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 of dough (domestic mixing or kneading machines A47J 43/00; A47J 44/00 {mixing in general B01F; mixing or kneading of substances in a plastic state in general B29B 7/00})

1/003  . {Plant; Systems, i.e. flow charts or diagrams}

1/006  . {Methods}

1/02  . with vertically-mounted tools; Machines for whipping or beading dough

1/04  . with inclined rotating mixing arms or levers

1/06  . with horizontally-mounted mixing or kneading tools; Worm {or screw} mixers

1/065  . . {Worm or screw mixers, e.g. with consecutive mixing receptacles}

1/08  . with rollers

1/083  . . {by calendering, i.e. working between rollers (using rollers for shaping dough A21C 3/02) }

1/086  . . {having a receptacle rotating about a vertical axis cooperating with rotary rollers}

1/10  . with additional aerating apparatus for the manufacture of aerated doughs

1/105  . . {the gas being introduced through the shaft of a rotary tool}

1/12  . for the preparation of dough directly from grain

1/14  . Structural elements of mixing or kneading machines; {Parts; Accessories}

1/1405  . . {Tools}

1/141  . . . {having mixing or cutting elements essentially perpendicular to their axes}

1/1415  . . . {Shafts; Heads therefor}

1/142  . . . {Feeding mechanisms, e.g. skip lifting mechanisms}

1/1425  . . . {for feeding in measured doses}

1/143  . . . . {using pneumatic means}

1/1435  . . . . {for liquids (A21C 1/1425 takes precedence)}

1/144  . . {Discharge mechanisms}

1/1445  . . . {using tiltable receptacles; Tilting mechanisms therefor}

1/145  . . {Controlling; Testing; Measuring (A21C 1/1425 takes precedence)}

1/1455  . . . {Measuring data of the driving system, e.g. torque, speed, power}

1/146  . . . {Measuring properties of the dough, e.g. moisture, electrical conductivity, temperature (A21C 1/1455 takes precedence)
3/065 . . (the coil axis of the produced rolls being in parallel or oblique position relative to the transport direction; with coiling elements, e.g. rollers, being placed in parallel or oblique position relative to the transport direction)
3/08 . Machines for twisting strips of dough, e.g. for making pretzels
3/10 . combined with dough-dividing apparatus

5/00 Dough-dividing machines
5/003 . (with revolving bodies, e.g. with bodies having spaces separated by radially oriented elements or walls)
5/006 . (for dispensing liquid or semi-liquid dough, e.g. batter)
5/02 . with division boxes and ejection plungers
5/04 . . . with division boxes in a revolving body with radially-working pistons
5/06 . . . with division boxes in a revolving body with axially-working pistons
5/08 . . . with radial, i.e. star-like, cutter-blades slidable in the slots of, and relatively to, a pressing-plunger { (A21C 7/006 takes precedence) }

7/00 Machines which homogenise the subdivided dough by working other than by kneading
7/005 . (the dough pieces being worked in radially disposed cavities in a rotating drum)
7/01 . with endless bands { (A21C 7/005 takes precedence) }
7/02 . with moulding channels (A21C 7/01 takes precedence)
7/04 . with moulding cups (A21C 7/01 takes precedence)
7/06 . combined with dividing machines with radial, i.e. star-like, cutter-blades slidable in the slots of, and relatively to, a pressing-plunger { (A21C 7/006 takes precedence) }

9/00 Other apparatus for handling dough or dough pieces
9/02 . Apparatus for hanging or distributing strings of dough, such as noodles, spaghetti or macaroni, on bars
9/04 . Apparatus for spreading granular material on, or sweeping or coating the surfaces of, pieces or sheets of dough { (coating baked articles A21C 15/002) }
9/045 . . . {Laminating dough sheets combined with applying a filling in between, e.g. lasagna-type products (ravioli-making machines A21C 9/066; making laminated baked wafer sheets A21C 15/02) }
9/06 . Apparatus for filling pieces of dough such as doughnuts { (A21C 11/163 takes precedence; apparatus for filling baked articles A21C 15/007) }
9/061 . . . {Making continuous filled tubular products, e.g. with subsequent cutting}
9/063 . . . {Applying a folding, wrapping, rolling action (A21C 9/045, A21C 9/061 take precedence) }
9/065 . . . [by means of injection into a piece of dough {filling baked articles A21C 15/007}]
9/066 . . . {using two separate sheets or pieces of dough with filling in between, e.g. crimped at their edges; Ravioli-making machines (A21C 11/163 takes precedence) }
9/068 . . . {Tools for crimping or trimming of edges or rims, e.g. hand-operated}
9/08 . Depositing, arranging and conveying apparatus for handling pieces, e.g. sheets of dough { (for handling liquid or semi-liquid dough, e.g. batter A21C 5/006) }
9/081 . . . {Charging of baking tins or forms with dough}
9/083 . . . {Manipulating tins, pans etc., e.g. charging or discharging conveyors, trolleys or ovens}
9/085 . . . {Separating, spacing, orienting or aligning discrete dough pieces, e.g. after passing a cutting device}
9/086 . . . {Stacking or unstacking discrete dough sheets (with filling in between sheets A21C 9/045) }
9/088 . . . {Folding or bending discrete dough pieces or dough strips (twisting strips of dough A21C 3/08; with filling action A21C 9/063; forming toroid-shaped dough pieces A21C 11/002) }

11/00 Other machines for forming the dough into its final shape before cooking or baking
11/002 . . . {the shape being toroid-like, e.g. bagels, doughnuts (extruding machines for toroid shaped products A21C 11/166) }
11/004 . . . {forming the dough into a substantially disc-like shape with or without an outer rim, e.g. for making pie crusts, cake shells or pizza bases}
11/006 . . . {by pressing or press-moulding (A21C 11/008 takes precedence) }
11/008 . . . {by press-rolling}
11/02 . Embossing machines
11/04 . . . with cutting and embossing rollers or drums { (A21C 11/106 takes precedence) }
11/06 . . . handling regularly pre-shaped sheets of dough
11/08 . . . with engraved moulds, e.g. rotary machines with die rolls
11/10 . . . combined with cutting apparatus { (A21C 11/004 takes precedence) }
11/103 . . . {having multiple cutting elements slidably or rotably mounted in a diaphragm-like arrangement}
11/106 . . . {using hand-operated cutting tools (A21C 9/068 takes precedence) }
11/12 . . . Apparatus for slotting, slitting or perforating the surface of pieces of dough
11/14 . . . for star-like stamping
11/16 . . . Extruding machines
11/163 . . . {Applying co-extrusion, i.e. extruding two or more plastic substances simultaneously, e.g. for making filled dough products; Making products from two or more different substances supplied to the extruder}
11/166 . . . {for making toroid-shaped products, e.g. doughnuts (A21C 11/163 takes precedence) }
11/18 . . . with pistons
11/20 . . . with worms
11/22 . . . Apparatus with rollers and cutting discs or blades for shaping noodles
11/24 . . . Apparatus for cutting out noodles from a sheet or ribbon of dough by an engaging pair of grooved rollers

13/00 Provers, i.e. apparatus permitting dough to rise { (testing dough properties G01N 33/10) }
13/02 . . . with endless conveyors {, e.g. for moving the dough pieces progressively through the prover}
A21C

14/00 Machines or equipment for making or processing dough, not provided for in other groups of this subclass

15/00 Apparatus for handling baked articles
15/002 . {Apparatus for spreading granular material on, or sweeping or coating the surface of baked articles (of pieces of dough A21C 9/04; for confectionary A23G 3/28)}
15/005 . {of which at least the dispensing part is hand-held, e.g. comprising a flexible container, pouch or gun-like applicator}
15/007 . {Apparatus for filling baked articles (filling pieces of dough A21C 9/06; filled bakery products A21D 13/30; A21D 13/80)}
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}
15/04 . Cutting or slicing machines or devices specially adapted for baked articles other than bread (for cutting or slicing bread B26B, B26D)