CPC COOPERATIVE PATENT CLASSIFICATION

G PHYSICS
(NOTES omitted)

INSTRUMENTS

G06 COMPUTING OR CALCULATING; COUNTING
(NOTES omitted)

G06M COUNTING MECHANISMS; COUNTING OF OBJECTS NOT OTHERWISE PROVIDED FOR (counting by measuring volume or weight of articles to be counted G01F, G01G; computers G06C - G06J; counting electric pulses H03K; counting characters, words or messages in switching networks for transmission of digital information H04L 12/08)

NOTE

This subclass covers:
- stepping or continuously-moving mechanical counters operated through one or more inputs applied to the lowest order mechanically or electrically;
- counting systems involving applications of either mechanical, electrical, or electronic counters.

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 Design features of general application

1/02 . Housing (for measuring instruments in general G01D)
1/022 . . {Plates}
1/024 . . . {Bearings}
1/026 . . {Connecting or supporting parts}
1/028 . . {Arbors, drum fixing and adjusting means (arbor-fixing means F16C 17/08)}
1/04 . for driving the stage of lowest order (with variable ratio of drive G06M 1/38)
1/041 . . {for drum-type indicating means}
1/042 . . . {with click devices (electromagnetic driving means G06M 1/102)}
1/044 . . . {with escapements (electromagnetic driving means G06M 1/102)}
1/045 . . {for dial, pointer, or similar type indicating means}
1/047 . . {for arithmetical operations}
1/048 . . {with switching means between two or more counting devices}
1/06 . . producing continuous revolution of the stage, e.g. with gear train
1/062 . . . {for drum type indicating means}
1/064 . . . {for dial, pointer, or similar type indicating means}
1/066 . . . {for arithmetical operations}
1/068 . . . {with switching means between two or more counting devices}
1/08 . for actuating the drive
1/083 . . {by mechanical means (counting of stacked objects G06M 9/00)}
1/086 . . . {including barriers (counting of conveyed objects G06M 7/00)}
1/10 . . by electric or magnetic means
1/101 . . . {by electro-optical means}
1/102 . . . {by magnetic or electromagnetic means}
1/104 . . . . {electromagnets, clicks}
1/105 . . . . . {electronic circuits for actuating the electromagnets}
1/107 . . . . {electromotors}
1/108 . . . {by electronic means}
1/12 . . by fluid means
1/123 . . . {by pneumatic means}
1/126 . . . {by hydraulic means}
1/14 . for transferring a condition from one stage to a higher stage (with variable ratio of transfer G06M 1/38)
1/143 . . {with drums}
1/146 . . {with dials, pointers, or similar type indicating means}
1/16 . . self-operating, e.g. by Geneva mechanism
1/163 . . . {with drums}
1/166 . . . {with dials, pointers or similar type indicating means}
1/18 . . requiring external operation, e.g. by electromagnetic force
1/183 . . . {with drums}
1/186 . . . {with dials, pointers, or similar type indicating means}
1/20 . . specially adapted for denominations with unequal numbers in each stage, e.g. degrees and minutes of angle
1/22 . for visual indication of the result of count on counting mechanisms, e.g. by window with magnifying lens

1/24 . . Drums; Dials; Pointers (for measuring instruments in general G01D; {for time measuring instruments G04B 19/00, including drums G04B 19/21, G04C 19/04; date indicating G04B 19/24})
1/241 . . . {Drums}
1/243 . . . . {Drums with presetting means}
1/245 . . . {Dials; Pointers}
1/246 . . . {Bands; Sheets}
1/248 . . . {Discs}
1/26 . . Aligning means
1/27 . for representing the result of count in the form of electric signals, e.g. by sensing markings on the counter drum
1/272 . . using photoelectric means
1/274 . . using magnetic means; using Hall-effect devices
1/276 . . using mechanically-actuated contacts
1/28 . for zeroising or setting to a particular value
1/283 . . {with drums}
1/286 . . {with dials, pointers, or similar type indicating means}
1/30 . . using heart-shaped or similar cams; using levers
1/303 . . . {with drums}
1/306 . . . {with dials, pointers, or similar type indicating means}
1/32 . . . Actuating means, e.g. magnet, spring, weight
1/323 . . . . {with drums}
1/326 . . . . {with dials, pointers, or similar type indicating means}
1/34 . . using reset shafts
1/343 . . . {with drums}
1/346 . . . {with dials, pointers, or similar type indicating means}
1/36 . . . Actuating means, e.g. magnet, spring, weight
1/363 . . . . {with drums}
1/366 . . . . {with dials, pointers, or similar type indicating means}
1/38 . for varying ratio of drive or transfer mechanism, e.g. by using alternative counting trains
1/385 . . {differentials}

3/00 **Counters with additional facilities** (generating electric pulses at random intervals H03K 3/84)
3/02 . for performing an operation at a predetermined value of the count, e.g. arresting a machine {(G06M 3/04 takes precedence)}
3/021 . . {with drums type indicating means}
3/022 . . . {by subtracting}
3/024 . . . {by adding}
3/025 . . {with dial, pointer, or similar type indicating means}
3/027 . . . {by subtracting}
3/028 . . . {by adding}
3/04 . . with an additional counter train operating in the reverse direction
3/043 . . . {with drums}
3/046 . . . {with dials, pointers, or similar type indicating means}
3/06 . for printing or separately displaying result of count (display systems G09)
3/062 . . {for printing}
3/065 . . . {with drums}
3/067 . . . {with dials, pointers, or similar type indicating means}
3/08 . for counting the input from several sources; for counting inputs of different amounts
3/10 . for counting denominations with unequal numbers in each stage, e.g. degrees and minutes of angle (transfer mechanism therefor G06M 1/20)
3/12 . for preventing incorrect actuation, e.g. for preventing falsification
3/14 . for registering difference of positive and negative actuations

Counting of objects (in machines for shaping metal without removing material B21C 51/00; in printing machines or presses B41F 33/02; in office copying machines B41L 39/02; of axles of rail vehicles B61L 1/16; in packaging machines B65B 65/08; of objects conveyed through a pipe or tube B65G 51/36; entry or exit registers G07C 9/00)

7/00 **Counting of objects carried by a conveyor**
7/02 . wherein objects ahead of the sensing element are separated to produce a distinct gap between successive objects
7/04 . . Counting of piece goods, e.g. of boxes
7/06 . . Counting of flat articles, e.g. of sheets of paper
7/08 . wherein the direction of movement of the objects is changed at the station where they are sensed
7/10 . . Counting of flat overlapped articles, e.g. of cards

9/00 **Counting of objects in a stack thereof**
9/02 . by using a rotating separator incorporating pneumatic suction nozzles
9/025 . . {the rotation axis being substantially parallel to the stacking direction}

11/00 **Counting of objects distributed at random, e.g. on a surface**
11/02 . using an electron beam scanning a surface line by line, e.g. of blood cells on a substrate
11/04 . . with provision for distinguishing between different sizes of objects (investigating particle size in general G01N 15/00)

15/00 **Counting of objects, not otherwise provided for**

2207/00 **Indexing scheme relating to counting of objects carried by a conveyor**
2207/02 . Counting of generally flat and overlapped articles, e.g. cards, newspapers