# CPC COOPERATIVE PATENT CLASSIFICATION

#### A HUMAN NECESSITIES

### **FOODSTUFFS**; **TOBACCO**

## **A21** BAKING; EDIBLE DOUGHS

# A21C MACHINES OR EQUIPMENT FOR MAKING OR PROCESSING DOUGHS; HANDLING BAKED ARTICLES MADE FROM DOUGH

#### **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.}

1/00	Mixing or kneading machines for the preparation	1/148	• • {Safety arrangements (A21C 1/1485 takes
	of dough		precedence)}
1/003	• {Plant; Systems, i.e. flow charts or diagrams}	1/1485	• • {Doors; Closures; Operating, e.g. safety,
1/006	• {Methods}		mechanisms therefor}
1/02	<ul> <li>with vertically-mounted tools; Machines for</li> </ul>	1/149	{Receptacles, e.g. provided with means for
	whipping or beating		carrying or guiding fluids, e.g. coolants}
1/04	with inclined rotating mixing arms or levers	1/1495	• • {Arrangements for cooling or heating
1/06	with horizontally-mounted mixing or kneading		(receptacles with means for guiding fluids per se
1/00	tools; Worm {or screw} mixers		A21C 1/149); Arrangements for applying super-
1/065	• • {Worm or screw mixers, e.g. with consecutive		or sub-atmospheric pressure}
1/003	mixing receptacles}		
1/08	• with rollers	3/00	Machines or apparatus for shaping batches of
			dough before subdivision
1/083	• • {by calendering, i.e. working between rollers	3/02	<ul> <li>Dough-sheeters; Rolling-machines; Rolling-pins</li> </ul>
	(using rollers for shaping dough <u>A21C 3/02</u> )}	3/021	• • {Rolling-pins; Hand-operated spreading or rolling
1/086	• • {having a receptacle rotating about a vertical axis		devices (A21C 11/004 takes precedence)}
	cooperating with rotary rollers}	3/022	{Laminating or undulating a continuous
1/10	<ul> <li>with additional aerating apparatus for the</li> </ul>		dough sheet, e.g. by folding transversely or
	manufacture of aerated doughs		longitudinally onto a moving surface (combined
1/105	• • {the gas being introduced through the shaft of a		with filling <u>A21C 9/045</u> )}
	rotary tool}	3/024	• • {using one or more rollers with an axis of rotation
1/12	. for the preparation of dough directly from grain	3,021	substantially parallel or oblique to the direction of
1/14	Structural elements of mixing or kneading		dough transport (A21C 3/065 takes precedence)
	machines; {Parts; Accessories}	3/025	• • { with one or more rollers moving perpendicularly
1/1405	· · {Tools}	3/023	to its rotation axis, e.g. reciprocally (A21C 3/024
1/141	• • {having mixing or cutting elements essentially		takes precedence; hand-operated rollers
1/171	perpendicular to their axes}		A21C 3/021)}
1/1415	• • {Shafts; Heads therefor}	3/027	• • • { with multiple rollers moving in a closed loop,
		3/027	e.g. in an orbital path; Planetary roller systems}
1/142	• • {Feeding mechanisms, e.g. skip lifting	2/029	
1 /1 405	mechanisms}	3/028	• • {using rollers having a shape other than straight
1/1425	{for feeding in measured doses}	2/04	round cylinders ( <u>A21C 3/04</u> takes precedence)}
1/143	• • · {using pneumatic means}	3/04	• Dough-extruding machines {; Hoppers with moving
1/1435	• • • {for liquids ( $\underline{A21C} \frac{1}{1425}$ takes precedence)}		elements, e.g. rollers or belts as wall elements for
1/144	• • {Discharge mechanisms}	210 =	drawing the dough}
1/1445	• • • {using tiltable receptacles; Tilting mechanisms	3/06	• Machines for coiling sheets of dough, e.g. for
	therefor}		producing rolls
1/145	• • {Controlling; Testing; Measuring (A21C 1/1425)	3/065	• • {the coil axis of the produced rolls being in
	takes precedence)}		parallel or oblique position relative to the
1/1455	• • • {Measuring data of the driving system, e.g.		transport direction; with coiling elements,
	torque, speed, power}		e.g. rollers, being placed in parallel or oblique
1/146	• • • {Measuring properties of the dough, e.g.		position relative to the transport direction}
1,1.0	moisture, electrical conductivity, temperature	3/08	<ul> <li>Machines for twisting strips of dough, e.g. for</li> </ul>
	(A21C 1/1455 takes precedence)		making pretzels
1/1465	{Drives}	3/10	<ul> <li>combined with dough-dividing apparatus</li> </ul>
1/1403	• • {Bives} • • • {for planetary motion}	<i>51</i> 00	
	{Brakes therefor}	5/00	Dough-dividing machines
1/1475	• • {Drakes meretor}		

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5/006	<ul><li>spaces separated by radially oriented elements or walls}</li><li>{for dispensing liquid or semi-liquid dough, e.g. batter}</li></ul>	9/088	<ul> <li>(with filling in between sheets A21C 9/045)}</li> <li>• • {Folding or bending discrete dough pieces or</li> </ul>
			dough strips (twisting strips of dough A21C 3/08;
	,		with filling action A21C 9/063; forming toroid-
5/02	<ul> <li>with division boxes and ejection plungers</li> </ul>		shaped dough pieces A21C 11/002)}
5/04	• • with division boxes in a revolving body with radially-working pistons	11/00	Other machines for forming the dough into its final shape before cooking or baking
5/06	• • with division boxes in a revolving body with axially-working pistons	11/002	• {the shape being toroid-like, e.g. bagels, doughnuts (extruding machines for toroid shaped products
5/08	<ul> <li>with radial, i.e. star-like, cutter-blades slidable in the slots of, and relatively to, a pressing-plunger</li> </ul>	11/004	A21C 11/166)} • {forming the dough into a substantially disc-like
7/00	Machines which homogenise the subdivided dough by working other than by kneading		shape with or without an outer rim, e.g. for making pie crusts, cake shells or pizza bases}
7/005	• {the dough pieces being worked in radially disposed cavities in a rotating drum}	11/006	• • {by pressing or press-moulding (A21C 11/008 takes precedence)}
7/01	• with endless bands {(A21C 7/005 takes	11/008	• • {by press-rolling}
	precedence)}	11/02	<ul> <li>Embossing machines</li> </ul>
7/02	• with moulding channels (A21C 7/01 takes precedence)	11/04	• • with cutting and embossing rollers or drums $\{(\underline{A21C\ 11/106}\ takes\ precedence)\}$
7/04	• with moulding cups (A21C 7/01 takes precedence)	11/06	<ul> <li>handling regularly pre-shaped sheets of dough</li> </ul>
7/06	<ul> <li>combined with dividing machines with radial, i.e. star-like, cutter-blades slidable in the slots of, and</li> </ul>	11/08	• • with engraved moulds, e.g. rotary machines with die rolls
9/00	relatively to, a pressing-plunger  Other apparatus for handling dough or dough	11/10	<ul> <li>combined with cutting apparatus {(<u>A21C 11/004</u> takes precedence)}</li> </ul>
	pieces	11/103	• • {having multiple cutting elements slidably or rotably mounted in a diaphragm-like
9/02	<ul> <li>Apparatus for hanging or distributing strings of dough, such as noodles, spaghetti or macaroni, on</li> </ul>		arrangement}
9/04	bars  Apparatus for spreading granular material on, or	11/106	• • {using hand-operated cutting tools ( <u>A21C 9/068</u> takes precedence)}
9/04	sweeping or coating the surfaces of, pieces or sheets of dough {(coating baked articles A21C 15/002)}	11/12	<ul> <li>Apparatus for slotting, slitting or perforating the surface of pieces of dough</li> </ul>
9/045	Laminating dough sheets combined with	11/14	• • for star-like stamping
J/0 <del>4</del> 3	applying a filling in between, e.g. lasagna-	11/16	Extruding machines
	type products (ravioli-making machines <u>A21C 9/066;</u> making laminated baked wafer	11/163	<ul> <li>(Applying co-extrusion, i.e. extruding two or more plastic substances simultaneously, e.g. for making filled dough products; Making products</li> </ul>
9/06	<ul> <li>sheets A21C 15/02)}</li> <li>Apparatus for filling pieces of dough such as doughnuts {(A21C 11/163 takes precedence;</li> </ul>		from two or more different substances supplied to the extruder}
9/061	apparatus for filling baked articles <u>A21C 15/007</u> )}  • {Making continuous filled tubular products, e.g.	11/166	• • {for making toroid-shaped products, e.g. doughnuts (A21C 11/163 takes precedence)}
9/001	with subsequent cutting}	11/18	• • with pistons
9/063	<ul> <li>• {Applying a folding, wrapping, rolling action</li> </ul>	11/20	with worms
9/065	(A21C 9/045, A21C 9/061 take precedence)}  • {by means of injection into a piece of dough	11/22	<ul> <li>Apparatus with rollers and cutting discs or blades for shaping noodles</li> </ul>
	(filling baked articles <u>A21C 15/007</u> )}	11/24	<ul> <li>Apparatus for cutting out noodles from a sheet or ribbon of dough by an engaging pair of grooved</li> </ul>
9/066	• • {using two separate sheets or pieces of dough with filling in between, e.g. crimped at their		rollers
	edges; Ravioli-making machines (A21C 11/163 takes precedence)}	13/00	Provers, i.e. apparatus permitting dough to rise
9/068	<ul> <li>. • {Tools for crimping or trimming of edges or rims, e.g. hand-operated}</li> </ul>	13/02	<ul> <li>with endless conveyors {, e.g. for moving the dough pieces progressively through the prover}</li> </ul>
9/08	• Depositing, arranging and conveying apparatus	14/00	Machines or equipment for making or processing
2100	for handling pieces, e.g. sheets of dough {(for handling liquid or semi-liquid dough, e.g. batter A21C 5/006)}		dough, not provided for in other groups of this subclass
9/081	• {Charging of baking tins or forms with dough}	15/00	Apparatus for handling baked articles
9/083	{Manipulating tins, pans etc., e.g. charging or discharging conveyors, trolleys or ovens}	15/002	• {Apparatus for spreading granular material on, or sweeping or coating the surface of baked articles
9/085	• • {Separating, spacing, orienting or aligning discrete dough pieces, e.g. after passing a cutting	15/005	(of pieces of dough A21C 9/04; for confectionary A23G 3/28)}
	device}	15/005	<ul> <li>• {of which at least the dispensing part is hand- held, e.g. comprising a flexible container, pouch or gun-like applicator}</li> </ul>

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15/007 • {Apparatus for filling baked articles (filling pieces of dough <u>A21C 9/06</u>; filled bakery products <u>A21D 13/30</u>, <u>A21D 13/80</u>)}
 15/02 • Apparatus for shaping or moulding baked wafers; Making multi-layer wafer sheets

15/025 • • {Apparatus for shaping or moulding baked wafers, e.g. to obtain cones for ice cream}

 $\begin{array}{c} \hbox{15/04} & \hbox{. Cutting or slicing machines or devices specially} \\ \hbox{adapted for baked articles other than bread} \\ \end{array}$ 

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