### PROCESSING MEAT, POULTRY, OR FISH (preserving A23B; obtaining protein compositions for foodstuffs A23J 1/00; fish, meat or poultry preparations A23L; disintegrating, e.g. chopping meat, B02C 18/00; preparation of proteins C07K 1/00)

**WARNING**
In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

<table>
<thead>
<tr>
<th>Processing meat</th>
<th>A22C</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/00 Apparatus for mixing meat, sausage-meat, or meat products (mixing in general B01F)</td>
<td>11/006 . [Separating linked sausages]</td>
</tr>
<tr>
<td>7/00 Apparatus for pounding, forming, or pressing meat, sausage-meat, or meat products (meat patty moulding devices for domestic use A47J 43/20; ham boilers A47J 27/20)</td>
<td>11/008 . [Conveying sausages in horizontal position (conveying hanging sausages A22C 15/001)]</td>
</tr>
<tr>
<td>7/0007 . [specially adapted for making multi-layered meat products]</td>
<td>11/02 . Sausage filling or stuffing machines ([enclosing material in preformed tubular webs B65B 9/10])</td>
</tr>
<tr>
<td>7/0015 . [specially adapted for making meat-balls]</td>
<td>11/0209 . . [Stuffing horn assembly]</td>
</tr>
<tr>
<td>7/0023 . [Pressing means]</td>
<td>11/0218 . . . [with multiple interchangeable stuffing horns, e.g. magazine arrangements]</td>
</tr>
<tr>
<td>7/003 . . . [Meat-moulds]</td>
<td>11/0227 . . . [Supplying casings to the stuffing device]</td>
</tr>
<tr>
<td>7/0038 . . . [Demoulding means]</td>
<td>11/0236 . . . [from a storage device]</td>
</tr>
<tr>
<td>7/0046 . . . [Containers in which meat is pressed and moulded]</td>
<td>11/0245 . . . [Controlling devices]</td>
</tr>
<tr>
<td>7/0053 . . . . . [Stackable containers]</td>
<td>11/0254 . . . [Sizing means]</td>
</tr>
<tr>
<td>7/0061 . . . . . [Containers for moulding and pressing ham]</td>
<td>11/0263 . . . [Braking means]</td>
</tr>
<tr>
<td>7/0069 . . . . . [Pressing and moulding by means of a drum]</td>
<td>11/0272 . . . . . . [for casing depletion]</td>
</tr>
<tr>
<td>7/0076 . . . . . [Devices for making meat patties]</td>
<td>11/0281 . . . [for sausages having at least one flat end]</td>
</tr>
<tr>
<td>7/0084 . . . . . [comprising a reciprocating plate]</td>
<td>11/029 . . . [with coating or lubricating means]</td>
</tr>
<tr>
<td>7/0092 . . . [with worms or other rotary mounted members (A22C 7/0007 takes precedence)]</td>
<td>11/04 . . . [with mechanically-operated piston moving to-and-fro]</td>
</tr>
<tr>
<td>9/00 Apparatus for tenderising meat, e.g. ham (tenderising chemically A23L 13/00; A23L 13/70)</td>
<td>11/06 . . [with piston operated by liquid or gaseous means]</td>
</tr>
<tr>
<td>9/001 . . . . . [by injection]</td>
<td>11/08 . . [with pressing-worm or other rotary-mounted pressing-members]</td>
</tr>
<tr>
<td>9/002 . . . . . [by electric treatment]</td>
<td>11/10 . . Apparatus for twisting (or linking) sausages (subdividing filled flexible tubes to form packages, involving displacement of contents B65B 9/12, by applying pressure and heat successively B65B 51/20)</td>
</tr>
<tr>
<td>9/004 . . . . . [by massaging]</td>
<td>2011/101 . . . [for pinching and twisting]</td>
</tr>
<tr>
<td>9/005 . . . . . [Tumblers and rotating drums for massaging meat in their interior]</td>
<td>2011/102 . . . [and twisting in opposite directions]</td>
</tr>
<tr>
<td>9/007 . . . . . [by beating]</td>
<td>11/104 . . . [by means of shear or blade elements]</td>
</tr>
<tr>
<td>9/008 . . . . . [by piercing]</td>
<td>11/105 . . . [The shear or blade elements being displacable parallel to the sausage string in order to create a narrow point free of meat]</td>
</tr>
<tr>
<td>11/00 Sausage making (chemical aspects A23L 13/00); Apparatus for handling or conveying sausage products during manufacture</td>
<td>11/107 . . . [A string passing between two rotary members comprising dividing elements cooperating with each other]</td>
</tr>
<tr>
<td>11/001 . . . . . [Machines for making skinless sausages, e.g. Frankfurters, Wiener]</td>
<td>11/108 . . . [with dividing elements located on the surface of a single rotary member]</td>
</tr>
<tr>
<td>11/003 . . . . . [Removing casings from sausages during manufacture]</td>
<td>11/112 . . . . . [Apparatus for tying sausage skins (Clipping sausage skins (applying clips or binding material to package folds or closures, e.g. to twisted bag necks B65B 51/04, B65B 51/08)]</td>
</tr>
<tr>
<td>11/005 . . . . . [Apparatus for binding or tying sausages or meat, e.g. salami, rollades; Filling sausage products into sleeve netting]</td>
<td>11/122 . . . [by forming knots]</td>
</tr>
<tr>
<td></td>
<td>11/125 . . . [by clipping; Removal of clips]</td>
</tr>
</tbody>
</table>
Processing meat

11/127 . {Forming a suspension loop}

13/00 Sausage casings {made of animal intestines A22C 17/141)}

13/0003 . {Apparatus for making sausage casings, e.g.
simultaneously with stuffing artificial casings
(enclosing material webs being formed into tubes in situ around filling nozzles B65B 9/20)}

13/0006 . {Apparatus for making artificial collagen casings
(chemical aspects A22C 15/0016)}

13/0009 . {End closures therefor}

13/0013 . {Chemical composition of synthetic sausage casings}

13/0016 . {based on proteins, e.g. collagen}

2013/002 . {made by extrusion}

2013/0023 . {coextruded together with the food product}

2013/0026 . {Chemical treatment of natural gut}

2013/003 . {with peeling aids, e.g. reducing adhesion between casing and product}

2013/0033 . {with at least one layer of a fat impermeable material}

2013/0036 . {with features allowing an easy opening and/or removal of the casing}

2013/004 . {with at least one layer of a gas, e.g. oxygen, water vapour, impermeable material}

2013/0043 . {with at least one layer of a water impermeable material}

2013/0046 . {suitable for impregnation with flavouring substances, e.g. caramel, liquid smoke, spices}

2013/005 . {monolayer casings}

2013/0053 . {multilayer casings}

2013/0056 . {nets and similar open structures to hold sausages and meat in general (making nets D04G; filling sausage products into sleeve netting A22C 11/005)}

2013/0059 . {thermoplastic casings, casings with at least one layer of thermoplastic material}

2013/0063 . {containing polyamide, e.g. nylon, aramide}

2013/0066 . {casings according to the presence or absence of seams}

2013/0069 . {seamed casings, casings with at least one longitudinal seam}

2013/0073 . {seamless casings made out of a continuous seamless tubular sheet}

2013/0076 . {treated in order to be conferred a rough appearance}

2013/0079 . {printable sausage casings or sausage casings
showing any kind of indicia (printing textiles D06P)}

2013/0083 . {biaxially oriented}

2013/0086 . {shrinking casings}

2013/0089 . {smokable casings, e.g. permeable to liquid smoke or phenol}

2013/0093 . {textile casings, casings with at least one layer of textile material}

2013/0096 . {cellulosic}

13/02 Shiring of sausage casings {(storing preformed tubular webs on filling nozzles B65B 9/15)}

2013/021 . {with pressurised air}

2013/023 . {holders or packs of shivered casings}

2013/025 . {severing the shired food casing}

2013/026 . {shirring netting onto a tube}

2013/028 . {supplying and shirring casings}

15/00 Apparatus for hanging-up meat or sausages
{(filling and conveying sausage products during manufacture A22C 11/00; transport through slaughterhouses A22B 7/001; poultry shackles A22C 21/007; conveying sausage A22C 21/0053)}

15/001 . {specially adapted for hanging or conveying several sausages or strips of meat}

15/002 . {loops, hooks, cords for suspending single sausages; apparatus for making or conveying loops for sausages}

15/003 . {hooks or the like specially adapted for meat or hams or part of carcasses (spreaders for cattle A22B 5/006)}

15/005 . {hangers with more hooks penetrating the piece of meat}

15/006 . {apparatus for inserting a cord into a piece of meat}

15/007 . {racks for storing or smoking suspended meat or sausages (racks for pressing meat A22C 7/0023)}

15/008 . {cages specially adapted for suspending hams, meat or sausages}

17/00 Other devices for processing meat or bones

17/0006 . {cutting or shaping meat}

17/0013 . {boards or blocks for cutting or chopping meat}

17/002 . {producing portions of meat with predetermined characteristics, e.g. weight or particular dimensions}

17/0026 . {mincing and grinding meat (mincing machines B02C 18/30)}

17/0033 . {cutting slices out of a piece of meat (slicing machines B26D 1/143)}

17/004 . {devices for deboning meat (deboning poultry A22C 21/0069; deboning operations on carcasses A22B 5/0035)}

17/0046 . {specially adapted for meat containing ribs}

17/0053 . {by injection}

17/006 . {putting meat on skewers}

17/0066 . {for "döner kebab", "shawarma", "gyros" or the like}

17/0073 . {using visual recognition, X-rays, ultrasounds, or other contactless means to determine quality or size of portioned meat}

17/008 . {for measuring quality, e.g. to determine further processing}

17/0086 . {calculating cutting patterns based on visual recognition}

17/0093 . {handling, transporting or packaging pieces of meat}

17/02 . {apparatus for holding meat or bones while cutting
(holding fish A22C 25/06; holding meat for carving A47J 43/18)}

17/04 . {bone cleaning devices}

17/06 . {bone-shears; bone-crushers}

17/08 . {cleaning, e.g. washing, meat or sausages (treating offal C11B)}

17/10 . {marking meat or sausages (marking animals A01K 11/00; labelling B65C)}

17/12 . {apparatus for cutting-off rind (skinning instruments A22B 5/16)}
Processing meat

A22C

25/14  . Beheading, eviscerating, or cleaning fish 
      (combined with removing fish-bone, skinning and 
      filleting A22C 25/14; hand tools A22C 25/006)
25/142 . . [Beheading fish]
25/145 . . [Eviscerating fish]
25/147 . . . [Eviscerating by means of vacuum or suction 
      devices]
25/16  . Removing fish-bones; Filleting fish 
      (combined with beheading, eviscerating A22C 25/14; hand 
      tools A22C 25/006)
25/163 . . [Removing the fins]
25/166 . . [Removing loose pin bones, e.g. from fish fillets]
25/17  . Skinning fish
25/18  . Cutting fish into portions
25/185 . . . [Hand tools for cutting fish]
25/20  . Shredding; Cutting into cubes; Flaking
25/22  . Fish-rolling apparatus

29/00 Processing shellfish [or bivalves], e.g. oysters, 
      lobsters; [Devices therefor, e.g. claw locks, claw 
      crushers, grading devices; Processing lines]
29/005 . . [Grading or classifying shellfish or bivalves]
29/002 . . Processing shrimps, lobsters or the like 
      {; Methods or machines for the shelling of shellfish}
29/021 . . . [Cleaning operations on shellfish, e.g. 
      evisceration, brushing]
29/022 . . . . [Deveining shellfish]
29/023 . . . . [Conveying, feeding or aligning shellfish]
29/024 . . . . [Opening, shelling or peeling shellfish]
29/025 . . . . . [Mechanically opening and shelling crabs, 
      lobsters or other hard-shelled crustaceans]
29/026 . . . . . [Mechanically peeling and shelling shrimps, 
      prawns or other soft-shelled crustaceans]
29/027 . . . . . [Hand tools for shelling shellfish]
29/028 . . . . (Beheading shellfish)
29/094 . . Processing bivalves, e.g. oysters (oyster knives with 
      openers A47G 21/06)
29/043 . . . [Cleaning operations on bivalves, e.g. 
      evisceration, brushing, separation of meat and 
      shell material]
29/046 . . . . [Opening or shucking bivalves]

Processing fish, including shellfish

25/00  Processing fish 
      (; Curing of fish; Stunning of fish 
      by electric current; Investigating fish by optical 
      means (slaughtering fish A22B 3/08))
25/003 . . . [Processing cephalopods]
25/006 . . . [Hand tools for processing fish]
25/02  . Washing or descaling fish
25/08  . . . . [Devices for washing or descaling fish by hand]
25/04  . Sorting fish; Separating ice from fish packed in ice 
      {investigating fish G01N 33/12]}
25/06  . Work-tables; Fish-holding and auxiliary devices in 
      connection with work-tables
25/08  . . Holding, guiding, or conveying fish before, 
      during or after its preparation 
      (A22C 25/06 
      takes precedence) ; Devices for sizing fish; 
      Automatically adapting conveyors or processing 
      machines to the measured size (transport in general 
      B65G)
25/10  . . Devices for threading fish on strings or the like
25/12  . . Arranging fish, e.g. according to the position of 
      head and tail {orientating articles during conveying 
      B65G 47/24]