CPC  COOPERATIVE PATENT CLASSIFICATION

B  PERFORMING OPERATIONS; TRANSPORTING
(NOTES omitted)

SEPARATING; MIXING

B07  SEPARATING SOLIDS FROM SOLIDS; SORTING

B07B  SEPARATING SOLIDS FROM SOLIDS BY SIEVING, SCREENING, OR SIFTING OR BY USING GAS CURRENTS; OTHER SEPARATING BY DRY METHODS APPLICABLE TO BULK MATERIAL, e.g. LOOSE ARTICLES FIT TO BE HANDLED LIKE BULK MATERIAL (combinations of dry separating apparatus with wet separating apparatus B03B; hand sorting, postal sorting, sorting by switching or other devices actuated in response to detection or measurement of some feature of articles or samples of material B07C)

NOTE
In this subclass any sorting or grading of bulk material or loose articles fit to be handled like bulk material results automatically from the construction of the apparatus and properties of the material, e.g. by a trap opening under an object of a certain minimum weight, by an aperture of graduated size. Sorting of articles is included in so far as the same conditions apply, e.g. sorting of timber by passing it over successively longer openings; the articles may or may not be orientated for the purpose of sorting.

WARNINGS
1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:
   B07B 1/32 covered by

2. 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  Sieving, screening, sifting, or sorting solid materials using networks, gratings, grids, or the like { (ash-sifters for domestic stoves or ranges F24B 15/007) }

1/005 . . . . [Transportable screening plants]
1/02 . . . . Hand screens
1/04 . . . . Stationary flat screens
1/06 . . . . Cone or disc shaped screens
1/08 . . . . Screens rotating within their own plane
1/10 . . . . Screens in the form of endless moving bands
1/12 . . . . Apparatus having only parallel elements
1/14 . . . . Roller screens
1/145 . . . . { the material to be screened moving along the axis of the parallel elements }
1/15 . . . . using corrugated, grooved or ribbed rollers
1/155 . . . . { the rollers having a star shaped cross section }
1/16 . . . . the elements being movable and in other than roller form
1/18 . . . . Drum screens
1/185 . . . . { provided with exchangeable sieve panels }
1/20 . . . . Stationary drums with moving interior agitators
1/22 . . . . Revolving drums
1/24 . . . . with fixed or moving interior agitators
1/26 . . . . with additional axial or radial movement of the drum
1/28 . . . . Moving screens not otherwise provided for, e.g. swinging, reciprocating, rocking, tilting or wobbling screens

1/282 . . . . { their jigging movement being a closed or open curvilinear path in a plane perpendicular to the plane of the screen and parallel or transverse to the direction of conveyance }
1/284 . . . . { with unbalanced weights }
1/286 . . . . { with eccentric shafts }

NOTE
Group B07B 1/40 takes precedence over groups B07B 1/30- B07B 1/38

1/288 . . . . { Tumbling screens }
1/30 . . . . { jigging or moving to-and-fro { within their own plane } in or approximately in { or transverse to } the direction of conveyance }
1/34 . . . . { jigging or moving to-and-fro perpendicular or approximately perpendicular to the plane of the screen }
1/343 . . . . { with mechanical drive elements other than electromagnets }
1/346 . . . . { with electromagnets }
1/36 . . . . { jigging or moving to-and-fro in more than one direction }
1/38 . . . . oscillating in a circular arc in their own plane; Plansifters
1/40 . . . . Resonant vibration screens
1/42 . . . . Drive mechanisms, regulating or controlling devices, or balancing devices, specially adapted for screens
1/44 . . . . Balancing devices

CPC - 2019.05  1
Separating solids from solids using gas currents

4/00 Separating solids from solids by subjecting their mixture to gas currents (using tables or jigs B03B 4/00)

4/02 . . while the mixtures fall
4/025 . . [the material being slingered or fled out horizontally before falling, e.g. by dispersing elements]

4/04 . . in cascades
4/06 . . using revolving drums
4/08 . . while the mixtures are supported by sieves, screens, or like mechanical elements

7/00 Selective separation of solid materials carried by, or dispersed in, gas currents (sieves or filters for separating dispersed particles from gases or vapours B01D)

7/01 . using gravity
7/02 . by reversal of direction of flow
7/04 . by impingement against baffle separators
7/06 . by impingement against sieves
7/08 . using centrifugal force (centrifuges B04B; cyclones B04C)
7/083 . . generated by rotating vanes, discs, drums, or brushes
7/086 . . generated by the winding course of the gas stream
7/0865 . . [using the coanda effect of the moving gas stream]
7/10 . having air recirculating within the apparatus

7/12 . with pulsating air currents

9/00 Combinations of apparatus for screening or sifting or for separating solids from solids using gas currents; General arrangement of plant, e.g. flow sheets

9/02 . Combinations of similar or different apparatus for separating solids from solids using gas currents

11/00 Arrangement of accessories in apparatus for separating solids from solids using gas currents

11/02 . Arrangement of air or material conditioning accessories
11/04 . Control arrangements
11/06 . Feeding or discharging arrangements
11/08 . Cleaning arrangements

Other separating, e.g. grading, resulting automatically from the construction of the apparatus used and properties of the material concerned: Combinations

13/00 Grading or sorting solid materials by dry methods, not otherwise provided for; Sorting articles otherwise than by indirectly controlled devices (grading eggs A01K 43/04)

13/003 . {Separation of articles by differences in their geometrical form or by difference in their physical properties, e.g. elasticity, compressibility, hardness} 13/006 . {Sorting molded pieces and runners}

13/02 . Apparatus for grading using pockets for taking out particles from aggregates
13/04 . according to size
13/05 . using material mover cooperating with retainer, deflector or discharger (B07B 13/065 - B07B 13/075 take precedence)

13/065 . . Apparatus for grading or sorting using divergent conveyor belts or cables
13/07 . . Apparatus in which aggregates or articles are moved along or past openings which increase in size in the direction of movement
13/072 . . {the openings being rollers with a divergent axis and the material moving substantially along the rollers axis}

13/075 . . Apparatus comprising moving article - receiving openings, the size of which varies as they move along (B07B 13/10 takes precedence)
13/08 . according to weight (B07B 13/10 takes precedence)
13/10 . using momentum effects
13/11 . involving travel of particles over surfaces which separate by centrifugal force or by relative friction between particles and such surfaces, e.g. helical sorters

13/113 . . . {shaking tables (for wet separating B03B 5/04; tables with water impulse B03B 5/70; pneumatic tables B03B 4/02; moving screens B07B 1/28)
Other separating, e.g. grading, resulting automatically from the construction of the apparatus used and properties...

15/00 Combinations of apparatus for separating solids from solids by dry methods applicable to bulk material, e.g. loose articles fit to be handled like bulk material (using wet methods B03B 7/00; using gas currents B07B 9/00)

---

2201/00 Details applicable to machines for screening using sieves or gratings
  2201/02 . Fastening means for fastening screens to their frames which do not stretch or sag the screening surfaces
  2201/04 . Multiple deck screening devices comprising one or more superimposed screens

2220/00 Type of materials being separated
  2220/02 . Plastics
  2220/04 . Batteries

2230/00 Specific aspects relating to the whole B07B subclass
  2230/01 . Wet separation
  2230/04 . The screen or the screened materials being subjected to ultrasonic vibration