

## SECTION A — HUMAN NECESSITIES

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

**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)

#### 1/00 Bakers' ovens

- 1/02 • characterised by the heating arrangements
- 1/04 • • Ovens heated by fire before baking only
- 1/06 • • Ovens heated by radiators
- 1/08 • • • by steam-heated radiators
- 1/10 • • • by radiators heated by fluids other than steam
- 1/14 • • • Arrangement of radiators
- 1/22 • • • by electric radiators (A21B 2/00 takes precedence; electric heating elements H05B)
- 1/24 • • Ovens heated by media flowing therethrough
- 1/26 • • • by hot air
- 1/28 • • • by gaseous combustion products
- 1/33 • • Ovens heated directly by combustion products (A21B 1/04 takes precedence)
- 1/36 • • Ovens heated directly by hot fluid (A21B 1/06, A21B 1/33 take precedence)
- 1/40 • characterised by the means for regulating the temperature (temperature-sensitive elements G01K)
- 1/42 • characterised by the baking surfaces moving during the baking (conveying in general B65G)
- 1/44 • • with surfaces rotating in a horizontal plane
- 1/46 • • with surfaces suspended from an endless conveyer or a revolving wheel
- 1/48 • • with surfaces in the form of an endless band
- 1/50 • characterised by having removable baking surfaces
- 1/52 • Portable ovens; Collapsible ovens (travelling or camp cookers A47J 33/00)

#### 2/00 Baking apparatus employing high-frequency or infra-red heating

#### 3/00 Parts or accessories of ovens

- 3/02 • Doors; Flap gates (general features of doors E06B)
- 3/04 • Air-treatment devices for ovens, e.g. regulating humidity
- 3/07 • Charging or discharging ovens (A21B 3/18 takes precedence)
- 3/10 • Means for illuminating ovens
- 3/13 • Baking-tins; Baking forms
- 3/15 • Baking sheets; Baking boards
- 3/16 • Machines for cleaning or greasing baking surfaces
- 3/18 • Discharging baked goods from tins (unpacking in general B65B 69/00)

#### 5/00 Baking apparatus for special goods; Other baking apparatus

- 5/02 • Apparatus for baking hollow articles, waffles, pastry, biscuits, or the like
- 5/03 • • for baking pancakes (frying pans A47J 37/10) [3]
- 5/04 • Apparatus for baking cylindrical cakes on spits
- 5/06 • Apparatus for baking in salt solution, e.g. for making pretzels
- 5/08 • Apparatus for baking in baking fat or oil, e.g. for making doughnuts

#### 7/00 Baking plants

### 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

#### 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

## A21C

### 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]

#### 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.

- 2/02 • by adding inorganic substances
- 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
- 2/22 • • • 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	<b>Preserving flour or dough before baking by storage in an inert atmosphere</b>	13/00	<b>Finished or partly finished bakery products</b>
6/00	<b>Other treatment of flour or dough before baking, e.g. cooling, irradiating, heating [2]</b>	13/02	• Bread from whole meal or containing rough-ground grain or bran
8/00	<b>Methods for preparing dough or for baking</b> (A21D 2/00 takes precedence)	13/04	• Bread from materials other than rye or wheat flour
8/02	• Methods for preparing dough; Treating dough prior to baking (machines or equipment for making or processing dough A21C)	13/06	• Bread with modified starch or protein content [2]
8/04	• • treating dough with micro-organisms or enzymes	13/08	• Pastry, e.g. cake, biscuit, puff-pastry (icing or frosting or mixes therefor A23G 3/00)
8/06	• Baking processes (bakers' ovens A21B)	15/00	<b>Preserving finished bakery products; Improving</b> (refreshing A21D 17/00; packaging or wrapping bakery products B65B, e.g. B65B 23/10, B65B 25/16) [2]
8/08	• Prevention of sticking, e.g. to baking plates	15/02	• by cooling [2]
8/10	• • using dusting powders	15/04	• by heat treatment [2]
10/00	<b>Batters, dough or mixtures before baking [2]</b>	15/06	• by irradiation [2]
10/02	• Ready-for-oven doughs, e.g. packaged doughs [2]	15/08	• by coating [2]
10/04	• Batters [2]	17/00	<b>Refreshing bakery products</b> (improving A21D 15/00) [2]