

SECTION G — PHYSICS

G04 HOROLOGY

G04F TIME-INTERVAL MEASURING (measuring pulse characteristics G01R, e.g. G01R 29/02; in radar or like systems G01S; masers H01S 1/00; generation of oscillations H03B; generation or counting of pulses, frequency dividing H03K; analogue/digital conversion in general H03M 1/00) [2]

Note(s)

This subclass covers:

- apparatus for measuring-off predetermined time intervals;
- apparatus for producing such intervals as timing standards, e.g. metronomes;
- apparatus for measuring unknown intervals, e.g. precision systems for short-time-interval measurement.

Subclass index

MEASURING PREDETERMINED TIME INTERVALS

Producing time standards.....5/00

Apparatus: without driving mechanisms; with driving mechanisms.....1/00, 3/00

MEASURING UNKNOWN TIME INTERVALS

Mechanically; electromechanically; electrically; otherwise.....7/00, 8/00, 10/00, 13/00

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| <p>1/00 Apparatus which can be set and started to measure-off predetermined or adjustably-fixed time intervals without driving mechanisms, e.g. egg timer (time or time-programme switches which automatically terminate their operation after the programme is completed H01H 43/00)</p> | <p>5/06 • • using piezo-electric resonators [2]</p> |
| <p>1/02 • by consuming prefixed quantities of materials, e.g. by burning candle</p> | <p>5/08 • • using magnetostrictive resonators [2]</p> |
| <p>1/04 • by movement or acceleration due to gravity</p> | <p>5/10 • using electric or electronic resonators (G04F 5/14 takes precedence) [2]</p> |
| <p>1/06 • • by flowing-away of a prefixed quantity of fine-granular or liquid materials, e.g. sand-glass, water-clock</p> | <p>5/12 • using fluidic devices [2]</p> |
| <p>1/08 • • by a body falling a prefixed distance in air or in a viscous material</p> | <p>5/14 • using atomic clocks [2]</p> |
| <p>3/00 Apparatus which can be set and started to measure-off predetermined or adjustably-fixed time intervals with driving mechanisms, e.g. dosimeter with clockwork (time or time-programme switches which automatically terminate their operation after the programme is completed H01H 43/00)</p> | <p>5/16 • using pulses produced by radio-isotopes [2]</p> |
| <p>3/02 • with mechanical driving mechanisms</p> | <p>7/00 Apparatus for measuring unknown time intervals by non-electric means (G04F 13/06 takes precedence) [2]</p> |
| <p>3/04 • • Additional arrangements in connection with ordinary non-electric clocks for this purpose</p> | <p>7/02 • by measuring the distance of fall or the final velocity of a falling body</p> |
| <p>3/06 • with electric driving mechanisms</p> | <p>7/04 • using a mechanical oscillator [2]</p> |
| <p>3/08 • • Additional arrangements in connection with ordinary electric clocks for this purpose</p> | <p>7/06 • • running only during the time interval to be measured, e.g. stop-watch</p> |
| <p>5/00 Apparatus for producing preselected time intervals for use as timing standards (generating clock signals for electric digital computers G06F 1/04; automatic frequency control or stabilisation of generators in general H03L)</p> | <p>7/08 • • Watches or clocks with stop devices, e.g. chronograph</p> |
| <p>5/02 • Metronomes</p> | <p>7/10 • Means used apart from the time-piece for starting or stopping same [2]</p> |
| <p>5/04 • using oscillators with electromechanical resonators [2]</p> | <p>8/00 Apparatus for measuring unknown time intervals by electromechanical means [2]</p> |
| | <p>8/02 • using an electromechanical oscillator [2]</p> |
| | <p>8/04 • • using a piezo-electric oscillator [2]</p> |
| | <p>8/06 • • using a magnetostrictive oscillator [2]</p> |
| | <p>8/08 • Means used apart from the time-piece for starting or stopping same [2]</p> |
| | <p>10/00 Apparatus for measuring unknown time intervals by electric means [2]</p> |
| | <p>10/02 • using oscillators with passive electric resonator, e.g. lumped LC [2]</p> |
| | <p>10/04 • by counting pulses or half-cycles of an ac [2]</p> |
| | <p>10/06 • by measuring phase [2]</p> |
| | <p>10/08 • using pulses produced by radio-isotopes [2]</p> |

G04F

- 10/10 • by measuring electric or magnetic quantities changing in proportion to time [2]
- 13/00 **Apparatus for measuring unknown time intervals by means not provided for in groups G04F 5/00-G04F 10/00 [2]**
- 13/02 • using optical means [2]
- 13/04 • using electrochemical means [2]
- 13/06 • using fluidic means [2]