

CPC COOPERATIVE PATENT CLASSIFICATION

A HUMAN NECESSITIES

FOODSTUFFS; TOBACCO

A22 BUTCHERING; MEAT TREATMENT; PROCESSING POULTRY OR FISH

A22C 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](#))

Processing meat

- | | | | |
|--------------|--|--------------|--|
| | | 11/02 | • Sausage filling or stuffing machines {(enclosing material in preformed tubular webs B65B 9/10)} |
| 5/00 | Apparatus for mixing meat, sausage-meat, or meat products (mixing in general B01F) | 11/0209 | • • {Stuffing horn assembly} |
| | | 11/0218 | • • • {with multiple interchangeable stuffing horns, e.g. magazine arrangements} |
| 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)} | 11/0227 | • • {Supplying casings to the stuffing device} |
| | | 11/0236 | • • • {from a storage device} |
| 7/0007 | • {specially adapted for making multi-layered meat products} | 11/0245 | • • {Controlling devices} |
| 7/0015 | • {specially adapted for making meat-balls} | 11/0254 | • • • {Sizing means} |
| 7/0023 | • {Pressing means} | 11/0263 | • • • {Braking means} |
| 7/003 | • • {Meat-moulds} | 11/0272 | • • • {for casing depletion} |
| 7/0038 | • • • {Demoulding means} | 11/0281 | • • {for sausages having at least one flat end} |
| 7/0046 | • • • {Containers in which meat is pressed and moulded} | 11/029 | • • {with coating or lubricating means} |
| | | 11/04 | • • with mechanically-operated piston moving to-and-fro |
| 7/0053 | • • • • {Stackable containers} | 11/06 | • • with piston operated by liquid or gaseous means |
| 7/0061 | • • • • {Containers for moulding and pressing ham} | 11/08 | • • with pressing-worm or other rotary-mounted pressing-members |
| 7/0069 | • • • {Pressing and moulding by means of a drum} | 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 51/26)} |
| 7/0076 | • • • {Devices for making meat patties} | | |
| 7/0084 | • • • • {comprising a reciprocating plate} | 2011/101 | • • {for pinching and twisting} |
| 7/0092 | • {with worms or other rotary mounted members (A22C 7/0007 takes precedence)} | 2011/102 | • • • {and twisting in opposite directions} |
| 9/00 | Apparatus for tenderising meat, e.g. ham {(tenderising chemically A23L 13/00, A23L 13/70)} | 11/104 | • • {by means of shear or blade elements} |
| 9/001 | • {by injection} | 11/105 | • • • {The shear or blade elements being displaceable parallel to the sausage string in order to create a narrow point free of meat} |
| 9/002 | • {by electric treatment} | 11/107 | • • {A string passing between two rotary members comprising dividing elements cooperating with each other} |
| 9/004 | • {by massaging} | 11/108 | • • {with dividing elements located on the surface of a single rotary member} |
| 9/005 | • • {Tumblers and rotating drums for massaging meat in their interior} | 11/12 | • 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)} |
| 9/007 | • {by beating} | 11/122 | • • {by forming knots} |
| 9/008 | • {by piercing} | 11/125 | • • {by clipping; Removal of clips} |
| 11/00 | Sausage making {(chemical aspects A23L 13/00); Apparatus for handling or conveying sausage products during manufacture} | 11/127 | • • {Forming a suspension loop} |
| 11/001 | • {Machines for making skinless sausages, e.g. Frankfurters, Wieners} | 13/00 | Sausage casings {(made of animal intestines A22C 17/14)} |
| 11/003 | • • {Removing casings from sausages during manufacture} | 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)} |
| 11/005 | • • {Apparatus for binding or tying sausages or meat, e.g. salami, rollades; Filling sausage products into sleeve netting} | | |
| 11/006 | • {Separating linked sausages} | | |
| 11/008 | • {Conveying sausages in horizontal position (conveying hanging sausages A22C 15/001)} | | |

- 13/0006 . . {Apparatus for making artificial collagen casings (chemical aspects [A22C 13/0016](#))}
- 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}
- 13/0026 . {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 . {shrinkable 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 . Shirring of sausage casings {(storing preformed tubular webs on filling nozzles [B65B 9/15](#))}
- 2013/021 . . {with pressurised air}
- 13/023 . . {Holders or packs of shirred 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 21/0007](#); conveying poultry [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 5/06](#))}
- 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](#))}
- 17/14 . Working-up animal intestines (; Treatment thereof for the manufacture of natural sausage casings (making artificial casings [A22C 13/0003](#); chemical treatment of natural casings [A22C 13/0026](#)); Apparatus for cutting intestines; Machines for pulling intestines to pieces
- 17/16 . Cleaning of intestines; Machines for removing fat or slime from intestines {(cleaning the stomach of slaughtered animals [A22B 5/18](#))}

- 18/00 Plants, factories, or the like for processing meat**
(for processing poultry only [A22C 21/00](#); for processing fish only [A22C 25/00](#))
- 21/00 Processing poultry**
- 21/0007 . {Poultry shackles}
 - 21/0015 . {Killing poultry entering the processing machine (slaughtering pliers, slaughtering shears [A22B 3/08](#))}
 - 21/0023 . {Dividing poultry}
 - 21/003 . . {Filleting poultry, i.e. extracting, cutting or shaping poultry fillets}
 - 21/0038 . {Trussing poultry}
 - 21/0046 . {Support devices}
 - 21/0053 . {Transferring or conveying devices for poultry}
 - 21/0061 . {Cleaning or disinfecting poultry}
 - 21/0069 . {Deboning poultry or parts of poultry}
 - 21/0076 . . {Deboning poultry legs and drumsticks}
 - 21/0084 . . {Deboning poultry wings}
 - 21/0092 . {Skinning poultry or parts of poultry}
 - 21/02 . Plucking mechanisms for poultry
 - 21/022 . . {with fingers}
 - 21/024 . . {Hand tools for plucking poultry}
 - 21/026 . . {with rollers}
 - 21/028 . . {with discs}
 - 21/04 . Scalding, singeing, waxing, or dewaxing poultry
 - 21/06 . Eviscerating devices for poultry
 - 21/063 . . {Hand tools for eviscerating poultry}
 - 21/066 . . {Extracting or removing the tendons from the legs of poultry}
- 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}
 - 29/02 . 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}
 - 29/04 . 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
 - 25/025 . . {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](#))}
 - 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](#))}