

# 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](#))
  - 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
  - 17/14 . with cylindrical screens
  - 17/16 . . with a conveyor spiral
  - 17/18 . . without a conveyor spiral
  - 17/20 . . with several co-operating screens
  - 17/22 . . with several co-operating sifter bands

<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)}
33/02	• Foliage-separating mechanisms	34/246	• . . . . {Hydraulic lifting devices}
33/04	• Stone-separating mechanisms	34/26	• . . . . manually actuated
33/06	• Haulm-cutting mechanisms	34/27	• . . . . Devices for disengaging the knife-driving mechanisms during the lifting of the cutter-bar
33/08	• Special sorting and cleaning mechanisms	34/28	• . . . Adjusting devices for the cutter-bar
33/10	• Crop collecting devices, with or without weighing apparatus		
33/105	• . {Devices for gathering the crop in a row}		

34/283	. . . . {Adjustment of the cutter bar in a vertical plane, i.e. to adjust the angle between the cutter bar and the soil}	34/66	. . . . . with two or more cutters
34/286	. . . . {Adjustment of the cutter bar on a horizontal plane, i.e. to adjust the angle between the cutter bar and the tractor}	34/661	. . . . . {Mounting means}
34/30	. . . Driving mechanisms for the cutters	34/662	. . . . . {to the front of the vehicle}
34/305	. . . . {Balancing}	34/664	. . . . . {Disc cutter bars}
34/32	. . . . Connecting-rods for knife-driving mechanisms	34/665	. . . . . {modular}
34/33	. . . . . Devices for connecting the rod to the knife-bar	34/667	. . . . . {Means for directing the cut crop}
34/34	. . . . . Devices for connecting the rod to the crank-pin of the driving mechanism	34/668	. . . . . {rotating}
34/36	. . . . actuated by advance of the machine	34/67	. . . . hand-guided by a walking operator
34/37	. . . . electric	34/68	. . . . . with motor driven cutters or wheels
34/38	. . . . fluid	34/6806	. . . . . {Driving mechanisms (for the cutters A01D 34/76)}
34/40	. . . Other details	34/6812	. . . . . {Braking or clutching mechanisms}
34/404	. . having cutters driven to oscillate in a horizontal plane	34/6818	. . . . . {Motor starting mechanisms}
34/408	. . . and cooperating with counter-cutters	2034/6825	. . . . . {being tire driven}
34/412	. . having rotating cutters	2034/6831	. . . . . {being fluid driven}
34/416	. . . Flexible line cutters	2034/6837	. . . . . {Drive connections}
34/4161	. . . . {Means for feeding cutter line}	2034/6843	. . . . . {Control levers on the handle of the mower}
34/4162	. . . . . {automatically}	34/685	. . . . . with two or more cutters
34/4163	. . . . . {by triggered line feedout, e.g. bump-feeding}	34/69	. . . . . with motor driven wheels
34/4165	. . . . {Mounting of the cutter head}	34/695	. . . . supported by an air cushion
34/4166	. . . . {Mounting or replacement of the lines}	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)
34/4167	. . . . {Protection devices}	34/73	. . . . Cutting apparatus
34/4168	. . . . {Constructional details of the flexible lines}	34/733	. . . . . {Cutting-blade mounting means}
34/42	. . . having cutters rotating about a horizontal axis, e.g. cutting-cylinders	34/736	. . . . . {Flail type}
34/43	. . . . mounted on a vehicle, e.g. a tractor, or drawn by an animal or a vehicle	34/74	. . . . Cutting-height adjustment
34/435	. . . . . {Flail harvesters or mowers (cutting flails A01D 34/535)}	34/76	. . . . Driving mechanisms for the cutters
34/44	. . . . . with two or more cutters	34/77	. . . . . actuated by advance of the machine
34/46	. . . . hand-guided by a walking operator	34/78	. . . . . electric
34/47	. . . . . with motor driven cutters or wheels	34/80	. . . . . fluid
34/475	. . . . . {Driving mechanisms (for the cutters A01D 34/56)}	34/81	. . . . Casings; Housings (A01D 34/71 takes precedence)
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)	34/82	. . . . Other details
34/52	. . . . Cutting apparatus	34/822	. . . . . {Devices for guiding or supporting cables}
34/53	. . . . . Helically shaped cutting members	34/824	. . . . . {Handle arrangements}
34/535	. . . . . with cutting members pivotally attached to the rotating axle, e.g. flails	34/826	. . . . . {Noise reduction means}
34/54	. . . . Cutting-height adjustment	34/828	. . . . . {Safety devices}
34/56	. . . . Driving mechanisms for the cutters	34/83	. . having cutting members on endless belts or sprocket chains
34/57	. . . . . actuated by advance of the machine	34/831	. . . . {with blades on endless belts}
34/58	. . . . . electric	34/833	. . . . {with blades on endless sprocket chains}
34/60	. . . . . fluid	34/835	. . specially adapted for particular purposes
34/62	. . . . Other details	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)}
34/63	. . . having cutters rotating about a vertical axis	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)
34/64	. . . . mounted on a vehicle, e.g. a tractor, or drawn by an animal or a vehicle (A01D 34/695 takes precedence)	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)
2034/645	. . . . . {Lifting means for the cutter of the lawnmower mounted at the front of the vehicle for inspection and maintenance}	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 stokers
  - 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 . with tine-carrying bars or equivalent members which interconnect heads rotating about horizontal axes, e.g. of rotary-drum type
  - 78/04 . . the tine-carrying members moving obliquely or at right angles to the direction of travel of the machine

78/06	• with tine-carrying endless chains or belts	85/001	• {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> )}
78/08	• with tine-carrying rotary heads or wheels	85/002	• • {with binding equipment, e.g. binding groups of bales}
78/10	• • the tines rotating about a substantially vertical axis	85/004	• • {with pressing equipment, e.g. vehicles for forming stacks}
78/1007	• • • {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> )}	85/005	• {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> )}
78/1014	• • • • {Folding frames}	2085/007	• • {Machines directly attached to a baler}
78/1021	• • • {Telescopic frames}	2085/008	• • {Making groups of bales just at horizontal level for leaving them on the field}
78/1028	• • • {Pivotable rotor support arms ( <a href="#">A01D 78/1007</a> takes precedence)}		
78/1035	• • • • {pivotable by orientation of the support wheels}	<b>87/00</b>	<b>Loaders for hay or like field crops (combined with mowers <a href="#">A01D 43/06</a>)</b>
78/1042	• • • {Steering devices}	87/0007	• {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> )}
78/105	• • • {Ground support for rotors}	87/0015	• {Arrangements for making a strand (forming round bales <a href="#">A01F 15/07</a> )}
78/1057	• • • {Drive mechanisms}	87/0023	• {Coupling arrangements between tractors, loaders or vehicles (for harvesters <a href="#">A01D 67/005</a> )}
78/1064	• • • {Arrangements of tines ( <a href="#">A01D 78/1007</a> takes precedence)}	87/003	• {with gripping or clamping devices (manure loaders <a href="#">A01C 3/04</a> )}
78/1071	• • • {Having only one rotor}	87/0038	• {Dumpboxes or metering devices for loading or unloading}
78/1078	• • • {Having only one row of rotors arranged on the same horizontal line perpendicular to the advance direction of the machine}	87/0046	• {Distributing devices at the delivery side of loaders}
78/1085	• • • {Having two rows of rotors on two different horizontal lines perpendicular to the advance direction of the machine}	87/0053	• {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> )}
78/1092	• • • {Having more than two rows of rotors on more than two different horizontal lines perpendicular to the advance direction of the machine}	87/0061	• • {mounted on the three-point lifting system of the tractor}
78/12	• • • the tines having an additional movement superimposed upon their rotary movement	87/0069	• • {mounted on the tractor but having their own lifting device}
78/125	• • • • {by a guiding track}	87/0076	• • • {Front loaders}
78/14	• • the tines rotating about a substantially horizontal axis	87/0084	• • • {Rear loaders}
78/142	• • • {Arrangements for transport by movement of the heads carrying rake arms}	87/0092	• • {Accessories}
78/144	• • • • {in a vertical plane}	87/02	• with conveyor belts {or conveyor chains, with or without pick-up means}
78/146	• • • • {in a horizontal plane}	87/04	• • with rakes feeding crop to the conveyor
78/148	• • • {Rakes having only one heads carrying arm}	87/06	• with oscillating or reciprocating rake-bars
78/16	• • • with positive drive of the heads or wheels	87/08	• with sweep rakes {, i.e. buck-rakes, e.g. transporting rakes}
78/18	• of the reciprocating tine type	87/10	• with blowers
78/20	• • the tines reciprocating in a direction parallel to the direction of travel of the machine	87/12	• Loaders for sheaves, stacks or bales
<b>80/00</b>	<b>Parts or details of {, or accessories for,} haymakers (parts or details specific for one type of machine, see the relevant groups for these machines)</b>	87/121	• • {for sheaves, stacks}
80/005	• {Carriers for the transport of haymakers (arrangements of the haymaker to facilitate transportation <a href="#">A01D 78/1007</a> )}	87/122	• • {for bales on the ground (vehicles for loading <a href="#">A01D 90/08</a> )}
80/02	• Tines; Attachment of tines	2087/123	• • • {Manual trolleys for bales}
<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>	87/125	• • {mounted on the press without laying down the bales}
82/02	• Rollers for crop conditioners	87/126	• • {Loaders for stacks or groups of bales}
<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>	87/127	• • {Apparatus for handling, loading or unrolling round bales}
84/02	• with flexible tools	2087/128	• • • {Devices for unrolling or breaking round bales}
<b>85/00</b>	<b>Arrangements for making or setting stacks</b>		

<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 (essentially requiring the use of particular machines, see the relevant groups for the machines)</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**