

A01D

HARVESTING; MOWING

Definition statement

This place covers:

Methods, apparatus or hand tools for

Separation of useful parts of plants (e.g. seeds, fruits, roots, stalks or leaves) from the remainder of the plants in the place where the plants are grown;

Mowing of plants (e.g. grass or cereals), regardless of whether the intention is to make use of the mown plants or not;

Gathering of whole plants (e.g. root crops or onions) or their useful parts (e.g. fallen fruit) from where the plants grow or from the ground;

Haymaking, i.e. working on mown forage crop lying on the ground with the intention to make hay.

Hand rakes.

Forks

Non-abrasive sharpening devices for scythes, sickles or the like.

Containers for whetstones for use during harvesting.

Machines specially adapted for binding of harvested hay, straw or similar crops in the field.

Arrangements for making or setting of stacks, used in connection with harvesting.

Vehicles specially adapted for carrying harvested crops with means for self-loading or unloading.

Relationships with other classification places

Combined or convertible apparatus

This subclass covers mowers combined with apparatus performing additional operations (e.g. threshing) while mowing, mowers convertible to apparatus for purposes other than mowing (e.g. for sweeping snow), and mowers capable of performing operations other than mowing (e.g. soil-working). The non-mowing parts of such mowers are only covered by this subclass if they are immediately associated with the mowing parts or the mowing process. Otherwise they are covered by the places for the non-mowing operations.

This subclass covers digging harvesters (e.g. for root crops) combined with apparatus performing additional operations (e.g. topping, separating or planting) while harvesting. The non-harvesting parts of such combinations are only covered by this subclass if they are immediately associated with the harvesting parts or the harvesting process. Otherwise they are covered by the places for the non-harvesting operations.

Hand tools for soil working

This subclass covers hand tools for soil working when specially adapted for harvesting, for example of root crops. This subclass also covers rakes and forks. [A01B 1/00](#) covers hand tools for soil working in general, e.g. spades, shovels or hoes, with the exception of rakes and forks.

Binding

Relationships with other classification places

This subclass covers apparatus specially adapted for binding of harvested hay, straw or similar crops, with the exception of stationary apparatus or hand tools, which are covered by [A01F 1/00](#), and binding apparatus specially adapted for baling presses, which is covered by [A01F 15/14](#). Binding in general is covered by [B65B](#), for example [B65B 13/00](#) and [B65B 27/12](#).

Shredding or pulverising

This subclass covers the shredding or pulverising of stubble or other vegetation in situ, 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](#).

References**Limiting references**

This place does not cover:

Soil working tools or machines for weeding or thinning	A01B , A01B 1/16 , A01B 39/18 , A01B 41/00
Transplanting	A01C 11/00 , A01G 23/04
Cutting implements specially adapted for horticultural purposes, e.g. flower shears, fruit shears, secateurs or hedge shears	A01G 3/00
Delimiting of standing trees	A01G 3/00
Machines for cutting sods or turf from lawns or meadows	A01G 20/12
Uprooting or felling of trees	A01G 23/02
Tapping of tree juices	A01G 23/10
Apparatus for destruction of unwanted vegetation	A01M 21/00

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Machines that pick up mown material from the ground and bale it	A01F 15/00
Machines that pick up mown material from the ground and cut it, e.g. field choppers	A01F 29/01

Informative references

Attention is drawn to the following places, which may be of interest for search:

Agricultural soil working in general	A01B
Gatherers for removing stones, undesirable roots or the like from the soil	A01B 43/00
Parts, details or accessories of agricultural machines in general	A01B 51/00 - A01B 76/00
Threshing	A01F 5/00 - A01F 12/00 , A01F 17/00 - A01F 21/00
Baling of hay, straw or the like	A01F 13/00 - A01F 21/00
Stacks for storing of harvested products	A01F 25/04
Cutting machines specially adapted for hay, straw or the like	A01F 29/00
Floral handling	A01G 5/00
"Harvesting" of oysters, mussels, sponges or the like	A01K 80/00

Treatment of harvested fruit or vegetables, not otherwise provided for, e.g. extracting juice, cleaning of vegetables or topping of onions	A23N
Preparation of tobacco	A24B
Mechanical metal working without essentially removing material, e.g. making harvesting tools	B21 , B21D 53/68 , B21D 53/72 , B21H 7/08 , B21H 7/10 , B21K 11/08 , B21K 11/14 , B21K 19/00
Grinding; Polishing, e.g. sharpening of cutting edges	B24B , B24D , B24B 3/00 , B24D 15/06
Handles for hand implements in general	B25G
Hand-held cutting tools in general	B26B
Cutting in general	B26D
Wheels	B60B
Vehicles specially adapted for load transportation, or for transporting, carrying or comprising special loads or objects, in general	B60P
Wheel scrapers	B60S 1/68
Conveyors in general	B65G
Hoisting or lifting in general, e.g. hay hoists	B66 , B66C 11/24
Removing undesired matter from land, not otherwise provided for	E01H 15/00
Dredging or soil-shifting in general	E02F , E02F 3/28 , E02F 5/28

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Combine (noun)	Harvester or mower combined with a threshing device.
Fork	Hand tool having two or more tines that are used for lifting, digging or pitching.
Harvest (verb)	Perform one of the methods defined in the definition statement in order to make use of the separated, mown or gathered plant material.
Hay	Mown forage crop in a dry or partially dry state.
Haymaking	Working on mown forage crop lying on the ground with the intention to make hay.
Mow (verb)	Cut down grass, cereals or other standing plants.
Thresh (verb)	Separate grains or seeds from harvested plants or plant parts (e.g. cereals, maize/corn, peas, beans or pine cones) by mechanical action (e.g. shaking, stamping, rubbing, beating or applying intermittent pressure).
Plant	Any of a kingdom (Plantae) of multicellular eukaryotic mostly photosynthetic organisms typically lacking locomotive movement or obvious nervous or sensory organs and possessing cellulose cell walls.

A01D 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](#)})

Definition statement

This place covers:

Human-held tools for harvesting.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Hedge trimming means	A01G 3/04
Making from sheet material	B21D 53/72
Making by rolling	B21H 7/10
Hand cutting in general	B26

A01D 3/00

Non-abrasive sharpening devices for scythes, sickles or the like

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Abrasive or similar sharpening devices	B24D 15/06
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A01D 5/00

Containers for whetstones for use during harvesting

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Whetting implements	B24D 15/00
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A01D 7/00

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

References

Limiting references

This place does not cover:

Mowers convertible to rakes or capable of raking	A01D 42/02
Mowers combines with rakes	A01D 43/02

Informative references

Attention is drawn to the following places, which may be of interest for search:

Haymakers, crop conditioners	A01D 76/00 - A01D 84/00
Making rakes from sheet material	B21D 53/68
Making rakes by rolling	B21H 7/08

A01D 9/00

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

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Making forks from sheet metal	B21D 53/68
Making forks by rolling	B21H 7/08

A01D 11/00

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

References

Limiting references

This place does not cover:

Hand implements for harvesting maize	A01D 45/026
Hand implements for picking of cotton	A01D 46/087

A01D 13/00

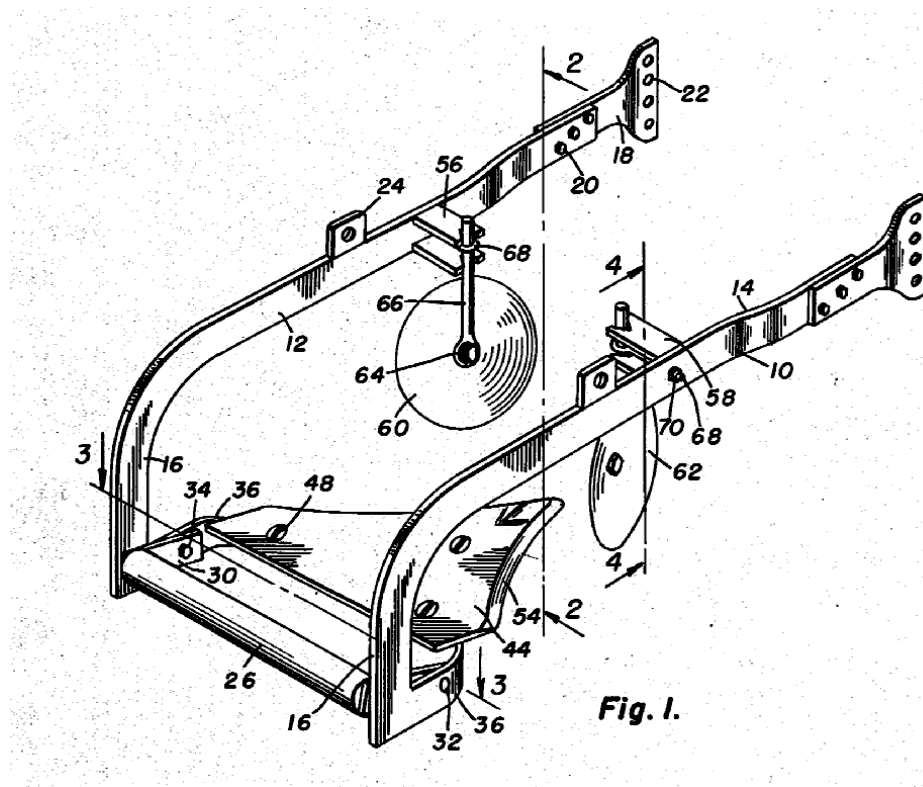
Diggers, e.g. potato ploughs

Definition statement

This place covers:

the plough or blade itself which penetrates into the ground for loosening the root crops.

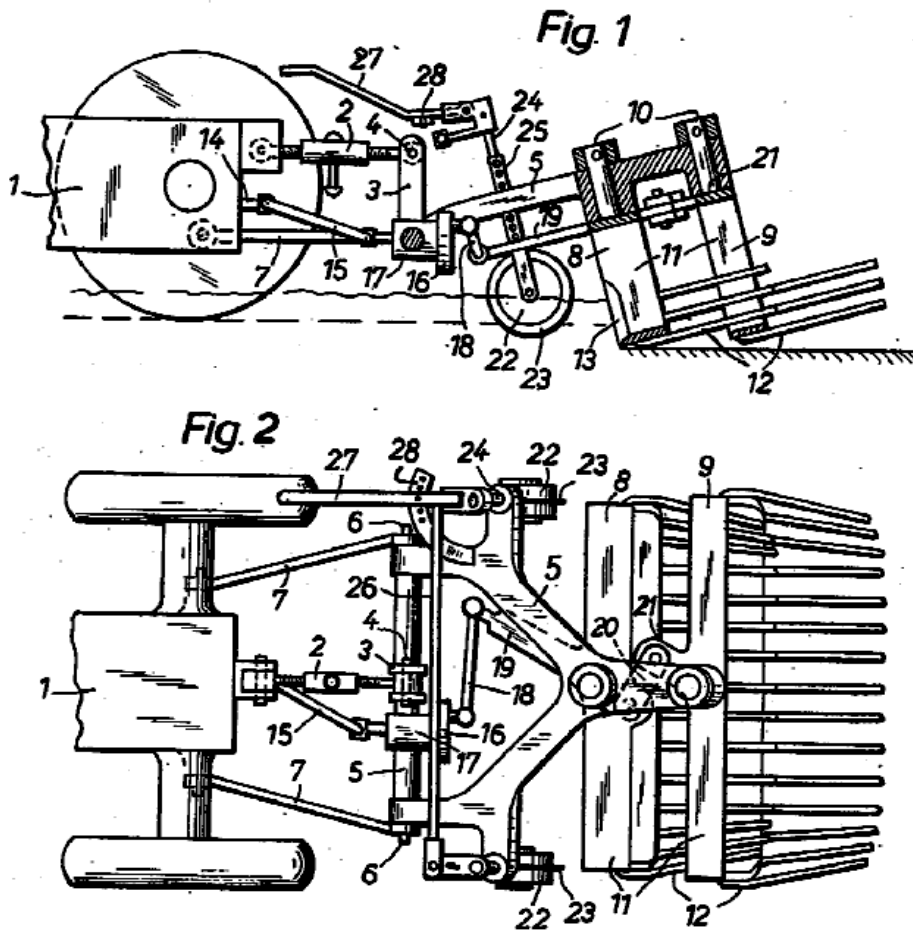
Example of a potato plough (from US2519761 by John R. Hobbs)



A01D 15/00**Digging machines with sieve graters but without conveying mechanisms****Definition statement**

This place covers:

Example of digging machine with sieve graters but without conveying mechanisms from US2932354 by Bucher Guyer AG.Masch.

**A01D 17/00****Digging machines with sieving and conveying mechanisms****Definition statement**

This place covers:

The sieving mechanism acts as conveying mechanism as well.

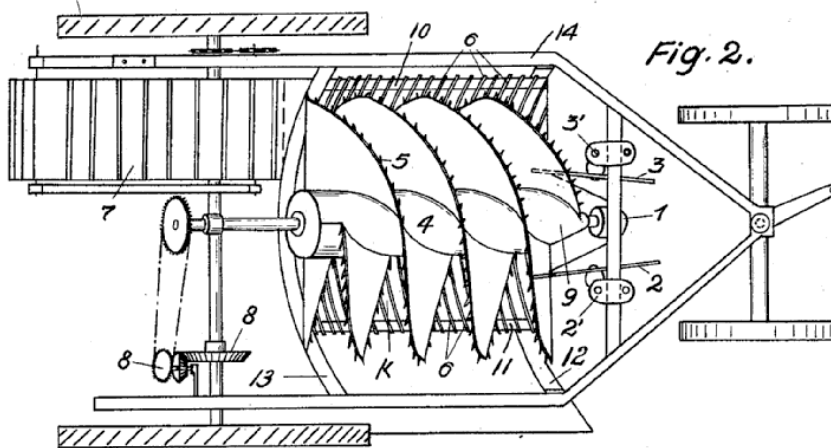
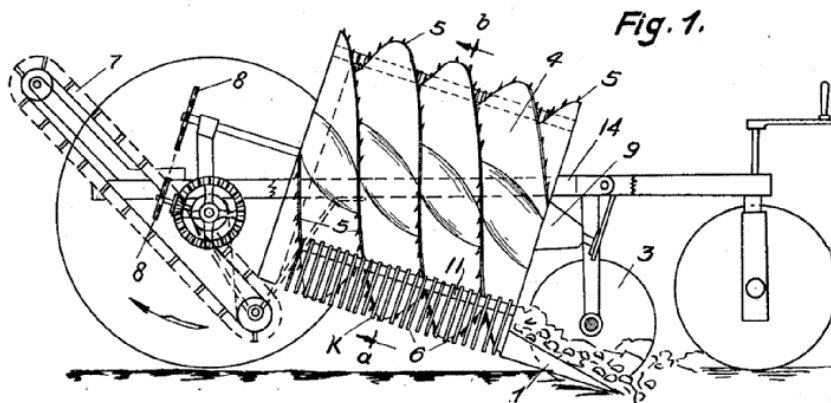
A01D 17/02

with conveyors arranged above the sieving device

Definition statement

This place covers:

Example of conveyor above a sieving device from US1876137 by Carls Engelen.



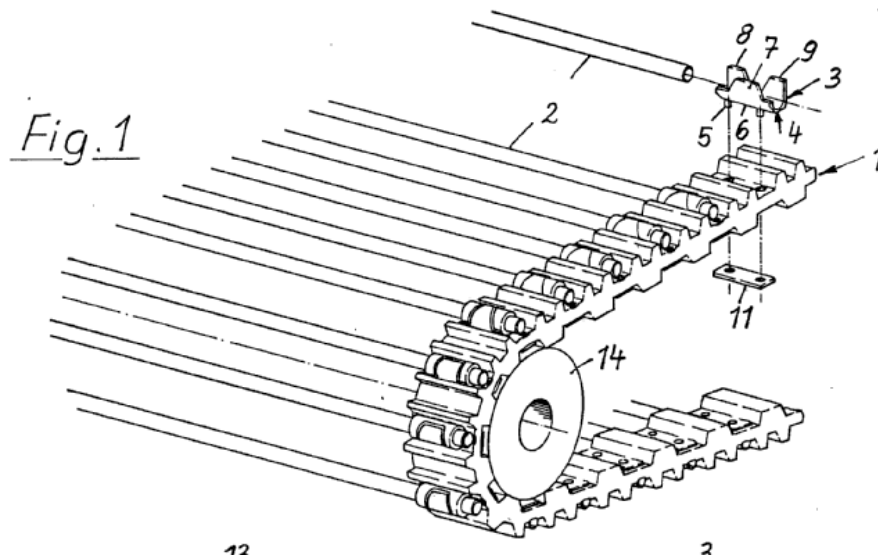
A01D 17/10

with smooth conveyor belts, lath bands or rake bands

Definition statement

This place covers:

Example of a lath band from EP0212146 by Franz Grimme Landmaschf.



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Endless belts in binders or combines	A01D 61/02
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Special rules of classification

Special aspects of the documents classified in this group are further classified using an Indexing Code of [A01D 2017/103](#) (construction), [A01D 2017/105](#) (driving means), [A01D 2017/106](#) (fingers on belt), and [A01D 2017/108](#) (paddles on belt).

A01D 19/00

Digging machines with centrifugal wheels, drums or spinners

Definition statement

This place covers:

Digging machines comprising centrifugal wheels, drums or spinners in order to clean and convey the root crop after having been lifted from the ground.

Example of centrifugal wheels from EP0418985 by Hack

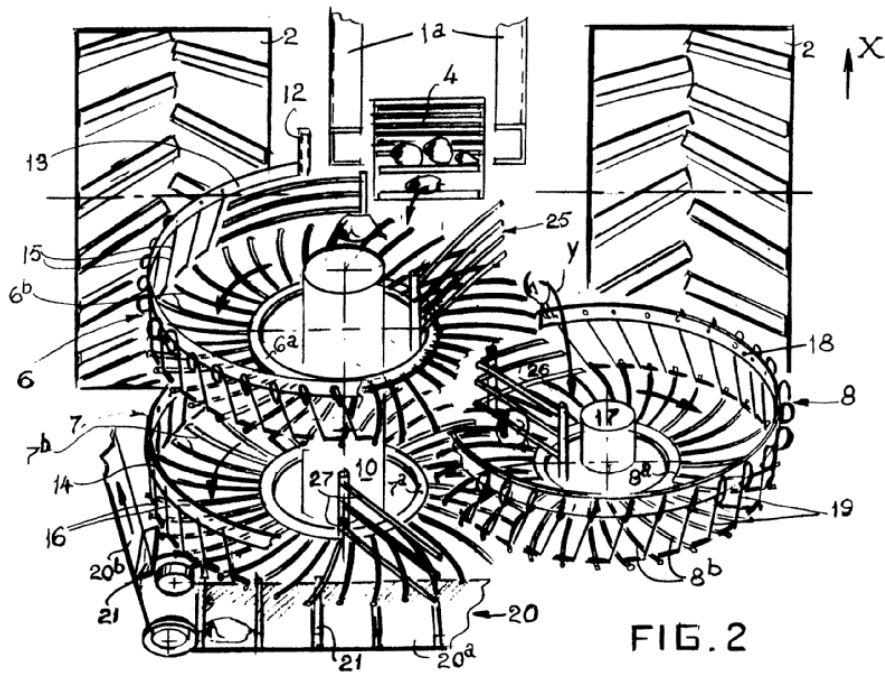


FIG. 2

A01D 21/00

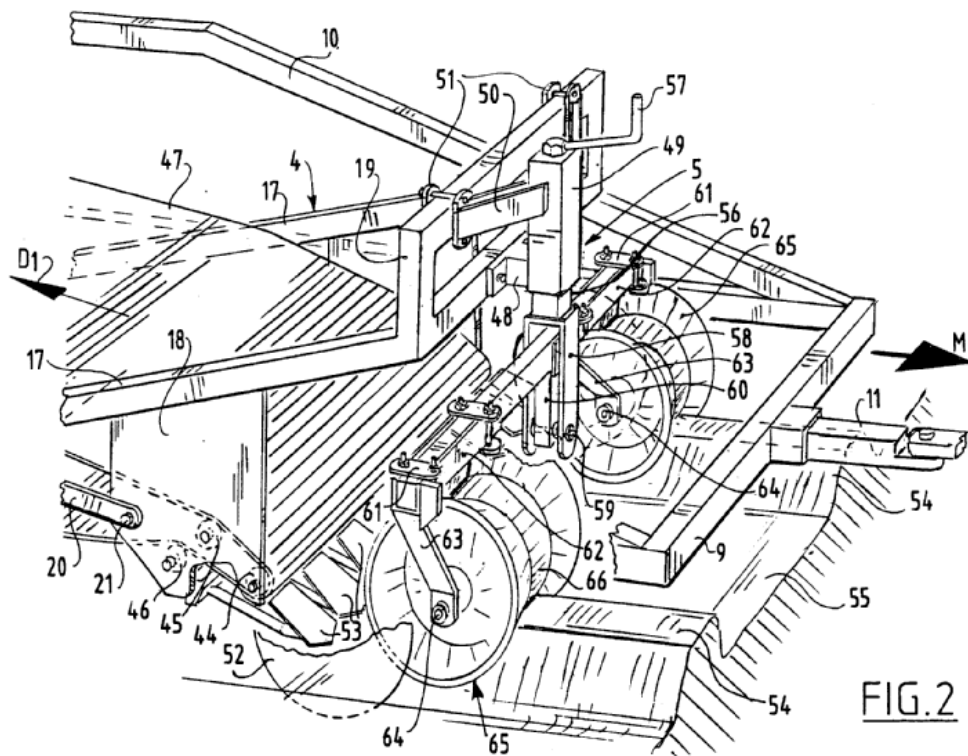
Digging machines with potato-picking implements

Definition statement

This place covers:

Digging machines in which the root crop is picked up by a conveying element immediately after having been loosened by a very short plough.

Example from EP0719495 by Amac BV.



A01D 23/00

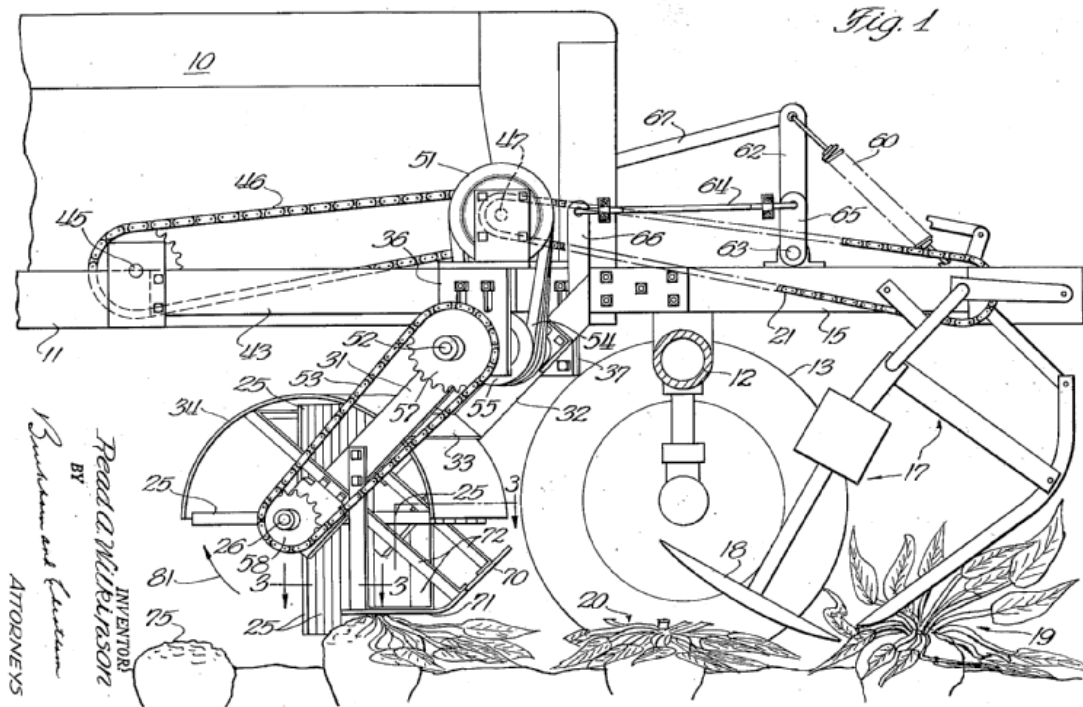
Topping machines

Definition statement

This place covers:

Removing the top part of root crops (e.g. sugar beet).

Example from US2587258 by Wilkinson Read A.



A01D 23/02

cutting the tops before being lifted

Special rules of classification

Special aspects of the documents classified in this group are further classified using an Indexing Code of [A01D 2023/022](#) (rotatable non cutting devices), [A01D 2023/024](#) (fix blades), [A01D 2023/026](#) (movable knives), and [A01D 2023/028](#) (cutters on a shaft)

A01D 23/04

cutting the tops after being lifted

Definition statement

This place covers:

Removing the top part of root crops after the root crop has been lifted (i.e. extracted from the soil).

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Processing of harvested produce in bulk	A01F 29/00 , A23N
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A01D 25/00

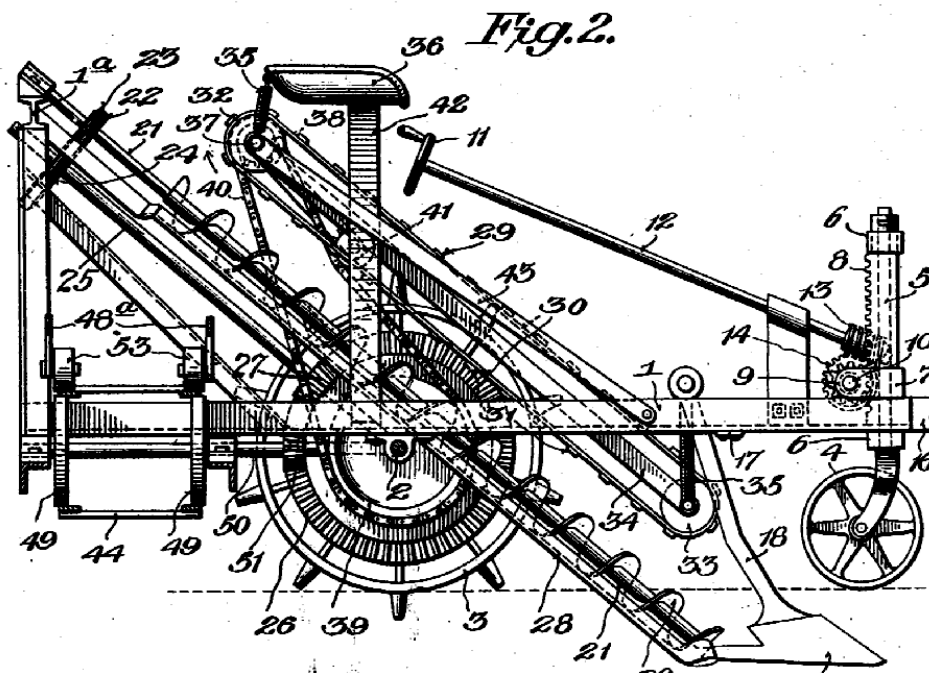
Lifters for beet or like crops

Definition statement

This place covers:

Devices which lift the root crop from ground level upwards.

Example from US1331957 by Utah Idaho Sugar Co.



A01D 27/00

Machines with both topping and lifting mechanisms

Definition statement

This place covers:

Machines comprising means for both lifting the root crop from ground level upwards and removing the top part of said crop (simultaneously or not).

A01D 29/00

Harvesters for peanuts

Definition statement

This place covers:

Machines explicitly intended for harvesting peanuts

A01D 31/00

Other digging harvesters {(for harvesting asparagus [A01D 45/007](#))}

References

Limiting references

This place does not cover:

Harvesting asparagus	A01D 45/007
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A01D 33/00

Accessories for digging harvesters

Definition statement

This place covers:

Accessories for digging harvesters, i.e. devices which do not form part of the digging and topping arrangements covered by the previous groups ([A01D 13/00](#) - [A01D 31/00](#)), but which also form part of a root crop harvester (e.g. special cleaning devices, drives, etc). See subgroups for some particular accessories which should be classified in one of those and not in this head group.

Special rules of classification

Special aspects of the documents classified in this group and subgroups, which relate to yield crop determination are further classified using an Indexing Code of [A01D 2033/005](#).

A01D 33/08

Special sorting and cleaning mechanisms

Definition statement

This place covers:

Sorting and cleaning in general (e.g. for removing attached earth).

References

Limiting references

This place does not cover:

Devices for removing foliage	A01D 33/02
Devices for removing stones	A01D 33/04

A01D 33/10

Crop collecting devices, with or without weighing apparatus

Definition statement

This place covers:

Collecting devices for root crops which have been lifted from the ground and left on the field.

Tanks and containers for root crop harvesters.

A01D 34/00

Mowers (combined with apparatus performing additional operations while mowing [A01D 37/00](#) - [A01D 41/00](#), [A01D 43/00](#); convertible to apparatus for purposes other than mowing or capable of performing operations other than mowing [A01D 42/00](#)); Mowing apparatus of harvesters

References

Limiting references

This place does not cover:

Combined with apparatus performing additional operations while mowing	A01D 37/00 , A01D 41/00 , A01D 43/00
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Convertible to apparatus for purposes other than mowing or capable of performing operations other than mowing	A01D 42/00
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A01D 34/001

{Accessories not otherwise provided for}

Definition statement

This place covers:

Carrying and storage means

A01D 34/008

{for automated or remotely controlled operation}

Definition statement

This place covers:

Robotic devices (working independently or autonomous)

A01D 34/125

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](#))

References**Limiting references**

This place does not cover:

Protection devices	A01D 34/4167
Combined with means for gathering or loading mown material	A01D 43/06
Delivering mechanisms for harvesters or mowers	A01D 57/26 - A01D 57/30

A01D 34/435

{Flail harvesters or mowers (cutting flails [A01D 34/535](#))}

References**Limiting references**

This place does not cover:

Cutting flails	A01D 34/535
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A01D 34/46

hand-guided by a walking operator

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Cutters mounted on a vehicle, e.g. a tractor, or drawn by an animal or a vehicle	A01D 34/43
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A01D 34/475

{Driving mechanisms (for the cutters [A01D 34/56](#))}

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Driving mechanisms for the cutters	A01D 34/56
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A01D 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](#))

References**Limiting references**

This place does not cover:

Combined with means for gathering or loading mown material	A01D 43/06
Delivering mechanisms for harvesters or mowers	A01D 57/26 - A01D 57/30

A01D 34/64

mounted on a vehicle, e.g. a tractor, or drawn by an animal or a vehicle ([A01D 34/695](#) takes precedence)

References**Limiting references**

This place does not cover:

Cutters supported by an air cushion	A01D 34/695
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A01D 34/68

with motor driven cutters or wheels

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Control levers on the handle of the mower	A01D 2034/6843
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A01D 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](#))

References**Limiting references**

This place does not cover:

Combined with means for gathering or loading mown material	A01D 43/06
Delivering mechanisms for harvesters or mowers	A01D 57/26 - A01D 57/30

A01D 34/733**{Cutting-blade mounting means}****Definition statement***This place covers:*

Flail type cutting-blade

A01D 34/74**Cutting-height adjustment****Definition statement***This place covers:*

Means for following ground contours

A01D 34/78**electric****Definition statement***This place covers:*

Electric drive for the wheels.

A01D 34/81**Casings; Housings ([A01D 34/71](#) takes precedence)****References****Limiting references***This place does not cover:*

Cutting apparatus with means for discharging mown material	A01D 34/71
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A01D 34/82**Other details****Definition statement***This place covers:*

Mounting means for accessories

Driving means for accessories

A01D 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](#))}

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

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

A01D 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](#))

References

Limiting references

This place does not cover:

For use on sloping ground, e.g. on embankments	A01D 34/86
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Edge trimmers	A01G 3/00
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Special rules of classification

Reference [A01G 3/00](#) is non-limiting in the subgroup [A01D 34/84](#). CPC will be updated/corrected once this inconsistency is resolved in IPC.

A01D 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](#))

References

Limiting references

This place does not cover:

Undercarriages or frames adapted for harvesters or mowers	A01D 67/00
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Control mechanisms for harvesters or mowers when moving on slopes	A01D 75/28
Apparatus for trimming edges	A01G 3/04

A01D 34/863

{and for mowing around obstacles, e.g. posts, trees, fences or the like
([A01D 34/866](#) takes precedence)}

References**Limiting references**

This place does not cover:

Mounting means	A01D 34/866
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A01D 34/866

{Mounting means}

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Combinations of shearing, sawing or milling apparatus specially adapted for felling trees	A01G 23/093
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A01D 34/90

for carrying by the operator

Definition statement

This place covers:

Apparatus carried by an operator, i.e. not supported by wheels

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Ergonomic provisions	A01D 34/902
Vibration dampening means	A01D 34/905

A01D 37/00

Reaper-binders (equipment thereon for binding harvested produce, e.g. knotters, [A01D 59/00](#))

References**Limiting references**

This place does not cover:

Knotters	A01D 59/00
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Features relating to mowing only	A01D 34/00
Features relating to binding only	A01D 39/00
Bundling articles	B65B 13/00
Knotting	D04G

A01D 37/02

with receiving platform and binding apparatus but without elevating canvases

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Knottting	D04G
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A01D 37/04

conveying the stalks in vertical position

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Delivering devices for standing stalks	A01D 57/22
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A01D 37/06

binding with stalks or straw bands

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Implements for laying-out bands for sheaves	A01D 75/16
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A01D 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](#)})

References

Limiting references

This place does not cover:

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

A01D 41/00

Combines, i.e. harvesters or mowers combined with threshing devices

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Threshing devices for combines	A01F 7/00 - A01F 12/00
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A01D 41/1208

{Tanks for grain or chaff (for threshing machines [A01F 12/60](#))}

Definition statement

This place covers:

Emptying, filling tanks

Unloading

References

Limiting references

This place does not cover:

Grain tanks for threshing machines	A01F 12/60
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Unloading mechanisms	A01D 41/1217
Extension mechanisms	A01D 41/1226

A01D 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](#))

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Mowers combined with apparatus performing additional operations while mowing	A01D 43/00
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A01D 42/005

{Mulching (shredders or like cutting implements for comminuting plant waste per se [A01G 3/002](#))}

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Shredders or like cutting implements for comminuting plant waste per se	A01G 3/002
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A01D 42/06

Sweeping or cleaning lawns or other surfaces {(sweeping apparatus for lawns per se [A01G 20/43](#))}

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Machines for sweeping lawns and for collecting or disintegrating	A01G 20/43
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A01D 43/00

Mowers combined with apparatus performing additional operations while mowing ([A01D 37/00](#), [A01D 39/00](#), [A01D 41/00](#), take precedence)

References

Limiting references

This place does not cover:

Reaper-binders	A01D 37/00
Independent binders, e.g. for hay	A01D 39/00
Combines, i.e. harvesters or mowers combined with threshing devices	A01D 41/00

A01D 43/06

with means for collecting, gathering or loading mown material {([A01D 43/086](#) takes precedence)}

References**Limiting references**

This place does not cover:

Mowers combined with means for collecting, gathering or loading mown material	A01D 43/086
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Loaders for hay or like field drops	A01D 87/00
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A01D 43/063

in or into a container carried by the mower; Containers therefor ([A01D 43/077](#) takes precedence)

References**Limiting references**

This place does not cover:

With auxiliary means, e.g. fans, for transporting the mown crop	A01D 43/077
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A01D 43/0631

{Control devices specially adapted therefor}

Definition statement

This place covers:

Determined filling degree (the height of what is in the containers)

A01D 43/08

with means for cutting up the mown crop {, e.g. forage harvesters}

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Threshing machines having chaff-cutters	A01F 12/40
Cutting apparatus of chaff-cutters or of apparatus for cutting up mown crop	A01F 29/00

A01D 43/10

with means for crushing or bruising the mown crop

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Stalk crushers or bruisers per se for standing stalks or stubbles	A01D 34/8355
Stalk crushers or bruisers per se for mown crop	A01D 82/00
Stalk crushers or bruisers per se for straw	A01F 12/40

A01D 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](#))

References**Limiting references**

This place does not cover:

Harvesting of underwater plants, e.g. harvesting of seaweed	A01D 44/00
Threshing devices for combines adapted for special crops	A01F 11/00
Harvesting of Mushrooms	A01G 18/70

A01D 45/02

of maize {, i.e. kernel harvesting (for ensilage maize [A01D 43/081](#))}

Definition statement

This place covers:

Harvesting of ears or corn ears

References**Limiting references**

This place does not cover:

Mowers combined with means for cutting up the mown crop specially adapted for ensilage maize	A01D 43/081
--	-----------------------------

A01D 45/10

of sugar cane {(for digging sugar cane [A01D 31/00](#))}

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Digging sugar cane	A01D 31/00
--------------------	----------------------------

A01D 45/22

of beans

Definition statement

This place covers:

Harvesting of soya beans

A01D 45/26

of cabbage or lettuce

Definition statement

This place covers:

Harvesting of celery, cauliflower

A01D 46/00

Picking of fruits, vegetables, hops, or the like; Devices for shaking trees or shrubs

Definition statement

This place covers:

Harvesting of strawberries

A01D 46/005

{picking or shaking pneumatically (of cotton [A01D 46/10](#))}

Definition statement

This place covers:

Removing leaves

References**Limiting references**

This place does not cover:

Pneumatically picking cotton	A01D 46/10
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A01D 46/10

pneumatically {([A01D 46/081](#) - [A01D 46/088](#) take precedence)}

References**Limiting references**

This place does not cover:

Harvesters characterised by transversally adjustable row units, by basket means, by the lubricant distribution systems	A01D 46/081 - A01D 46/088
--	--

A01D 46/24

Devices for picking apples or like fruit ([A01D 46/28](#) {and [A01D 46/005](#)} takes precedence)

References**Limiting references**

This place does not cover:

Picking or shaking pneumatically	A01D 46/005
Vintaging machines	A01D 46/28

A01D 46/26

Devices for shaking trees or shrubs; Fruit catching devices to be used therewith ([A01D 46/28](#) takes precedence)

References**Limiting references**

This place does not cover:

Vintaging machines, i.e. grape harvesting machines	A01D 46/28
--	----------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Collecting surfaces extended around a tree in order to catch the fruit when shaken	A01D 2046/262
Portable devices to shaken branches	A01D 2046/266
Portable shaking device for branches which are pneumatically powered	A01D 2046/268

A01D 57/03

with supplementary controlled movement of the crop-engaging members, e.g. of the tines {([A01D 57/025](#) takes precedence)}

References**Limiting references**

This place does not cover:

Devices for leading crops to the mowing apparatus using reels with synchronised driving means	A01D 57/025
---	-----------------------------

A01D 59/00

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

References**Limiting references**

This place does not cover:

Specially adapted for baling presses	A01F 15/14
--------------------------------------	----------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Bundling articles for packaging in general	B65B 13/00
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A01D 59/12

Containers for the twine

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Twine balls or their manufacture	B65H
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A01D 61/00

Elevators or conveyors for binders or combines

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Conveying in general	B65G
Hoisting, lifting, in general	B66

A01D 61/002**{transversal conveying devices}****Glossary of terms***In this place, the following terms or expressions are used with the meaning indicated:*

Transversal	Perpendicular to the direction of movement of the machine.
-------------	--

A01D 61/008**{for longitudinal conveying, especially for combines}****Glossary of terms***In this place, the following terms or expressions are used with the meaning indicated:*

Longitudinal	In the direction of movement of the machine.
--------------	--

A01D 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

References***Informative references****Attention is drawn to the following places, which may be of interest for search:*

Mechanisms for adjusting the frame (adjusting for the cutter-bar)	A01D 34/28
Coupling arrangements between animal and tractor	A01B 59/00

A01D 67/005**{Arrangements of coupling devices}****Definition statement***This place covers:*

Couplings between tractor and harvesting machine

A01D 69/00

Driving mechanisms or parts thereof for harvesters or mowers (driving mechanisms for the cutters of mowers or harvesters [A01D 34/00](#))

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Driving mechanisms for the cutters of mowers or harvesters	A01D 34/00
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A01D 69/02

electric

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Hybrid systems	A01D 69/025
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A01D 75/08

Sharpening apparatus fixed to the harvester or mower

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Sharpening machines or devices per se	B24B , B24D
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A01D 75/18

Safety devices for parts of the machines

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Avoiding overload	A01D 75/182
Avoiding collision with obstacles	A01D 75/185
Removing foreign objects	A01D 75/187
Safety devices in general	F16P

A01D 75/20**Devices for protecting men or animals****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Safety devices in general	F16P
---------------------------	----------------------

A01D 75/282**{acting on the grain cleaning and separating device (grain cleaners, separators per se [A01F 12/44](#))}****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Grain cleaners, separators per se	A01F 12/44
-----------------------------------	----------------------------

A01D 75/287**{acting on the mowing table ([A01D 75/285](#) takes precedence)}****References****Limiting references***This place does not cover:*

Acting on the grain cleaning and separating device	A01D 75/285
--	-----------------------------

A01D 76/003**{Hand-operated wheeled rakes (hand-operated rakes [A01D 7/00](#))}****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Hand-operated rakes in general	A01D 7/00
--------------------------------	---------------------------

A01D 76/006

{Hay-sweeps (rakes for making stacks [A01D 85/001](#); sweep rakes [A01D 87/08](#))}

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Rakes for making stacks	A01D 85/001
Sweep rakes	A01D 87/08

A01D 78/001

{Side-delivery rakes ([A01D 78/04](#) takes precedence)}

Definition statement

This place covers:

Folding and adjusting arrangements

A01D 78/10

the tines rotating about a substantially vertical axis

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Having only one rotor	A01D 78/1071
Having only one row of rotors on a horizontal transversal line	A01D 78/1078
Having only two rows of rotors on different transversal lines	A01D 78/1085
Having more than two rows of rotors on different transversal lines	A01D 78/1092

A01D 78/1007

{Arrangements to facilitate transportation specially adapted therefor ([A01D 78/1021](#) takes precedence; for other agricultural machines or implements [A01B 73/00](#); carriers [A01D 80/005](#))}

References**Limiting references**

This place does not cover:

Telescopic frames	A01D 78/1021
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Carriers	A01D 80/005
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For other agricultural machines or implements	A01B 73/00
---	----------------------------

A01D 78/1028

{Pivotable rotor support arms ([A01D 78/1007](#) takes precedence)}

References

Limiting references

This place does not cover:

Arrangements to facilitate transportation specially adapted therefor	A01D 78/1007
--	------------------------------

A01D 78/1064

{Arrangements of tines ([A01D 78/1007](#) takes precedence)}

References

Limiting references

This place does not cover:

Arrangements to facilitate transportation specially adapted therefor	A01D 78/1007
--	------------------------------

A01D 80/005

{Carriers for the transport of haymakers (arrangements of the haymaker to facilitate transportation [A01D 78/1007](#))}

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangements of the haymaker to facilitate transportation	A01D 78/1007
---	------------------------------

A01D 82/00

Crop conditioners, i.e. machines for crushing or bruising stalks (combined with harvesters [A01D 43/10](#))

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Combined with harvesters	A01D 43/10
--------------------------	----------------------------

A01D 84/00

Haymakers not provided for in a single one of groups [A01D 76/00](#) - [A01D 82/00](#)

References**Limiting references**

This place does not cover:

Haymakers with tines that are stationary with respect to the machine during operation but that may be liftable for dumping	A01D 76/00
Crop conditioners, i. e. machines for crushing or bruising stalks	A01D 82/00

A01D 85/00

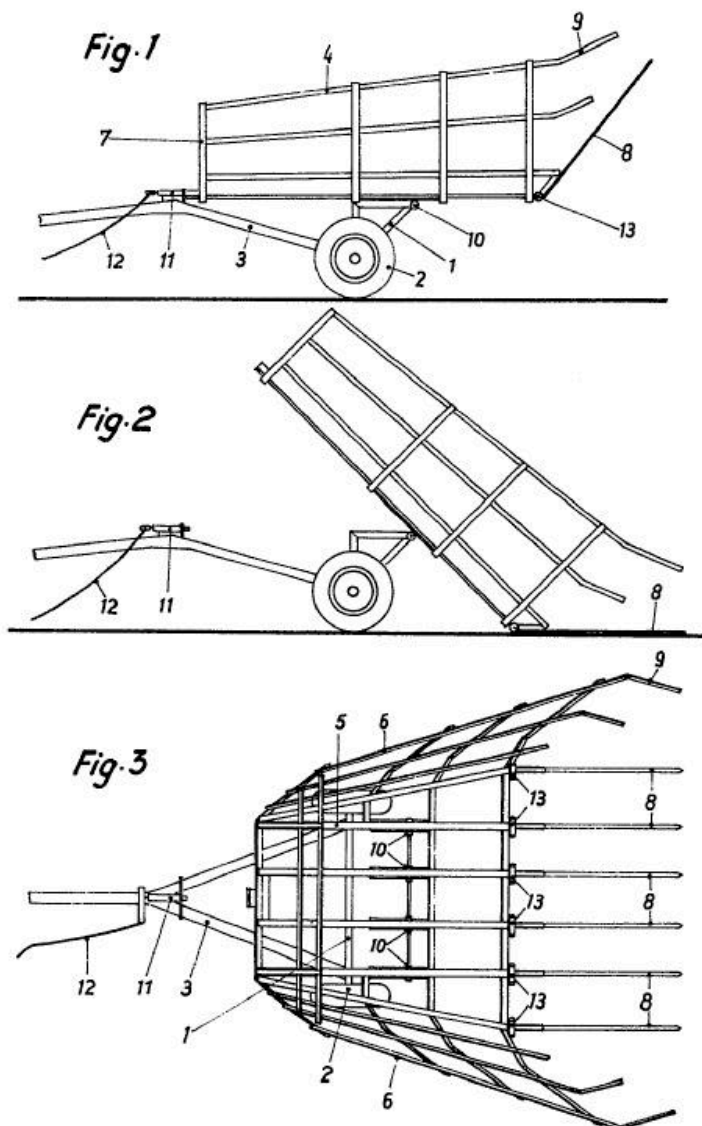
Arrangements for making or setting stacks

Definition statement

This place covers:

Creating a stack of loose products or of bales.

Example from FR1366404 by Berghoff Werner.



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Storing in stacks	A01F 25/04
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A01D 85/001

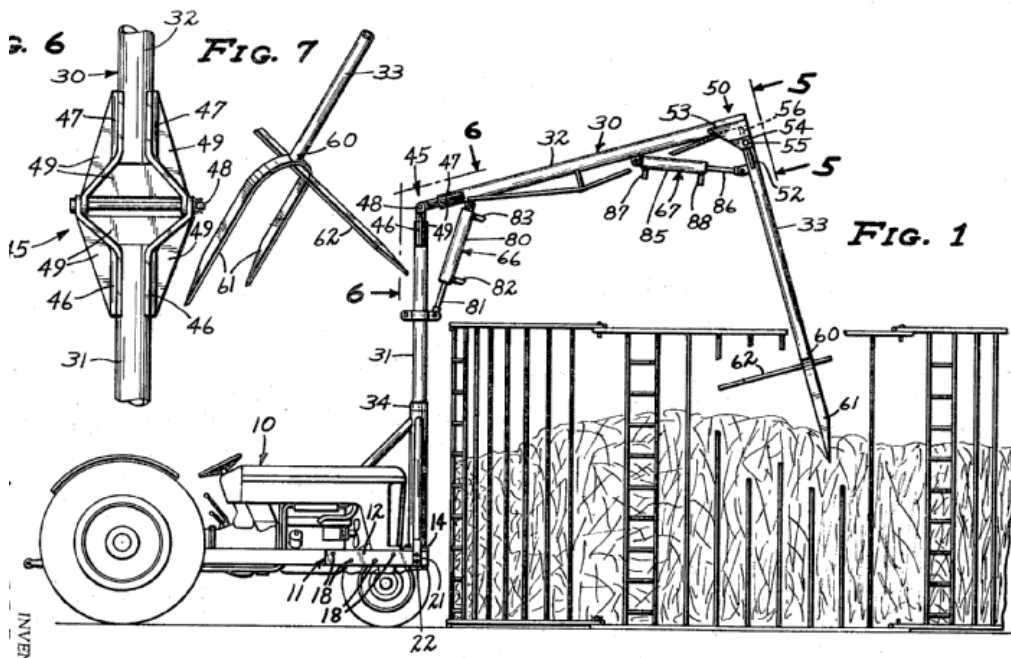
{making or setting stacks of cereals or grass, e.g. rack formers, fixed haystacks (rakes for making windrows, haysweeps [A01D 76/006](#); drying racks [A01F 25/12](#))}

Definition statement

This place covers:

Subdivision of the previous group which covers devices where loose product is actively accumulated in order to create a stack.

Example from US3402829 by Leedah Alvin N.

**References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Rakes for making windrows, haysweeps	A01D 76/006
Drying racks	A01F 25/12

A01D 85/002

{with binding equipment, e.g. binding groups of bales}

Definition statement

This place covers:

Arrangements for making or setting stacks comprising binding equipment for tying the whole stack.

References

Limiting references

This place does not cover:

Devices for forming groups of bales without binding them	A01D 85/005
--	-----------------------------

A01D 85/005

{Forming groups of bales, e.g. bale sledges (loaders for bales [A01D 87/12](#); vehicles for loading bales [A01D 90/08](#))}

References

Limiting references

This place does not cover:

Binding means for a group of bales	A01D 85/002
------------------------------------	-----------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Loaders for bales	A01D 87/12
Vehicles for loading bales	A01D 90/08

Special rules of classification

Special aspects of the documents classified in this group Are further classified using Indexing Codes of [A01D 2085/007](#) (devices directly attached to a baler) and [A01D 2085/008](#) (groups of bales just at horizontal level)

A01D 87/00

Loaders for hay or like field crops (combined with mowers [A01D 43/06](#))

Definition statement

This place covers:

Devices for displacing on the fields hay or like field crops in loose form or as bales

References

Limiting references

This place does not cover:

Loaders combined with mowers	A01D 43/06
------------------------------	----------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Loading in forage silos	A01F 25/18
Loading in general	B65G , B66

A01D 87/0007

{with chopping devices (harvesters with loaders [A01D 43/06](#); forage harvesters [A01D 43/08](#); special adaptations of cutting machines for hay, straw or fodder [A01F 29/00](#))}

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Harvesters with loaders	A01D 43/06
Forage harvesters	A01D 43/08
Special adaptations of cutting machines for hay, straw or fodder	A01F 29/00

A01D 87/0015

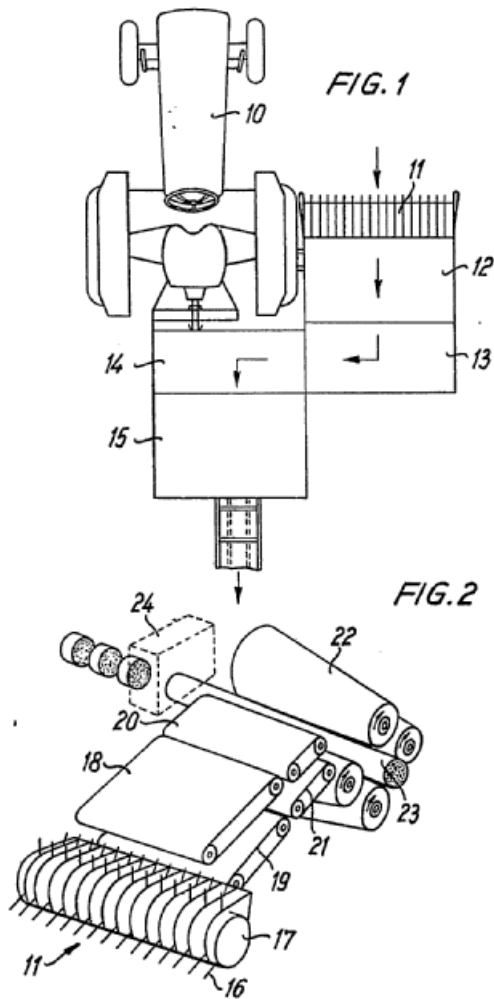
{Arrangements for making a strand (forming round bales [A01F 15/07](#))}

Definition statement

This place covers:

Loaders comprising means for producing a strand of product, e.g. by means of rollers.

Example from GB1150050 by Claas.



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Forming round bales	A01F 15/07
---------------------	----------------------------

A01D 87/0023

{Coupling arrangements between tractors, loaders or vehicles (for harvesters [A01D 67/005](#))}

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Coupling arrangements for harvesters	A01D 67/005
--------------------------------------	-----------------------------

A01D 87/003

{with gripping or clamping devices (manure loaders [A01C 3/04](#))}

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Manure loaders	A01C 3/04
----------------	---------------------------

A01D 87/0053

{Tractor-mounted loaders (buck-rakes, transporting rakes [A01D 87/08](#); manure loaders [A01C 3/04](#); fork loaders, fork lifts [B66F](#); earth-moving machines [E02F](#))}

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Buck-rakes, transporting rakes	A01D 87/08
Manure loaders	A01C 3/04
Fork loaders, fork lifts	B66F
Earth-moving machines	E02F

A01D 87/08

with sweep rakes {, i.e. buck-rakes, e.g. transporting rakes}

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Gripping or clamping devices	A01D 87/003
Fork loaders	A01D 87/0053

A01D 87/10

with blowers

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Loading or distributing arrangements in forage silos	A01F 25/18
Blowing and conveying	B65G 53/00

A01D 87/121

{for sheaves, stacks}

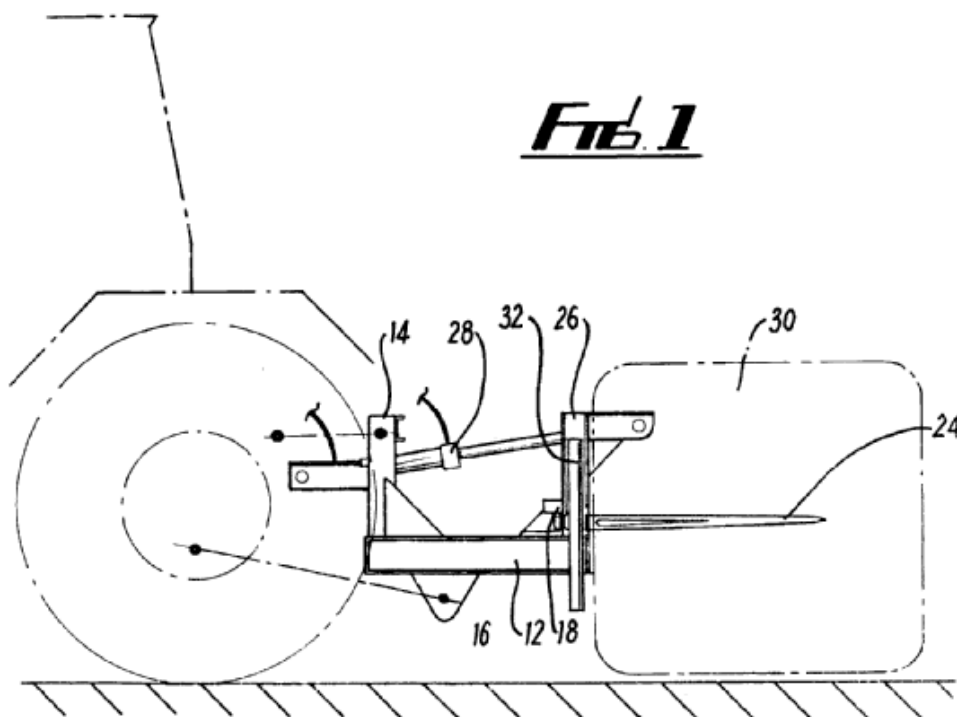
References**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Transport devices for hay racks	A01F 25/125
---------------------------------	-----------------------------

A01D 87/122{for bales on the ground (vehicles for loading [A01D 90/08](#))}**Definition statement***This place covers:*

Loaders directly connected to a 3-point hitch of a tractor which lack their own means of displacement which would allow handling of bales in a broader range of movements.

Example from EP0638229 by Lowe Maurice Samuel.

**References****Limiting references***This place does not cover:*

Loaders directly connected to a 3-point hitch of a tractor comprising their own means of displacement, which allow handling of bales in a broader range of movements.	A01D 87/127
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Vehicles for loading	A01D 90/08
Forks for loads	B66F 9/12
Forks for loads with side clamps	B66F 9/183

Special rules of classification

If the documents classified in this group comprise a manual trolley, then they must be also indexed in the group [A01D 2087/123](#)

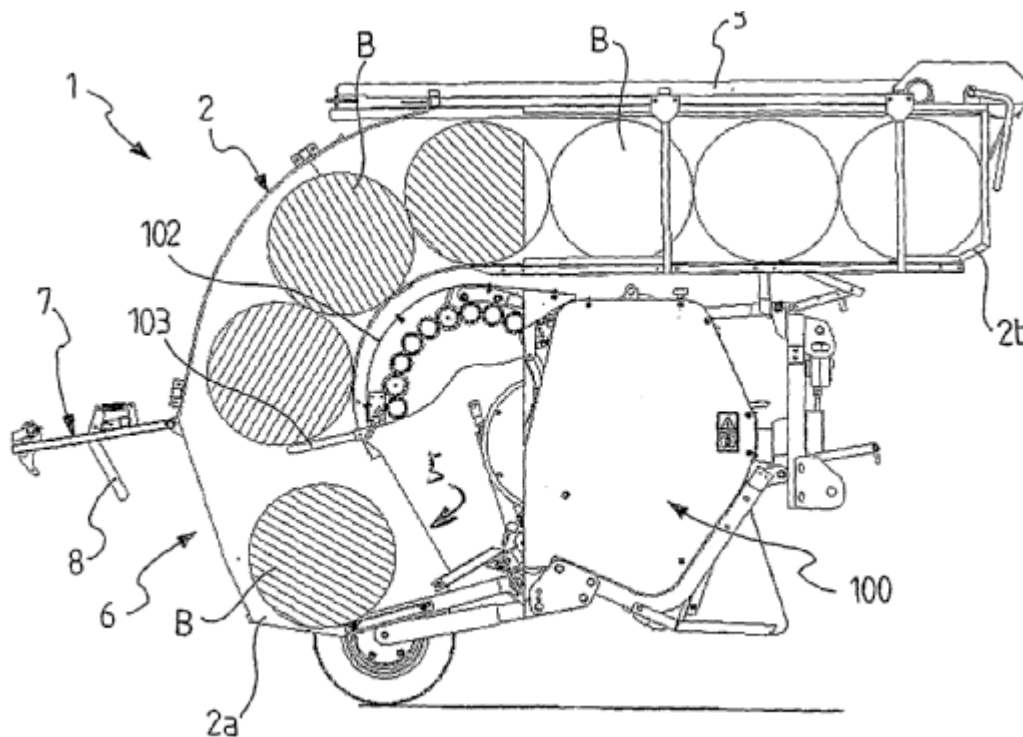
A01D 87/125

{mounted on the press without laying down the bales}

Definition statement

This place covers:

Example from WO2009141692 by CAEB Internat. SRL



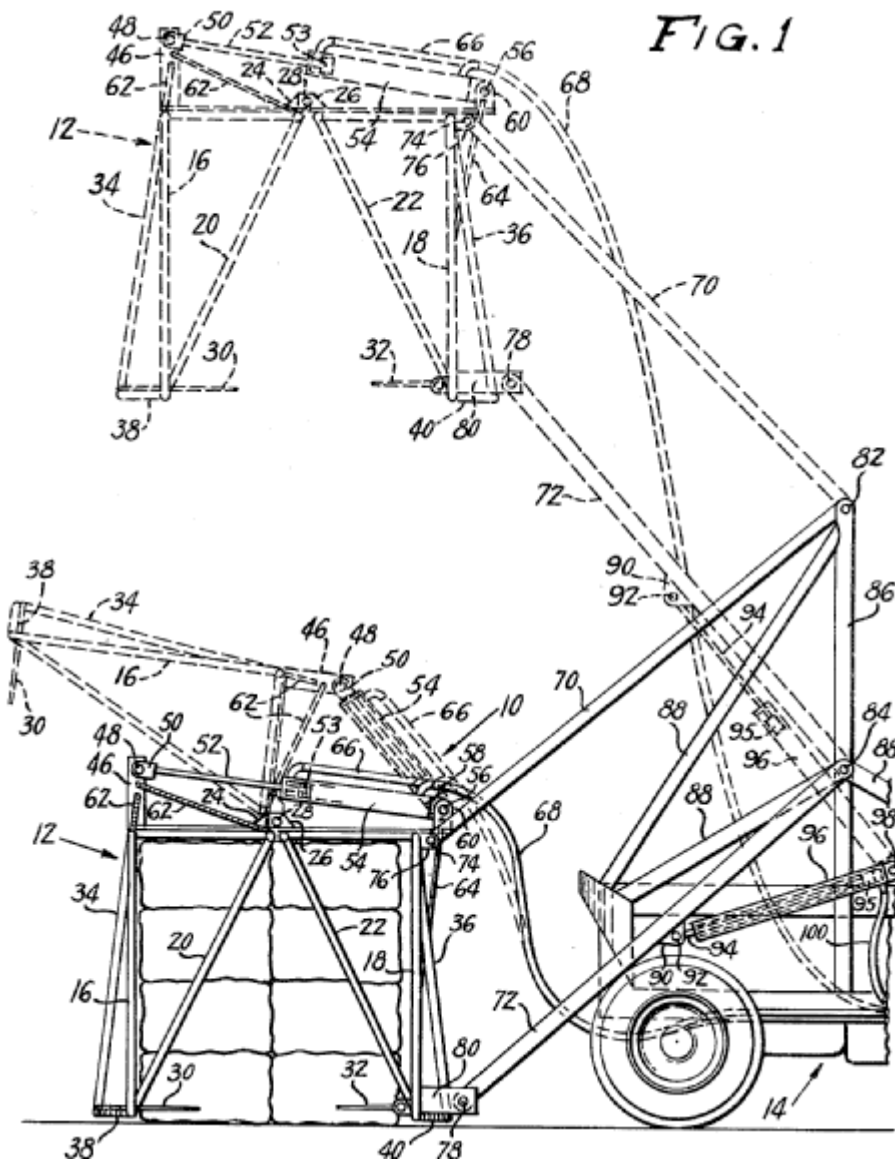
A01D 87/126

{Loaders for stacks or groups of bales}

Definition statement

This place covers:

Example from US3052366 by Duncan Wilber O.



A01D 87/127

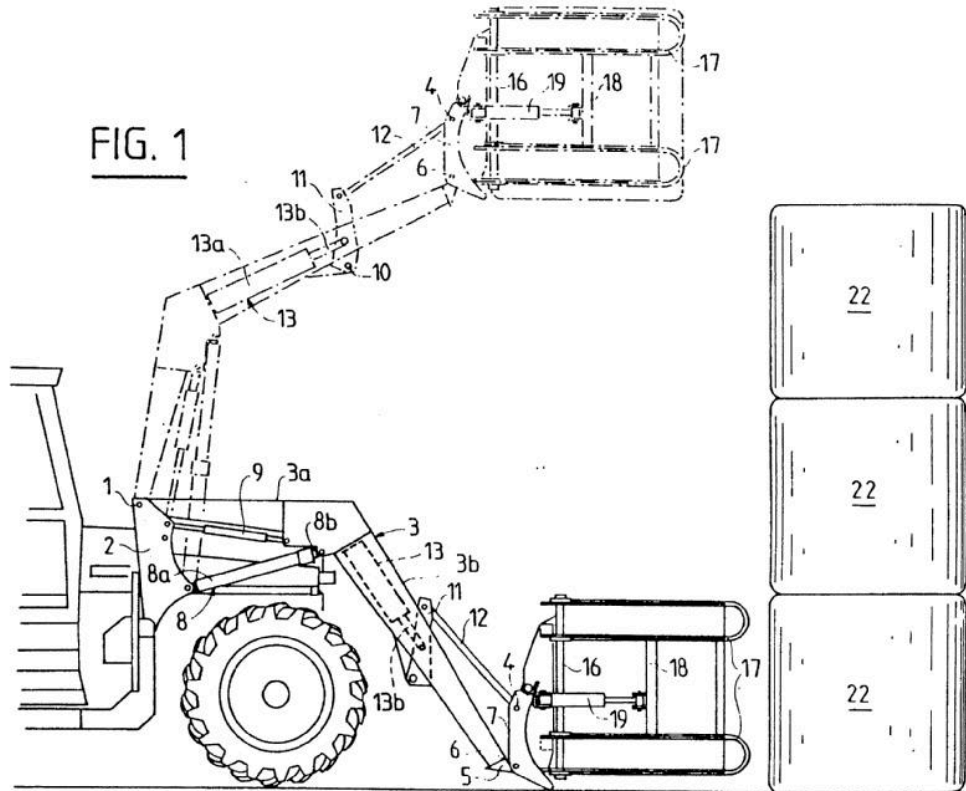
{Apparatus for handling, loading or unrolling round bales}

Definition statement

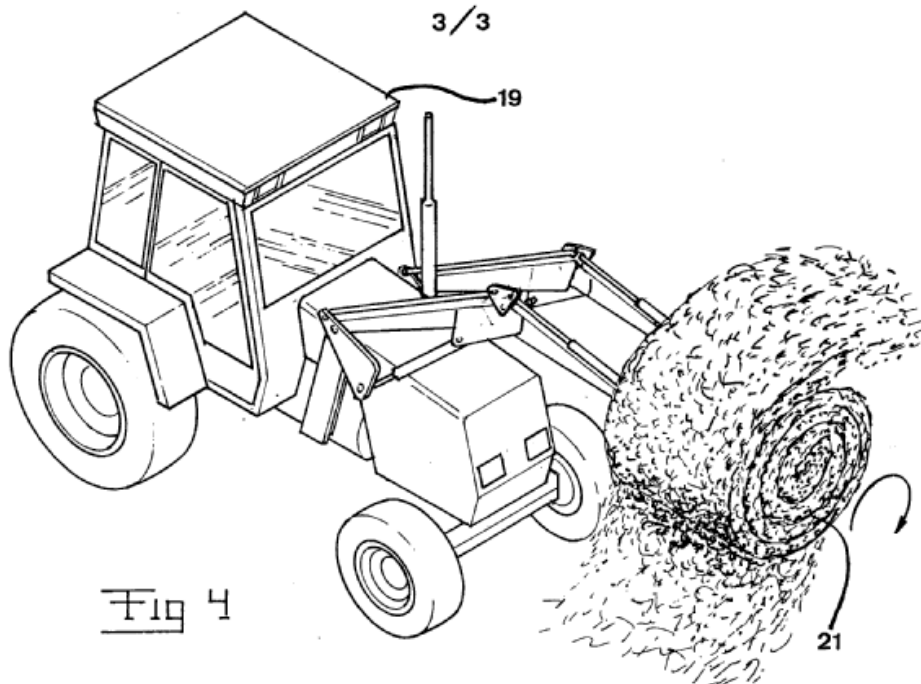
This place covers:

Apparatus requiring a certain degree of flexibility in displacing the bale in vertical and horizontal direction without depending on the movement of the vehicle alone, and/or the capacity of unrolling the round bale.

Example 1 from FR2628088 by Mailloux.



Example 2 from WO9911113 by Adolfsson Lars Gunnar.



References

Limiting references

This place does not cover:

Loaders connected to a 3-point hitch of a tractor with no displacing means of their own and without any unrolling mechanism for the bale.	A01D 87/122
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Forks for loads	B66F 9/12
Forks for loads with side clamps	B66F 9/183

Special rules of classification

If the documents classified in this group are capable of unrolling or breaking round bales, then they must be also indexed in the group [A01D 2087/128](#)

A01D 89/00

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 [A01D 41/10](#))}

Definition statement

This place covers:

Attachments for picking-up hay or the like field crops.

Example from EP1929854 by Class Salgau GmbH.

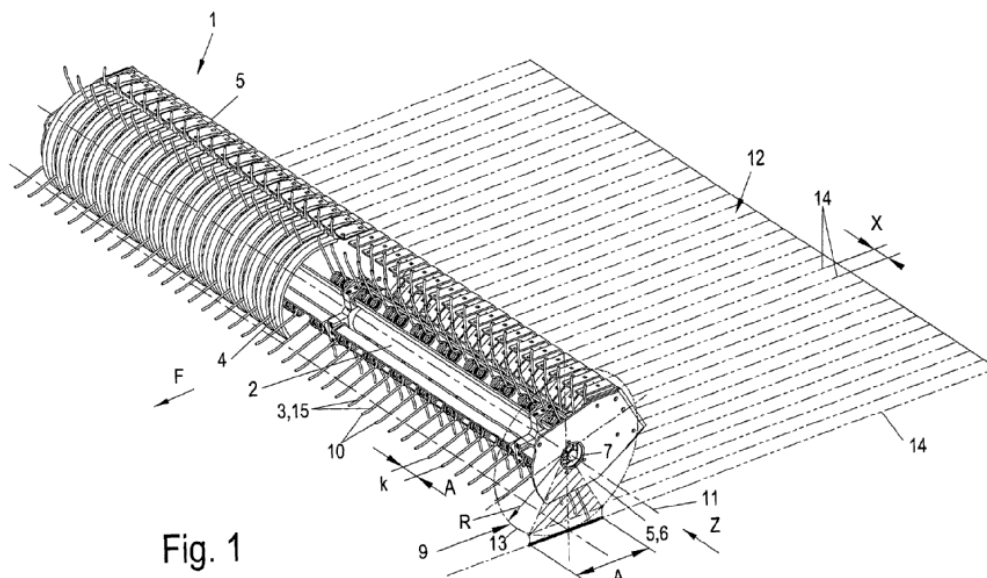


Fig. 1

References

Limiting references

This place does not cover:

Mowing tables for combines	A01D 41/14
Headers for ears and similar crops	A01D 47/00

Informative references

Attention is drawn to the following places, which may be of interest for search:

Field threshers with windrow pick-up apparatus	A01D 41/10
Loading means for loading wagons	A01D 90/02
Feeding means for balers	A01F 15/10

A01D 89/004

{Mountings, e.g. height adjustment, wheels, lifting devices}

Definition statement

This place covers:

Mounting means for the pick-up in order to connect it to the machine where it is installed (e.g. harvester, loading wagon, etc).

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Movable wheels for vehicles and tractors	B60B 35/10 , B62D 49/0678
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A01D 89/006

{Accessories (feeding devices for baling presses [A01F 15/10](#); for cutting machines [A01F 29/10](#))}

Definition statement

This place covers:

Accessories for the pick-up, i.e. devices which do not form part of the pick-up arrangements covered by the previous groups ([A01D 89/00](#) - [A01D 89/005](#)), but which also form part of a pick-up device. See subgroups for some particular accessories which should be classified in one of those and not in this head group.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

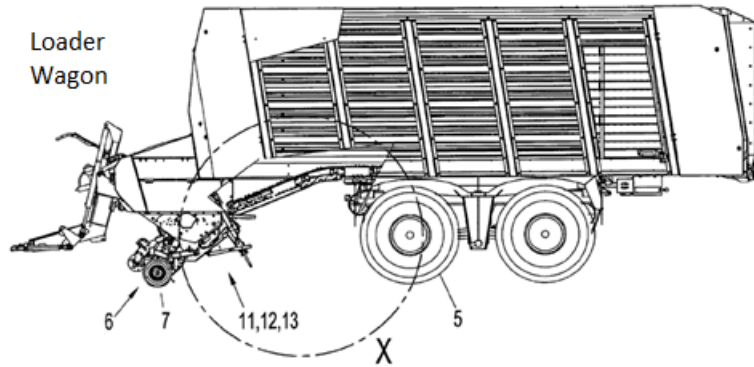
Feeding devices for baling presses	A01F 15/10
Accessories for cutting machines	A01F 29/10

A01D 90/00

Vehicles for carrying harvested crops with means for selfloading or unloading (combined with mowers [A01D 43/06](#))

Definition statement

This place covers:



Pick up 6 with feeler wheel 7 and cutting device 11 comprising the conveying rotor 12 and the knife assembly 13 in the cutting frame.

References

Limiting references

This place does not cover:

Combined with mowers	A01D 43/06
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Load transporting vehicles modified to facilitate loading in general	B60P
Bucket cars, i.e. having scraper bowls	E02F 3/64

Special rules of classification

If the documents classified in this group (and subgroups) are for transport of bunches of bananas, they must be also indexed in the group [A01D 2090/005](#)

A01D 90/02

Loading means

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Loaders per se	A01D 87/00
Pick-ups	A01D 89/00
Loaders for balers	A01F 15/10

A01D 90/06

with chaff cutters, {i.e. choppers} used as loading and cutting means
([A01D 43/08](#) takes precedence)

References

Limiting references

This place does not cover:

Mowers combined with means for cutting up the mown crop	A01D 43/08
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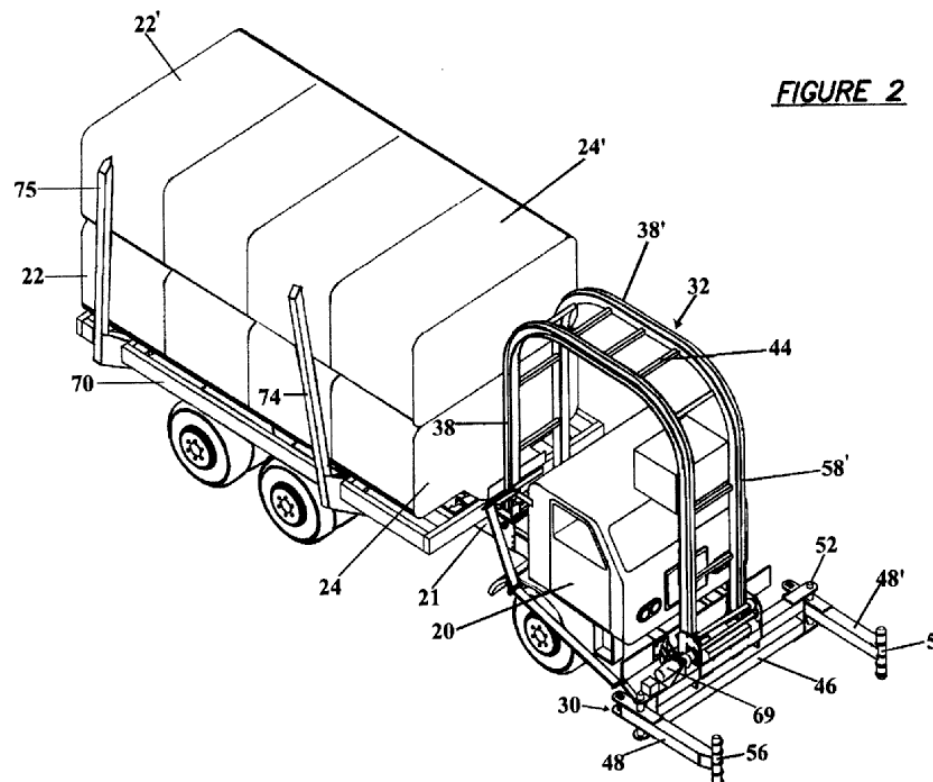
A01D 90/08

with bale-forming means additionally used for loading; with means for picking-up bales and transporting them into the vehicle

Definition statement

This place covers:

Example from US5813814 by Justice Enterprises Inc.



Special rules of classification

If the documents classified in this group pick up loose product instead of bales, then they must be also indexed in the group [A01D 2090/086](#)

A01D 90/083

{Round-bale trailers (trailers in general [B62D](#))}

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Trailers in general	B62D
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A01D 90/10

Unloading means

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Manure distributors	A01C 3/06
---------------------	---------------------------

A01D 90/12

with additional devices or implements (arrangements of coupling devices [A01B 59/00](#))

Definition statement

This place covers:

Additional devices or implements for the vehicles for carrying harvested crops with means for self-loading or unloading, i.e. devices which do not form part of the aspects covered by the previous groups ([A01D 90/00](#) - [A01D 90/105](#), [A01D 90/14](#) and [A01D 90/16](#)), but which also form part of such vehicles (e.g. a drying mechanism for treating the product loaded onto the vehicle).

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangements of coupling devices	A01B 59/00
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A01D 91/00

Methods for harvesting agricultural products

Definition statement

This place covers:

Methods for harvesting, but not particular machines or devices. Said methods must be characterised by a number of steps or procedures to be followed during harvesting (e.g. a method for harvesting sugar cane consisting of cutting the plant at 20%, 50% and 70% of its height, letting the different pieces dry on the ground for two days on different windrows, and collecting them separately).

A01D 91/04

Products growing above the soil (fruit, hops [A01D 46/00](#))

References

Limiting references

This place does not cover:

Fruit, hops	A01D 46/00
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