

**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 <a href="#">G06M 1/38</a> )
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 <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> })
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

**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