B26D  

CUTTING; DETAILS COMMON TO MACHINES FOR PERFORATING, PUNCHING, CUTTING-OUT, STAMPING-OUT OR SEVERING (soil-working A01B; for growing crops or plants A01D, A01G; for fodder or straw A01F; 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, B21G; 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 C13B 45/00; for textile materials D06H; civil engineering, building, mining, see Section E; for light guides G02B 6/25; cutting processed photographic material G03D 15/04)

NOTES
1. 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.
2. 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.
3. 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.

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

1/01 . . . . {for thin material, e.g. for sheets, strips or the like}

1/02 . . . . having a stationary cutting member (B26D 1/547 takes precedence)

1/025 . . . . {for thin material, e.g. for sheets, strips or the like}

1/03 . . . . with a plurality of cutting members

1/035 . . . . {for thin material, e.g. for sheets, strips or the like}

1/04 . . . . having a linearly-movable cutting member (B26D 1/46, B26D 1/547 take precedence)

1/045 . . . . {for thin material, e.g. for sheets, strips or the like}

1/06 . . . . wherein the cutting member reciprocates (cup or like cutting members B26D 1/44)

1/065 . . . . {for thin material, e.g. for sheets, strips or the like}

1/08 . . . . of the guillotine type

1/085 . . . . {for thin material, e.g. for sheets, strips or the like}

1/09 . . . . . with a plurality of cutting members

1/095 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/10 . . . . in, or substantially in, a direction parallel to the cutting edge

1/105 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/11 . . . . . with a plurality of cutting members

1/115 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/12 . . . . . having a cutting member moving about an axis (B26D 1/547 takes precedence; cup or like cutting members B26D 1/44)

1/125 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/14 . . . . with a circular cutting member, e.g. disc cutter

1/141 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/143 . . . . . rotating about a stationary axis (B26D 1/20 - B26D 1/24 take precedence)

1/1435 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/147 . . . . . with horizontal cutting member

1/1475 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/15 . . . . . with vertical cutting member

1/151 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/153 . . . . . with inclined cutting member

1/1535 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/157 . . . . . rotating about a movable axis (B26D 1/20 - B26D 1/24 take precedence)

1/1575 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/16 . . . . . mounted on a movable arm or the like

1/165 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/18 . . . . . mounted on a movable carriage

1/185 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/20 . . . . . coacting with a fixed member

1/205 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/22 . . . . . coacting with a movable member, e.g. a roller (B26D 1/24 takes precedence)

1/225 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/24 . . . . . coacting with another disc cutter

1/245 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/25 . . . . . with a non-circular cutting member

1/255 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/26 . . . . . moving about an axis substantially perpendicular to the line of cut

1/265 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/28 . . . . . and rotating continuously in one direction during cutting

1/285 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/29 . . . . . with cutting member mounted in the plane of a rotating disc, e.g. for slicing beans

1/295 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/30 . . . . . with limited pivotal movement to effect cut

1/305 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/34 . . . . . moving about an axis parallel to the line of cut

1/345 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/36 . . . . . and rotating continuously in one direction during cutting, e.g. mounted on a rotary cylinder (for flying cutting B26D 1/62)

1/365 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/38 . . . . . and coacting with a fixed blade or other fixed member

1/385 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/40 . . . . . and coacting with a rotary member

1/405 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/42 . . . . . and slidably mounted in a rotary member

1/425 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/43 . . . . . moving about another axis, e.g. mounted on the surface of a cone or curved body

1/435 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/44 . . . . . having a cup or like cutting member

1/445 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/45 . . . . . having a cutting member the movement of which is not covered by any preceding group

1/455 . . . . . {for thin material, e.g. for sheets, strips or the like}

1/46 . . . . . having an endless band-knife or the like
3/00 Cutting work characterised by the nature of the cut made; Apparatus therefor

3/001 [Cutting tubes longitudinally]
3/003 [specially adapted for cutting rubber]
3/005 [for cutting used tyres]
3/006 [specially adapted for cutting blocs of plastic material]
3/008 [by slidding]
3/02 Bevelling
3/06 Grooving involving removal of material from the surface of the work
3/065 [On sheet material]
3/08 Making a superficial cut in the surface of the work without removal of material, e.g. scoring, incising
3/085 [On sheet material]
3/10 Making cuts of other than simple rectilinear form (cutting-out B26F)
3/11 to obtain pieces of spiral or helical form
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

3/14 Forming notches in marginal portion of work by cutting (by punching B26F 1/12)
3/16 Cutting rods or tubes transversely [(cutting tubes longitudinally B26D 3/001)]

NOTE


3/161 [for obtaining more than one product at a time]
3/162 [cutting tubes obliquely]
3/163 [Cutting tubes from the inside]
3/164 [characterised by means for supporting the tube from the inside]
3/165 [by fluid under pressure]
3/166 [Trimming tube-ends]
3/167 [Cutting tubes having a non-circular cross-section]
3/168 [flattened tubes]
3/169 [Hand held tube cutters]
3/18 to obtain cubes or the like (ice harvesting F25C 5/02)
3/185 [Grid like cutters]
3/20 using reciprocating knives
3/22 using rotating knives
3/225 [with adjustable knives]
3/24 to obtain segments other than slices, e.g. cutting pies
3/245 [having means to change the number of equal segments, e.g. for pies]
3/26 specially adapted for cutting fruit or vegetables, e.g. for onions
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)
3/281 [the work being simultaneously deformed by the application of pressure to obtain profiled workpieces]
3/282 [by peeling-off]
3/283 [Household devices therefor]
3/285 [cutting one single slice at each stroke]
3/286 [having a detachable blade that is removable attached to the support]
3/287 [having a holder for the product to be cut]
3/288 [making several incisions and cutting tubes or the like, e.g. so-called "julienne-cutter"]
3/30 Halving devices, e.g. for halving buns

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

2005/002 [Performing a pattern matching operation]
5/005 [Computer numerical control means]
5/007 [Control means comprising cameras, vision or image processing systems]
5/02 Means for moving the cutting member into its operative position for cutting
5/04 by fluid pressure
5/06 by electrical means
5/08 Means for actuating the cutting member to effect the cut
5/083 [Rack-and-pinion means]
B26D

5/086 . . . [Electric, magnetic, piezo-electric, electro-magnetic means]
5/10 . . . Hand or foot actuated means
5/12 . . . Fluid-pressure means
5/14 . . . Crank and pin means
5/16 . . . Cam means
5/18 . . . Toggle-link means (B26D 5/10 - B26D 5/16 take precedence)
5/20 . . . with interrelated action between the cutting member and work feed
5/22 . . . having the cutting member and work feed mechanically connected
5/24 . . . including a metering device
5/26 . . . wherein control means on the work feed means renders the cutting member operative
5/28 . . . the control means being responsive to presence or absence of work
5/30 . . . having the cutting member controlled by scanning a record carrier
5/32 . . . with the record carrier formed by the work itself
5/34 . . . scanning being effected by a photosensitive device
5/36 . . . scanning being effected by magnetic means
5/38 . . . with means operable by the moving work to initiate the cutting action
5/40 . . . including a metering device
5/42 . . . with interrelated action between work feed and clamp (work clamping arrangements B26D 7/02)

7/00 Details of apparatus for cutting, cutting-out, stamping-out, punching, perforating, or severing by means other than cutting (cutters B26D 1/40; arrangements for guiding hand cutting tools B26B 29/06; punching tools or dies, cutting-out knives or dies B26F)

7/0006 . . . [Means for guiding the cutter (for hand knives B26B 29/06; for band-knives B26D 1/54)]

2007/0012 . . . [Details, accessories or auxiliary or special operations not otherwise provided for]
2007/0018 . . . [Trays, reservoirs for waste, chips or cut products]
2007/0025 . . . [Sterilizing]
2007/0031 . . . [Floating a web during slitting]
2007/0037 . . . [the cutter being a so-called “iris cutter”]
2007/0043 . . . [the cutting machine comprising a linear motor]
2007/005 . . . [cutters, e.g. guillotines, used in a label maker or printer]
2007/0056 . . . [Rotating a pile of sheets in the plane of the sheets]
2007/0062 . . . [Rounding off the end of self adhesive labels on tapes]
2007/0068 . . . [Trimming and removing web edges]
2007/0075 . . . [so-called “winder slitters”]
2007/0081 . . . [Cutting on three sides, e.g. trilateral trimming]
2007/0087 . . . [for use on a desktop]
2007/0093 . . . [for embossing, forming, creasing, flange forming]

7/01 . . . Means for holding or positioning work
2007/011 . . . [by clamping claws, e.g. in high speed slicers for food products]
2007/013 . . . [the work being tubes, rods or logs]
7/015 . . . [for sheet material or piles of sheets (B26D 7/018 and B26D 7/02 take precedence)]

7/016 . . . [Back gauges (for metal shearing machines B23D 3/30)]
7/018 . . . [Holding the work by suction]
7/02 . . . with clamping means ((B26D 7/018 takes precedence)]
7/025 . . . [acting upon planar surfaces (B26D 7/04 takes precedence)]
7/04 . . . providing adjustable clamping pressure
7/06 . . . Arrangements for feeding or delivering work of other than sheet, web, or filamentary form (feeding or discharging sheets, webs, or filaments B65H)
7/0608 . . . [by pushers (B26D 7/0616, B26D 7/0625 and B26D 7/0641 take precedence)]
7/0616 . . . [by carriages, e.g. for slicing machines]
7/0625 . . . [by endless conveyors, e.g. belts]
7/0633 . . . [by grippers]
7/0641 . . . [using chutes, hoppers, magazines]
7/065 . . . [by the cutter itself because of its form]
7/0658 . . . [using fluid, e.g. hydraulic, acting directly on the work]
7/0666 . . . [by screw or rotary spiral conveyors]
7/0675 . . . [specially adapted for piles of sheets]
7/0683 . . . [specially adapted for elongated articles]
7/0691 . . . [by centrifugal force]
7/08 . . . Means for treating work or cutting member to facilitate cutting (tensioning band cutters B26D 1/48)

2007/082 . . . [Guiding or pushing a web into a favorable position by deflector means]
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)]
7/086 . . . [by vibrating, e.g. ultrasonically]
7/088 . . . [by cleaning or lubricating (sterilizing B26D 1/00)]
7/10 . . . by heating (with Laser B23K 26/00; severing by heating B26F)
7/12 . . . by sharpening the cutting member
7/14 . . . by tensioning the work
7/18 . . . Means for removing cut-out material or waste

2007/1809 . . . [by stripping fingers]
7/1818 . . . [by pushing out]
7/1827 . . . [by tearing]
7/1836 . . . [by pulling out]
7/1845 . . . [by non mechanical means]
7/1854 . . . [by air under pressure]
7/1863 . . . [by suction]
2007/1872 . . . [using breakaway pins]
2007/1881 . . . [using countertoools]
2007/189 . . . [Mounting blanking, stripping and break-out tools]
7/20 . . . Cutting beds ((B26D 7/018 takes precedence; supporting beds for severing by means of a fluid jet B26F 3/008)]
2007/202 . . . [Rollers or cylinders being pivoted during operation]
7/204 . . . [Anvil rollers]
2007/206 . . . [having a travelling gap]
2007/208 . . . [having a cleaning device]
7/22 . . . Safety devices specially adapted for cutting machines (safety devices in general F16P)
7/225 . . . [for food slicers]
7/24 . . arranged to disable the operating means for the cutting member
7/26 . Means for mounting or adjusting the cutting member; Means for adjusting the stroke of the cutting member

2007/2607 . . [for mounting die cutters]
7/2614 . . [Means for mounting the cutting member]
7/2621 . . . [for circular cutters]
7/2628 . . . [Means for adjusting the position of the cutting member]
7/2635 . . . [for circular cutters]
7/2642 . . . [for slotting cutters]
7/265 . . . . . [Journals, bearings or supports for positioning rollers or cylinders relatively to each other]

2007/2657 . . . [Auxiliary carriages for moving the tool holders]
2007/2664 . . . [for radial adjustment]
2007/2671 . . . [for cutters moving in a planetary motion on their support, e.g. so-called “Ferris Wheels”]
2007/2678 . . . [for cutting pens mounting in a cutting plotter]
2007/2685 . . . [flexible mounting means]
2007/2692 . . . [the rollers or cylinders being mounted skewed]

7/27 . Means for performing other operations combined with cutting (B26D 9/00 takes precedence)
7/28 . . for counting the number of cuts or measuring cut lengths (B26D 5/24, B26D 5/40 take precedence)
7/30 . . for weighing cut product
7/32 . . for conveying or stacking cut product (means for removing cut-out material or waste B26D 7/18)
2007/322 . . . . [the cut products being sheets, e.g. sheets of paper]
7/325 . . . . [stacking the cut product individually separated by separator elements]
2007/327 . . . . [the cut products being slices of bread]
7/34 . . . for applying a coating, such as butter, to cut product

9/00 Cutting apparatus combined with punching or perforating apparatus or with dissimilar cutting apparatus

11/00 Combinations of several similar cutting apparatus
2011/005 . . [in combination with different kind of cutters, e.g. two serial slitters in combination with a transversal cutter]

2210/00 Machines or methods used for cutting special materials
2210/02 . for cutting food products, e.g. food slicers
2210/04 . . controlling the volume by pressing the food product, e.g. meat to a predetermined shape before cutting
2210/06 . . for bread, e.g. bread slicing machines for use in a retail store
2210/08 . . Idle cutting
2210/11 . . for cutting web rolls