### 1/00 Mixing or kneading machines for the preparation of dough (domestic mixing or kneading machines A47J 43/00, A47J 44/00; mixing or kneading of substances in a plastic state in general B02B 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 aerating
- **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 rolling]
- **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 7/06 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

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  . Deposing, 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)