

**CPC****COOPERATIVE PATENT CLASSIFICATION****A23N**

**MACHINES OR APPARATUS FOR TREATING HARVESTED FRUIT, VEGETABLES OR FLOWER BULBS IN BULK, NOT OTHERWISE PROVIDED FOR; PEELING VEGETABLES OR FRUIT IN BULK; APPARATUS FOR PREPARING ANIMAL FEEDING- STUFFS** (machines for cutting straw or fodder [A01F 29/00](#);

disintegrating, e.g. shredding, [B02C](#); severing, e.g. cutting, splitting, slicing [B26B](#), [B26D](#))

**A23N 1/00**

**Machines or apparatus for extracting juice** (preparation of non-alcoholic beverages, e.g. by adding ingredients to fruit or vegetable juices, [A23L 2/00](#); apparatus for making beverages [A47J 31/00](#){centrifuges [B04B](#)}; extracting presses [B30B](#))

[A23N 1/003](#)

- . {especially for citrus fruits}

[A23N 1/006](#)

- . {by electropasmolysis (preserving of fruit or vegetables by electropasmolytic treatment [A23B 7/015](#))}

[A23N 1/02](#)

- . combined with disintegrating or cutting

**A23N 3/00**

**Machines for coring or stoning fruit, characterised by their feeding device** ([A23N 4/00](#) takes precedence; {kitchen devices for stoning fruit [A47J 25/00](#)})

[A23N 3/02](#)

- . with feeder-drums

[A23N 3/04](#)

- . with endless feeder-belts

[A23N 3/06](#)

- . with feeder-tables

**A23N 4/00**

**Machines for stoning fruit or removing seed-containing sections from fruit, characterised by their stoning or removing device** (for peeling fruit and removing seed-containing sections [A23N 7/08](#); domestic devices for stoning fruit [A47J 23/00](#), for coring fruit [A47J 25/00](#))

[A23N 4/02](#)

- . for stoning fruit

[A23N 4/04](#)

- . . for peaches, plums, apricots or the like

[A23N 4/06](#)

- . . for cherries or the like ([A23N 4/04](#) takes precedence)

[A23N 4/08](#)

- . . for dates, olives or the like oblong fruits

[A23N 4/085](#)

- . . . {for olives}

[A23N 4/10](#)

- . . for fruit with very small pips, e.g. raisins

[A23N 4/12](#)

- . for coring fruit {(for household appliances [B26B](#))}

[A23N 4/14](#)

- . . for apples, pears or the like

[A23N 4/16](#)

- . . for tomatoes or the like

[A23N 4/18](#)

- . . for citrus fruits

[A23N 4/20](#)

- . . for pineapples

[A23N 4/22](#)

- . for both splitting and stoning

[A23N 4/24](#)

- . for removing seed-containing sections from cut fruit {(material in [A23N 4/12](#))}

**A23N 5/00**

**Machines for hulling, husking or cracking nuts** {(household nutcrackers [A47J 43/26](#))}

- A23N 5/002 . {for skinning nut kernels}
- A23N 5/004 . {for palmnuts ([A23N 5/002](#) and [A23N 5/08](#) take precedence)}
- A23N 5/006 . {for chestnuts ([A23N 5/002](#) and [A23N 5/08](#) take precedence)}
- A23N 5/008 . {for almonds ([A23N 5/002](#) and [A23N 5/08](#) take precedence)}
- A23N 5/01 . for peanuts
- A23N 5/03 . for coconuts ([A23N 5/08](#) takes precedence)
- A23N 5/08 . for removing fleshy or fibrous hulls of nuts (for peanuts [A23N 5/01](#))

**A23N 7/00**

**Peeling vegetables or fruit** (devices for skinning onions [A23N 15/08](#); {peeling by non-mechanical means [A23P](#)}; peeling machines of the household type [A47J 17/00](#))

- A23N 7/002 . {Peeling pineapples ([A23N 7/005](#) and [A23N 7/01](#) take precedence)}
- A23N 7/005 . {Peeling with steam}
- A23N 2007/007 . {Brush rollers for peeling fruit or vegetables}
- A23N 7/01 . using chemical substances, e.g.lye
- A23N 7/02 . Peeling potatoes, apples or similarly shaped vegetables or fruit ({[A23N 7/005](#) and [A23N 7/01](#) take precedence})
- A23N 7/023 .. {one by one}
- A23N 7/026 ... {Peeling machines therefor with rotary fruit holding spindles and fixed or movable peeler blades}
- A23N 7/04 . Peeling asparagus ({[A23N 7/005](#) and [A23N 7/01](#) take precedence})
- A23N 7/08 . for peeling fruit and removing seed-containing sections
- A23N 7/10 . Driving mechanisms

**A23N 11/00**

**Removing pith from stems**

**A23N 12/00**

**Machines for cleaning, blanching, drying or roasting fruits or vegetables, e.g. coffee, cocoa, nuts** (methods for treating, e.g. roasting, coffee or cocoa, [A23F](#), [A23G](#); cleaning, e.g. washing, or drying grain [B02B 1/00](#); separating solids from solids for cleaning [B07B](#); cleaning in general [B08B](#); heating devices per se, see the relevant classes, e.g. [F24](#); drying machines in general [F26B](#))

- A23N 12/005 . {for dry-cleaning}
- A23N 12/02 . for washing or blanching ([A23N 12/06](#) takes precedence; blanching methods [A23B 7/06](#))
- A23N 12/023 .. {for washing potatoes, apples or similarly shaped vegetables or fruit (washing grain [B02B 1/04](#))}
- A23N 12/026 ... {Stone-gatherers or cleaning devices for the washing machines}
- A23N 12/04 . for blanching
- A23N 12/06 . for washing or blanching, combined with subsequent drying
- A23N 12/08 . for drying or roasting ([A23N 12/06](#) takes precedence)
- A23N 12/083 .. {with stirring, vibrating or grinding devices}
- A23N 12/086 .. {with centrifuging devices}
- A23N 12/10 .. Rotary roasters
- A23N 12/12 .. Auxiliary devices for roasting machines

A23N 12/125 . . . {Accessories or details}

**A23N 15/00** **Machines or apparatus for other treatment of fruits or vegetables for human purposes; Machines or apparatus for topping or skinning flower bulbs** {(treatment of coffee, other than drying or roasting [A23F](#); treatment of cocoa [A23G 1/02](#))}

- A23N 15/001 . {for trimming artichokes}
- A23N 15/003 . {for trimming cauliflowers, broccoli or cabbages}
- A23N 15/005 . {for pricking peas or beans}
- A23N 2015/006 . {Singularising cherries or other clustered fruit and vegetables}
- A23N 2015/008 . {Sorting of fruit and vegetables}
- A23N 15/01 . for stripping Brussels` sprouts from stalks
- A23N 15/02 . for stemming, piercing, or stripping fruit {(for household appliances [A47J 21/00](#))}; Removing sprouts of potatoes
- A23N 15/025 . . {for stemming grapes}
- A23N 15/04 . Devices for topping fruit or vegetables (topping onions [A23N 15/08](#))
- A23N 15/045 . . {Devices for topping mushrooms}
- A23N 15/06 . Devices for other treatment of fruit e.g. marking, maturing, polishing
- A23N 15/08 . Devices for topping or skinning onions or flower bulbs
- A23N 15/10 . for shelling peas or beans
- A23N 15/12 . for snipping or stringing beans

**A23N 17/00** **Apparatus specially adapted for preparing animal feeding-stuffs** {(automatic devices for the distribution of liquid fodder for stock or game [A01K 5/0216](#); sucking apparatus for young stock [A01K 9/00](#))}

- A23N 17/001 . {by treating with chemicals, e.g. ammoniac, sodium hydroxide (processes [A23K 1/12](#))}
- A23N 17/002 . {for treating of meat, fish waste or the like}
- A23N 17/004 . {for treating by application of heat, e.g. by means of potato cookers (drying [F26B](#))}
- A23N 17/005 . {for shaping by moulding, extrusion, pressing, e.g. pellet-mills (processes [A23K 1/001](#); presses in general [B30B](#))}
- A23N 17/007 . {for mixing feeding-stuff components}
- A23N 17/008 . {for treating of silage, e.g. upgrading with water}
- A23N 17/02 . Fodder mashers (household implements for mashing potatoes or other foodstuffs [A47J 19/04](#))