

CPC**COOPERATIVE PATENT CLASSIFICATION****B26D****CUTTING; DETAILS COMMON TO MACHINES FOR PERFORATING, PUNCHING, CUTTING-OUT, STAMPING-OUT OR SEVERING**

(soil-working [A01B](#); for growing crops or plants [A01D](#), G; for fodder or straw [A01E](#); for bulk butter [A01J](#); for dough [A21C](#); slaughtering [A22B](#); for tobacco, cigars or cigarettes [A24](#); marking-out, perforating or making buttonholes [A41H 25/00](#); manufacturing footwear [A43D](#); brushmaking [A46D](#); surgery [A61B](#); disintegrating, mincing or shredding in general [B02C](#); cutting wire, making pins or nails [B21F](#), G; of the kind used for metal [B23](#); cutting by abrasive fluid jets [B24C 5/02](#); hand-held cutting tools [B26B](#); perforating, cutting-out, stamping-out or punching, or severing by means other than cutting [B26F](#); for wood [B27](#); for stone [B28D](#); working of plastics or substances in a plastic state [B29](#); making boxes, cartons, envelopes or bags, of paper or similarly worked materials, e.g. metal foil, [B31B](#); article or web delivery apparatus incorporating cutting or line-perforating devices [B65H 35/00](#); for leather or upholstery [B68](#); [C14B](#); for glass [C03B](#); making matches [C06F](#); for peat [C10F](#); for sugar [C13H](#); for textile materials [D06H](#); civil engineering, building, mining, see Section E; for light guides [G02B 6/25](#); cutting processed photographic material [G03D 15/04](#))

NOTE

This subclass covers:

cutting non-metallic sheet material and metal foil in general;

cutting other forms of non-metallic material not otherwise provided for;

features specific to machines for cutting, perforating, punching, cutting-out, stamping-out and severing by means other than cutting, which relate to a requirement or problem of a nature which is not peculiar to a machine for these purposes, that is, details of or arrangements for operating or controlling such machines, although the realisation of such features may differ according to the kind of machine concerned. This subclass covers such features in general even if the feature in any particular case is to some extent peculiar to, or is claimed only for, a machine designed for perforating, punching, cutting-out, stamping-out, or for severing other than by cutting.

If the details or arrangements have no essential features specific to cutting, perforating, punching, cutting-out, stamping-out or severing machines, the more general classes, e.g. [F16](#), take precedence.

In this subclass, in groups [B26D 5/00](#) and [B26D 7/00](#), the following term is used with the meaning indicated:

"cutting" includes cutting-out, stamping-out, punching, perforating, and severing by means other than cutting.

B26D 1/00

Cutting through work characterised by the nature or movement of the cutting member { or particular materials not otherwise provided for }; Apparatus or machines therefor; Cutting members therefor

B26D 1/0006

. { Cutting members therefor }

B26D 1/01

. involving a cutting member which does not travel with the work

B26D 1/015	..	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/02	..	having a stationary cutting member (B26D 1/547 takes precedence)
B26D 1/025	...	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/03	...	with a plurality of cutting members
B26D 1/035	....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/04	..	having a linearly-movable cutting member (B26D 1/46 , B26D 1/547 take precedence)
B26D 1/045	...	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/06	...	wherein the cutting member reciprocates (cup or like cutting members B26D 1/44)
B26D 1/065	....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/08	....	of the guillotine type
B26D 1/085	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/09	.....	with a plurality of cutting members
B26D 1/095	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/10	....	in, or substantially in, a direction parallel to the cutting edge
B26D 1/105	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/11	.....	with a plurality of cutting members
B26D 1/115	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/12	..	having a cutting member moving about an axis (B26D 1/547 takes precedence; cup or like cutting members B26D 1/44)
B26D 1/125	...	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/14	...	with a circular cutting member, e.g. disc cutter
B26D 1/141	....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/143	....	rotating about a stationary axis (B26D 1/20 to B26D 1/24 take precedence)
B26D 1/1435	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/147	.....	with horizontal cutting member
B26D 1/1475	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/15	.....	with vertical cutting member
B26D 1/151	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/153	.....	with inclined cutting member
B26D 1/1535	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/157	....	rotating about a movable axis (B26D 1/20 to B26D 1/24 take precedence)
B26D 1/1575	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/16	.....	mounted on a movable arm or the like
B26D 1/165	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/18	.....	mounted on a movable carriage
B26D 1/185	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/20	....	coacting with a fixed member
B26D 1/205	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/22	....	coacting with a movable member, e.g. a roller (B26D 1/24 takes precedence)
B26D 1/225	.....	{ for thin material, e.g. for sheets, strips or the like }

B26D 1/24	....	coacting with another disc cutter
B26D 1/245	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/25	...	with a non-circular cutting member
B26D 1/255	....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/26	....	moving about an axis substantially perpendicular to the line of cut
B26D 1/265	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/28	.....	and rotating continuously in one direction during cutting
B26D 1/285	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/29	.....	with cutting member mounted in the plane of a rotating disc, e.g. for slicing beans
B26D 1/295	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/30	.....	with limited pivotal movement to effect cut
B26D 1/305	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/34	....	moving about an axis parallel to the line of cut
B26D 1/345	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/36	.....	and rotating continuously in one direction during cutting, e.g. mounted on a rotary cylinder (for flying cutting B26D 1/62)
B26D 1/365	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/38	.....	and coacting with a fixed blade or other fixed member
B26D 1/385	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/40	.....	and coacting with a rotary member
B26D 1/405	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/42	.....	and slidably mounted in a rotary member
B26D 1/425	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/43	....	moving about another axis, e.g. mounted on the surface of a cone or curved body
B26D 1/435	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/44	..	having a cup or like cutting member
B26D 1/445	...	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/45	..	having a cutting member the movement of which is not covered by any preceding group
B26D 1/455	...	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/46	..	having an endless band-knife or the like
B26D 1/465	...	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/48	...	with tensioning means
B26D 1/485	....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/50	...	with a plurality of band-knives or the like
B26D 1/505	....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/52	....	having adjustable spacing between knives
B26D 1/525	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/54	...	Guides for band-knives or the like
B26D 1/543	.....	{ for thin material, e.g. for sheets, strips or the like }
B26D 1/547	..	having a wire-like cutting member (endless wire B26D 1/46 ; severing using a heated wire B26F 3/12)

- B26D 1/5475 . . . { for thin material, e.g. for sheets, strips or the like }
- B26D 1/553 . . . with a plurality of wire-like cutting members
- B26D 1/5535 . . . { for thin material, e.g. for sheets, strips or the like }

- B26D 1/56 . involving a cutting member which travels with the work { otherwise than in the direction of the cut } i.e. flying cutter (flying shears for metal [B23D 25/00](#); flying saws for metal [B23D 45/18](#))
- B26D 1/565 . . { for thin material, e.g. for sheets, strips or the like }
- B26D 1/58 . . and is mounted on a movable arm or the like {(for metal [B23D 25/06](#))}
- B26D 1/585 . . . { for thin material, e.g. for sheets, strips or the like }
- B26D 1/60 . . and is mounted on a movable carriage
- B26D 1/605 . . . { for thin material, e.g. for sheets, strips or the like }
- B26D 1/62 . . and is rotating about an axis parallel to the line of cut, e.g. mounted on a rotary cylinder
- B26D 1/626 . . . { for thin material, e.g. for sheets, strips or the like }

- B26D 3/00** **Cutting work characterised by the nature of the cut made; Apparatus therefor**

- B26D 3/001 . { Cutting tubes longitudinally }
- B26D 3/003 . { specially adapted for cutting rubber }
- B26D 3/005 . . { for cutting used tyres }

- B26D 3/006 . { specially adapted for cutting blocs of plastic material }
- B26D 3/008 . . { by sliding }

- B26D 3/02 . Bevelling

- B26D 3/06 . Grooving involving removal of material from the surface of the work
- B26D 3/065 . . { On sheet material }

- B26D 3/08 . Making a superficial cut in the surface of the work without removal of material, e.g. scoring, incising
- B26D 3/085 . . { On sheet material }

- B26D 3/10 . Making cuts of other than simple rectilinear form (cutting-out [B26F](#))
- B26D 3/11 . . to obtain pieces of spiral or helical form

- B26D 3/12 . Slitting marginal portions of the work, i.e. forming cuts, without removal of material, at an angle, e.g. a right angle, to the edge of the work

- B26D 3/14 . Forming notches in marginal portion of work by cutting (by punching [B26F 1/12](#))

- B26D 3/16 . Cutting rods or tubes transversely {(cutting tubes longitudinally [B26D 3/001](#))} { Note: [B26D 3/161](#) takes precedence over groups [B26D 3/162](#) to [B26D 3/168](#) }
- B26D 3/161 . . { for obtaining more than one product at a time }
- B26D 3/162 . . { cutting tubes obliquely }
- B26D 3/163 . . { Cutting tubes from the inside }

- B26D 3/164 .. { characterised by means for supporting the tube from the inside }
- B26D 3/165 ... { by fluid under pressure }
- B26D 3/166 .. { Trimming tube-ends }
- B26D 3/167 .. { Cutting tubes having a non-circular cross-section }
- B26D 3/168 ... { flattened tubes }
- B26D 3/169 .. { Hand held tube cutters }

- B26D 3/18 . to obtain cubes or the like ([ice harvesting F25C 5/02](#))
- B26D 3/185 .. { Grid like cutters }
- B26D 3/20 .. using reciprocating knives
- B26D 3/22 .. using rotating knives
- B26D 3/225 ... { with adjustable knives }

- B26D 3/24 . to obtain segments other than slices, e.g. cutting pies
- B26D 3/245 .. { having means to change the number of equal segments e.g. for pies }
- B26D 3/26 .. specially adapted for cutting fruit or vegetables, e.g. for onions

- B26D 3/28 . Splitting layers from work; Mutually separating layers by cutting ([B26D 3/30 takes precedence](#); [Recovery of plastics or other constituents of waste material containing plastics B29B 17/00](#))
- B26D 3/281 .. { the work being simultaneously deformed by the application of pressure to obtain profiled workpieces }
- B26D 3/282 .. { by peeling-off }
- B26D 3/283 .. { Household devices therefor }

- B26D 3/30 . Halving devices, e.g. for halving buns

- B26D 5/00** **Arrangements for operating and controlling machines or devices for cutting, cutting-out, stamping-out, punching, perforating, or severing by means other than cutting**

- B26D 5/005 . { Computer numerical control means }
- B26D 5/007 . { Control means comprising cameras, vision or image processing systems }

- B26D 5/02 . Means for moving the cutting member into its operative position for cutting
- B26D 5/04 .. by fluid pressure
- B26D 5/06 .. by electrical means

- B26D 5/08 . Means for actuating the cutting member to effect the cut
- B26D 5/083 .. { Rack-and-pinion means }
- B26D 5/086 .. { Electric, magnetic, piezo-electric, electro-magnetic means }
- B26D 5/10 .. Hand or foot actuated means
- B26D 5/12 .. Fluid-pressure means
- B26D 5/14 .. Crank and pin means
- B26D 5/16 .. Cam means

- B26D 5/18 . . Toggle-link means ([B26D 5/10](#) to [B26D 5/16](#) take precedence)
- B26D 5/20 . with interrelated action between the cutting member and work feed
- B26D 5/22 . . having the cutting member and work feed mechanically connected
- B26D 5/24 . . . including a metering device
- B26D 5/26 . . wherein control means on the work feed means renders the cutting member operative
- B26D 5/28 . . . the control means being responsive to presence or absence of work
- B26D 5/30 . . having the cutting member controlled by scanning a record carrier
- B26D 5/32 . . . with the record carrier formed by the work itself
- B26D 5/34 . . . scanning being effected by a photo-sensitive device
- B26D 5/36 . . . scanning being effected by magnetic means
- B26D 5/38 . with means operable by the moving work to initiate the cutting action
- B26D 5/40 . . including a metering device
- B26D 5/42 . with interrelated action between work feed and clamp ([work clamping arrangements B26D 7/02](#))
- B26D 7/00** **Details of apparatus for cutting, cutting-out, stamping-out, punching, perforating, or severing by means other than cutting** (cutters [B26D 1/00](#); arrangements for guiding hand cutting tools [B26B 29/06](#); punching tools or dies, cutting-out knives or dies [B26F](#))
- B26D 7/0006 . { Means for guiding the cutter (for hand knives [B26B 29/06](#); for band-knives [B26D 1/54](#)) }
- B26D 7/01 . Means for holding or positioning work
- B26D 7/015 . . { for sheet material or piles of sheets ([B26D 7/018](#) and [B26D 7/02](#) take precedence) }
- B26D 7/016 . . . { Back gauges (for metal shearing machines [B23D 33/10](#)) }
- B26D 7/018 . . { Holding the work by suction }
- B26D 7/02 . . with clamping means { ([B26D 7/018](#) takes precedence) }
- B26D 7/025 . . . { acting upon planar surfaces ([B26D 7/04](#) takes precedence) }
- B26D 7/04 . . . providing adjustable clamping pressure
- B26D 7/06 . Arrangements for feeding or delivering work of other than sheet, web, or filamentary form ([feeding or discharging sheets, webs, or filaments B65H](#))
- B26D 7/0608 . . { by pushers ([B26D 7/0616](#), [B26D 7/0625](#) and [B26D 7/0641](#) take precedence) }
- B26D 7/0616 . . { by carriages, e.g. for slicing machines }
- B26D 7/0625 . . { by endless conveyers, e.g. belts }
- B26D 7/0633 . . . { by grippers }
- B26D 7/0641 . . { using chutes, hoppers, magazines }
- B26D 7/065 . . { by the cutter itself because of its form }
- B26D 7/0658 . . { using fluid, e.g. hydraulic, acting directly on the work }
- B26D 7/0666 . . { by screw or rotary spiral conveyers }
- B26D 7/0675 . . { specially adapted for piles of sheets }

- B26D 7/0683 .. { specially adapted for elongated articles }
- B26D 7/0691 .. { by centrifugal force }

- B26D 7/08 . Means for treating work or cutting member to facilitate cutting ([tensioning band cutters B26D 1/48](#))
- B26D 7/084 .. { specially adapted for cutting articles composed of at least two different materials, e.g. using cutters of different shapes ([cutting concrete B28B 11/14](#)) }
- B26D 7/086 .. { by vibrating, e.g. ultrasonically }
- B26D 7/088 .. { by cleaning or lubricating ([sterilizing B26D 1/00](#)) }
- B26D 7/10 .. by heating ([with Laser B23K 26/00](#); [severing by heating B26F](#))
- B26D 7/12 .. by sharpening the cutting member
- B26D 7/14 .. by tensioning the work

- B26D 7/18 . Means for removing cut-out material or waste
- B26D 7/1818 .. { by pushing out }
- B26D 7/1827 .. { by tearing }
- B26D 7/1836 .. { by pulling out }
- B26D 7/1845 .. { by non mechanical means }
- B26D 7/1854 ... { by air under pressure }
- B26D 7/1863 ... { by suction }

- B26D 7/20 . Cutting beds (([B26D 7/018](#) takes precedence; supporting beds for severing by means of a fluid jet [B26F 3/008](#)))
- B26D 7/204 .. { Anvil rollers }

- B26D 7/22 . Safety devices specially adapted for cutting machines ([safety devices in general F16P](#))
- B26D 7/225 .. { for food slicers }
- B26D 7/24 .. arranged to disable the operating means for the cutting member

- B26D 7/26 . Means for mounting or adjusting the cutting member; Means for adjusting the stroke of the cutting member
- B26D 7/2614 .. { Means for mounting the cutting member }
- B26D 7/2621 ... { for circular cutters }
- B26D 7/2628 .. { Means for adjusting the position of the cutting member }
- B26D 7/2635 ... { for circular cutters }
- B26D 7/2642 ... { for slotting cutters }
- B26D 7/265 ... { Journals, bearings or supports for positioning rollers or cylinders relatively to each other }

- B26D 7/27 . Means for performing other operations combined with cutting ([B26D 9/00](#) takes precedence)
- B26D 7/28 .. for counting the number of cuts or measuring cut lengths ([B26D 5/24](#), [B26D 5/40](#) take precedence)
- B26D 7/30 .. for weighing cut product
- B26D 7/32 .. for conveying or stacking cut product ([means for removing cut-out material or waste B26D 7/18](#))

- B26D 7/325 . . . { stacking the cut product individually separated by separator elements }
- B26D 7/34 . . for applying a coating, such as butter, to cut product
- B26D 9/00 Cutting apparatus combined with punching or perforating apparatus or with dissimilar cutting apparatus**
- B26D 11/00 Combinations of several similar cutting apparatus**
- B26D 2001/00 Cutting through work characterised by the nature or movement of the cutting member { or particular materials not otherwise provided for }; Apparatus or machines therefor; Cutting members therefor**
- B26D 2001/0006 . { Cutting members therefor }
- B26D 2001/0013 . . consisting of a reciprocating or endless band
- B26D 2001/002 . . Materials or surface treatments therefor, e.g. composite materials
- B26D 2001/0026 . . . fiber reinforced materials
- B26D 2001/0033 . . assembled from multiple blades
- B26D 2001/004 . . not rotating
- B26D 2001/0046 . . rotating continuously about an axis perpendicular to the edge
- B26D 2001/0053 . . having a special cutting edge section or blade section
- B26D 2001/006 . . the cutting blade having a special shape, e.g. a special outline, serrations
- B26D 2001/0066 . . having shearing means, e.g. shearing blades, abutting blades
- B26D 2001/0073 . . having the form of a three dimensional spiral
- B26D 2001/008 . . in the form of wires
- B26D 2001/0086 . . having a radiussed blunt cutting edge
- B26D 2001/0093 . . circular cutting discs with a radiussed blunt cutting edge
- B26D 2001/56 . involving a cutting member which travels with the work { otherwise than in the direction of the cut } i.e. flying cutter (flying shears for metal [B23D 25/00](#); flying saws for metal [B23D 45/18](#))
- B26D 2001/62 . . and is rotating about an axis parallel to the line of cut, e.g. mounted on a rotary cylinder
- B26D 2001/623 . . . for selecting different knife sets by shifting the angle of the rotary cylinder
- B26D 2003/00 Cutting work characterised by the nature of the cut made; Apparatus therefor**
- B26D 2003/28 . Splitting layers from work; Mutually separating layers by cutting ([B26D 3/30](#) takes precedence; Recovery of plastics or other constituents of waste material containing plastics [B29B 17/00](#))
- B26D 2003/283 . . { Household devices therefor }
- B26D 2003/285 . . . cutting one single slice at each stroke
- B26D 2003/286 . . . having a detachable blade that is removable attached to the support
- B26D 2003/287 . . . having a holder for the product to be cut
- B26D 2003/288 . . . making several incisions and cutting cubes or the like, e.g. so-called "julienne-cutter"

B26D 2005/00	Arrangements for operating and controlling machines or devices for cutting, cutting-out, stamping-out, punching, perforating, or severing by means other than cutting
B26D 2005/002	. Performing a pattern matching operation
B26D 2007/00	Details of apparatus for cutting, cutting-out, stamping-out, punching, perforating, or severing by means other than cutting (cutters B26D 1/00; arrangements for guiding hand cutting tools B26B 29/06; punching tools or dies, cutting-out knives or dies B26F)
B26D 2007/0012	. Details, accessories or auxiliary or special operations not otherwise provided for
B26D 2007/0018	. . Trays, reservoirs for waste, chips or cut products
B26D 2007/0025	. . Sterilizing
B26D 2007/0031	. . floating a web during slitting
B26D 2007/0037	. . the cutter being a so-called "iris cutter"
B26D 2007/0043	. . the cutting machine comprising a linear motor
B26D 2007/005	. . cutters, e.g. guillotines, used in a label maker or printer
B26D 2007/0056	. . Rotating a pile of sheets in the plane of the sheets
B26D 2007/0062	. . Rounding off the end of self adhesive labels on tapes
B26D 2007/0068	. . Trimming and removing web edges
B26D 2007/0075	. . so-called "winder slitters"
B26D 2007/0081	. . Cutting on three sides, e.g. trilateral trimming
B26D 2007/0087	. . for use on a desktop
B26D 2007/0093	. . for embossing, forming, creasing, flange forming
B26D 2007/01	. Means for holding or positioning work
B26D 2007/011	. . by clamping claws, e.g. in high speed slicers for food products
B26D 2007/013	. . the work being tubes, rods or logs
B26D 2007/08	. Means for treating work or cutting member to facilitate cutting (tensioning band cutters B26D 1/48)
B26D 2007/082	. . Guiding or pushing a web into a favorable position by deflector means
B26D 2007/18	. Means for removing cut-out material or waste
B26D 2007/1809	. . by stripping fingers
B26D 2007/1872	. . using breakaway pins
B26D 2007/1881	. . using countertools
B26D 2007/189	. . Mounting blanking, stripping and break-out tools
B26D 2007/20	. Cutting beds ((B26D 7/018 takes precedence; supporting beds for severing by means of a fluid jet B26F 3/008))
B26D 2007/202	. . Rollers or cylinders being pivoted during operation
B26D 2007/206	. . having a travelling gap
B26D 2007/208	. . having a cleaning device
B26D 2007/26	. Means for mounting or adjusting the cutting member; Means for adjusting the stroke of

- the cutting member
- B26D 2007/2607 . . for mounting die cutters
- B26D 2007/2657 . . Auxiliary carriages for moving the tool holders
- B26D 2007/2664 . . for radial adjustment
- B26D 2007/2671 . . for cutters moving in a planetary motion on their support, e.g. so-called "Ferris Wheels"
- B26D 2007/2678 . . for cutting pens mounting in a cutting plotter
- B26D 2007/2685 . . flexible mounting means
- B26D 2007/2692 . . the rollers or cylinders being mounted skewed
- B26D 2007/27 . Means for performing other operations combined with cutting ([B26D 9/00 takes precedence](#))
- B26D 2007/32 . . for conveying or stacking cut product ([means for removing cut-out material or waste B26D 7/18](#))
- B26D 2007/322 . . . the cut products being sheets, e.g. sheets of paper
- B26D 2007/327 . . . the cut products being slices of bread
- B26D 2011/00 Combinations of several similar cutting apparatus**
- B26D 2011/005 . in combination with different kind of cutters, e.g. two serial slitters in combination with a transversal cutter.
- B26D 2210/00 Machines or methods used for cutting special materials**
- B26D 2210/02 . for cutting food products, e.g. food slicers
- B26D 2210/04 . . controlling the volume by pressing the food product, e.g. meat to a predetermined shape before cutting
- B26D 2210/06 . . for bread, e.g. bread slicing machines for use in a retail store
- B26D 2210/08 . . Idle cutting
- B26D 2210/11 . for cutting web rolls