

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](#) to [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.

G06M 1/00**Design features of general application**

- G06M 1/02 . Housing (for measuring instruments in general [G01D](#))
- G06M 1/022 .. { Plates }
- G06M 1/024 ... { Bearings }
- G06M 1/026 .. { Connecting or supporting parts }
- G06M 1/028 .. { Arbors, drum fixing and adjusting means (arbor-fixing means [F16C 17/08](#)) }

- G06M 1/04 . for driving the stage of lowest order (with variable ratio of drive [G06M 1/38](#))
- G06M 1/041 .. { for drum-type indicating means }
- G06M 1/042 ... { with click devices (electromagnetic driving means [G06M 1/102](#)) }
- G06M 1/044 ... { with escapements (electromagnetic driving means [G06M 1/102](#)) }
- G06M 1/045 .. { for dial, pointer, or similar type indicating means }
- G06M 1/047 .. { for arithmetical operations }
- G06M 1/048 .. { with switching means between two or more counting devices }
- G06M 1/06 .. producing continuous revolution of the stage, e.g. with gear train
- G06M 1/062 ... { for drum type indicating means }
- G06M 1/064 ... { for dial, pointer, or similar type indicating means }
- G06M 1/066 ... { for arithmetical operations }
- G06M 1/068 ... { with switching means between two or more counting devices }

- G06M 1/08 . for actuating the drive
- G06M 1/083 .. { by mechanical means (counting of stacked objects [G06M 9/00](#)) }
- G06M 1/086 ... { including barriers (counting of conveyed objects [G06M 7/00](#)) }
- G06M 1/10 .. by electric or magnetic means
- G06M 1/101 ... { by electro-optical means }

- G06M 1/102 ... { by magnetic or electromagnetic means }
- G06M 1/104 { electromagnets, clicks }
- G06M 1/105 { electronic circuits for actuating the electromagnets }
- G06M 1/107 { electromotors }
- G06M 1/108 ... { by electronic means }
- G06M 1/12 .. by fluid means
- G06M 1/123 ... { by pneumatic means }
- G06M 1/126 ... { by hydraulic means }

- G06M 1/14 . for transferring a condition from one stage to a higher stage (with variable ratio of transfer [G06M 1/38](#))
- G06M 1/143 .. { with drums }
- G06M 1/146 .. { with dials, pointers, or similar type indicating means }
- G06M 1/16 .. self-operating, e.g. by Geneva mechanism
- G06M 1/163 ... { with drums }
- G06M 1/166 ... { with dials, pointers or similar type indicating means }
- G06M 1/18 .. requiring external operation, e.g. by electromagnetic force
- G06M 1/183 ... { with drums }
- G06M 1/186 ... { with dials, pointers, or similar type indicating means }
- G06M 1/20 .. specially adapted for denominations with unequal numbers in each stage, e.g. degrees and minutes of angle

- G06M 1/22 . for visual indication of the result of count on counting mechanisms, e.g. by window with magnifying lens
- G06M 1/24 .. Drums; Dials; Pointers (for measuring instruments in general [G01D](#); { for time measuring instruments [G04B 19/00](#), including drums [G04B 19/20C](#), [G04C 19/04](#); date indicating [G04B 19/24](#) })
- G06M 1/241 ... { Drums }
- G06M 1/243 { Drums with presetting means }
- G06M 1/245 ... { Dials; Pointers }
- G06M 1/246 ... { Bands; Sheets }
- G06M 1/248 ... { Discs }
- G06M 1/26 .. Aligning means

- G06M 1/27 . for representing the result of count in the form of electric signals, e.g. by sensing markings on the counter drum
- G06M 1/272 .. using photoelectric means
- G06M 1/274 .. using magnetic means; using Hall-effect devices
- G06M 1/276 .. using mechanically-actuated contacts

- G06M 1/28 . for zeroising or setting to a particular value
- G06M 1/283 .. { with drums }
- G06M 1/286 .. { with dials, pointers, or similar type indicating means }
- G06M 1/30 .. using heart-shaped or similar cams; using levers
- G06M 1/303 ... { with drums }

- G06M 1/306 . . . { with dials, pointers, or similar type indicating means }
- G06M 1/32 . . . Actuating means, e.g. magnet, spring, weight
- G06M 1/323 { with drums }
- G06M 1/326 { with dials, pointers, or similar type indicating means }
- G06M 1/34 . . using reset shafts
- G06M 1/343 . . . { with drums }
- G06M 1/346 . . . { with dials, pointers, or similar type indicating means }
- G06M 1/36 . . . Actuating means, e.g. magnet, spring, weight
- G06M 1/363 { with drums }
- G06M 1/366 { with dials, pointers, or similar type indicating means }
- G06M 1/38 . . for varying ratio of drive or transfer mechanism, e.g. by using alternative counting trains
- G06M 1/385 . . { differentials }

G06M 3/00 **Counters with additional facilities** ([generating electric pulses at random intervals H03K 3/84](#))

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

Guidance heading: **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](#))

G06M 7/00**Counting of objects carried by a conveyer**

G06M 7/02

- wherein objects ahead of the sensing element are separated to produce a distinct gap between successive objects

G06M 7/04

- Counting of piece goods, e.g. of boxes

G06M 7/06

- Counting of flat articles, e.g. of sheets of paper

G06M 7/08

- wherein the direction of movement of the objects is changed at the station where they are sensed

G06M 7/10

- Counting of flat overlapped articles, e.g. of cards

G06M 9/00**Counting of objects in a stack thereof**

G06M 9/02

- by using a rotating separator incorporating pneumatic suction nozzles

G06M 9/025

- { the rotation axis being substantially parallel to the stacking direction }

G06M 11/00**Counting of objects distributed at random, e.g. on a surface**

G06M 11/02

- using an electron beam scanning a surface line by line, e.g. of blood cells on a substrate

G06M 11/04

- with provision for distinguishing between different sizes of objects ([investigating particle size in general G01N 15/00](#))

G06M 2207/00**Indexing scheme relating to counting of objects carried by a conveyer**

G06M 2207/02

- Counting of generally flat and overlapped articles, e.g. cards, newspapers