 75/04 . Sheaf carriers
- 75/06 . Sheaf shockers or stookers
- 75/065 . . {hand-operated}
- 75/08 . Sharpening apparatus fixed to the harvester or mower

- 75/10 . Devices for reconditioning the knife-bar, e.g. removing the knife from its backing
- 75/12 . Instruments for removing the knife-bar from the cutter
- 75/16 . Implements for laying-out bands for sheaves
- 75/18 . Safety devices for parts of the machines
- 75/182 . . {Avoiding overload}
- 75/185 . . {Avoiding collisions with obstacles}
- 75/187 . . {Removing foreign objects}
- 75/20 . Devices for protecting men or animals
- 2075/203 . . {by stopping driving when lifting frames, e.g. for haymakers}
- 75/206 . . {for mowers carried by operator}
- 75/24 . Special devices for harvesters or mowers drawn by animals
- 75/243 . . {Poles}
- 75/246 . . {Devices for harnessing}
- 75/26 . Front trucks; Axle-pivot steering of front trucks
- 75/265 . . {Support wheels for poles or supporting devices}
- 75/28 . Control mechanisms for harvesters or mowers when moving on slopes; Devices preventing lateral pull
- 75/282 . . {acting on the grain cleaning and separating device (grain cleaners, separators [per se A01F 12/44](#))}
- 75/285 . . {with arrangements for holding the harvesting or mowing apparatus in a horizontal position}
- 75/287 . . {acting on the mowing table ([A01D 75/285](#) takes precedence)}
- 75/30 . Arrangements for trailing two or more mowers
- 75/303 . . {for mowers positioned one behind the other or side by side}
- 75/306 . . {for lawn mowers positioned one behind the other or side by side}

#### **Haymakers (combined with mowers [A01D 43/04](#)); Crop Conditioners**

#### **NOTE**

In groups [A01D 76/00](#) - [A01D 87/00](#), the following terms are used with the meanings indicated:

- "hay" includes all mowed forage crop in a dry or partially dry state;
- "haymakers" covers all apparatus working on mowed forage cropland on the ground with the intention to make hay, with the exception of "rakes" which are covered by group [A01D 7/00](#)

- 76/00 Haymakers with tines that are stationary with respect to the machine during operation but that may be liftable for dumping**
- 76/003 . {Hand-operated wheeled rakes ([hand-operated rakes A01D 7/00](#))}
- 76/006 . {Hay-sweeps (rakes for making stacks [A01D 85/001](#); sweep rakes [A01D 87/08](#))}
- 78/00 Haymakers with tines moving with respect to the machine**
- 78/001 . {Side-delivery rakes ([A01D 78/04](#) takes precedence)}
- 78/002 . . {Drum-turner-tedders with lateral discharge}
- 78/003 . . {Drum-turner-tedders with throwing wheel}
- 78/005 . {Turners; Tedders}
- 78/006 . . {Rotating turners}
- 78/007 . . . {Control mechanisms therefor}
- 78/008 . . {with forks}

78/02	<ul style="list-style-type: none"> <li>with tine-carrying bars or equivalent members which interconnect heads rotating about horizontal axes, e.g. of rotary-drum type</li> </ul>	84/02	<ul style="list-style-type: none"> <li>with flexible tools</li> </ul>
78/04	<ul style="list-style-type: none"> <li>the tine-carrying members moving obliquely or at right angles to the direction of travel of the machine</li> </ul>	<b>85/00</b>	<b>Arrangements for making or setting stacks</b>
78/06	<ul style="list-style-type: none"> <li>with tine-carrying endless chains or belts</li> </ul>	85/001	<ul style="list-style-type: none"> <li>{making or setting stacks of cereals or grass, e.g. rack formers, fixed haystacks (rakes for making windrows, haysweeps <a href="#">A01D 76/006</a>; drying racks <a href="#">A01F 25/12</a>)}</li> </ul>
78/08	<ul style="list-style-type: none"> <li>with tine-carrying rotary heads or wheels</li> </ul>	85/002	<ul style="list-style-type: none"> <li>{with binding equipment, e.g. binding groups of bales}</li> </ul>
78/10	<ul style="list-style-type: none"> <li>the tines rotating about a substantially vertical axis</li> </ul>	85/004	<ul style="list-style-type: none"> <li>{with pressing equipment, e.g. vehicles for forming stacks}</li> </ul>
78/1007	<ul style="list-style-type: none"> <li>{Arrangements to facilitate transportation specially adapted therefor (<a href="#">A01D 78/1021</a> takes precedence; for other agricultural machines or implements <a href="#">A01B 73/00</a>; carriers <a href="#">A01D 80/005</a>)}</li> </ul>	85/005	<ul style="list-style-type: none"> <li>{Forming groups of bales, e.g. bale sledges (loaders for bales <a href="#">A01D 87/12</a>; vehicles for loading bales <a href="#">A01D 90/08</a>)}</li> </ul>
78/1014	<ul style="list-style-type: none"> <li>{Folding frames}</li> </ul>	2085/007	<ul style="list-style-type: none"> <li>{Machines directly attached to a baler}</li> </ul>
78/1021	<ul style="list-style-type: none"> <li>{Telescopic frames}</li> </ul>	2085/008	<ul style="list-style-type: none"> <li>{Making groups of bales just at horizontal level for leaving them on the field}</li> </ul>
78/1028	<ul style="list-style-type: none"> <li>{Pivotable rotor support arms (<a href="#">A01D 78/1007</a> takes precedence)}</li> </ul>	<b>87/00</b>	<b>Loaders for hay or like field crops (combined with mowers <a href="#">A01D 43/06</a>)</b>
78/1035	<ul style="list-style-type: none"> <li>{pivotable by orientation of the support wheels}</li> </ul>	87/0007	<ul style="list-style-type: none"> <li>{with chopping devices (harvesters with loaders <a href="#">A01D 43/06</a>; forage harvesters <a href="#">A01D 43/08</a>; special adaptations of cutting machines for hay, straw or fodder <a href="#">A01F 29/00</a>)}</li> </ul>
78/1042	<ul style="list-style-type: none"> <li>{Steering devices}</li> </ul>	87/0015	<ul style="list-style-type: none"> <li>{Arrangements for making a strand (forming round bales <a href="#">A01F 15/07</a>)}</li> </ul>
78/105	<ul style="list-style-type: none"> <li>{Ground support for rotors}</li> </ul>	87/0023	<ul style="list-style-type: none"> <li>{Coupling arrangements between tractors, loaders or vehicles (for harvesters <a href="#">A01D 67/005</a>)}</li> </ul>
78/1057	<ul style="list-style-type: none"> <li>{Drive mechanisms}</li> </ul>	87/003	<ul style="list-style-type: none"> <li>{with gripping or clamping devices (manure loaders <a href="#">A01C 3/04</a>)}</li> </ul>
78/1064	<ul style="list-style-type: none"> <li>{Arrangements of tines (<a href="#">A01D 78/1007</a> takes precedence)}</li> </ul>	87/0038	<ul style="list-style-type: none"> <li>{Dumpboxes or metering devices for loading or unloading}</li> </ul>
78/1071	<ul style="list-style-type: none"> <li>{Having only one rotor}</li> </ul>	87/0046	<ul style="list-style-type: none"> <li>{Distributing devices at the delivery side of loaders}</li> </ul>
78/1078	<ul style="list-style-type: none"> <li>{Having only one row of rotors arranged on the same horizontal line perpendicular to the advance direction of the machine}</li> </ul>	87/0053	<ul style="list-style-type: none"> <li>{Tractor-mounted loaders (buck-rakes, transporting rakes <a href="#">A01D 87/08</a>; manure loaders <a href="#">A01C 3/04</a>; fork loaders, fork lifts <a href="#">B66F</a>; earth-moving machines <a href="#">E02F</a>)}</li> </ul>
78/1085	<ul style="list-style-type: none"> <li>{Having two rows of rotors on two different horizontal lines perpendicular to the advance direction of the machine}</li> </ul>	87/0061	<ul style="list-style-type: none"> <li>{mounted on the three-point lifting system of the tractor}</li> </ul>
78/1092	<ul style="list-style-type: none"> <li>{Having more than two rows of rotors on more than two different horizontal lines perpendicular to the advance direction of the machine}</li> </ul>	87/0069	<ul style="list-style-type: none"> <li>{mounted on the tractor but having their own lifting device}</li> </ul>
78/12	<ul style="list-style-type: none"> <li>the tines having an additional movement superimposed upon their rotary movement</li> </ul>	87/0076	<ul style="list-style-type: none"> <li>{Front loaders}</li> </ul>
78/125	<ul style="list-style-type: none"> <li>{by a guiding track}</li> </ul>	87/0084	<ul style="list-style-type: none"> <li>{Rear loaders}</li> </ul>
78/14	<ul style="list-style-type: none"> <li>the tines rotating about a substantially horizontal axis</li> </ul>	87/0092	<ul style="list-style-type: none"> <li>{Accessories}</li> </ul>
78/142	<ul style="list-style-type: none"> <li>{Arrangements for transport by movement of the heads carrying rake arms}</li> </ul>	87/02	<ul style="list-style-type: none"> <li>with conveyor belts {or conveyor chains, with or without pick-up means}</li> </ul>
78/144	<ul style="list-style-type: none"> <li>{in a vertical plane}</li> </ul>	87/04	<ul style="list-style-type: none"> <li>with rakes feeding crop to the conveyor</li> </ul>
78/146	<ul style="list-style-type: none"> <li>{in a horizontal plane}</li> </ul>	87/06	<ul style="list-style-type: none"> <li>with oscillating or reciprocating rake-bars</li> </ul>
78/148	<ul style="list-style-type: none"> <li>{Rakes having only one heads carrying arm}</li> </ul>	87/08	<ul style="list-style-type: none"> <li>with sweep rakes {, i.e. buck-rakes, e.g. transporting rakes}</li> </ul>
78/16	<ul style="list-style-type: none"> <li>with positive drive of the heads or wheels</li> </ul>	87/10	<ul style="list-style-type: none"> <li>with blowers</li> </ul>
78/18	<ul style="list-style-type: none"> <li>of the reciprocating tine type</li> </ul>	87/12	<ul style="list-style-type: none"> <li>Loaders for sheaves, stacks or bales</li> </ul>
78/20	<ul style="list-style-type: none"> <li>the tines reciprocating in a direction parallel to the direction of travel of the machine</li> </ul>	87/121	<ul style="list-style-type: none"> <li>{for sheaves, stacks}</li> </ul>
<b>80/00</b>	<b>Parts or details of {, or accessories for,} haymakers</b>	87/122	<ul style="list-style-type: none"> <li>{for bales on the ground (vehicles for loading <a href="#">A01D 90/08</a>)}</li> </ul>
80/005	<ul style="list-style-type: none"> <li>{Carriers for the transport of haymakers (arrangements of the haymaker to facilitate transportation <a href="#">A01D 78/1007</a>)}</li> </ul>	2087/123	<ul style="list-style-type: none"> <li>{Manual trolleys for bales}</li> </ul>
80/02	<ul style="list-style-type: none"> <li>Tines; Attachment of tines</li> </ul>	87/125	<ul style="list-style-type: none"> <li>{mounted on the press without laying down the bales}</li> </ul>
<b>82/00</b>	<b>Crop conditioners, i.e. machines for crushing or bruising stalks (combined with harvesters <a href="#">A01D 43/10</a>)</b>	87/126	<ul style="list-style-type: none"> <li>{Loaders for stacks or groups of bales}</li> </ul>
82/02	<ul style="list-style-type: none"> <li>Rollers for crop conditioners</li> </ul>	87/127	<ul style="list-style-type: none"> <li>{Apparatus for handling, loading or unrolling round bales}</li> </ul>
<b>84/00</b>	<b>Haymakers not provided for in a single one of groups <a href="#">A01D 76/00</a> - <a href="#">A01D 82/00</a></b>	2087/128	<ul style="list-style-type: none"> <li>{Devices for unrolling or breaking round bales}</li> </ul>

<b>89/00</b>	<b>Pick-ups for loaders, chaff-cutters, balers, field-threshers, or the like {, i.e. attachments for picking-up hay or the like field crops (field threshers with windrow pick-up apparatus <a href="#">A01D 41/10</a>)}</b>
89/001	. {Pick-up systems}
89/002	. . {Rotors}
89/003	. . {Endless belts}
89/004	. {Mountings, e.g. height adjustment, wheels, lifting devices}
89/005	. {Drives}
89/006	. {Accessories (feeding devices for baling presses <a href="#">A01F 15/10</a> ; for cutting machines <a href="#">A01F 29/10</a> )}
89/007	. . {Devices for preparing the picking-up of the windrow}
89/008	. . {Devices cooperating with the pick-up}
<b>90/00</b>	<b>Vehicles for carrying harvested crops with means for selfloading or unloading (combined with mowers <a href="#">A01D 43/06</a>)</b>
2090/005	. {Vehicles for transporting bunches of bananas}
90/02	. Loading means
90/04	. . with additional cutting means
90/06	. . . with chaff cutters, {i.e. choppers} used as loading and cutting means ( <a href="#">A01D 43/08</a> takes precedence)
90/08	. . with bale-forming means additionally used for loading; with means for picking-up bales and transporting them into the vehicle
90/083	. . . {Round-bale trailers (trailers in general <a href="#">B62D</a> )}
2090/086	. . . {Taking loose material, i.e. before having been baled, into the vehicle}
90/10	. Unloading means
90/105	. . {Automatic side-emptying forage wagons}
90/12	. with additional devices or implements (arrangements of coupling devices <a href="#">A01B 59/00</a> )
90/14	. Adaptations of gearing for driving, loading or unloading means
90/16	. self-propelled
<b>91/00</b>	<b>Methods for harvesting agricultural products</b>
91/02	. Products growing in the soil
91/04	. Products growing above the soil (fruit, hops <a href="#">A01D 46/00</a> )
<b>93/00</b>	<b>Harvesting apparatus not provided for in other groups of this subclass</b>

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**2101/00**   **Lawn-mowers**