

# CPC COOPERATIVE PATENT CLASSIFICATION

**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

The following IPC groups are not used in the CPC scheme. Subject matter covered by these groups is classified in the following CPC groups:

[G06M 15/00](#)

covered by

<b>1/00</b>	<b>Design features of general application</b>	1/123	. . . {by pneumatic means}
1/02	. Housing (for measuring instruments in general <a href="#">G01D</a> )	1/126	. . . {by hydraulic means}
1/022	. . {Plates}	1/14	. for transferring a condition from one stage to a higher stage (with variable ratio of transfer <a href="#">G06M 1/38</a> )
1/024	. . . {Bearings}	1/143	. . {with drums}
1/026	. . {Connecting or supporting parts}	1/146	. . {with dials, pointers, or similar type indicating means}
1/028	. . {Arbors, drum fixing and adjusting means (arbor-fixing means <a href="#">F16C 17/08</a> )}	1/16	. . self-operating, e.g. by Geneva mechanism
1/04	. for driving the stage of lowest order (with variable ratio of drive <a href="#">G06M 1/38</a> )	1/163	. . . {with drums}
1/041	. . {for drum-type indicating means}	1/166	. . . {with dials, pointers or similar type indicating means}
1/042	. . . {with click devices (electromagnetic driving means <a href="#">G06M 1/102</a> )}	1/18	. . requiring external operation, e.g. by electromagnetic force
1/044	. . . {with escapements (electromagnetic driving means <a href="#">G06M 1/102</a> )}	1/183	. . . {with drums}
1/045	. . {for dial, pointer, or similar type indicating means}	1/186	. . . {with dials, pointers, or similar type indicating means}
1/047	. . {for arithmetical operations}	1/20	. . specially adapted for denominations with unequal numbers in each stage, e.g. degrees and minutes of angle
1/048	. . {with switching means between two or more counting devices}	1/22	. for visual indication of the result of count on counting mechanisms, e.g. by window with magnifying lens
1/06	. . producing continuous revolution of the stage, e.g. with gear train	1/24	. . Drums; Dials; Pointers (for measuring instruments in general <a href="#">G01D</a> ; {for time measuring instruments <a href="#">G04B 19/00</a> , including drums <a href="#">G04B 19/21</a> , <a href="#">G04C 19/04</a> ; date indicating <a href="#">G04B 19/24</a> })
1/062	. . . {for drum type indicating means}	1/241	. . . {Drums}
1/064	. . . {for dial, pointer, or similar type indicating means}	1/243	. . . . {Drums with presetting means}
1/066	. . . {for arithmetical operations}	1/245	. . . {Dials; Pointers}
1/068	. . . {with switching means between two or more counting devices}	1/246	. . . {Bands; Sheets}
1/08	. for actuating the drive	1/248	. . . {Discs}
1/083	. . {by mechanical means (counting of stacked objects <a href="#">G06M 9/00</a> )}	1/26	. . Aligning means
1/086	. . . {including barriers (counting of conveyed objects <a href="#">G06M 7/00</a> )}	1/27	. for representing the result of count in the form of electric signals, e.g. by sensing markings on the counter drum
1/10	. . by electric or magnetic means	1/272	. . using photoelectric means
1/101	. . . {by electro-optical means}	1/274	. . using magnetic means; using Hall-effect devices
1/102	. . . {by magnetic or electromagnetic means}	1/276	. . using mechanically-actuated contacts
1/104	. . . . {electromagnets, clicks}	1/28	. for zeroising or setting to a particular value
1/105	. . . . . {electronic circuits for actuating the electromagnets}	1/283	. . {with drums}
1/107	. . . . . {electromotors}		
1/108	. . . . {by electronic means}		
1/12	. . by fluid means		

- 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 [\(investigating particle size in general G01N 15/00\)](#)

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#### **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