COOPERATIVE PATENT CLASSIFICATION

B PERFORMING OPERATIONS; TRANSPORTING

SHAPING

B30 PRESSES

B30B PRESSES IN GENERAL (producing ultra-high pressure or ultra-high pressure and high temperature to effect modifications of a substance, e.g. for making artificial diamonds B01J 3/00) { (compressing means for refuse receptacles B65F 1/1405) }

NOTE
This subclass provides for presses in general and also for those presses, for particular purposes, which are not provided for elsewhere.

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.

1/00 Presses, using a press ram, characterised by the features of the drive therefor, pressure being transmitted directly, or through simple thrust or tension members only, to the press ram or platen

1/001 . [by explosive charges]
1/002 . [by internal combustion mechanism]
1/003 . [by an elastic bag or diaphragm expanded by fluid pressure]
1/005 . [by thermal expansion or evaporation]
1/006 . [by a scissor or lazy-tongs mechanism]
1/007 . [using a fluid connection between the drive means and the press ram]
1/008 . [by a rod swinging between a fixed plane and the ram]
1/02 . by lever mechanism (by toggle mechanism B30B 1/10)
1/04 . . operated by hand or foot
1/06 . . operated by cams, eccentrics, or cranks
1/08 . . operated by fluid-pressure means
1/10 . . by toggle mechanism
1/103 . . [operated by screw means]
1/106 . . [operated by another toggle mechanism]
1/12 . . operated by hand or foot
1/14 . . operated by cams, eccentrics, or cranks
1/16 . . operated by fluid-pressure means
1/18 . . by screw means (B30B 9/3064 takes precedence)
1/181 . . [the screw being directly driven by an electric motor]
1/183 . . [Braking mechanisms for the return movement of the press ram]
1/185 . . [driven through friction roller means]
1/186 . . [Control arrangements]
1/188 . . [driven by a continuously rotatable flywheel with a coupling arranged between the flywheel and the screw]
1/20 . . driven by hand
1/22 . . driven through friction disc means
1/23 . . operated by fluid-pressure means
1/24 . . by rack-and-pinion means (B30B 9/3067 takes precedence)
1/26 . . by cams, eccentrics, or cranks
1/261 . . { by cams }
1/263 . . { work stroke adjustment means }
1/265 . . { using a fluid connecting unit between drive shaft and press ram }
1/266 . . { Drive systems for the cam, eccentric or crank axis }
1/268 . . { using a toggle connection between driveshaft and press ram }
1/28 . . the cam, crank, or eccentric being disposed below the lower platen or table and operating to pull down the upper platen or slide
1/30 . . by the pull of chains or ropes (B30B 9/3071 takes precedence)
1/32 . . by plungers under fluid pressure
1/323 . . { using low pressure long stroke opening and closing means, and high pressure short stroke cylinder means }
1/326 . . { operated by hand or foot, e.g. using hydraulic jacks }
1/34 . . involving a plurality of plungers acting on the platen (gas operated B30B 1/38)
1/36 . . { having telescoping plungers (gas operated B30B 1/38) }
1/38 . . wherein the plungers are operated by pressure of a gas, e.g. steam, air
1/40 . . by wedge means
1/42 . . by magnetic means, e.g. electromagnetic

3/00 Presses characterised by the use of rotary pressing members, e.g. rollers, rings, discs

3/005 . { Roll constructions }
3/002 . co-operating with a fixed member
3/004 . co-operating with one another, e.g. with co-operating cones
3/045 . . { with co-operating cones }
5/00  **Presses characterised by the use of pressing means other than those mentioned in the preceding groups**

5/02  . wherein the pressing means is in the form of a flexible element, e.g. diaphragm, urged by fluid pressure

5/04  . wherein the pressing means is in the form of an endless band

5/06  . co-operating with another endless band

5/062  . . . [urged by directly-acting fluid pressure]

5/065  . . . [using anti-friction means for the pressing band]

5/067  . . . [using anti-friction roller means]

7/00  **Presses characterised by a particular arrangement of the pressing members**

7/02  . having several platens arranged one above the other

7/023  . . . [Feeding or discharging means]

7/026  . . . [Spacer elements; Changing means therefor]

7/04  . wherein pressing is effected in different directions simultaneously or in turn

9/00  **Presses specially adapted for particular purposes**

9/02  . for squeezing-out liquid from liquid-containing material, e.g. juice from fruits, oil from oil-containing material (kitchen equipment A47F; filtering, e.g. straining solids from liquids, using presses in combination with filtering elements B01D; expelling water from textile fabrics or laundry D06C, D06F; drying F26 ; clothes presses D06F 69/00, D06F 71/00)

9/04  . . . using press rams

9/042  . . . [co-operating with casings mounted on a movable carrier, e.g. turntable]

9/045  . . . [co-operating with several adjacent casings]

9/047  . . . [Control arrangements]

9/06  . . . co-operating with permeable casings or strainers

9/062  . . . [Extrusion presses]

9/065  . . . [for making briquettes, e.g. from paper]

9/067  . . . [with a retractable abutment member closing one end of the press chamber]

9/08  . . . co-operating with a rotary casing

9/10  . . . without use of a casing

9/105  . . . [using a press ram co-operating with an intermittently moved endless conveyor]

9/12  . . . using pressing worms or screws co-operating with a permeable casing

9/121  . . . [Screw constructions]

9/122  . . . [Means preventing the material from turning with the screw or returning towards the feed hopper]

9/124  . . . [using a rotatable and axially movable screw]

9/125  . . . [Control arrangements]

9/127  . . . [Feed means]

9/128  . . . [Vertical or inclined screw presses]

9/14  . . . operating with only one screw or worm

9/16  . . . operating with two or more screws or worms

9/163  . . . [working in different chambers]

9/166  . . . [the screws being coaxially disposed in the same chamber]

9/18  . . . with means for adjusting the outlet for the solid

9/20  . . . using rotary pressing members, other than worms or screws, e.g. rollers, rings, discs

9/202  . . . [with co-operating cones]

9/205  . . . [using a roller with radially arranged vanes dividing the pressing space in separate chambers]

9/207  . . . [Roller-and-ring presses]

9/22  . . . using a flexible member, e.g. diaphragm, urged by fluid pressure

9/225  . . . [the diaphragm being urged by a fluid]

9/24  . . . using an endless pressing band

9/241  . . . [co-operating with a drum or roller]

9/242  . . . [comprising compartments which are recurrently constricted and expanded]

9/243  . . . [The squeezing-out being performed in several stages]

9/245  . . . [the edges of the band being folded over the material]

9/246  . . . [The material being conveyed around a drum between pressing bands]

9/247  . . . [Pressing band constructions]

9/248  . . . [Means for sealing the press zone]

9/26  . . . Permeable casings or strainers

9/262  . . . [means disposed in the casing facilitating the squeezing-out of liquid]

9/265  . . . [Press cloths]

9/267  . . . [Strainer bars; Spacers]

9/28  . . . [for forming shaped articles (from material in powder, granular, or paste form, e.g. briquetting presses B30B 11/00)]

9/30  . . . for baling; Compression boxes therefor (baling hay, straw, or the like A01F)

9/3003  . . . [Details]

9/3007  . . . [Control arrangements]

9/301  . . . [Feed means]

9/3014  . . . [Ejection means]

9/3017  . . . [Odor eliminating means]

9/3021  . . . [Press rams]

9/3025  . . . [Extrusion chambers with adjustable outlet opening]

9/3028  . . . [Retaining dogs]

9/3032  . . . [Press boxes]

9/3035  . . . [Means for conditioning the material to be pressed, e.g. paper shredding means]

9/3039  . . . [Fluid removing means]

9/3042  . . . [Containers provided with, or connectable to, compactor means]

9/3046  . . . [Containers with built-in compactor means]

9/305  . . . [Drive arrangements for the press ram]

9/3053  . . . [Hand- or foot-operated presses]

9/3057  . . . [Fluid-driven presses]

9/306  . . . [Mechanically-driven presses]

9/3064  . . . [by screw means]

9/3067  . . . [by rack-and-pinion means]

9/3071  . . . [by the pull of chains or ropes]

9/3075  . . . [with press boxes on a movable carrier, e.g. turntable]

9/3078  . . . [with precompression means]

9/3082  . . . [with compression means other than rams performing a rectilinear movement]

9/3085  . . . [using a stationary press ram co-operating with a movable press box]
11/00 Presses specially adapted for forming shaped articles from material in particulate or plastic state, e.g. briquetting presses, tableting presses, etc.

11/001 . . . [using a flexible element, e.g. diaphragm, urged by fluid pressure; isostatic presses]
11/002 . . . [isostatic press chambers; Press stands therefor]
11/003 . . . [using a roller with radially arranged vanes dividing the pressing space in separate chambers]
11/004 . . . [involving the use of very high pressures, (for the formation of artificial diamonds or boronitrides B01J 3/065)]
11/005 . . . [Control arrangements]
11/006 . . . [for roller presses]
11/007 . . . [using a plurality of pressing members working in different directions]
11/008 . . . [Applying a magnetic field to the material]
11/02 . . . using a ram exerting pressure on the material in a moulding space
11/022 . . . [whereby the material is subjected to vibrations]
11/025 . . . [whereby the material is transferred into the press chamber by relative movement between a ram and the press chamber]
11/027 . . . [Particular press methods or systems]
11/04 . . . co-operating with a fixed mould
11/06 . . . each charge of the material being compressed against the previously formed body
11/08 . . . co-operating with moulds carried by a turntable
11/085 . . . [for multi-layer articles]
11/10 . . . [intermittently rotated]
11/12 . . . co-operating with moulds on the circumference of a rotating drum
11/14 . . . co-operating with moulds on a movable carrier other than a turntable or a rotating drum
11/16 . . . using pocketed rollers, e.g. two co-operating pocketed rollers
11/165 . . . [Roll constructions]
11/18 . . . using profiled rollers
11/20 . . . Roller-and-ring machines, i.e. with roller disposed within a ring and co-operating with the inner surface of the ring
11/201 . . . [for extruding material]
11/202 . . . [Ring constructions]
15/0094 . [Press load monitoring means (B30B 15/281 takes precedence)]
15/02 . Dies; Inserts therefor; Mounting thereof; Moulds (extrusion dies B30B 11/22)
15/022 . . [Moulds for compacting material in powder, granular of pasta form]
15/024 . . [using elastic mould parts]
15/026 . . [Mounting of dies, platens or press rams]
15/028 . . [Loading or unloading of dies, platens or press rams]
15/04 . . Frames; Guides
15/041 . . [Guides]
15/042 . . [Prestressed frames]
15/044 . . [Means preventing deflection of the frame, especially for C-frames]
15/045 . . [Mountings of press columns]
15/047 . . [C-shaped frames (with means for preventing deflection B30B 15/044)]
15/048 . . [Laminated frame structures]
15/06 . . Platens or press rams
15/061 . . [Cushion plates]
15/062 . . [Press plates]
15/064 . . . [with heating or cooling means]
15/065 . . [Press rams]
15/067 . . . [with means for equalizing the pressure exerted by a plurality of press rams]
15/068 . . . [Drive connections, e.g. pivotal]
15/08 . . Accessory tools, e.g. knives; Mountings therefor
15/10 . . Brakes specially adapted for presses (brakes in general F16D)
15/12 . . Control arrangements for mechanically-driven presses
15/142 . . [controlling the brake or the clutch]
15/144 . . [for stopping the press shaft in a predetermined angular position]
15/146 . . [for synchronising a line of presses]
15/148 . . [Electrical control arrangements]
15/16 . . Control arrangements for fluid-driven presses (pumps per se F04; hydraulic accumulators per se F15B; valves per se F16K; control devices in general G05)
15/161 . . [controlling the ram speed and ram pressure, e.g. fast approach speed at low pressure, low pressing speed at high pressure]
15/163 . . [for accumulator-driven presses]
15/165 . . [for pneumatically-hydraulically driven presses]
15/166 . . [Electrical control arrangements]
15/168 . . [for pneumatically driven presses (B30B 15/165 takes precedence)]
15/18 . . controlling the reciprocating motion of the ram
15/183 . . [Controlling the filling of the press cylinder during the approach stroke of the ram, e.g. prefill-valves]
15/186 . . [Controlling the return movement of the ram, e.g. decompression valves]
15/20 . . controlling the speed of the ram, e.g. the speed of the approach, pressing or return strokes
15/22 . . controlling the degree of pressure applied by the ram during the pressing stroke
15/24 . . . [controlling the movement of a plurality of actuating members to maintain parallel movement of the platen or press beam]
15/245 . . . [using auxiliary cylinder and piston means as actuating members]
15/26 . . Programme control arrangements
15/28 . . Arrangements for preventing distortion of, or damage to, presses or parts thereof
15/281 . . . [overload limiting devices (in general F16H 35/10)]
15/282 . . . [using a breakage element]
15/284 . . . [releasing fluid from a fluid chamber subjected to overload pressure]
15/285 . . . [preventing a full press stroke if there is an obstruction in the working area]
15/287 . . . [preventing unintended ram movement, e.g. using blocking devices]
15/288 . . . [preventing over-run or reverse-run of the press shaft]
15/30 . . Feeding material to presses
15/302 . . . [Feeding material in particulate or plastic state to moulding presses]
15/304 . . . [by using feed frames or shoes with relative movement with regard to the mould or moulds]
15/306 . . . . [for multi-layer articles]
15/308 . . . . [in a continuous manner, e.g. for roller presses, screw extrusion presses]
15/32 . . Discharging presses
15/34 . . Heating or cooling presses or parts thereof