**A21C**

**MACHINES OR EQUIPMENT FOR MAKING OR PROCESSING DOUGHS; HANDLING BAKED ARTICLES MADE FROM DOUGH**

**Definition statement**

*This place covers:*

Machines or Equipment, including e.g. hand tools or trays, for preparing, shaping and processing edible dough, namely for mixing, kneading, dividing, working, forming, shaping, cutting, proving, handling the dough before the baking, cooking or prebaking process with optional subsequent freezing.

Machines or equipment, including hand tools, for handling baked or prebaked articles made from edible dough.

**References**

**Limiting references**

*This place does not cover:*

| Dough and dough or bakery products as such, e.g. chemical treatment, recipes, preservation | A21D |
| Pasta and noodles as such | A23L 7/109 |

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

| Baker's ovens; machines or equipment for baking | A21B |
| Confectionary | A23G |
| Machines for shaping or working of foodstuff not fully covered by other subclasses, e.g. A21C | A23P |
| Machines for mixing | B01F |
| Machines for packaging articles | B65B |
| Machines for arranging, feeding or orienting biscuits | B65B 23/12 |
| Transport or storage devices in general | B65G |
| Measuring or metering of fluent solids other than dough by volume | G01F |

**Glossary of terms**

*In this place, the following terms or expressions are used with the meaning indicated:*

| Dough | is understood to be an edible substance being baked before consumption. The dough can be in a semi-liquid state, e.g. batter, or the dough can be a pasty. |
A21C 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))

Definition statement

This place covers:

Devices for the mixing and/or kneading of dough, this preparation only concerning the mechanical aspects of it, i.e. the mixing of the individual components to obtain a homogeneous dough and/or its subsequent mechanical kneading to achieve the desired consistency.

References

Limiting references

This place does not cover:

| In general, methods or devices which are directed to the chemical aspects of the dough preparation (e.g. chemical composition, use of specific additives, operating steps intended to modify the properties of the dough -consistency, leavening, development of the mass, preparation for the baking step, etc.-) not being directly related to the mixing and/or kneading machine | A21D |

Informative references

Attention is drawn to the following places, which may be of interest for search:

| Mixing devices in domestic bread preparation machines | A21B 7/00 |
| Household appliances | A47J 43/00 |
| Mixing in general | B01F |

Special rules of classification

In this subclass, as a general rule, the type of dough mixer is to be specified, as well as the specific structural elements which are characteristic of this kind of device.

Additional details of the mixing or kneading device for which no specific classification information can be found in A21C 1/00 are classified under the corresponding sub-groups of B01F (mixing in general).

A21C 1/006

{Methods}

Definition statement

This place covers:

Purely mechanical methods for operating a dough mixing or kneading machine.
Example:

A21C 1/02

with vertically-mounted tools; Machines for whipping or beating

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Mixing devices with relative displacement between stirrer and receptacle B01F 7/1605
A21C 1/083
{by calendering, i.e. working between rollers (using rollers for shaping dough A21C 3/02)}

Definition statement

This place covers:

For example:

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A21C 1/086

{having a receptacle rotating about a vertical axis cooperating with rotary rollers}

Definition statement

This place covers:

For example:

A21C 1/1465

{Drives}

References

Limiting references

This place does not cover:

Drive units, transmissions, brakes or couplings per se, i.e. when said elements and/or their details are the essential part of the described or claimed invention.

<table>
<thead>
<tr>
<th>Wind motors</th>
<th>F03D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydraulic motors</td>
<td>F15B</td>
</tr>
<tr>
<td>Brakes</td>
<td>F16D</td>
</tr>
<tr>
<td>Couplings</td>
<td>F16D</td>
</tr>
<tr>
<td>Transmissions</td>
<td>F16G, F16H</td>
</tr>
<tr>
<td>Electric motors</td>
<td>H02K</td>
</tr>
</tbody>
</table>

5
A21C 1/148

{Safety arrangements (A21C 1/1485 takes precedence)}

References

Limiting references

This place does not cover:

| Doors; Closures; Operating, e.g. safety, mechanisms of mixing or kneading machines | A21C 1/1485 |
| Safety devices in general | F16P |

A21C 1/1495

{Arrangements for cooling or heating (receptacles with means for guiding fluids per se A21C 1/149); Arrangements for applying super- or sub-atmospheric pressure}

Definition statement

This place covers:

Heating or cooling elements in combination with the mixing device, the specific details of the heat-exchange means not being of relevance.

References

Limiting references

This place does not cover:

| Receptacles with means for guiding fluids per se | A21C 1/149 |
| Heat exchangers in general | F28 |

A21C 3/00

Machines or apparatus for shaping batches of dough before subdivision

Definition statement

This place covers:

Machines for shaping dough, supplied in batches or continuously, to a semi-finished products, followed by sub-division and/or another shaping step.

Machines for twisting discrete strips of dough to obtain the final shape, e.g. for making pretzel.

Machines for twisting strips of dough followed by sub-division to obtain the final shape.

Machines for coiling sheets of dough to obtain the final shape or followed by sub-division.
References

Limiting references

This place does not cover:

Dough extruding machines producing a string already having the final shape, with or without following cutting step  A21C 11/16

A21C 5/00

Dough-dividing machines

Definition statement

This place covers:
Machines for dividing batches of dough or batter, i.e. semi-liquid dough, into equally sized portions.

References

Limiting references

This place does not cover:

Dough dividing apparatus followed by a merging, e.g. sheeting step to obtain a semi-finished product  A21C 3/10

A21C 5/006

{for dispensing liquid or semi-liquid dough, e.g. batter}

Definition statement

This place covers:
Dough-dividing machines for dividing liquid or semi-liquid dough by intermittently dispensing.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Batter dispensing and baking apparatus, e.g. for pancakes  A21B 5/02

A21C 5/02

with division boxes and ejection plungers

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Apparatus for measuring fluent solid materials with piston type measuring chambers  G01F 11/021
A21C 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}}

Special rules of classification

Dividers featuring cutter blades other than radial, e.g. having a square pattern, are also classified in this group.

A21C 7/00

Machines which homogenise the subdivided dough by working other than by kneading

Definition statement

This place covers:

Machines for working or rounding discrete dough portions.

References

Limiting references

This place does not cover:

- Kneading dough

A21C 1/00

Synonyms and Keywords

In patent documents, the following words/expressions are often used as synonyms:

- "working, rounding (E)", "wirken (G)" and "travailler (F)"

A21C 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

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Dough dividing machines which, as an additional feature, homogenise the dough

A21C 5/08

Special rules of classification

Machines combined with dividers featuring cutter blades other than radial, e.g. having a square pattern, are also classified in this group.
**A21C 9/00**

Other apparatus for handling dough or dough pieces

**Definition statement**

*This place covers:*

Other apparatus for handling (opposed to shaping or forming) dough or dough pieces in the broadest sense not covered by groups A21C 3/00 - A21C 7/00 and A21C 13/00 - A21C 14/00, such as:

- Apparatus for conveying, positioning dough or dough pieces or dough carriers, e.g. tins or pans.
- Apparatus for filling, e.g. by injection or folding, and apparatus for coating dough pieces, e.g. by brushing on a coating with a sweeping action, and laminating dough sheets.
- Other apparatus like hand tools, dust hoods, cleaning arrangements and trays.

**A21C 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)}

**References**

*Informative references*

Attention is drawn to the following places, which may be of interest for search:

<table>
<thead>
<tr>
<th>Coated foodstuff</th>
<th>A23P 20/00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breading apparatus</td>
<td>A23P 20/12</td>
</tr>
</tbody>
</table>

**A21C 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)}

**References**

*Informative references*

Attention is drawn to the following places, which may be of interest for search:

| Charging or discharging ovens | A21B 3/07 |

**A21C 11/00**

Other machines for forming the dough into its final shape before cooking or baking

**Definition statement**

*This place covers:*

Machines not covered in A21C 3/00 - A21C 9/00 performing the final shaping or slitting of the dough prior to baking or cooking, of e.g. pasta.
A21C 11/12
Apparatus for slotting, slitting or perforating the surface of pieces of dough

References
Informative references
Attention is drawn to the following places, which may be of interest for search:

| Slitting apparatus or tool per se | B26D 3/12 |

A21C 13/00
Provers, i.e. apparatus permitting dough to rise \{(testing dough properties G01N 33/10)\}

Definition statement
This place covers:
Climate controlled spaces or chambers for dough.

Relationships with other classification places
Prover combined with oven are classified also in A21B.

References
Informative references
Attention is drawn to the following places, which may be of interest for search:

| Prover combined with oven | A21B |
| Treating methods for dough prior to baking | A21D 8/02 |
| Testing dough properties | G01N 33/10 |

Synonyms and Keywords
In patent documents, the following words/expressions are often used as synonyms:

- "proofer, prover, proofing, proving, to proof, to prove, rise, rising (E)", "Gärschrank, gären, treiben, aufgehen (G)" and "fermenter, cuver (F)"

A21C 14/00
Machines or equipment for making or processing dough, not provided for in other groups of this subclass

Definition statement
This place covers:
Machines or equipment for making or processing dough, not provided for in other groups of this subclass, e.g. apparatus, devices and hand tools used for marking dough.
A21C 15/00
Apparatus for handling baked articles

Definition statement
This place covers:
Apparatus for handling and refining baked articles.
Apparatus for specifically cutting baked articles other than bread.

References
Informative references
Attention is drawn to the following places, which may be of interest for search:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharging baked goods from tins</td>
<td>A21B 3/18</td>
</tr>
<tr>
<td>Cutting or slicing bread</td>
<td>B26B, B26D</td>
</tr>
<tr>
<td>Machines for packaging articles in general</td>
<td>B65B</td>
</tr>
<tr>
<td>Machines for arranging, feeding, orientating and packaging biscuits</td>
<td>B65B 23/12</td>
</tr>
<tr>
<td>Transport and Storage Devices in general</td>
<td>B65G</td>
</tr>
</tbody>
</table>

A21C 15/005
(of which at least the dispensing part is hand-held, e.g. comprising a flexible container, pouch or gun-like applicator)

Definition statement
This place covers:
Apparatus for coating the surface of baked articles comprising a stationary part, e.g. a tank and a hand-held dispensing part, e.g. a gun-like applicator.
Apparatus for coating the surface of baked articles being entirely hand-held.

References
Informative references
Attention is drawn to the following places, which may be of interest for search:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piping Bags for confectionary</td>
<td>A23G 3/28</td>
</tr>
</tbody>
</table>

A21C 15/02
Apparatus for shaping or moulding baked wafers; Making multi-layer wafer sheets

References
Informative references
Attention is drawn to the following places, which may be of interest for search:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apparatus for baking wafers</td>
<td>A21B 5/02</td>
</tr>
</tbody>
</table>
Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

<table>
<thead>
<tr>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wafer</td>
<td>any sheet like baked product being, at ambient temperature, either rigid or soft</td>
</tr>
</tbody>
</table>

Synonyms and Keywords

In patent documents, the following words/expressions are often used as synonyms:
- "waffle, wafer (E)", "gaufre (F)" and "Waffel (G)"

A21C 15/04

Cutting or slicing machines or devices specially adapted for baked articles other than bread (for cutting or slicing bread B26B, B26D)

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutting e.g. pies in segments</td>
<td>B26D 3/24</td>
</tr>
<tr>
<td>Halving buns</td>
<td>B26D 3/30</td>
</tr>
</tbody>
</table>