

# 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](#))

##### 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.

##### Processing meat

**5/00 Apparatus for mixing meat, sausage-meat, or meat products** (mixing in general [B01F](#))

**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](#))}

7/0007 . {specially adapted for making multi-layered meat products}

7/0015 . {specially adapted for making meat-balls}

7/0023 . {Pressing means}

7/003 . . {Meat-moulds}

7/0038 . . . {Demoulding means}

7/0046 . . . {Containers in which meat is pressed and moulded}

7/0053 . . . . {Stackable containers}

7/0061 . . . . {Containers for moulding and pressing ham}

7/0069 . . . {Pressing and moulding by means of a drum}

7/0076 . . . {Devices for making meat patties}

7/0084 . . . . {comprising a reciprocating plate}

7/0092 . {with worms or other rotary mounted members ([A22C 7/0007](#) takes precedence)}

**9/00 Apparatus for tenderising meat, e.g. ham** {(tenderising chemically [A23L 13/00](#), [A23L 13/70](#))}

9/001 . {by injection}

9/002 . {by electric treatment}

9/004 . {by massaging}

9/005 . . {Tumblers and rotating drums for massaging meat in their interior}

9/007 . {by beating}

9/008 . {by piercing}

**11/00 Sausage making** {(chemical aspects [A23L 13/00](#)); **Apparatus for handling or conveying sausage products during manufacture**}

11/001 . {Machines for making skinless sausages, e.g. Frankfurters, Wieners}

11/003 . . {Removing casings from sausages during manufacture}

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](#))}

11/02 . Sausage filling or stuffing machines {(enclosing material in preformed tubular webs [B65B 9/10](#))}

11/0209 . . {Stuffing horn assembly}

11/0218 . . . {with multiple interchangeable stuffing horns, e.g. magazine arrangements}

11/0227 . . {Supplying casings to the stuffing device}

11/0236 . . . {from a storage device}

11/0245 . . {Controlling devices}

11/0254 . . . {Sizing means}

11/0263 . . . {Braking means}

11/0272 . . . {for casing depletion}

11/0281 . . {for sausages having at least one flat end}

11/029 . . {with coating or lubricating means}

11/04 . . with mechanically-operated piston moving to-and-fro

11/06 . . with piston operated by liquid or gaseous means

11/08 . . with pressing-worm or other rotary-mounted pressing-members

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](#))}

2011/101 . . {for pinching and twisting}

2011/102 . . . {and twisting in opposite directions}

11/104 . . {by means of shear or blade elements}

11/105 . . . {The sheer or blade elements being displaceable parallel to the sausage string in order to create a narrow point free of meat}

11/107 . . {A string passing between two rotary members comprising dividing elements cooperating with each other}

11/108 . . {with dividing elements located on the surface of a single rotary member}

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](#))}

11/122 . . {by forming knots}

11/125 . . {by clipping; Removal of clips}

11/127	. . {Forming a suspension loop}	<b>15/00</b>	<b>Apparatus for hanging-up meat or sausages</b> {(filling and conveying sausage products during manufacture <a href="#">A22C 11/00</a> ; transport through slaughterhouses <a href="#">A22B 7/001</a> ; poultry shackles <a href="#">A22C 21/0007</a> ; conveying poultry <a href="#">A22C 21/0053</a> )}
<b>13/00</b>	<b>Sausage casings</b> {(made of animal intestines <a href="#">A22C 17/14</a> )}	15/001	. {Specially adapted for hanging or conveying several sausages or strips of meat}
13/0003	. {Apparatus for making sausage casings, e.g. simultaneously with stuffing artificial casings (enclosing material webs being formed into tubes <a href="#">in situ</a> around filling nozzles <a href="#">B65B 9/20</a> )}	15/002	. . {Loops, hooks, cords for suspending single sausages; apparatus for making or conveying loops for sausages}
13/0006	. . {Apparatus for making artificial collagen casings (chemical aspects <a href="#">A22C 13/0016</a> )}	15/003	. {Hooks or the like specially adapted for meat or hams or part of carcasses (spreaders for cattle <a href="#">A22B 5/06</a> )}
13/0009	. {End closures therefor}	15/005	. . {Hangers with more hooks penetrating the piece of meat}
13/0013	. {Chemical composition of synthetic sausage casings}	15/006	. . {Apparatus for inserting a cord into a piece of meat}
13/0016	. . {based on proteins, e.g. collagen}	15/007	. {Racks for storing or smoking suspended meat or sausages (racks for pressing meat <a href="#">A22C 7/0023</a> )}
2013/002	. {made by extrusion}	15/008	. {Cages specially adapted for suspending hams, meat or sausages}
2013/0023	. . {coextruded together with the food product}	<b>17/00</b>	<b>Other devices for processing meat or bones</b>
13/0026	. {Chemical treatment of natural gut}	17/0006	. {Cutting or shaping meat}
2013/003	. {with peeling aids, e.g. reducing adhesion between casing and product}	17/0013	. . {Boards or blocks for cutting or chopping meat}
2013/0033	. {with at least one layer of a fat impermeable material}	17/002	. {Producing portions of meat with predetermined characteristics, e.g. weight or particular dimensions}
2013/0036	. {with features allowing an easy opening and/or removal of the casing}	17/0026	. . {Mincing and grinding meat (mincing machines <a href="#">B02C 18/30</a> )}
2013/004	. {with at least one layer of a gas, e.g. oxygen, water vapour, impermeable material}	17/0033	. . {Cutting slices out of a piece of meat (slicing machines <a href="#">B26D 1/143</a> )}
2013/0043	. {with at least one layer of a water impermeable material}	17/004	. {Devices for deboning meat (deboning poultry <a href="#">A22C 21/0069</a> ; deboning operations on carcasses <a href="#">A22B 5/0035</a> )}
2013/0046	. {suitable for impregnation with flavouring substances, e.g. caramel, liquid smoke, spices}	17/0046	. . {specially adapted for meat containing ribs}
2013/005	. {monolayer casings}	17/0053	. {by injection}
2013/0053	. {multilayer casings}	17/006	. {Putting meat on skewers}
2013/0056	. {nets and similar open structures to hold sausages and meat in general (making nets <a href="#">D04G</a> ; filling sausage products into sleeve netting <a href="#">A22C 11/005</a> )}	17/0066	. . {for "döner kebab", "shawarma", "gyros" or the like}
2013/0059	. {thermoplastic casings, casings with at least one layer of thermoplastic material}	17/0073	. {using visual recognition, X-rays, ultrasounds, or other contactless means to determine quality or size of portioned meat}
2013/0063	. {containing polyamide, e.g. nylon, aramide}	17/008	. . {for measuring quality, e.g. to determine further processing}
2013/0066	. {casings according to the presence or absence of seams}	17/0086	. . {Calculating cutting patterns based on visual recognition}
2013/0069	. . {seamed casings, casings with at least one longitudinal seam}	17/0093	. {Handling, transporting or packaging pieces of meat}
2013/0073	. . {seamless casings made out of a continuous seamless tubular sheet}	17/02	. Apparatus for holding meat or bones while cutting {(holding fish <a href="#">A22C 25/06</a> ; holding meat for carving <a href="#">A47J 43/18</a> )}
2013/0076	. {treated in order to be conferred a rough appearance}	17/04	. Bone cleaning devices
2013/0079	. {printable sausage casings or sausage casings showing any kind of indicia (printing textiles <a href="#">D06P</a> )}	17/06	. Bone-shears; Bone-crushers
2013/0083	. {biaxially oriented}	17/08	. Cleaning, e.g. washing, meat or sausages {(treating offal <a href="#">C11B</a> )}
2013/0086	. {shrinkable casings}	17/10	. Marking meat or sausages {(marking animals <a href="#">A01K 11/00</a> ; labelling <a href="#">B65C</a> )}
2013/0089	. {smokable casings, e.g. permeable to liquid smoke or phenol}	17/12	. Apparatus for cutting-off rind {(skinning instruments <a href="#">A22B 5/16</a> )}
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 <a href="#">B65B 9/15</a> )}		
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}		

17/14	<ul style="list-style-type: none"> <li>Working-up animal intestines {; Treatment thereof for the manufacture of natural sausage casings (making artificial casings <a href="#">A22C 13/0003</a>; chemical treatment of natural casings <a href="#">A22C 13/0026</a>); Apparatus for cutting intestines; Machines for pulling intestines to pieces</li> </ul>	25/14	<ul style="list-style-type: none"> <li>Beheading, eviscerating, or cleaning fish {(combined with removing fish-bone, skinning and filleting <a href="#">A22C 25/14</a>; hand tools <a href="#">A22C 25/006</a>)}</li> </ul>
17/16	<ul style="list-style-type: none"> <li>Cleaning of intestines; Machines for removing fat or slime from intestines {(cleaning the stomach of slaughtered animals <a href="#">A22B 5/18</a>)}</li> </ul>	25/142	<ul style="list-style-type: none"> <li>. . {Beheading fish}</li> </ul>
<b>18/00</b>	<b>Plants, factories, or the like for processing meat</b> (for processing poultry only <a href="#">A22C 21/00</a> ; for processing fish only <a href="#">A22C 25/00</a> )	25/145	<ul style="list-style-type: none"> <li>. . {Eviscerating fish}</li> </ul>
<b>21/00</b>	<b>Processing poultry</b>	25/147	<ul style="list-style-type: none"> <li>. . . {Eviscerating by means of vacuum or suction devices}</li> </ul>
21/0007	<ul style="list-style-type: none"> <li>{Poultry shackles}</li> </ul>	25/16	<ul style="list-style-type: none"> <li>Removing fish-bones; Filleting fish {(combined with beheading, eviscerating <a href="#">A22C 25/14</a>; hand tools <a href="#">A22C 25/006</a>)}</li> </ul>
21/0015	<ul style="list-style-type: none"> <li>{Killing poultry entering the processing machine (slaughtering pliers, slaughtering shears <a href="#">A22B 3/08</a>)}</li> </ul>	25/163	<ul style="list-style-type: none"> <li>. . {Removing the fins}</li> </ul>
21/0023	<ul style="list-style-type: none"> <li>{Dividing poultry}</li> </ul>	25/166	<ul style="list-style-type: none"> <li>. . {Removing loose pin bones, e.g. from fish fillets}</li> </ul>
21/003	<ul style="list-style-type: none"> <li>. . {Filleting poultry, i.e. extracting, cutting or shaping poultry fillets}</li> </ul>	25/17	<ul style="list-style-type: none"> <li>Skinning fish</li> </ul>
21/0038	<ul style="list-style-type: none"> <li>{Trussing poultry}</li> </ul>	25/18	<ul style="list-style-type: none"> <li>Cutting fish into portions</li> </ul>
21/0046	<ul style="list-style-type: none"> <li>{Support devices}</li> </ul>	25/185	<ul style="list-style-type: none"> <li>. . {Hand tools for cutting fish}</li> </ul>
21/0053	<ul style="list-style-type: none"> <li>{Transferring or conveying devices for poultry}</li> </ul>	25/20	<ul style="list-style-type: none"> <li>Shredding; Cutting into cubes; Flaking</li> </ul>
21/0061	<ul style="list-style-type: none"> <li>{Cleaning or disinfecting poultry}</li> </ul>	25/22	<ul style="list-style-type: none"> <li>Fish-rolling apparatus</li> </ul>
21/0069	<ul style="list-style-type: none"> <li>{Deboning poultry or parts of poultry}</li> </ul>	<b>29/00</b>	<b>Processing shellfish {or bivalves}, e.g. oysters, lobsters; {Devices therefor, e.g. claw locks, claw crushers, grading devices; Processing lines}</b>
21/0076	<ul style="list-style-type: none"> <li>. . {Deboning poultry legs and drumsticks}</li> </ul>	29/005	<ul style="list-style-type: none"> <li>{Grading or classifying shellfish or bivalves}</li> </ul>
21/0084	<ul style="list-style-type: none"> <li>. . {Deboning poultry wings}</li> </ul>	29/02	<ul style="list-style-type: none"> <li>Processing shrimps, lobsters or the like {; Methods or machines for the shelling of shellfish}</li> </ul>
21/0092	<ul style="list-style-type: none"> <li>{Skinning poultry or parts of poultry}</li> </ul>	29/021	<ul style="list-style-type: none"> <li>. . {Cleaning operations on shellfish, e.g. evisceration, brushing}</li> </ul>
21/02	<ul style="list-style-type: none"> <li>Plucking mechanisms for poultry</li> </ul>	29/022	<ul style="list-style-type: none"> <li>. . . {Deveining shellfish}</li> </ul>
21/022	<ul style="list-style-type: none"> <li>. . {with fingers}</li> </ul>	29/023	<ul style="list-style-type: none"> <li>. . {Conveying, feeding or aligning shellfish}</li> </ul>
21/024	<ul style="list-style-type: none"> <li>. . {Hand tools for plucking poultry}</li> </ul>	29/024	<ul style="list-style-type: none"> <li>. . {Opening, shelling or peeling shellfish}</li> </ul>
21/026	<ul style="list-style-type: none"> <li>. . {with rollers}</li> </ul>	29/025	<ul style="list-style-type: none"> <li>. . . {Mechanically opening and shelling crabs, lobsters or other hard-shelled crustaceans}</li> </ul>
21/028	<ul style="list-style-type: none"> <li>. . {with discs}</li> </ul>	29/026	<ul style="list-style-type: none"> <li>. . . {Mechanically peeling and shelling shrimps, prawns or other soft-shelled crustaceans}</li> </ul>
21/04	<ul style="list-style-type: none"> <li>Scalding, singeing, waxing, or dewaxing poultry</li> </ul>	29/027	<ul style="list-style-type: none"> <li>. . . {Hand tools for shelling shellfish}</li> </ul>
21/06	<ul style="list-style-type: none"> <li>Eviscerating devices for poultry</li> </ul>	29/028	<ul style="list-style-type: none"> <li>. . {Beheading shellfish}</li> </ul>
21/063	<ul style="list-style-type: none"> <li>. . {Hand tools for eviscerating poultry}</li> </ul>	29/04	<ul style="list-style-type: none"> <li>Processing bivalves, e.g. oysters (oyster knives with openers <a href="#">A47G 21/06</a>)</li> </ul>
21/066	<ul style="list-style-type: none"> <li>. . {Extracting or removing the tendons from the legs of poultry}</li> </ul>	29/043	<ul style="list-style-type: none"> <li>. . {Cleaning operations on bivalves, e.g. evisceration, brushing, separation of meat and shell material}</li> </ul>
<b><u>Processing fish, including shellfish</u></b>		29/046	<ul style="list-style-type: none"> <li>. . {Opening or shucking bivalves}</li> </ul>
<b>25/00</b>	<b>Processing fish {; Curing of fish; Stunning of fish by electric current; Investigating fish by optical means (slaughtering fish <a href="#">A22B 3/08</a>)}</b>		
25/003	<ul style="list-style-type: none"> <li>{Processing cephalopods}</li> </ul>		
25/006	<ul style="list-style-type: none"> <li>{Hand tools for processing fish}</li> </ul>		
25/02	<ul style="list-style-type: none"> <li>Washing or descaling fish</li> </ul>		
25/025	<ul style="list-style-type: none"> <li>. . {Devices for washing or descaling fish by hand}</li> </ul>		
25/04	<ul style="list-style-type: none"> <li>Sorting fish; Separating ice from fish packed in ice {(investigating fish <a href="#">G01N 33/12</a>)}</li> </ul>		
25/06	<ul style="list-style-type: none"> <li>Work-tables; Fish-holding and auxiliary devices in connection with work-tables</li> </ul>		
25/08	<ul style="list-style-type: none"> <li>Holding, guiding, or conveying fish before, during or after its preparation (<a href="#">A22C 25/06</a> takes precedence){; Devices for sizing fish; Automatically adapting conveyors or processing machines to the measured size (transport in general <a href="#">B65G</a>)}</li> </ul>		
25/10	<ul style="list-style-type: none"> <li>Devices for threading fish on strings or the like</li> </ul>		
25/12	<ul style="list-style-type: none"> <li>Arranging fish, e.g. according to the position of head and tail {(orientating articles during conveying <a href="#">B65G 47/24</a>)}</li> </ul>		