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)}

Definition statement

This place covers:
Presses in general and also those presses, for particular purposes, which are not provided for elsewhere.

Relationships with other classification places

The preceding image includes references to B22F 3/00, B28B 3/00, B29C, B29C 43/00, and B28C47/00.

B30B 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

Definition statement

This place covers:
Presses using a press ram characterised by the features of the drive therefor in general and also those presses using a press ram characterised by the features of the drive therefor, for particular purposes, which are not provided for elsewhere. The driving system is decomposed, if necessary, in simple fluid actuation units (e.g. a cylinder/piston) and simple mechanical force multipliers (e.g. a lever, a toggle, a screw/nut system).
References

Informative references

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

<table>
<thead>
<tr>
<th>Description</th>
<th>CPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shaping by press-cutting; Perforating - Drive of the tools</td>
<td>B21D 28/002</td>
</tr>
<tr>
<td>Hammers; Forging machines with hammers or die jaws acting by impact; Drives for hammers</td>
<td>B21J 7/20</td>
</tr>
<tr>
<td>Forging presses; Drives for forging presses</td>
<td>B21J 9/10</td>
</tr>
<tr>
<td>Shearing machines or shearing devices cutting by blades which move parallel to themselves characterised by drives or gearings therefor</td>
<td>B23D 15/12</td>
</tr>
<tr>
<td>Arrangements for operating and controlling machines or devices for cutting, cutting-out, stamping-out, punching, perforating, or severing by means other than cutting - Means for actuating the cutting member to effect the cut</td>
<td>B26D 5/08</td>
</tr>
</tbody>
</table>

Special rules of classification

Rule 1

Plural driving units of the same kind applying force in parallel to the ram or platen are classified together with the single driving unit per se. Exceptions to rule 1 are clearly indicated.

Rule 2

Plural driving units applying force in series to the ram or platen are classified according to the driving unit in direct contact or in contact through simple thrust or tension members only, to the press ram or platen. Exceptions to rule 2 are clearly indicated.

B30B 1/001

{by explosive charges}

Definition statement

This place covers:

Presses for which the fluid pressure is generated by explosive charges in a cylinder/piston unit or in a chamber. Illustrative example of subject matter classified in this group:
References

Informative references

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Class Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shaping without cutting otherwise than using rigid devices or tools or</td>
<td>B21D 26/08</td>
</tr>
<tr>
<td>yieldable or resilient pads by applying fluid pressure by shock waves</td>
<td></td>
</tr>
<tr>
<td>generated by explosives</td>
<td></td>
</tr>
<tr>
<td>Shearing machines or shearing devices cutting by blades which move</td>
<td>B23D 15/145</td>
</tr>
<tr>
<td>parallel to themselves characterised by drives or gearings therefor</td>
<td></td>
</tr>
<tr>
<td>actuated by fluid or gas pressure - actuated by explosion</td>
<td></td>
</tr>
<tr>
<td>Explosive welding</td>
<td>B23K 20/08</td>
</tr>
<tr>
<td>Gearing</td>
<td>F16H</td>
</tr>
</tbody>
</table>

B30B 1/002

{by internal combustion mechanism}

Definition statement

This place covers:

Presses for which the fluid pressure is generated by internal combustion mechanism in a cylinder/piston unit. Illustrative example of subject matter classified in this group:
References

Informative references

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

| Drives for hammers operated by internal combustion | B21J 7/26 |

B30B 1/003

{by an elastic bag or diaphragm expanded by fluid pressure}

Definition statement

This place covers:

Presses for which the fluid is injected in a bag or in a chamber presenting a diaphragm. Illustrative example of subject matter classified in this group:
Definition statement

This place covers:
Illustrative example of subject matter classified in this group:

US-A-4260582
B30B 1/006
{by a scissor or lazy-tongs mechanism}

Definition statement

This place covers:
Presses for which one part of the scissor or lazy-tongs mechanism is in direct contact or in contact through simple thrust or tension members only, to the press ram or platen. Illustrative example of subject matter classified in this group:

DE-A-4013107

B30B 1/007
{using a fluid connection between the drive means and the press ram}

Definition statement

This place covers:
Presses for which the driving unit is classified per se. Illustrative example of subject matter classified in this group:
B30B 1/008

{by a rod swinging between a fixed plane and the ram}

Definition statement

This place covers:

Presses for which one end of the rod follows a path on a fixed plane and the other end of the rod is in direct contact or in contact through simple thrust or tension members only, to the press ram or platen. Illustrative example of subject matter classified in this group:
B30B 1/02

by lever mechanism (by toggle mechanism B30B 1/10)

Definition statement

This place covers:

Presses for which one part of the lever is in direct contact or in contact through simple thrust or tension members only, to the press ram or platen.

Illustrative example of subject matter classified in this group:
References

Informative references

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

Gearings comprising primarily only links or levers, with or without slides

B30B 1/04

operated by hand or foot

Definition statement

This place covers:

Presses for which another part of the lever is in direct or indirect contact with the hand or the foot of an operator applying a force. Illustrative example of subject matter classified in this group:
operated by cams, eccentric, or cranks

Definition statement

This place covers:

Presses for which another part of the lever is in direct or indirect contact with a cam, eccentric, or crank unit applying a force. Illustrative example of subject matter classified in this group:

DE-A-10241107
**B30B 1/08**

**operated by fluid-pressure means**

**Definition statement**

This place covers:

Presses for which another part of the lever is in direct or indirect contact with a fluid-pressure unit applying a force. Illustrative example of subject matter classified in this group:

US-A-4329865

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**B30B 1/10**

**by toggle mechanism**

**Definition statement**

This place covers:

Presses for which one part of the toggle is in direct contact or in contact through simple thrust or tension members only, to the press ram or platen. The driving force is applied transversally to the line that can be drawn between the two ends of the two bars system constituting the toggle. Illustrative example of subject matter classified in this group:
References

*Informative references*

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

<table>
<thead>
<tr>
<th>Arrangements for operating and controlling machines or devices for cutting, cutting-out, stamping-out, punching, perforating, or severing by means other than cutting. Means for actuating the cutting member to effect the cut Toggle-link means</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B26D 5/18</strong></td>
</tr>
</tbody>
</table>

**B30B 1/103**

*(operated by screw means)*

**Definition statement**

*This place covers:*

Presses for which another part of the toggle is in direct or indirect contact with a screw/nut unit applying a force. Illustrative example of subject matter classified in this group:
**B30B 1/106**

{operated by another toggle mechanism}

**Definition statement**

*This place covers:*

Presses for which another part of the toggle is in direct or indirect contact with another toggle unit applying a force. The driving unit of the second toggle is classified, if necessary, per se in the groups [B30B 1/103, B30B 1/106] or [B30B 1/12 - B30B 1/18]. Illustrative example of subject matter classified in this group:
B30B 1/12 operated by hand or foot

Definition statement

This place covers:

Presses for which another part of the toggle is in direct or indirect contact with the hand or the foot of an operator applying a force. Illustrative example of subject matter classified in this group:
B30B 1/14

operated by cams, eccentrics, or cranks

Definition statement

This place covers:

Presses for which another part of the toggle is in direct or indirect contact with a cam, eccentric, or crank unit applying a force. Illustrative example of subject matter classified in this group:
B30B 1/16

operated by fluid-pressure means

Definition statement

This place covers:

Presses for which another part of the toggle is in direct or indirect contact with a fluid-pressure unit applying a force. Illustrative example of subject matter classified in this group:
Definition statement

This place covers:

Presses for which one part of the screw/nut unit is in direct contact or in contact through simple thrust or tension members only, to the press ram or platen. Illustrative example of subject matter classified in this group:
WO-A-2009073240

References

Informative references

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

| Gearings comprising primarily only cams, cam-followers and screw-and-nut mechanisms | F16H 25/00 |

B30B 1/181

{the screw being directly driven by an electric motor}

Definition statement

This place covers:

Presses for which the rotor part of the electric motor is fixed directly to a part of the screw/nut unit. Illustrative example of subject matter classified in this group:
Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-3886859
B30B 1/185
{driven through friction roller means}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
DE-A-2915540

B30B 1/186
{Control arrangements}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
B30B 1/188
{driven by a continuously rotatable flywheel with a coupling arranged between the flywheel and the screw}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
**B30B 1/20**

Driven by hand

**Definition statement**

*This place covers:*

Presses for which another part of the screw/nut unit is in direct or indirect contact with the hand or the foot of an operator applying a force. Illustrative example of subject matter classified in this group:
Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 1/22 (continued)

US-A-4062284

FIG. 1

B30B 1/23

operated by fluid-pressure means

Definition statement

This place covers:

Presses for which another part of the screw/nut unit is in direct or indirect contact with a fluid-pressure unit applying a force. Illustrative example of subject matter classified in this group:
**Definition statement**

*This place covers:*

Presses for which one part of the rack-and-pinion unit is in direct contact or in contact through simple thrust or tension members only, to the press ram or platen. Illustrative example of subject matter classified in this group:
References

Informative references

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

| Arrangements for operating and controlling machines or devices for cutting, cutting-out, stamping-out, punching, perforating, or severing by means other than cutting. Means for actuating the cutting member to effect the cut rack-and-pinion means | B26D 5/083 |
| Gearings comprising essentially only toothed gears or friction members and not capable of conveying indefinitely-continuing rotary motion for interconverting rotary motion and reciprocating motion comprising a rack | F16H 19/04 |

B30B 1/26

by cams, eccentrics, or cranks

Definition statement

This place covers:

Presses for which one part of the cam, eccentric, or crank unit is in direct contact or in contact through simple thrust or tension members only, to the press ram or platen. Illustrative example of subject matter classified in this group:
References

Informative references

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

| Arrangements for operating and controlling machines or devices for cutting, cutting-out, stamping-out, punching, perforating, or severing by means other than cutting. Means for actuating the cutting member to effect the cut Crank and pin means | B26D 5/14 |
| Crankshafts, eccentric-shafts; Cranks, eccentric | F16C 3/04 |
| Gearings comprising primarily only links or levers, with or without slides - Crank gearings; Eccentric gearings | F16H 21/18 |

B30B 1/261

{by cams}

Definition statement

This place covers:

Presses for which the driving unit is a cam system. Illustrative example of subject matter classified in this group:
References

Informative references

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

<table>
<thead>
<tr>
<th>Arrangements for operating and controlling machines or devices for cutting, cutting-out, stamping-out, punching, perforating, or severing by means other than cutting. Means for actuating the cutting member to effect the cut Cam means</th>
</tr>
</thead>
<tbody>
<tr>
<td>B26D 5/16</td>
</tr>
</tbody>
</table>

B30B 1/263

{work stroke adjustment means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
DE-A-3507328

References

Informative references

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

| Shafts Crankshafts, eccentric-shafts; Cranks; Eccentrics Adjustable cranks or eccentrics | F16C 3/28 |

B30B 1/265

{using a fluid connecting unit between drive shaft and press ram}

Definition statement

This place covers:

Presses for which the fluid connecting associated with another type of driving unit are classified in B30B 1/007. Illustrative example of subject matter classified in this group:
B30B 1/266

{Drive systems for the cam, eccentric or crank axis}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
**B30B 1/268**

{using a toggle connection between driveshaft and press ram}

**Definition statement**

*This place covers:*

Presses for which the driving force follows the line that can be drawn between the two ends of the two bars system constituting the toggle. Illustrative example of subject matter classified in this group:
B30B 1/268 (continued)

US-A-2633094

B30B 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

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 1/30

by the pull of chains or ropes {([B30B 9/3071 takes precedence])}

**Definition statement**

*This place covers:*

Presses for which one part of a chain or a rope is in direct contact or in contact through simple thrust or tension members or pulleys only, to the press ram or platen. Illustrative example of subject matter classified in this group:
B30B 1/30 (continued)

DE-U-8706683

B30B 1/32

by plungers under fluid pressure

Definition statement

This place covers:

Presses for which the fluid actuation is generated by a means connected to the cylinder/plunger unit.

Illustrative example of subject matter classified in this group:
References

Informative references

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

| Drives for forging presses operated by hydraulic or liquid pressure | B21J 9/12 |
| Shearing machines or shearing devices cutting by blades which move parallel to themselves characterised by drives or gearings therefor actuated by fluid or gas pressure | B23D 15/14 |
| Arrangements for operating and controlling machines or devices for cutting, cutting-out, stamping-out, punching, perforating, or severing by means other than cutting. Means for actuating the cutting member to effect the cut. Fluid-pressure means | B26D 5/12 |
| Systems acting by means of fluids in general; fluid-pressure actuators, e.g. servo-motors; details of fluid-pressure systems, not otherwise provided for | F15B |

B30B 1/323

{using low pressure long stroke opening and closing means, and high pressure short stroke cylinder means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 1/326
{operated by hand or foot, e.g. using hydraulic jacks}

**Definition statement**

*This place covers:*

Presses for which an operator applies the driving force on the pump with the hand or the foot.

Illustrative example of subject matter classified in this group:

D-A-E102008006105

**B30B 1/34**

involving a plurality of plungers acting on the platen (gas operated **B30B 1/38**)

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
Special rules of classification
Exception to rule 1 indicated in B30B 1/00.

B30B 1/36

having telescoping plungers (gas operated B30B 1/38)

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
wherein the plungers are operated by pressure of a gas, e.g. steam, air

**Definition statement**

*T his place covers:*

Illustrative example of subject matter classified in this group:
by wedge means

Definition statement

This place covers:

Presses for which one part of the wedge unit is in direct contact or in contact through simple thrust or tension members only, to the press ram or platen. Illustrative example of subject matter classified in this group:

US-A-4535689
**B30B 1/42**

by magnetic means, e.g. electromagnetic

**Definition statement**

*This place covers:*

Presses for which one part of the magnetic, e.g. electro-magnetic unit is in direct contact or in contact through simple thrust or tension members only, to the press ram or platen. Illustrative example of subject matter classified in this group:

US-A-3783662

**References**

**Informative references**

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

| Arrangements for operating and controlling machines or devices for cutting, cutting-out, stamping-out, punching, perforating, or severing by means other than cutting Means for actuating the cutting member to effect the cut Electric, magnetic, piezo-electric, electro-magnetic means | B26D 5/086 |
B30B 3/00
Presses characterised by the use of rotary pressing members, e.g. rollers, rings, discs

Definition statement
This place covers:
Presses characterised by the use of rotary pressing members in general and also those presses characterised by the use of rotary pressing members, for particular purposes, which are not provided for elsewhere. Illustrative example of subject matter classified in this group:

DE-U-29606115
References

Informative references

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

| Baling presses with compression means other than rams performing a rectilinear movement | B30B 9/3082 |
| Crushing or disintegrating by roller mills | B02C 4/00 |
| Wet presses Pressure rolls | D21F 3/08 |
| Papermaking machine - Pressure rolls - Calendars | D21G 1/00 |

B30B 3/005

{Roll constructions}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 3/02
co-operating with a fixed member

Definition statement

This place covers:
Illustrative example of subject matter classified in this group:

B30B 3/04

coo-operating with one another, e.g. with co-operating cones

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

DE-A-102007031879

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B30B 3/045

{with co-operating cones}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 3/06

arranged one within another, e.g. with a roller disposed within a rotating ring and co-operating with the inner surface thereof

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:

US-A-4444100
References

Informative references

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

| Presses specially adapted for forming shaped articles from material in particulate or plastic state, e.g. briquetting presses, tableting presses - Roller-and-ring machines, i.e. with roller disposed within a ring and co-operating with the inner surface of the ring | B30B 11/20 |

B30B 5/00

Presses characterised by the use of pressing means other than those mentioned in the preceding groups

Definition statement

This place covers:

Presses characterised by the use of pressing means other than those mentioned in the preceding groups B30B 1/00 - B30B 3/00 in general and also those presses characterised by the use of pressing means other than those mentioned in the preceding groups B30B 1/00 - B30B 3/00, for particular purposes, which are not provided for elsewhere. Illustrative example of subject matter classified in this group:

DE-A-3731769
**References**

**Informative references**

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

| Shaping without cutting otherwise than using rigid devices or tools or yieldable or resilient pads, by applying fluid pressure | B21D 26/02 |
| Methods or apparatus for laminating characterised by the pressing technique, e.g. using action of vacuum or fluid pressure and subgroups | B32B 37/10 |

**B30B 5/02**

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

**Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:

DE-A-2039930

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**References**

**Informative references**

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

| Presses using a press ram by an elastic bag or diaphragm expanded by fluid pressure | B30B 1/003 |
| Presses for squeezing-out liquid from liquid-containing material using a flexible member, e.g. diaphragm, urged by fluid pressure | B30B 9/22 |
Lining or sheathing applied by "rubber" bag or diaphragm  B29C 63/16

**B30B 5/04**

wherein the pressing means is in the form of an endless band

**Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:

![Illustrative Example](image)

**References**

**Informative references**

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baling presses for straw, hay or the like - Rotobalers, i.e. machines for forming cylindrical bales by winding and pressing</td>
<td>A01F 15/07</td>
</tr>
<tr>
<td>Veneer presses; Press plates; Plywood presses - with endless arrangement of moving press plates, belts, or the like</td>
<td>B27D 3/04</td>
</tr>
<tr>
<td>Manufacture of substantially flat articles, e.g. boards, from particles or fibres characterised by using continuously acting presses having endless belts or chains moved within the compression zone</td>
<td>B27N 3/24</td>
</tr>
<tr>
<td>Methods or apparatus for laminating - Pressing using at least one press band</td>
<td>B32B 37/1027</td>
</tr>
</tbody>
</table>
B30B 5/06
co-operating with another endless band

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
WO-A-8903288
B30B 5/062

{urged by directly-acting fluid pressure}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:


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B30B 5/065

{using anti-friction means for the pressing band}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

B30B 5/067
{using anti-friction roller means}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
DE-A-102005053920

B30B 7/00
Presses characterised by a particular arrangement of the pressing members

Definition statement
This place covers:
Presses characterised by a particular arrangement of the pressing members in general and also those presses characterised by a particular arrangement of the pressing members, which are not provided for elsewhere.

B30B 7/02
having several platens arranged one above the other

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
References

Informative references

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veneer presses; Press plates; Plywood presses - with a plurality of press plates, i.e. multi-platen hot presses</td>
<td>B27D 3/02</td>
</tr>
<tr>
<td>Manufacture of substantially flat articles, e.g. boards, from particles or fibres. Moulding or pressing characterised by using platen-presses</td>
<td>B27N 3/20</td>
</tr>
<tr>
<td>Methods or apparatus for laminating characterised by the pressing technique</td>
<td>B32B 37/10</td>
</tr>
</tbody>
</table>

**B30B 7/023**

{Feeding or discharging means}

**Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:
B30B 7/026

{Spacer elements; Changing means therefor}

Definition statement

This place covers:
Illustrative example of subject matter classified in this group:

JP-A-2000042789
**B30B 7/04**

wherein pressing is effected in different directions simultaneously or in turn

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:


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**References**

**Informative references**

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

| Presses for baling with pre-compression means | B30B 9/3078 |
| Presses specially adapted for forming shaped articles from material in particulate or plastic state, e.g. briquetting presses, tableting presses using a plurality of pressing members working in different directions | B30B 11/007 |
| Forging machines working with several hammers | B21J 7/14 |

---

**B30B 9/00**

Presses specially adapted for particular purposes

**Definition statement**

*This place covers:*

Presses specially adapted for particular purposes in general and also those presses specially adapted for particular purposes, which are not provided for elsewhere.
B30B 9/02

for squeezing-out liquid from liquid-containing material, e.g. juice from fruits, oil from oil-containing material (kitchen equipment A47J; 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})

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

DE1627844

DE1627844

US-A-2009249967

Fig. 1

Fig. 4A

Fig. 4B
B30B 9/04
using press rams

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

JP-A-2002086299
B30B 9/042
{co-operating with casings mounted on a movable carrier, e.g. turntable}
Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
US-A-4303412

B30B 9/045
{co-operating with several adjacent casings}
Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
B30B 9/047

{Control arrangements}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 9/06

co-operating with permeable casings or strainers

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 9/062

{Extrusion presses}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

GB-A-1477418

B30B 9/065

{for making briquettes, e.g. from paper}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
**B30B 9/067**

(with a retractable abutment member closing one end of the press chamber)

**Definition statement**

_This place covers:_

Illustrative example of subject matter classified in this group:
B30B 9/08
co-operating with a rotary casing

Definition statement

This place covers:
Illustrative example of subject matter classified in this group:

FR-A-2236655
**B30B 9/10**

without use of a casing

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:


![Figure 1](image)

**B30B 9/105**

{using a press ram co-operating with an intermittently moved endless conveyor}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
**B30B 9/12**

using pressing worms or screws co-operating with a permeable casing

**Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:

GB-A-2019237

---

**B30B 9/121**

{Screw constructions}

**Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:
(Means preventing the material from turning with the screw or returning towards the feed hopper)

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

DE-A-2736810
**B30B 9/124**

{using a rotatable and axially movable screw}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:

DE-U-8302259
B30B 9/125
{Control arrangements}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
DE-A-19902480

B30B 9/127
{Feed means}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
B30B 9/128

{Vertical or inclined screw presses}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
B30B 9/16

operating with two or more screws or worms

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:

DE-A-1627975
**B30B 9/163**

{working in different chambers}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:

US-A-4253390

---

**B30B 9/166**

{the screws being coaxially disposed in the same chamber}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
B30B 9/18

with means for adjusting the outlet for the solid

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

FR-A-2269605

Fig. 1

Fig. 2
**B30B 9/20**

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

**Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:

WO-A-9426388

**Special rules of classification**

The use is classified in this group. Details that are relevant for rolls in general are classified in B30B 3/00.

**B30B 9/202**

{with co-operating cones}

**Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:
{using a roller with radially arranged vanes dividing the pressing space in separate chambers}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
B30B 9/207

{Roller-and-ring presses}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:

US-A-4683816
B30B 9/22

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

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-5451415

B30B 9/225

{the diaphragm being tubular}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 9/24

using an endless pressing band

Definition statement

This place covers:
Illustrative example of subject matter classified in this group:

US-A-5203996
B30B 9/241
{co-operating with a drum or roller}

Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group:

DE-U-9306718
B30B 9/242
{comprising compartments which are recurrently constricted and expanded}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-3631794
B30B 9/243

{The squeezing-out being performed in several stages}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-4181616
**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:

US-A-3805692
B30B 9/246

{The material being conveyed around a drum between pressing bands}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:


---

B30B 9/247

{Pressing band constructions}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
GB-A-2004763

B30B 9/248

{Means for sealing the press zone}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:

US-A-5545333
B30B 9/26

Permeable casings or strainers

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-5351612

B30B 9/262

{means disposed in the casing facilitating the squeezing-out of liquid}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

DE-A-3802037
**B30B 9/267**

{Strainer bars; Spacers}

**Definition statement**

*This place covers:*  
Illustrative example of subject matter classified in this group:

US-A-4289065

![Diagram](image)

**B30B 9/28**

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

**Definition statement**

*This place covers:*  
Illustrative example of subject matter classified in this group:
B30B 9/30

for baling; Compression boxes therefor (baling hay, straw, or the like A01F)

Definition statement

This place covers:
Illustrative example of subject matter classified in this group:

DE-A-3238642
References

Informative references

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miscellaneous auxiliary devices operating on articles or materials to be</td>
<td>B65B 63/02</td>
</tr>
<tr>
<td>packaged and not otherwise provided for - for compressing or compacting</td>
<td></td>
</tr>
<tr>
<td>articles or materials prior to wrapping or insertion in containers or</td>
<td></td>
</tr>
<tr>
<td>receptacles</td>
<td></td>
</tr>
<tr>
<td>Refuse receptacles Other constructional features Compressing means</td>
<td>B65F 1/1405</td>
</tr>
<tr>
<td>incorporated in, or specially adapted for, refuse receptacles</td>
<td></td>
</tr>
<tr>
<td>Vehicles particularly adapted for collecting refuse with devices for</td>
<td>B65F 3/20</td>
</tr>
<tr>
<td>charging, distributing or compressing refuse in the interior of the tank of</td>
<td></td>
</tr>
<tr>
<td>a refuse vehicle with charging pistons, plates, or the like</td>
<td></td>
</tr>
</tbody>
</table>

B30B 9/3003

{Details}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

DE-U-20119524

![Diagram](image_url)
References

Informative references

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

| Bundling particular articles presenting special problems using string, wire, or narrow tape or band; Baling fibrous material, e.g. peat, not otherwise provided for | B65B 27/12 |

Special rules of classification

This group is for the details not specifically mentioned in the hierarchical lower groups.

B30B 9/3007

{Control arrangements}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-2010071572
**B30B 9/301**

**{Feed means}**

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:

![Diagram](image)

**Special rules of classification**

This group is directed to the means for loading loose material in the baler.

**B30B 9/3014**

**{Ejection means}**

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
Special rules of classification

The ejection means should be part of the baling installation.
B30B 9/3017

{Odor eliminating means}

Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group:

US-A-5389346

Special rules of classification

The means should be integrated in the baling installation.
B30B 9/3021

{Press rams}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-3863779
B30B 9/3025
{Extrusion chambers with adjustable outlet opening}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:

US-A-3866529

B30B 9/3028
{Retaining dogs}

Definition statement
This place covers:
Holding or gripping elements which are located in the wall of the pressing chamber to retain the compressed material.
Illustrative example of subject matter classified in this group:

**B30B 9/3032**

**{Press boxes}**

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
B30B 9/3035

{Means for conditioning the material to be pressed, e.g. paper shredding means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

DE-U-202007004201
B30B 9/3039

{Fluid removing means}

**Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:

DE-A-10250053
B30B 9/3042

{Containers provided with, or connectable to, compactor means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

FR-A-2572370

B30B 9/3046

{Containers with built-in compactor means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 9/305
{Drive arrangements for the press ram}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:

US-A-3899967

B30B 9/3053
{Hand- or foot-operated presses}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
GB-A-2315404

B30B 9/3057

{Fluid-driven presses}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 9/306
{Mechanically-driven presses}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

![Diagram](image-url)
**B30B 9/3064**

(by screw means)

**Definition statement**

*This place covers:

Illustrative example of subject matter classified in this group:

![Diagram](image-url)
B30B 9/3067
{by rack-and-pinion means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 9/3071
{by the pull of chains or ropes}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
**B30B 9/3075**

{with press boxes on a movable carrier, e.g. turntable}

**Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:

![Diagram of press box system](image1)

**Fig. 1**

**B30B 9/3078**

{with precompression means}

**Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:
B30B 9/3082
{with compression means other than rams performing a rectilinear movement}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
B30B 9/3085

{using a stationary press ram co-operating with a movable press box}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
DE-U-20207348

**B30B 9/3089**

{Extrusion presses}

**Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:

US-A-5611268
**B30B 9/3092**

{with two or more stationary press boxes co-operating alternately with a press ram or simultaneously with press rams}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:

DE-U-20108195
B30B 9/3096
{the means against which, or wherein, the material is compacted being retractable}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:

Fig 2

**B30B 9/32**

for consolidating scrap metal or for compacting used cars

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:

US-A-5655443

---

**B30B 9/321**

{for consolidating empty containers, e.g. cans}

**Definition statement**

*This place covers:*

Apparatus for consolidating metal, plastic and/or cardboard containers.
Illustrative example of subject matter classified in this group:

DE-A-19705136

References

Informative references

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

<table>
<thead>
<tr>
<th>Recovery of plastics or other constituents of waste material containing plastics by agglomeration or compacting Compacting complete waste articles Hollow articles, e.g. bottles</th>
<th>B29B 17/0052</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refuse receptacles specially adapted for segregated refuse collecting, e.g. receptacles with several compartments; Combination of receptacles</td>
<td>B65F 1/0033</td>
</tr>
<tr>
<td>Mechanisms actuated by objects other than coins to free or to actuate vending, hiring, coin or paper currency dispensing or refunding apparatus by returnable containers i.e. reverse vending systems in which a user is rewarded for returning a container that serves as a token of value, e.g. bottles - by fluid containers, e.g. bottles, cups, gas containers</td>
<td>Q07F 7/0609</td>
</tr>
</tbody>
</table>
B30B 9/322
{between jaws pivoting with respect to each other}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-5158013
B30B 9/325
{between rotary pressing members, e.g. rollers, discs}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:

![Diagram 1](image1)
![Diagram 2](image2)
![Diagram 3](image3)

B30B 9/326
{provided with shearing means for the scrap metal, or adapted to co-operate with a shearing machine}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
References

Informative references

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

| Shearing machines or shearing devices covered by none or more than one of the groups B23D 15/00 - B23D 29/00; Combinations of shearing machines - Cutting-up scrap | B23D 31/008 |
**B30B 9/327**

{for briquetting scrap metal}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:

![Illustrative example](image)

**References**

*Informative references*

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

<table>
<thead>
<tr>
<th>Manufacture of articles from scrap or waste metal particles</th>
<th>B22F 8/00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary treatment of ores or scrap Agglomerating; Briquetting; Binding; Granulating - of metal scrap or alloys</td>
<td>C22B 1/248</td>
</tr>
</tbody>
</table>
B30B 9/328
{for making furnace charges}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:

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

Preliminary treatment of ores or scrap Agglomerating; Briquetting; Binding; Granulating - of metal scrap or alloys

B30B 11/00
Presses specially adapted for forming shaped articles from material in particulate or plastic state, e.g. briquetting presses, tabletting presses (for clay or mixtures containing cement B28B; for plastics materials B29)

Definition statement
This place covers:
Presses specially adapted for forming shaped articles from material in particulate or plastic state in general and also those presses specially adapted for forming shaped articles from material in particulate or plastic state, which are not provided for elsewhere.
B30B 11/001
{using a flexible element, e.g. diaphragm, urged by fluid pressure; Isostatic presses}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
DE-A-3115470

FIG. 1
B30B 11/002
{Isostatic press chambers; Press stands therefor}

Definition statement

This place covers:
Illustrative example of subject matter classified in this group:
References

Informative references

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

<table>
<thead>
<tr>
<th>Topic</th>
<th>Classifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal powder HIP</td>
<td>B22F 3/003, B22F 3/15</td>
</tr>
<tr>
<td>Pressure vessels</td>
<td>F16J</td>
</tr>
<tr>
<td>Autoclaves furnaces</td>
<td>F27B, B01J 3/04</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>HIP</td>
<td>hot isostatic press</td>
</tr>
<tr>
<td>CIP</td>
<td>cold isostatic press</td>
</tr>
</tbody>
</table>

B30B 11/003

{using a roller with radially arranged vanes dividing the pressing space in separate chambers}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

EP-A-0280518

![FIG. 1](image)
B30B 11/004

{involving the use of very high pressures, (for the formation of artificial diamonds or boronitrides B01J 3/065)}

Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group:

US-A-5780139

![Diagram](image-url)
JP-A-63036829

B30B 11/005

{Control arrangements}

Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group:
B30B 11/006
{for roller presses}

Definition statement

This place covers:
Illustrative example of subject matter classified in this group:

JP-A-9070697
B30B 11/007

{using a plurality of pressing members working in different directions}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:

GB-A-1443823
B30B 11/008

{Applying a magnetic field to the material}

Definition statement

*This place covers:

Illustrative example of subject matter classified in this group:

DE-A-2629990
B30B 11/02
using a ram exerting pressure on the material in a moulding space

Definition statement
This place covers:
US-A-4260346

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

Ram heads of special form wherein a ram exerts pressure on the material in a moulding space B28B 3/02
B30B 11/022
{whereby the material is subjected to vibrations}

Definition statement
This place covers:

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

Combined with vibrating or jolting B28B 3/022

B30B 11/025
{whereby the material is transferred into the press chamber by relative movement between a ram and the press chamber}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
B30B 11/027

{Particular press methods or systems}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 11/04
co-operating with a fixed mould

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
DE-A-10110938

B30B 11/06
each charge of the material being compressed against the previously formed body

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
B30B 11/08

co-operating with moulds carried by a turntable

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 11/085
{for multi-layer articles}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 11/10

intermittently rotated

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 11/12
co-operating with moulds on the circumference of a rotating drum

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 11/14

coop-erating with moulds on a movable carrier other than a turntable or a rotating drum

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
Definition statement

This place covers:

JP-A-10043894

using pocketed rollers, e.g. two co-operating pocketed rollers
B30B 11/165

{Roll constructions}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-3738785

B30B 11/18

using profiled rollers

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
References

Informative references

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

| With co-operating profiled rollers | B28B 3/16 |

B30B 11/20

Roller-and-ring machines, i.e. with roller disposed within a ring and co-operating with the inner surface of the ring

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
Roller-and-ring machines, i.e. with roller disposed within a ring and co-operating with the inner surface of the ring

B30B 11/201

{for extruding material}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 11/202

{Ring constructions}

Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group:

WO-A-2004022324
B30B 11/204
{Rings with adjustable extrusion openings}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
US-a-3253557

B30B 11/205
{using an annular series of radial die cells, especially for crop material}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
B30B 11/207

{Feed means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 11/22

Extrusion presses; Dies therefor (extruding by the use of roller-and-ring
machines B30B 11/20)

References

Informative references

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

<table>
<thead>
<tr>
<th>Wherein the material is extruded</th>
<th>B28B 3/20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extrusion moulding of plastics</td>
<td>B29C 48/00</td>
</tr>
</tbody>
</table>

B30B 11/221

{extrusion dies}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
References

Informative references

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

Extrusion dies
B30B 11/222
{using several circumferentially spaced rollers, e.g. skewed rollers}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
US-A-3520250

B30B 11/224
{Extrusion chambers}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
B30B 11/225

{with adjustable outlet opening}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

WO-A-9104150

B30B 11/227

{Means for dividing the extruded material into briquets}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 11/228

{using pressing means, e.g. rollers moving over a perforated die plate}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 11/24
using screws or worms

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

| By screw or worm | B28B 3/22 |

B30B 11/241
{Drive means therefor; screw bearings}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
WO-A-2007059547

![Fig. 1](image)

B30B 11/243
{using two or more screws working in the same chamber}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
**B30B 11/245**

{using two or more screws working in different chambers}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:

GB-A-733585

---

**B30B 11/246**

{Screw constructions}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
B30B 11/248

{Means preventing the material from turning with the screw or returning towards the feed hopper}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
B30B 11/26

using press rams

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
References

**Informative references**

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

| By reciprocating plunger | B28B 3/24 |

**B30B 11/265**

**(with precompression means)**

**Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:
B30B 11/28

using perforated rollers or discs

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 11/30

using directly-acting fluid pressure

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-3771221
B30B 11/34
for coating articles, e.g. tablets

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US2004113319

GB-A-1034713
Presses not provided for in groups B30B 1/00 - B30B 11/00

Definition statement

This place covers:

Presses not provided for in groups B30B 1/00 - B30B 11/00 in general and also those presses not provided for in groups B30B 1/00 - B30B 11/00, which are not provided for elsewhere.

B30B 13/00

Methods of pressing not special to the use of presses of any one of the preceding main groups

Definition statement

This place covers:

Methods of pressing not special to the use of presses in general and also methods of pressing for those presses, for particular purposes, which are not provided for elsewhere of any one of the preceding main groups B30B 1/00 - B30B 12/00.
B30B 15/00
Details of, or accessories for, presses; Auxiliary measures in connection with pressing (safety devices F16P)

Definition statement
This place covers:
Details of, or accessories for presses in general and also for those presses, for particular purposes, which are not provided for elsewhere; Auxiliary measures in connection with pressing in presses in general and also in those presses, for particular purposes, which are not provided for elsewhere

B30B 15/0005
{for briquetting presses}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:

FR-A-2200255

Fig. 1

B30B 15/0011
{lubricating means}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
B30B 15/0017

{Deairing means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-3832107
B30B 15/0023

{Drive arrangements for movable carriers, e.g. turntables}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

DE-A-2166391
B30B 15/0029
{means for adjusting the space between the press slide and the press table, i.e. the shut height}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:

GB-A-1398048

B30B 15/0035
{using an adjustable connection between the press drive means and the press slide}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
B30B 15/0041

{Control arrangements therefor}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-5456165
B30B 15/0047
{releasing means for jammed presses}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

GB-A-2032312
B30B 15/0052
{for fluid driven presses}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

FIG. 2

US-A-4954068
B30B 15/0058

{Inclinable presses}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-3665847
B30B 15/0064

{Counterbalancing means for movable press elements}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-5467706
B30B 15/007

{Means for maintaining the press table, the press platen or the press ram against tilting or deflection}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

DE-A-4415577
B30B 15/0076
{Noise or vibration isolation means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 15/0082
{Dust eliminating means; Mould or press ram cleaning means}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:

US-A-5536331
B30B 15/0088

{Lubricating means (B30B 15/0011 takes precedence)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 15/0094

{Press load monitoring means (B30B 15/281 takes precedence)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 15/02
Dies; Inserts therefor; Mounting thereof; Moulds (extrusion dies B30B 11/22)

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-4971543
B30B 15/022
{Moulds for compacting material in powder, granular of pasta form}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:

![Fig 2](image1)

![Fig 3](image2)
B30B 15/024
{using elastic mould parts}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:

DE-A-19748370
B30B 15/026

{Mounting of dies, platens or press rams}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-4590788
B30B 15/028

{Loading or unloading of dies, platens or press rams}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

Fig. 1

DE-A-19612242

Fig. 2
B30B 15/04
Frames; Guides

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-5394723
B30B 15/041

{Guides}

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:

US-A-4502379
B30B 15/042
{Prestressed frames}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

Fig. 5

Fig. 6

US3064558
B30B 15/044

{Means preventing deflection of the frame, especially for C-frames}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-5097734
B30B 15/045

{Mountings of press columns}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

GB-A-1245853

FIG. 1
**B30B 15/047**

{C-shaped frames (with means for preventing deflection B30B 15/044)}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:

![C-shaped frame diagram](image)

DE-A-10028346

**B30B 15/048**

{Laminated frame structures}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
B30B 15/06

Platens or press rams

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

US-A-3552306
B30B 15/061
{Cushion plates}

Definition statement

This place covers:
Illustrative example of subject matter classified in this group:

References

Limiting references

This place does not cover:
Cushioning arrangements utilized for absorbing the force from upper die so that the blank holder is moved downwardly in a controlled manner

B30B 15/062
{Press plates}

Definition statement

This place covers:
Illustrative example of subject matter classified in this group:
B30B 15/064
{with heating or cooling means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:


FIG. 1
**B30B 15/065**

**{Press rams}**

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:

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**DE-B-1134956**

**B30B 15/067**

**{with means for equalizing the pressure exerted by a plurality of press rams}**

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
B30B 15/068
{Drive connections, e.g. pivotal}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

DE-A-102005007215
B30B 15/08
Accessory tools, e.g. knives; Mountings therefor

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:

Brakes specially adapted for presses (brakes in general F16D)
Illustrative example of subject matter classified in this group:


**B30B 15/10**

Brakes specially adapted for presses (brakes in general **F16D**)

**Definition statement**

*This place covers:*

Brakes specially adapted for presses (brakes in general **F16D**)
B30B 15/12
Clutches specially adapted for presses (clutches in general F16D)

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:

GB-A-1399346

B30B 15/14
Control arrangements for mechanically-driven presses

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
B30B 15/142

{controlling the brake or the clutch}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 15/144

{for stopping the press shaft in a predetermined angular position}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 15/146

{for synchronising a line of presses}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
Control arrangements for fluid-driven presses (pumps per se F04; hydraulic accumulators per se F15B; valves per se F16K; control devices in general G05)

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
**B30B 15/16**

(controlling the ram speed and ram pressure, e.g. fast approach speed at low pressure, low pressing speed at high pressure)

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
B30B 15/163

{for accumulator-driven presses}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
**B30B 15/166**

*{Electrical control arrangements}*

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
B30B 15/168

{for pneumatically driven presses (B30B 15/165 takes precedence)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 15/18
controlling the reciprocating motion of the ram

Definition statement
This place covers:
Illustrative example of subject matter classified in this group:
B30B 15/183

{Controlling the filling of the press cylinder during the approach stroke of the ram, e.g. prefill-valves}

Definition statement

This place covers:
Illustrative example of subject matter classified in this group:
B30B 15/186

{Controlling the return movement of the ram, e.g. decompression valves}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
**B30B 15/20**

controlling the speed of the ram, e.g. the speed of the approach, pressing or return strokes

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:


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**B30B 15/22**

controlling the degree of pressure applied by the ram during the pressing stroke

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
controlling the movement of a plurality of actuating members to maintain parallel movement of the platen or press beam

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 15/245
{using auxiliary cylinder and piston means as actuating members}

Definition statement

This place covers:
Illustrative example of subject matter classified in this group:
B30B 15/26
Programme control arrangements

Definition statement

This place covers:
Illustrative example of subject matter classified in this group:
US-A-5027631

B30B 15/28
Arrangements for preventing distortion of, or damage to, presses or parts thereof

Definition statement

This place covers:
Illustrative example of subject matter classified in this group:
B30B 15/281

{overload limiting devices (in general F16H 35/10)}

**Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:
Definition statement

This place covers:
Illustrative example of subject matter classified in this group:
B30B 15/284

{releasing fluid from a fluid chamber subjected to overload pressure}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
B30B 15/285

{preventing a full press stroke if there is an obstruction in the working area}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:
**B30B 15/287**

{preventing unintended ram movement, e.g. using blocking devices}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
**B30B 15/288**

{preventing over-run or reverse-run of the press shaft}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:

![Diagram](image)

DE-A-2110841

**B30B 15/30**

**Feeding material to presses**

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
References
Informative references
Attention is drawn to the following places, which may be of interest for search:

| Feeding the unshaped material to moulds or apparatus for producing shaped articles |
|---------------------------------|--------------------------------|
| B28B 13/00                      |

B30B 15/302
{Feeding material in particulate or plastic state to moulding presses}

Definition statement
This place covers:

Illustrative example of subject matter classified in this group:
B30B 15/304

{by using feed frames or shoes with relative movement with regard to the mould or moulds}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

DE-A-4328381

References

Informative references

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

By using a feed box transferring the moulding material from a hopper to the moulding cavities

B28B 13/023
**B30B 15/306**

{for multi-layer articles}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:

DE-A-3206981

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**References**

**Informative references**

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

<table>
<thead>
<tr>
<th>Feeding several successive layers, optionally of different materials</th>
<th>B28B 13/022</th>
</tr>
</thead>
</table>

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**B30B 15/308**

{in a continuous manner, e.g. for roller presses, screw extrusion presses}

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group:
B30B 15/32
Discharging presses

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

DE-C-3541756
B30B 15/34
Heating or cooling presses or parts thereof

Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group: