

**CPC****COOPERATIVE PATENT CLASSIFICATION****B02C**

**CRUSHING, PULVERISING, OR DISINTEGRATING IN GENERAL; MILLING GRAIN** ({ household tools and machines for pulverising foodstuffs, e.g. coffee and spice mills [A47J 42/00](#); pharmaceutical mortars [A61J 3/02](#); mechanical processing of refuse and garbage [B03B 9/06](#); dressing mould materials by grinding [B22C 5/04](#); obtaining metallic powder by crushing, grinding or milling [B22F 9/04](#); { recovery of plastics by desintegration [B29B 17/00](#); crushing raw materials in starch making [C08B 30/02](#); beaters for papermaking [D21D 1/02](#); crushing devices specially for transport in mines [E21F 13/002](#); slag crushing devices [F23J 1/00](#); fuel milling devices in combustion apparatus [F23K 1/00](#); household devices for crushing coal [F24B 15/02](#); ice desintegrating devices [F25C 5/02](#)}) **C2011.10**

**B02C 1/00****Crushing or disintegrating by reciprocating members**

B02C 1/005

. {hydraulically or pneumatically operated}

B02C 1/02

. Jaw crushers or pulverisers

B02C 1/025

.. {Jaw clearance or overload control}

B02C 1/04

.. with single-acting jaws

B02C 1/043

... {with cooperating single acting jaws}

B02C 1/046

... {of the plural stage type}

B02C 1/06

.. with double-acting jaws

B02C 1/08

.. with jaws coacting with rotating roller

B02C 1/10

.. Shape or construction of jaws

B02C 1/12

. Mills with non-rotating spiked members

B02C 1/14

. Stamping mills

**B02C 2/00****Crushing or disintegrating by gyratory or cone crushers** {(with non-coaxial discs with intersecting axes [B02C 7/005](#))}

B02C 2002/002

. {the bowl being a driven element for providing a crushing effect }

B02C 2/005

. {Lining}

B02C 2/007

. {Feeding devices}

B02C 2/02

. eccentrically moved

B02C 2/04

.. with vertical axis

B02C 2/042

... {Moved by an eccentric weight}

B02C 2/045

... {and with bowl adjusting or controlling mechanisms ([B02C 2/042](#), [B02C 2/06](#) take precedence)}

B02C 2/047

... {and with head adjusting or controlling mechanisms ([B02C 2/042](#), [B02C 2/06](#) take precedence)}

B02C 2/06

... and with top bearing {(B02C 2/042 takes precedence)}

B02C 2/08

.. with horizontal axis

B02C 2/10

. concentrically moved; Bell crushers

**B02C 4/00**

**Crushing or disintegrating by roller mills** (with milling members in the form of rollers or balls co-operating with rings or discs [B02C 15/00](#); roller mills or roll refiners exclusively for chocolate [A23G 1/10](#), [A23G 1/12](#))

- B02C 4/02 . with two or more rollers
- B02C 4/04 . . specially adapted for milling paste-like material, e.g. paint, chocolate, colloids
- B02C 4/06 . . specially adapted for milling grain
- B02C 4/08 . . with co-operating corrugated or toothed crushing-rollers
- B02C 4/10 . with a roller co-operating with a stationary member
- B02C 4/12 . . in the form of a plate
- B02C 4/14 . . . specially adapted for milling paste-like material, e.g. paint, chocolate, colloids
- B02C 4/16 . . . specially adapted for milling grain
- B02C 4/18 . . in the form of a bar
- B02C 4/20 . . . wherein the roller is corrugated or toothed
- B02C 4/22 . . . specially adapted for milling paste-like material, e.g. paint, chocolate, colloids
- B02C 4/24 . . . specially adapted for milling grain
- B02C 4/26 . . in the form of a grid or grating
- B02C 4/28 . Details
- B02C 4/283 . . {Lateral sealing shields}
- B02C 4/286 . . {Feeding devices}
- B02C 4/30 . . Shape or construction of rollers
- B02C 4/305 . . . {Wear resistant rollers}
- B02C 4/32 . . Adjusting, applying pressure to, or controlling the distance between, milling members
  - B02C 4/34 . . . in mills wherein a roller co-operates with a stationary member
  - B02C 4/36 . . . in mills specially adapted for paste-like materials
  - B02C 4/38 . . . in grain mills
- B02C 4/40 . . Detachers, e.g. scrapers
- B02C 4/42 . . Driving mechanisms; Roller speed control
  - B02C 4/423 . . . {with vibrating or oscillating mechanisms}
  - B02C 4/426 . . . {Torque counterbalancing mechanisms}
- B02C 4/44 . . Cooling or heating rollers or bars

**B02C 7/00**

**Crushing or disintegrating by disc mills** (apparatus specially adapted for manufacture or treatment of cocoa or cocoa products exclusively [A23G 1/04](#))

- B02C 7/005 . {Crushers with non-coaxial toothed discs with intersecting axes}
- B02C 7/02 . with coaxial discs
  - B02C 7/04 . . with concentric circles of intermeshing teeth
  - B02C 7/06 . . with horizontal axis ([B02C 7/04](#) takes precedence)
  - B02C 7/08 . . with vertical axis ([B02C 7/04](#) takes precedence)
  - B02C 7/10 . with eccentric discs
  - B02C 7/11 . Details

B02C 7/12	..	Shape or construction of discs
B02C 7/13	...	for grain mills
B02C 7/14	..	Adjusting, applying pressure to, or controlling distance between, discs
B02C 7/16	..	Driving mechanisms
B02C 7/17	..	Cooling or heating of discs
B02C 7/175	.	Disc mills specially adapted for paste-like material, e.g. paint, chocolate, colloids
B02C 7/18	.	Disc mills specially adapted for grain
B02C 7/182	..	{with horizontal axis}
B02C 7/184	..	{with vertical axis}
B02C 7/186	..	{Adjusting, applying pressure to, or controlling distance between, discs}
B02C 7/188	..	{Driving mechanisms}
<b>B02C 9/00</b>		<b>Other milling methods or mills specially adapted for grain</b>
B02C 9/02	.	Cutting or splitting grain
B02C 9/04	.	Systems or sequences of operations; Plant
<b>B02C 11/00</b>		<b>Other auxiliary devices or accessories specially adapted for grain mills</b>
B02C 11/02	.	Breaking up amassed particles, e.g. flakes
B02C 11/04	.	Feeding devices
B02C 11/06	.	Arrangements for preventing fire or explosion (methods for preventing or extinguishing fires, devices therefor <a href="#">A62C</a> )
B02C 11/08	.	Cooling, heating, ventilating, conditioning with respect to temperature or water content (conditioning grain before milling <a href="#">B02B 1/08</a> ; air-conditioning or ventilating in general <a href="#">F24F</a> )
<b>B02C 13/00</b>		<b>Disintegrating by mills having rotary beater elements; {Hammer mills}</b>
B02C 13/02	.	with horizontal rotor shaft (with axial flow <a href="#">B02C 13/10</a> )
B02C 13/04	..	with beaters hinged to the rotor; Hammer mills
B02C 13/06	..	with beaters rigidly connected to the rotor
B02C 13/08	...	and acting as a fan
B02C 13/09	...	and throwing the material against an anvil or impact plate {(with vertical axis <a href="#">B02C 13/1807</a> )}
B02C 13/095	....	{with an adjustable anvil or impact plate}
B02C 13/10	.	with horizontal rotor shaft and axial flow
B02C 13/12	..	with vortex chamber
B02C 13/13	.	with horizontal rotor shaft and combined with sifting devices, e.g. for making powdered fuel
B02C 13/14	.	with vertical rotor shaft, e.g. combined with sifting devices
B02C 2013/145	..	{with fast rotating vanes generating vortices effecting material on material impact }
B02C 13/16	..	with beaters hinged to the rotor
B02C 13/18	..	with beaters rigidly connected to the rotor

B02C 13/1807	...	{the material to be crushed being thrown against an anvil or impact plate (with horizontal axis B02C 13/09; centrifugal acceleration of material through radially extending channels B02C 19/0025; centrifugal acceleration of material by means of an open top rotor B02C 19/0031)}
B02C 13/1814	....	{by means of beater or impeller elements fixed on top of a disc type rotor}
B02C 13/1821	.....	{the beater or impeller elements being rotatably fixed around their own axis}
B02C 13/1828	.....	{with dead bed protected beater or impeller elements}
B02C 13/1835	....	{by means of beater or impeller elements fixed in between an upper and lower rotor disc}
B02C 13/1842	.....	{with dead bed protected beater or impeller elements}
B02C 13/185	....	{Construction or shape of anvil or impact plate}
B02C 2013/1857	....	{rotating coaxially around the rotor shaft }
B02C 2013/1864	....	{rotatable around its own axis }
B02C 2013/1871	....	{vertically adjustable }
B02C 2013/1878	....	{radially adjustable }
B02C 2013/1885	....	{of dead bed type }
B02C 2013/1892	....	{cooled or heated }
B02C 13/20	.	with two or more co-operating rotors
B02C 13/205	..	{arranged concentrically}
B02C 13/22	.	with intermeshing pins; {Pin Disk Mills}
B02C 13/24	..	arranged around a vertical axis
B02C 13/26	.	Details
B02C 13/28	..	Shape or construction of beater elements
B02C 13/2804	...	{the beater elements being rigidly connected to the rotor}
B02C 2013/2808	...	{the beater elements are attached to disks mounted on a shaft }
B02C 2013/2812	...	{the beater elements are attached to a hollow cylindrical rotor }
B02C 2013/2816	...	{of chain, rope or cable type }
B02C 13/282	..	Shape or inner surface of mill-housings
B02C 2013/2825	...	{with fastening means for fixing lining members to the inner surface of mill-housings }
B02C 13/284	...	Built-in screens
B02C 13/286	..	Feeding or discharge
B02C 2013/28609	...	{Discharge means }
B02C 2013/28618	...	{Feeding means }
B02C 2013/28627	....	{of ram or pusher type }
B02C 2013/28636	....	{of conveyor belt type }
B02C 2013/28645	....	{of conveyor belt and cooperating roller type }
B02C 2013/28654	....	{of screw type }
B02C 2013/28663	....	{using rollers }
B02C 2013/28672	....	{Feed chute arrangements }
B02C 2013/28681	....	{Feed distributor plate for vertical mill }

- B02C 2013/2869 . . . {Arrangements of feed and discharge means in relation to each other }
- B02C 13/288 . . Ventilating, or influencing air circulation
- B02C 2013/29 . . {devices for manipulating beater elements }
- B02C 13/30 . . Driving mechanisms
- B02C 13/31 . . Safety devices or measures
  
- B02C 15/00** **Disintegrating by milling members in the form of rollers or balls co-operating with rings or discs {(high-speed drum mills B02C 19/11)}**
- B02C 15/001 . {Air flow directing means positioned on the periphery of the horizontally rotating milling surface}
- B02C 2015/002 . {combined with a classifier }
- B02C 15/003 . {Shape or construction of discs or rings}
- B02C 15/004 . {Shape or construction of rollers or balls}
- B02C 15/005 . . {Rollers or balls of composite construction}
- B02C 15/006 . {Ring or disc drive gear arrangement}
- B02C 15/007 . {Mills with rollers pressed against a rotary horizontal disc (with pendularly mounted rollers B02C 15/04)}
- B02C 2015/008 . {Roller drive arrangements }
- B02C 15/02 . Centrifugal pendulum-type mills
- B02C 15/04 . Mills with pressed pendularly-mounted rollers, e.g. spring pressed
- B02C 15/045 . . {pressed against the interior of a ring rotating in a vertical plane}
- B02C 15/06 . Mills with rollers forced against the interior of a rotary ring, e.g. under spring action (B02C 15/04 takes precedence)
- B02C 15/08 . Mills with balls or rollers centrifugally forced against the inner surface of a ring, the balls or rollers of which are driven by a centrally arranged member (B02C 15/02 takes precedence)
- B02C 15/10 . Mills with balls or rollers centrifugally forced against the inner surface of a ring, the balls or rollers of which are driven by other means than a centrally-arranged member
- B02C 15/12 . Mills with at least two discs {or rings} and interposed balls or rollers mounted like ball or roller bearings
- B02C 15/123 . . {with rings and interposed rollers}
- B02C 2015/126 . . {of the plural stage type }
- B02C 15/14 . Edge runners, e.g. Chile mills
- B02C 2015/143 . . {each runner pivot carrying more than one runner }
- B02C 2015/146 . . {Step-shaped runners }
- B02C 15/16 . with milling members essentially having different peripheral speeds and in the form of a hollow cylinder or cone and an internal roller or cone
  
- B02C 17/00** **Disintegrating by tumbling mills, i.e. mills having a container charged with the material to be disintegrated with or without special disintegrating members such as pebbles or balls (high-speed drum mills B02C 19/11; {drums for polishing or grinding B24B})**
- B02C 17/002 . {with rotary cutting or beating elements}
- B02C 17/005 . {the charge being turned over by magnetic forces}

- B02C 17/007 . {specially adapted for disintegrating refuse}
- B02C 17/02 . with perforated container
- B02C 17/04 . with unperforated container
- B02C 17/06 .. with several compartments
- B02C 2017/065 ... {with several compartments in the form of multiwell blocks }
- B02C 17/07 ... in radial arrangement
- B02C 17/08 .. with containers performing a planetary movement
- B02C 17/10 . with one or a few disintegrating members arranged in the container
- B02C 17/14 . Mills in which the charge to be ground is turned over by movements of the container other than by rotating, e.g. by swinging, vibrating, tilting {(mills provided with vibrators in general B02C 19/16)}
- B02C 17/16 . Mills in which a fixed container houses stirring means tumbling the charge
- B02C 17/161 .. {Arrangements for separating milling media and ground material}
- B02C 17/163 .. {Stirring means}
- B02C 2017/165 .. {with stirring means comprising more than one agitator }
- B02C 17/166 .. {of the annular gap type}
- B02C 17/168 .. {with a basket media milling device arranged in or on the container, involving therein a circulatory flow of the material to be milled}
- B02C 17/18 . Details
- B02C 17/1805 .. {Monitoring devices for tumbling mills}
- B02C 17/181 .. {Bearings specially adapted for tumbling mills}
- B02C 17/1815 .. {Cooling or heating devices}
- B02C 17/182 .. {Lids}
- B02C 17/1825 .. {Lifting devices (lifting devices associated with the lining for containers B02C 17/22)}
- B02C 17/183 .. {Feeding or discharging devices}
- B02C 17/1835 ... {Discharging devices combined with sorting or separating of material (B02C 17/186 takes precedence)}
- B02C 17/184 .... {with separator arranged in discharge path of crushing zone}
- B02C 17/1845 ..... {with return of oversize material to crushing zone}
- B02C 17/185 .... {with more than one separator}
- B02C 17/1855 .... {with separator defining termination of crushing zone, e.g. screen denying egress of oversize material}
- B02C 17/186 ... {Adding fluid, other than for crushing by fluid energy}
- B02C 17/1865 .... {after crushing}
- B02C 17/187 ..... {with recirculation of material to crushing zone}
- B02C 17/1875 .... {passing gas through crushing zone}
- B02C 17/188 ..... {characterised by point of gas entry or exit or by gas flow path}
- B02C 17/1885 ..... {the applied gas acting to effect material separation (B02C 17/1895 takes precedence)}
- B02C 17/189 ..... {with return of oversize material to crushing zone (B02C 17/1895 takes precedence)}

- B02C 17/1895 . . . . . {gas being recirculated to crushing zone}
- B02C 17/20 . . Disintegrating members
- B02C 17/205 . . . {Adding disintegrating members to the tumbling mill}
- B02C 17/22 . . Lining for containers
- B02C 17/225 . . . {using rubber or elastomeric material}
- B02C 17/24 . . Driving mechanisms
  
- B02C 18/00** **Disintegrating by knives or other cutting or tearing members which chop material into fragments {(tree stump comminutors [A01G 23/067](#))}**
- B02C 18/0007 . {specially adapted for disintegrating documents}
- B02C 2018/0015 . . {for disintegrating CDs, DVDs and/or credit cards }
- B02C 2018/0023 . . {Switching devices }
- B02C 2018/003 . . {Removing clips, pins or staples before disintegrating }
- B02C 2018/0038 . . {Motor drives }
- B02C 2018/0046 . . {Shape or construction of frames, housings or casings }
- B02C 2018/0053 . . {hand-operated }
- B02C 2018/0061 . . {with compacting devices for the disintegrated material }
- B02C 2018/0069 . . {with stripping devices }
- B02C 18/0076 . {with cutting or tearing members fixed on endless flexible members (without cutting or tearing members [B02C 19/0006](#))}
- B02C 18/0084 . {specially adapted for disintegrating garbage, waste or sewage}
- B02C 18/0092 . . {for waste water or for garbage}
- B02C 18/02 . with reciprocating knives
- B02C 18/04 . . Details
- B02C 18/06 . with rotating knives
- B02C 18/062 . . {with rotor elements extending axially in close radial proximity of a concentrically arranged slotted or perforated ring}
- B02C 18/065 . . {within rotatable bowls, e.g. meat cutters}
- B02C 18/067 . . {Tub-grinders}
- B02C 18/08 . . within vertical containers {([B02C 18/062](#), [B02C 18/065](#) take precedence)}
- B02C 18/083 . . . {with a disc rotor having generally radially extending slots or openings bordered with cutting knives}
- B02C 18/086 . . . {specially adapted for disintegrating plastics, e.g. cinematographic films (for plastic bottles [B02C 19/0093](#), disintegrating plastics [B29B 17/00](#))}
- B02C 18/10 . . . with drive arranged above container {([B02C 18/083](#) takes precedence)}
- B02C 18/12 . . . with drive arranged below container {([B02C 18/083](#) takes precedence)}
- B02C 18/14 . . within horizontal containers {([B02C 18/062](#), [B02C 18/065](#) take precedence)}
- B02C 18/141 . . . {with axial flow}
- B02C 18/142 . . . {with two or more inter-engaging rotatable cutter assemblies}
- B02C 18/143 . . . {with a disc rotor having generally radially extending slots or openings bordered with cutting knives}
- B02C 18/144 . . . {with axially elongated knives}



B02C 18/145	...	{with knives spaced axially and circumferentially on the periphery of a cylindrical rotor unit}
B02C 18/146	...	{with a rotor comprising a plurality of axially contiguous disc-like segments each having at least one radially extending cutting element}
B02C 2018/147	...	{of the plural stage type }
B02C 18/148	...	{specially adapted for disintegrating plastics, e.g. cinematographic films (for plastic bottles <a href="#">B02C 19/0093</a> , disintegrating plastics <a href="#">B29B 17/00</a> )}
B02C 18/16	..	Details
B02C 2018/162	...	{Shape or inner surface of shredder-housings }
B02C 2018/164	...	{Prevention of jamming and/or overload }
B02C 2018/166	...	{Lubricating the knives of the cutting mechanisms }
B02C 2018/168	...	{User safety devices or measures in shredders }
B02C 18/18	...	Knives; Mountings thereof
B02C 18/182	....	{Disc-shaped knives}
B02C 18/184	.....	{with peripherally arranged demountable cutting tips or elements}
B02C 18/186	....	{Axially elongated knives}
B02C 2018/188	....	{Stationary counter-knives; Mountings thereof }
B02C 18/20	....	Sickle-shaped knives
B02C 18/22	...	Feed or discharge means
B02C 2018/2208	....	{for weblike material }
B02C 18/2216	....	{Discharge means}
B02C 18/2225	....	{Feed means}
B02C 18/2233	.....	{of ram or pusher type}
B02C 18/2241	.....	{of conveyor belt type ( <a href="#">B02C 18/225</a> takes precedence)}
B02C 18/225	.....	{of conveyor belt and cooperating roller type}
B02C 18/2258	.....	{of screw type}
B02C 18/2266	.....	{of revolving drum type}
B02C 18/2275	.....	{using a rotating arm}
B02C 18/2283	.....	{using rollers ( <a href="#">B02C 18/225</a> takes precedence)}
B02C 18/2291	.....	{Feed chute arrangements}
B02C 18/24	...	Drives
B02C 18/26	.	with knives which both reciprocate and rotate
B02C 18/28	.	with spiked cylinders
B02C 18/30	.	Mincing machines with perforated discs and feeding worms
B02C 18/301	..	{with horizontal axis}
B02C 18/302	...	{with a knife-perforated disc unit}
B02C 18/304	...	{with several axially aligned knife-perforated disc units}
B02C 18/305	..	{Details}
B02C 2018/307	...	{Cooling arrangements in mincing machines }
B02C 2018/308	..	{with separating devices for hard material, e.g. bone }
B02C 18/32	..	with sharpening devices



- B02C 18/34 .. with means for cleaning the perforated discs
- B02C 18/36 .. Knives or perforated discs
- B02C 18/362 ... {Knives}
- B02C 18/365 ... {Perforated discs}
- B02C 2018/367 ... {Resiliently mounted knives or discs }
- B02C 18/38 .. Drives
- B02C 19/00** **Other disintegrating devices or methods** (for grain [B02C 9/00](#))
- B02C 19/0006 . {Crushing by endless flexible members (with cutting or tearing members [B02C 18/0076](#))}
- B02C 19/0012 . {Devices for disintegrating materials by collision of these materials against a breaking surface or breaking body and/or by friction between the material particles (also for grain)}
- B02C 19/0018 .. {using a rotor accelerating the materials centrifugally against a circumferential breaking surface (rotors with beater elements [B02C 13/09](#), [B02C 13/1807](#))}
- B02C 19/0025 ... {by means of a rotor with radially extending channels}
- B02C 19/0031 ... {by means of an open top rotor}
- B02C 19/0037 .... {with concentrically arranged open top rotors}
- B02C 19/0043 .. {the materials to be pulverised being projected against a breaking surface or breaking body by a pressurised fluid (jet mills [B02C 19/06](#))}
- B02C 19/005 .. {the materials to be pulverised being disintegrated by collision of, or friction between, the material particles (jet mills [B02C 19/06](#))}
- B02C 19/0056 . {specially adapted for specific materials not otherwise provided for}
- B02C 19/0062 .. {specially adapted for shredding scrap metal, e.g. automobile bodies}
- B02C 19/0068 .. {specially adapted for breaking-up fluorescent tubes}
- B02C 19/0075 .. {specially adapted for desintegrating medical waste (disposal of medical waste [B09B 3/0075](#), sterilisation of refuse [A61L 11/00](#))}
- B02C 19/0081 .. {specially adapted for breaking-up bottles}
- B02C 19/0087 ... {for glass bottles}
- B02C 19/0093 ... {for plastic bottles}
- B02C 19/06 . Jet mills
- B02C 19/061 .. {of the cylindrical type ([B02C 19/068](#) takes precedence)}
- B02C 19/063 .. {of the toroidal type ([B02C 19/068](#) takes precedence)}
- B02C 19/065 .. {of the opposed-jet type ([B02C 19/068](#) takes precedence)}
- B02C 19/066 .. {of the jet-anvil type ([B02C 19/068](#) takes precedence)}
- B02C 19/068 .. {of the fluidised-bed type}
- B02C 19/08 . Pestle and mortar
- B02C 19/10 . Mills in which a friction block is towed along the surface of a cylindrical or annular member
- B02C 19/11 . High-speed drum mills (for separating [B04B](#))
- B02C 19/16 . Mills provided with vibrators ({roller mills [B02C 4/423](#); tumbling mills [B02C 17/14](#))}
- B02C 19/18 . Use of auxiliary physical effects, e.g. ultrasonics, irradiation, for disintegrating
- B02C 2019/183 .. {Crushing by discharge of high electrical energy }

- B02C 19/186 .. {Use of cold or heat for disintegrating ([B02C 4/44](#), [B02C 7/17](#), [B02C 11/08](#) take precedence)}
- B02C 19/20 . Disintegrating by grating {(domestic food grating devices [A47J 43/25](#))}
- B02C 19/22 . Crushing mills with screw-shaped crushing means
  
- B02C 21/00** **Disintegrating plant with or without drying of the material (for grain [B02C 9/04](#))**
- B02C 21/002 . {using a combination of a roller mill and a drum mill}
- B02C 21/005 .. {the roller mill having cooperating rollers}
- B02C 21/007 . {using a combination of two or more drum or tube mills}
- B02C 21/02 . Transportable disintegrating plant
- B02C 2021/023 .. {for disintegrating material on the surface of the ground }
- B02C 21/026 .. {self-propelled}
  
- B02C 23/00** **Auxiliary methods or auxiliary devices or accessories specially adapted for crushing or disintegrating not provided for in preceding groups or not specially adapted to apparatus covered by a single preceding group ({specially adapted for grain mills [B02C 11/00](#);} separating or sorting in general [B03](#), [B04](#), [B07](#))**
- B02C 23/02 . Feeding devices ({for grain mills [B02C 11/04](#); for roller mills [B02C 4/286](#); transport devices in general [B65G](#))
- B02C 23/04 . Safety devices (in general [F16P](#); {for rotary mills [B02C 13/31](#)})
- B02C 23/06 . Selection or use of additives to aid disintegrating
- B02C 23/08 . Separating or sorting of material, associated with crushing or disintegrating ([B02C 23/18](#) takes precedence; {beater mills combined with sifting devices [B02C 13/13](#), [B02C 13/14](#); for tumbling mills [B02C 17/1835](#)})
- B02C 23/10 .. with separator arranged in discharge path of crushing or disintegrating zone
- B02C 23/12 ... with return of oversize material to crushing or disintegrating zone
- B02C 23/14 .. with more than one separator
- B02C 23/16 .. with separator defining termination of crushing or disintegrating zone, e.g. screen denying egress of oversize material
- B02C 2023/165 ... {Screen denying egress of oversize material }
- B02C 23/18 . Adding fluid, other than for crushing or disintegrating by fluid energy ({for tumbling mills [B02C 17/186](#);} feeding devices [B02C 23/02](#))
- B02C 23/20 .. after crushing or disintegrating
- B02C 23/22 ... with recirculation of material to crushing or disintegrating zone
- B02C 23/24 .. Passing gas through crushing or disintegrating zone ({[B02C 15/001](#)}, [B02C 23/38](#), [B02C 23/40](#) take precedence)
- B02C 23/26 ... characterised by point of gas entry or exit or by gas flow path
- B02C 23/28 ... gas moving means being integral with, or attached to, crushing or disintegrating element
- B02C 23/30 ... the applied gas acting to effect material separation ([B02C 23/34](#) takes precedence)
- B02C 23/32 ... with return of oversize material to crushing or disintegrating zone ([B02C 23/34](#) takes precedence)
- B02C 23/34 ... gas being recirculated to crushing or disintegrating zone

- B02C 23/36 . . the crushing or disintegrating zone being submerged in liquid
- B02C 23/38 . . in apparatus having multiple crushing or disintegrating zones
- B02C 23/40 . . with more than one means for adding fluid to the material being crushed or disintegrated

#### **B02C 25/00 Control arrangements specially adapted for crushing or disintegrating**

##### **B02C 2201/00 Codes relating to disintegrating devices adapted for specific materials**

- B02C 2201/02 . for reinforced concrete
- B02C 2201/04 . for used tyres
- B02C 2201/06 . for garbage, waste or sewage
- B02C 2201/063 . . for waste water or sewage
- B02C 2201/066 . . for garden waste

##### **B02C 2210/00 Codes relating to different types of disintegrating devices**

- B02C 2210/01 . Indication of wear on beaters, knives, rollers, anvils, linings and the like
- B02C 2210/02 . Features for generally used wear parts on beaters, knives, rollers, anvils, linings and the like