

## SECTION A — HUMAN NECESSITIES

### A21 BAKING; EQUIPMENT FOR MAKING OR PROCESSING DOUGHS; DOUGHS FOR BAKING

#### Note(s)

Processes using enzymes or micro-organisms in order to:

- i. liberate, separate or purify a pre-existing compound or composition, or to
- ii. treat textiles or clean solid surfaces of materials

are further classified in subclass C12S.

**A21B BAKERS' OVENS; MACHINES OR EQUIPMENT FOR BAKING** (domestic baking equipment A47J 37/00; combustion apparatus F23; domestic stoves or ranges being wholly or partly ovens F24B, F24C)

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| <p><b>1/00 Bakers' ovens</b></p> <p>1/02 • characterised by the heating arrangements</p> <p>1/04 • • Ovens heated by fire before baking only</p> <p>1/06 • • Ovens heated by radiators</p> <p>1/08 • • • by steam-heated radiators</p> <p>1/10 • • • by radiators heated by fluids other than steam</p> <p>1/14 • • • Arrangement of radiators</p> <p>1/22 • • • by electric radiators (A21B 2/00 takes precedence; electric heating elements H05B)</p> <p>1/24 • • Ovens heated by media flowing therethrough</p> <p>1/26 • • • by hot air</p> <p>1/28 • • • by gaseous combustion products</p> <p>1/33 • • Ovens heated directly by combustion products (A21B 1/04 takes precedence)</p> <p>1/36 • • Ovens heated directly by hot fluid (A21B 1/06, A21B 1/33 take precedence)</p> <p>1/40 • characterised by the means for regulating the temperature (temperature-sensitive elements G01K)</p> <p>1/42 • characterised by the baking surfaces moving during the baking (conveying in general B65G)</p> <p>1/44 • • with surfaces rotating in a horizontal plane</p> <p>1/46 • • with surfaces suspended from an endless conveyer or a revolving wheel</p> <p>1/48 • • with surfaces in the form of an endless band</p> <p>1/50 • characterised by having removable baking surfaces</p> <p>1/52 • Portable ovens; Collapsible ovens (travelling or camp cookers A47J 33/00)</p> | <p><b>2/00 Baking apparatus employing high-frequency or infra-red heating</b></p> <p><b>3/00 Parts or accessories of ovens</b></p> <p>3/02 • Doors; Flap gates (general features of doors E06B)</p> <p>3/04 • Air-treatment devices for ovens, e.g. regulating humidity</p> <p>3/07 • Charging or discharging ovens (A21B 3/18 takes precedence)</p> <p>3/10 • Means for illuminating ovens</p> <p>3/13 • Baking-tins; Baking forms</p> <p>3/15 • Baking sheets; Baking boards</p> <p>3/16 • Machines for cleaning or greasing baking surfaces</p> <p>3/18 • Discharging baked goods from tins (unpacking in general B65B 69/00)</p> <p><b>5/00 Baking apparatus for special goods; Other baking apparatus</b></p> <p>5/02 • Apparatus for baking hollow articles, waffles, pastry, biscuits, or the like</p> <p>5/03 • • for baking pancakes (frying pans A47J 37/10) [3]</p> <p>5/04 • Apparatus for baking cylindrical cakes on spits</p> <p>5/06 • Apparatus for baking in salt solution, e.g. for making pretzels</p> <p>5/08 • Apparatus for baking in baking fat or oil, e.g. for making doughnuts</p> <p><b>7/00 Baking plants</b></p> |
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**A21C MACHINES OR EQUIPMENT FOR MAKING OR PROCESSING DOUGHS; HANDLING BAKED ARTICLES MADE FROM DOUGH**

#### Subclass index

##### WORKING DOUGH BEFORE BAKING

- Mixing, kneading, homogenising.....1/00, 7/00
- Shaping.....3/00, 11/00
- Dividing; handling.....5/00, 9/00, 11/00

APPARATUS PERMITTING DOUGH TO RISE.....13/00

OTHER MACHINES OR EQUIPMENT FOR MAKING OR PROCESSING DOUGH.....14/00

HANDLING BAKED ARTICLES.....15/00

A21C

- 1/00 **Mixing or kneading machines for the preparation of dough** (domestic mixing or kneading machines A47J 43/00, A47J 44/00)
  - 1/02 • with vertically-mounted tools; Machines for whipping or beating
  - 1/04 • with inclined rotating mixing arms or levers
  - 1/06 • with horizontally-mounted mixing or kneading tools; Worm mixers
  - 1/08 • with rollers
  - 1/10 • with additional aerating apparatus for the manufacture of aerated doughs
  - 1/12 • for the preparation of dough directly from grain
  - 1/14 • Structural elements of mixing or kneading machines
- 3/00 **Machines or apparatus for shaping batches of dough before subdivision**
  - 3/02 • Dough-sheeters; Rolling-machines; Rolling-pins
  - 3/04 • Dough-extruding machines
  - 3/06 • Machines for coiling sheets of dough, e.g. for producing rolls
  - 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**
  - 5/02 • 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
- 7/00 **Machines which homogenise the subdivided dough by working other than by kneading**
  - 7/01 • with endless bands
  - 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
- 9/06 • Apparatus for filling pieces of dough such as doughnuts
- 9/08 • Depositing, arranging and conveying apparatus for handling pieces, e.g. sheets of dough
- 11/00 **Other machines for forming the dough into its final shape before cooking or baking**
  - 11/02 • Embossing machines
  - 11/04 • • with cutting and embossing rollers or drums
  - 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
  - 11/12 • Apparatus for slotting, slitting or perforating the surface of pieces of dough
    - 11/14 • • for star-like stamping
  - 11/16 • Extruding machines
    - 11/18 • • 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**
  - 13/02 • with endless conveyers
- 14/00 **Machines or equipment for making or processing dough, not provided for in other groups of this subclass [2006.01]**
- 15/00 **Apparatus for handling baked articles**
  - 15/02 • Apparatus for shaping or moulding baked wafers; Making multi-layer wafer sheets
  - 15/04 • Cutting or slicing machines or devices specially adapted for baked articles other than bread (for cutting or slicing bread B26B, B26D)

**A21D TREATMENT, e.g. PRESERVATION, OF FLOUR OR DOUGH FOR BAKING, e.g. BY ADDITION OF MATERIALS; BAKING; BAKERY PRODUCTS; PRESERVATION THEREOF [1, 2006.01]**

Subclass index

PRODUCTS BEFORE BAKING; TREATMENT OR CONSERVATION THEREOF.....	10/00, 2/00-8/00
BAKING OF DOUGH.....	8/00
BAKERY PRODUCTS; PRESERVATION OR REFRESHING THEREOF.....	13/00, 15/00, 17/00

- 2/00 **Treatment of flour or dough by adding materials thereto before or during baking** (A21D 10/00 takes precedence) [2, 2006.01]
  - 2/04 • • Oxygen; Oxygen-generating compounds, e.g. ozone, peroxides
  - 2/06 • • Reducing agents
  - 2/08 • by adding organic substances
    - 2/10 • • Hydrocarbons
    - 2/12 • • Halohydrocarbons
    - 2/14 • • Organic oxygen compounds
      - 2/16 • • • Fatty acid esters
      - 2/18 • • • Carbohydrates
      - 2/20 • • • Peroxides
- 2/02 • by adding inorganic substances

Note(s)

In groups A21D 2/02-A21D 2/40, in the absence of an indication to the contrary, a substance is classified in the last appropriate place.

- 2/22 • • • Ascorbic acid
- 2/24 • • Organic nitrogen compounds
- 2/26 • • • Proteins
- 2/28 • • Organic sulfur compounds
- 2/30 • • Organic phosphorus compounds
- 2/32 • • • Phosphatides
- 2/34 • • Animal material
- 2/36 • • Vegetable material
- 2/38 • • • Seed germs; Germinated cereals; Extracts thereof
- 2/40 • Apparatus for the chemical treatment of flour or dough
- 4/00 Preserving flour or dough before baking by storage in an inert atmosphere**
- 6/00 Other treatment of flour or dough before baking, e.g. cooling, irradiating, heating [2]**
- 8/00 Methods for preparing dough or for baking**  
(A21D 2/00 takes precedence)
- 8/02 • Methods for preparing dough; Treating dough prior to baking (machines or equipment for making or processing dough A21C)
- 8/04 • • treating dough with micro-organisms or enzymes
- 8/06 • Baking processes (bakers' ovens A21B)
- 8/08 • Prevention of sticking, e.g. to baking plates
- 8/10 • • using dusting powders
- 10/00 Batters, dough or mixtures before baking [2]**
- 10/02 • Ready-for-oven doughs, e.g. packaged doughs [2]
- 10/04 • Batters [2]
- 13/00 Finished or partly finished bakery products**
- 13/02 • Bread from whole meal or containing rough-ground grain or bran
- 13/04 • Bread from materials other than rye or wheat flour
- 13/06 • Bread with modified starch or protein content [2]
- 13/08 • Pastry, e.g. cake, biscuit, puff-pastry (icing or frosting or mixes therefor A23G 3/00)
- 15/00 Preserving finished bakery products; Improving**  
(refreshing A21D 17/00; packaging or wrapping bakery products B65B, e.g. B65B 23/10, B65B 25/16) [2]
- 15/02 • by cooling [2]
- 15/04 • by heat treatment [2]
- 15/06 • by irradiation [2]
- 15/08 • by coating [2]
- 17/00 Refreshing bakery products** (improving A21D 15/00) [2]