## CPC

 COOPERATIVE PATENT CLASSIFICATION
## G PHYSICS <br> (NOTES omitted)

## INSTRUMENTS

G06 COMPUTING; CALCULATING OR COUNTING (NOTES omitted)

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.\}

## Design features of general application

- Housing (for measuring instruments in general G01D)
. . \{Plates $\}$
. . . \{Bearings\}
- . \{Connecting or supporting parts\}
- . \{Arbors, drum fixing and adjusting means (arborfixing means F16C 17/08) \}
- for driving the stage of lowest order (with variable ratio of drive G06M 1/38)
. . \{for drum-type indicating means\}
- . . \{with click devices (electromagnetic driving means G06M 1/102) \}
- . . \{with escapements (electromagnetic driving means G06M 1/102) \}
- . \{for dial, pointer, or similar type indicating means $\}$
. . \{for arithmetical operations\}
- . \{with switching means between two or more counting devices\}
- . producing continuous revolution of the stage, e.g. with gear train
. . . \{for drum type indicating means\}
. . \{for dial, pointer, or similar type indicating means $\}$
. . . \{for arithmetical operations\}
. . . \{with switching means between two or more counting devices $\}$
. for actuating the drive
- . \{by mechanical means (counting of stacked objects G06M 9/00) \}
. . . \{including barriers (counting of conveyed objects G06M 7/00) \}
. . by electric or magnetic means

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. . . \{by electro-optical means $\}$
. . . \{by magnetic or electromagnetic means\}
. . . . \{electromagnets, clicks\}
. . . . . \{electronic circuits for actuating the electromagnets $\}$
. . . . \{electromotors\}
. . . \{by electronic means $\}$
. . by fluid means
. . . \{by pneumatic means $\}$
. . . \{by hydraulic means $\}$

- for transferring a condition from one stage to a higher stage (with variable ratio of transfer G06M 1/38)
. . \{with drums \}
. . \{with dials, pointers, or similar type indicating means $\}$
. . self-operating, e.g. by Geneva mechanism
. . . \{with drums $\}$
. . $\{$ with dials, pointers or similar type indicating means $\}$
- . requiring external operation, e.g. by electromagnetic force
. . . \{with drums \}
-• \{with dials, pointers, or similar type indicating means $\}$
. . specially adapted for denominations with unequal numbers in each stage, e.g. degrees and minutes of angle
- 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\}) | $3 / 067$ $3 / 08$ $3 / 10$ | . . . \{with dials, pointers, or similar type indicating means $\}$ <br> - for counting the input from several sources; for counting inputs of different amounts <br> - for counting denominations with unequal numbers |
| :---: | :---: | :---: | :---: |
| 1/241 | \{Drums \} |  | in each stage, e.g. degrees and minutes of angle |
| 1/243 | . \{Drums with presetting means\} |  | (transfer mechanism therefor G06M 1/20) |
| 1/245 | \{Dials; Pointers\} | 3/12 | . for preventing incorrect actuation, e.g. for |
| 1/246 | - \{Bands; Sheets\} |  | preventing falsification |
| 1/248 | . \{Discs\} | 3/14 | - for registering difference of positive and negative |
| 1/26 | Aligning means |  | actuations |
| 1/27 | - for representing the result of count in the form of electric signals, e.g. by sensing markings on the counter drum | 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) |  |
| 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 $\}$ | 7/00 | Counting of objects carried by a conveyor <br> - wherein objects ahead of the sensing element are separated to produce a distinct gap between successive objects |
| 1/286 | . . \{with dials, pointers, or similar type indicating means $\}$ | 7/02 |  |
| 1/30 | . . using heart-shaped or similar cams; using levers |  |  |
| 1/303 | . \{with drums $\}$ | 7/04 | - . Counting of piece goods, e.g. of boxes |
| 1/306 | . . . \{with dials, pointers, or similar type indicating means $\}$ |  | - . Counting of flat articles, e.g. of sheets of paper <br> . wherein the direction of movement of the objects is |
| 1/32 | . Actuating means, e.g. magnet, spring, weight |  | changed at the station where they are sensed |
| 1/323 | . . \{with drums | 7/10 | - . Counting of flat overlapped articles, e.g. of cards |
| 1/326 | . . . . \{with dials, pointers, or similar type indicating means $\}$ | 9/00 $9 / 02$ | Counting of objects in a stack thereof <br> - by using a rotating separator incorporating pneumatic suction nozzles <br> . . \{the rotation axis being substantially parallel to the stacking direction $\}$ |
| 1/34 | . using reset shafts |  |  |
| 1/343 | . . \{with drums \} | 9/025 |  |
| 1/346 | . . . \{with dials, pointers, or similar type indicating means\} |  |  |
| 1/36 | . Actuating means, e.g. magnet, spring, weight | 11/00 | Counting of objects distributed at random, e.g. on a surface |
| 1/363 | . . \{with drums\} |  |  |
| 1/366 | . . . . \{with dials, pointers, or similar type indicating means $\}$ | 11/02 | - using an electron beam scanning a surface line by line, e.g. of blood cells on a substrate |
| 1/38 | - for varying ratio of drive or transfer mechanism, e.g. by using alternative counting trains | 11/04 | . . with provision for distinguishing between different sizes of objects (investigating particle |
| 1/385 | - differentials\} |  | size in general G01N 15/00) |
| 3/00 | Counters with additional facilities (generating electric pulses at random intervals $\mathrm{H} 03 \mathrm{~K} 3 / 84$ ) | 15/00 | Counting of objects, not otherwise provided for |
| 3/02 | - for performing an operation at a predetermined value of the count, e.g. arresting a machine \{(G06M 3/04 takes precedence) $\}$ | 2207/00 | Indexing scheme relating to counting of objects carried by a conveyor |
| 3/021 | - \{with drums type indicating means \} | 2207/02 |  |
| 3/022 | . . \{by subtracting\} |  | e.g. cards, newspapers |
| 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\} |  |  |

