



summary

Embodiment No.1

Objective: Our objective was to improve the ease of operation of the dial on a dial-type timer on which a setting ring can be used, when that setting ring is not used.

Construction: The locking pawl which fixes the set position of the setting ring is not on the timer itself, but rather on a cover which can be mounted on that timer.

10 Result: The cover with the locking pawl on it is removed from the timer when the setting ring is not being used. This prevents the locking pawl from interfering with the operation of the dial.

Embodiment No.2

15 Objective: To make it impossible to change the settings on a dial-type timer except in a fixed range.

Construction: Two setting rings are mounted on the perimeter of the dial in such a way that they rotate as a single entity with the said dial. Each of the rings has a single molded tooth on its outer edge. A stop protrudes from the body of the timer which is contacted by the aforementioned teeth on the setting rings mounted on the dial. When the teeth come in contact with the stop, the range of rotation of the said dial is constrained.

25 Effects: Two setting rings are set in positions which indicate the upper and lower limits of a dial's rotation. When these rings are mounted on the perimeter of the said dial, the settings achieved by the dial can be changed

only within the range between the said upper and lower limits.

Embodiment No.3

Objective: To make it possible for a timing device to
5 use a small-capacity power supply, to prevent the current from varying either during timing or when timing is completed, and to make it possible to supply stable power to the time-limit circuit.

Construction: This timing device is constructed as follows.
10 Time-limit circuit 1 and output relay 2 are connected in series. Output relay 2 and dummy resistor 7, which has virtually the same impedance as relay 2, are connected to this series circuit. Switching elements 8 and 9, which go on and off in opposite sense at a given
15 time, are connected in parallel to dummy resistor 7 and output relay 2, respectively. These switching elements are made to switch on or off by the change of state of output switching element 5.

This Sheet Has Been Replaced

