**COOPERATIVE PATENT CLASSIFICATION**

**A HUMAN NECESSITIES**

**FOODSTUFFS; TOBACCO**

**A23 FOODS OR FOODSTUFFS; THEIR TREATMENT, NOT COVERED BY OTHER CLASSES**
*(NOTE omitted)*

**A23B PRESERVING, e.g. BY CANNING, MEAT, FISH, EGGS, FRUIT, VEGETABLES, EDIBLE SEEDS; CHEMICAL RIPENING OF FRUIT OR VEGETABLES; THE PRESERVED, RIPENED, OR CANNED PRODUCTS** *(preserving foodstuffs in general A23L 3/00; preserving in general A61L; applying food preservatives in packages B65D 81/28)*

**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.

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/00</td>
<td>General methods for preserving meat, sausages, fish or fish products</td>
</tr>
<tr>
<td>4/005</td>
<td>Preserving by heating</td>
</tr>
<tr>
<td>4/0053</td>
<td>{with gas or liquids, with or without shaping, e.g. in form of powder, granules or flakes}</td>
</tr>
</tbody>
</table>

**NOTE**

The heating means for the gas or liquid are not classified.

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/0056</td>
<td>{with packages, or with shaping in the form of blocks or portions}</td>
</tr>
<tr>
<td>4/01</td>
<td>by irradiation or electric treatment {with or without shaping, e.g. in form of powder, granules or flakes}</td>
</tr>
<tr>
<td>4/012</td>
<td>{with packages, or with shaping in the form of blocks or portions}</td>
</tr>
<tr>
<td>4/015</td>
<td>Preserving by irradiation or electric treatment without heating effect</td>
</tr>
<tr>
<td>4/02</td>
<td>Preserving by means of inorganic salts (apparatus therefor A23B 4/26, A23B 4/32)</td>
</tr>
<tr>
<td>4/021</td>
<td>{with apparatus adapted for gaseous preserving agents}</td>
</tr>
<tr>
<td>4/023</td>
<td>by kitchen salt or mixtures thereof with inorganic or organic compounds</td>
</tr>
<tr>
<td>4/0235</td>
<td>{with organic compounds or biochemical products}</td>
</tr>
<tr>
<td>4/027</td>
<td>by inorganic salts other than kitchen salt, or mixtures thereof with organic compounds, e.g. biochemical compounds</td>
</tr>
<tr>
<td>4/03</td>
<td>Drying; Subsequent reconstitution {drying apparatus in general F26B)}</td>
</tr>
<tr>
<td>4/031</td>
<td>{Apparatus for drying (A23B 4/037 takes precedence)}</td>
</tr>
<tr>
<td>4/033</td>
<td>{with addition of chemicals (A23B 4/037 takes precedence)}</td>
</tr>
<tr>
<td>4/037</td>
<td>Freeze-drying {i.e. cryodessication, lyophilisation; Apparatus therefor}</td>
</tr>
<tr>
<td>4/044</td>
<td>Smoking; Smoking devices</td>
</tr>
<tr>
<td>4/048</td>
<td>with addition of chemicals other than natural smoke</td>
</tr>
<tr>
<td>4/052</td>
<td>Smoke generators {Smoking apparatus (A23B 4/056 takes precedence)}</td>
</tr>
<tr>
<td>4/053</td>
<td>{Smoke generators using wood-pyrolysis or wood-friction}</td>
</tr>
<tr>
<td>4/0526</td>
<td>{Smoke generators or smoking apparatus using liquid smoke in gaseous or liquid form}</td>
</tr>
<tr>
<td>4/056</td>
<td>Smoking combined with irradiation or electric treatment, e.g. electrostatic smoking {Apparatus therefor}</td>
</tr>
<tr>
<td>4/06</td>
<td>Freezing; Subsequent thawing; Cooling</td>
</tr>
<tr>
<td>4/062</td>
<td>{the materials being transported through or in the apparatus with or without shaping, e.g. in the form of powder, granules or flakes (moving on the spot only A23B 4/066)}</td>
</tr>
<tr>
<td>4/064</td>
<td>{with packages or with shaping in the form of blocks or portions}</td>
</tr>
<tr>
<td>4/066</td>
<td>{the materials not being transported through or in the apparatus with or without shaping, e.g. in the form of powder, granules or flakes}</td>
</tr>
<tr>
<td>4/068</td>
<td>{with packages or with shaping in the form of blocks or portions}</td>
</tr>
<tr>
<td>4/07</td>
<td>Thawing subsequent to freezing</td>
</tr>
<tr>
<td>4/08</td>
<td>with addition of chemicals {or treatment with chemicals} before or during cooling {e.g. in the form of an ice coating or frozen block}</td>
</tr>
<tr>
<td>4/09</td>
<td>with direct contact between the food and the chemical, e.g. liquid N\textsubscript{2} at cryogenic temperature</td>
</tr>
<tr>
<td>4/10</td>
<td>Coating with a protective layer; Compositions or apparatus therefor {Coating apparatus in general F26B)}</td>
</tr>
<tr>
<td>4/12</td>
<td>Preserving with acids; Acid fermentation</td>
</tr>
<tr>
<td>4/14</td>
<td>Preserving with chemicals not covered by groups A23B 4/02 or A23B 4/12</td>
</tr>
<tr>
<td>4/16</td>
<td>in the form of gases, e.g. fumigation; Compositions or apparatus therefor</td>
</tr>
<tr>
<td>4/18</td>
<td>in the form of liquids or solids (apparatus therefor A23B 4/26, A23B 4/32)</td>
</tr>
</tbody>
</table>
A23B

4/20 ... Organic compounds; Microorganisms;
      Enzymes (acid fermentation A23B 4/12)
4/22 ... Microorganisms; Enzymes; {Antibiotics}
4/24 ... Inorganic compounds
4/26 ... Apparatus for preserving using liquids {Methods therefor}
4/28 ... by injection of liquids
4/285 ... {with inorganic salts}
4/30 ... by spraying of liquids
4/305 ... {with inorganic salts}
4/32 ... Apparatus for preserving using solids
4/325 ... {with inorganic salts}

5/00 Preservation of eggs or egg products (preserving dough or bakery products A21D)
5/005 ... Preserving by heating
5/0052 ... [in the shell]
5/0055 ... [without the shell]
5/0057 ... [with packages]
5/01 ... by irradiation or electric treatment
5/015 ... Preserving by irradiation or electric treatment
      without heating effect
5/02 ... Drying; Subsequent reconstitution
5/022 ... [Drying with use of gas or vacuum]
5/025 ... [Drying] with addition of chemicals (A23B 5/03,
      A23B 5/035 take precedence)
5/0255 ... [Drying with use of liquids, e.g. by extraction]
5/03 ... Freeze-drying {, i.e. cryodessication,
      lyophilisation; Apparatus therefor}
5/035 ... Spray-drying
5/04 ... Freezing; Subsequent thawing; Cooling
5/041 ... {Freezing or cooling without shell (A23B 5/05
      takes precedence)}
5/043 ... [with packages]
5/045 ... Thawing subsequent to freezing
5/05 ... [Freezing or cooling] with addition of chemicals
5/055 ... with direct contact between the food and the
      chemical, e.g. liquid nitrogen, at cryogenic
      temperature
5/06 ... Coating eggs with a protective layer; Compositions
      or apparatus therefor
5/065 ... [Apparatus for coating]
5/08 ... Preserving with chemicals
5/10 ... in the form of gases, e.g. fumigation;
      Compositions or apparatus therefor
5/12 ... in the form of liquids or solids
5/14 ... Organic compounds; Microorganisms;
      Enzymes
5/16 ... Microorganisms; Enzymes
5/18 ... Inorganic compounds
5/20 ... Apparatus for preserving using liquids
5/22 ... Apparatus for preserving using solids

7/00 Preservation or chemical ripening of fruit or
      vegetables
7/005 ... Preserving by heating
7/0053 ... [by direct or indirect contact with heating gases
      or liquids]
7/0056 ... [with packages]
7/01 ... by irradiation or electric treatment
7/012 ... [with packages]
7/015 ... Preserving by irradiation or electric treatment
      without heating effect
7/02 ... Dehydrating; Subsequent reconstitution (dried
      cooked potatoes A23L 19/12)
7/0205 ... [by contact of the material with fluids, e.g. drying
      gas or extracting liquids]
7/021 ... [Foam drying]
7/0215 ... [Post-treatment of dried fruits or vegetables]
7/022 ... with addition of chemicals {before or
      during drying, e.g. semi-moist products
      (A23B 7/024 - A23B 7/028 take precedence)
7/024 ... Freeze-drying {, i.e. cryodessication or
      lyophilisation}
7/026 ... Spray-drying
7/028 ... Thin layer-, drum- or roller-drying {or by contact
      with a hot surface}
7/03 ... Drying raw potatoes
7/04 ... Freezing; Subsequent thawing; Cooling
7/0408 ... [the material being transported through or in the
      apparatus with or without shaping, e.g. in the
      form of powder, granules or flakes (A23B 7/05
      takes precedence; moving on the spot only
      A23B 7/0425)]
7/0416 ... [with packages or with shaping in the form of
      blocks or portions]
7/0425 ... [the material not being transported through or in
      the apparatus, with or without shaping, e.g. in the
      form of powder, granules or flakes (A23B 7/05
      takes precedence)]
7/0433 ... [with packages or with shaping in the form of
      blocks or portions]
7/0441 ... [Treatment other than blanching preparatory to
      freezing]
7/045 ... Thawing subsequent to freezing
7/05 ... with addition of chemicals {or treatment with
      chemicals other than cryogenics, before or during
      cooling, e.g. in the form of an ice coating or
      frozen block}
7/055 ... with direct contact between the food and the
      chemical, e.g. liquid nitrogen, at cryogenic
      temperature
7/06 ... Blanching {machines therefor A23N 12/00}
7/08 ... Preserving with sugars (marmalade, jam or fruit
      jellies A23L 21/10)
7/085 ... [in a solution of sugar]
7/10 ... Preserving with acids; Acid fermentation
7/105 ... [Leaf vegetables, e.g. sauerkraut]
7/12 ... Apparatus for compressing sauerkraut
7/14 ... Preserving or ripening with chemicals not covered
      by groups A23B 7/08 or A23B 7/10
7/144 ... in the form of gases, e.g. fumigation;
      Compositions or apparatus therefor
      {cooling without control of atmosphere composition
      A23B 7/04)}
7/148 ... in a controlled atmosphere, e.g. partial vacuum,
      comprising only CO₂, N₂, O₂ or H₂O
7/152 ... in a controlled atmosphere comprising other
      gases in addition to CO₂, N₂, O₂ or H₂O {;
      Elimination of such other gases}
7/153 ... in the form of liquids or solids
7/154 ... Organic compounds; Microorganisms;
      Enzymes (acid fermentation A23B 7/10)
7/155 ... Microorganisms; Enzymes; {Antibiotics}
7/157 ... Inorganic compounds
7/158 ... Apparatus for preserving using liquids
7/159 ... Apparatus for preserving using solids

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Coating with a protective layer; Compositions or apparatus therefor (A23B 7/08 takes precedence)

Preservation of edible seeds, e.g. cereals

9/005 [Processes or apparatus using pressure variation or mechanical force, e.g. shock, acceleration, shear stress, contortion]

9/02 Preserving by heating
9/025 [with use of gases]
9/04 by irradiation or electric treatment
9/06 Preserving by irradiation or electric treatment without heating effect
9/08 Drying; Subsequent reconstitution
9/10 Freezing; Subsequent thawing; Cooling
9/12 Thawing subsequent to freezing
9/14 Coating with a protective layer; Compositions or apparatus therefor
9/16 Preserving with chemicals
9/18 in the form of gases, e.g. fumigation; Compositions or apparatus therefor
9/20 in a controlled atmosphere, e.g. partial vacuum, comprising only CO₂, N₂, O₂ or H₂O
9/22 in a controlled atmosphere comprising other gases in addition to CO₂, N₂, O₂ or H₂O
9/24 in the form of liquids or solids
9/26 Organic compounds; Microorganisms; Enzymes
9/28 Microorganisms; Enzymes; {Antibiotics}
9/30 Inorganic compounds
9/32 Apparatus for preserving using liquids
9/34 Apparatus for preserving using solids