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(54) **WATCH COMPRISING A HAND-FREE DISPLAY**

(57) The invention relates to a watch including a mechanical or electronic time base which is built into a case having securing means consisting of a base or strap. The aforementioned time base is associated with means for

moving indicators along a rule. The invention is **characterised in that** the case comprises cells for receiving different colour indicators which change cell position with the passage of time.

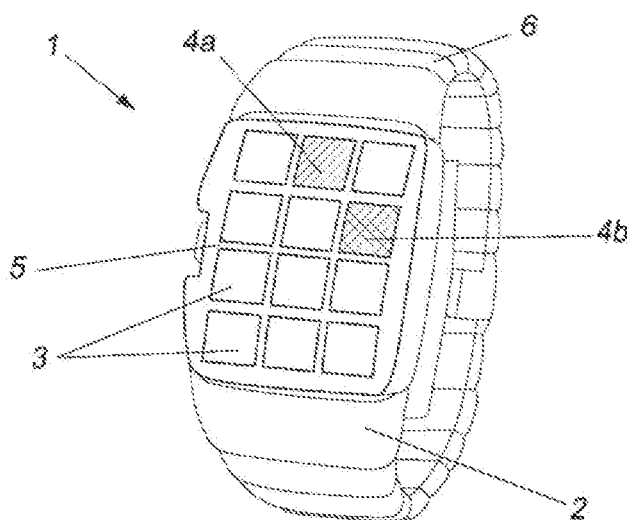


FIG. 1

Description

OBJECT OF THE INVENTION

[0001] The present invention relates to a clock.

BACKGROUND OF THE INVENTION

[0002] Currently, there are clocks known of various types (watches, wall clocks, pedestal clocks, etc.) constituted by a case or medium which includes a time base, for example electronic (a quartz crystal connected to a decoder) or mechanical (a seesaw pin which acts rhythmically on the teeth of a pre-loaded gear) and needles or indicators that move along a rule; or by a display with digits that change according to the supply provided by the decoder.

[0003] However, these clocks have a certain mechanical complexity, especially in the case of clocks with clock hands. In both cases the time is difficult to see for people with sight problems (myopia, presbyopia, etc).

[0004] These drawbacks are resolved with the use of the clock of the invention.

DESCRIPTION OF THE INVENTION

[0005] The clock of the invention has a simple constitution according to which it is easy for any person with sight problems to understand the time.

[0006] In accordance with the invention, the clock is constituted by a medium to hang, support, wrap around the wrist by means of straps or chains, etc., in the interior of whose medium is disposed a mechanical time base, electronic, or of any other type applicable.

[0007] Said time base incorporates the components (electronic and/or mechanical elements) to act on different coloured indicators which are susceptible to changing shade (or colour), as well as position by cells implemented in the medium.

[0008] Ideally from the support shall be incorporated twelve cells, although any other number can be incorporated. Furthermore, the disposal of the cells can be regular or irregular, for example forming grouping by rows and columns, or changeable. Preferably, moreover, these cells are materialised by means of colour displays or screens, susceptible of representing the different colours of the indicators as well as their changes of shade. Also, and in preferred manner, the cells shall be constituted by different dedicated areas of a single screen or display, such as that of a television, a computer monitor, a screen of a mobile telephone or of an urban display, or any other screen of suitable size, even to be wrapped around the wrist in the form of a bracelet by means of the corresponding straps or chains.

[0009] To represent the time preferably two indicators of different colours will be used; one which will change cells at larger time intervals, preferably of duration equivalent to one hour, and the other which will change cells

at smaller time intervals which are fractions of the greater, whose duration will preferably be of five minutes. Additionally, the five minute indicator, or both, will be able to change shade as fractions of the time unit which measure them transpire, i.e. for example the minutes indicator will be able to change shade to a lighter shade or darker shade at one minute intervals.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010]

Figure 1 shows the clock of the invention of an embodiment in watch format.

Figure 2 shows the clock of the invention materialised in a mobile telephone screen or a portable electronic device.

Figure 3 shows the clock of the invention materialised in an urban display screen.

Figure 4 shows the clock of the invention materialised in a computer or television screen.

DESCRIPTION OF A PRACTICAL EMBODIMENT OF THE INVENTION

[0011] The clock 1 of the invention comprises a medium 2 with a series of cells 3, ideally twelve, intended to receive markers 4a, 4b or different colours which change cell, and shade, in some cases, as time passes.

[0012] Consequently, markers 4a and 4b are equipped with means which cause their change of cell or shade.

[0013] Each marker represents a time unit, so that if one wishes the clock to indicate hours, every five minutes and other minimal intervals, such as every five seconds, three markers of different colours will be used: in the event that one only wishes for it to mark hours and minutes only two different colour markers will be necessary; and if one only wishes for it to mark hours only a single marker. Additionally, the change of shade of the marker also represents a passage of time. For example, if the five minute marker is red, its change will be produced at one minute intervals, which permits smaller markers (seconds) to be discarded.

[0014] By way of example, it can be observed in the figures that the hour marker 4a occupies the second cell, which means that it is the second hour, while the five minute marker 4b occupies the sixth cell, so the time would be between two twenty-five and two thirty. Additionally, by the shade of the indicator 4b the exact time would be known in minutes (for example two twenty-three).

[0015] For the materialisation of the cells 3 and markers 4a, 4b the invention preferably contemplates the use of colour screens or displays, which can be grouped in a single display 5 or screen where the different cells are defined.

[0016] According to another example of the invention, which is not represented in the figures, the cells can be

materialised by means of engraved or projecting squares in the medium where, by means of motors for example, the changes of position of pieces of different colours which constitute the markers pass mechanically.

[0017] In any of the cases the clock will incorporate a time base not represented (mechanical or electronic) internal or external to the medium 2, as well as the means, also mechanical and/or electronic, capable of determining the colour, position and/or shade of the markers. 5

[0018] The medium 2 has means for the attachment of the clock, materialised, for example, by straps 6 for the wrist as observed in figure 1, a stand 7 for support, or flanges to hang, etc, or is built into a mobile device 8 or in an urban display. 10

[0019] The nature of the invention having been described sufficiently, as well as the manner of embodying it in practice, it must be stated that the arrangement previously indicated and represented in the attached drawings are susceptible to modifications of detail as long as they do not change the fundamental principle. 15 20

Claims

1. Clock of the type of which include an electronic or mechanical time base in a medium equipped with means of support such as a pedestal, straps or suchlike, and whose time base is connected to means capable of moving indicators along a rule or representing digits on a screen; **characterised in that** the medium comprises cells designed to receive markers of different colours which change cells with the passage of time. 25 30
2. Clock according to claim 1, **characterised in that** it preferably uses two indicators, one of them for larger time intervals and another of shorter time intervals which are fractions of the greater intervals. 35
3. Clock according to claim 2, **characterised in that** it optionally has a third minimum time interval indicator which are fractions of the smaller time intervals. 40
4. Clock according to claim 1, **characterised in that** the cells are constituted by screens, displays or suchlike susceptible to illuminating in different colours with changes of shade. 45
5. Clock according to the previous claims, **characterised in that** the cells are constituted by different areas of a single colour screen or display. 50
6. Clock according to claim 5, **characterised in that** the single screen or display is a computer, television, mobile telephone, urban display or suchlike screen. 55
7. Clock according to claim 1, **characterised in that** it ideally incorporates twelve cells.

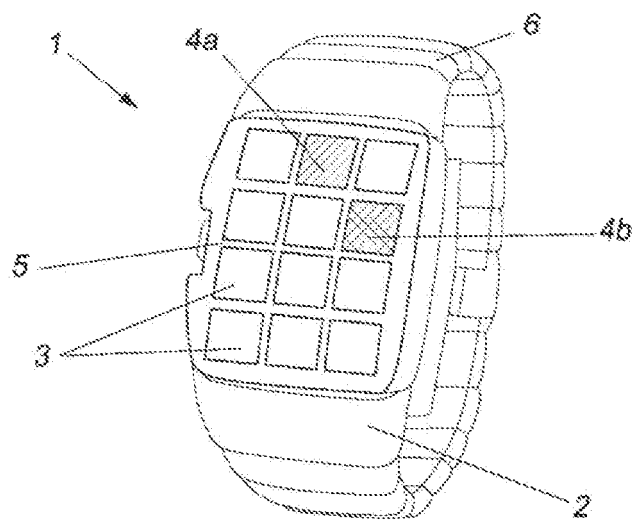


FIG. 1

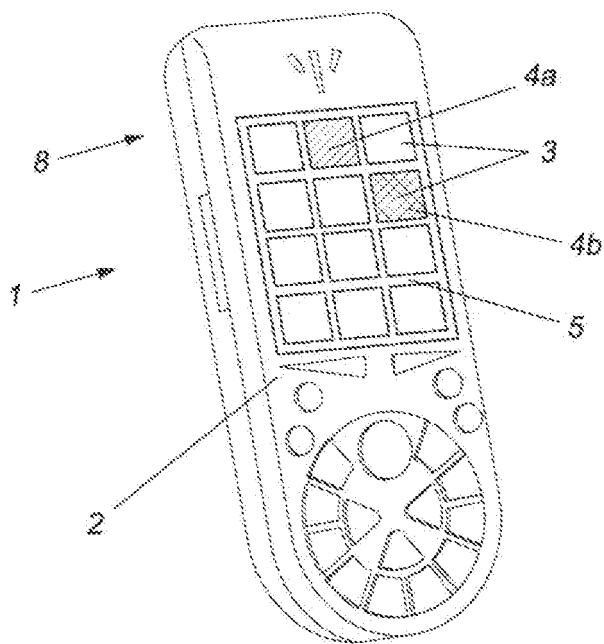


FIG. 2

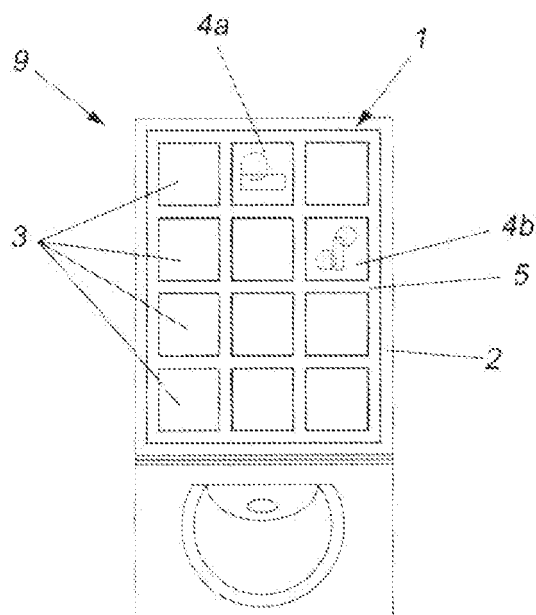


FIG. 3

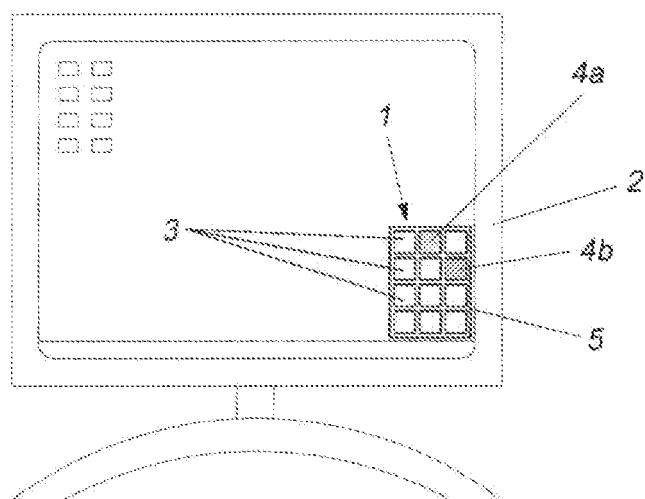


FIG. 4

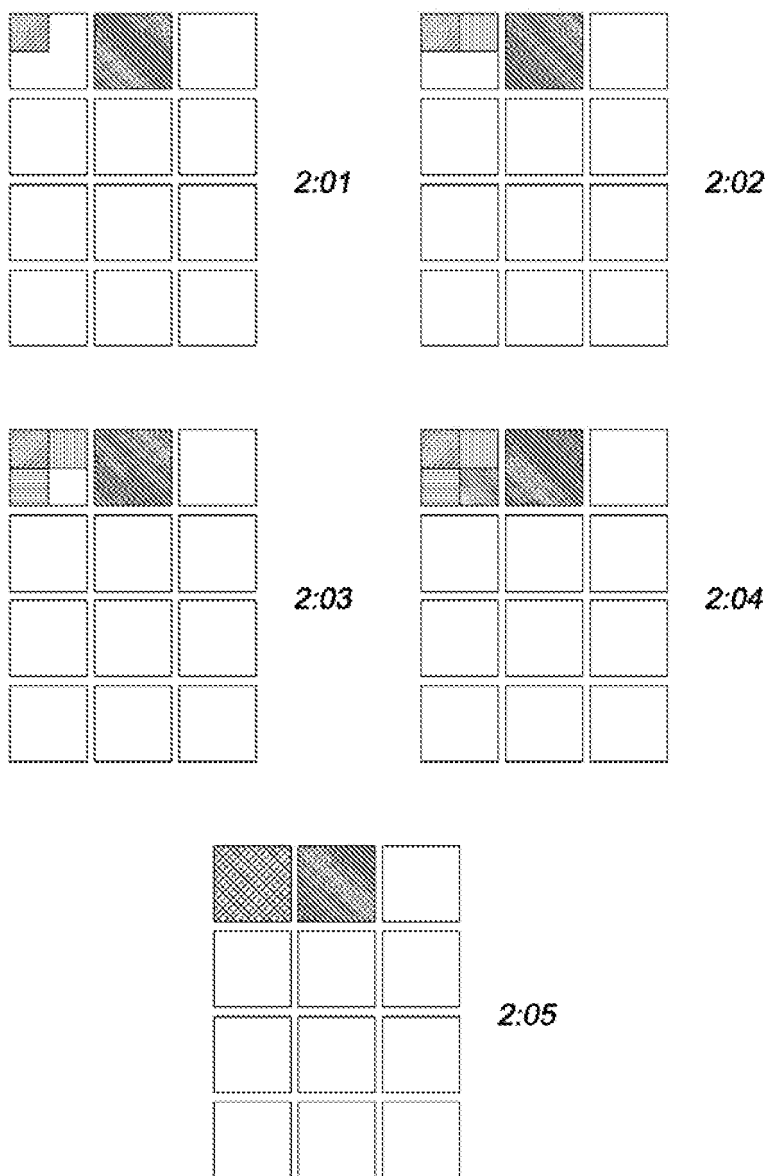


FIG. 5

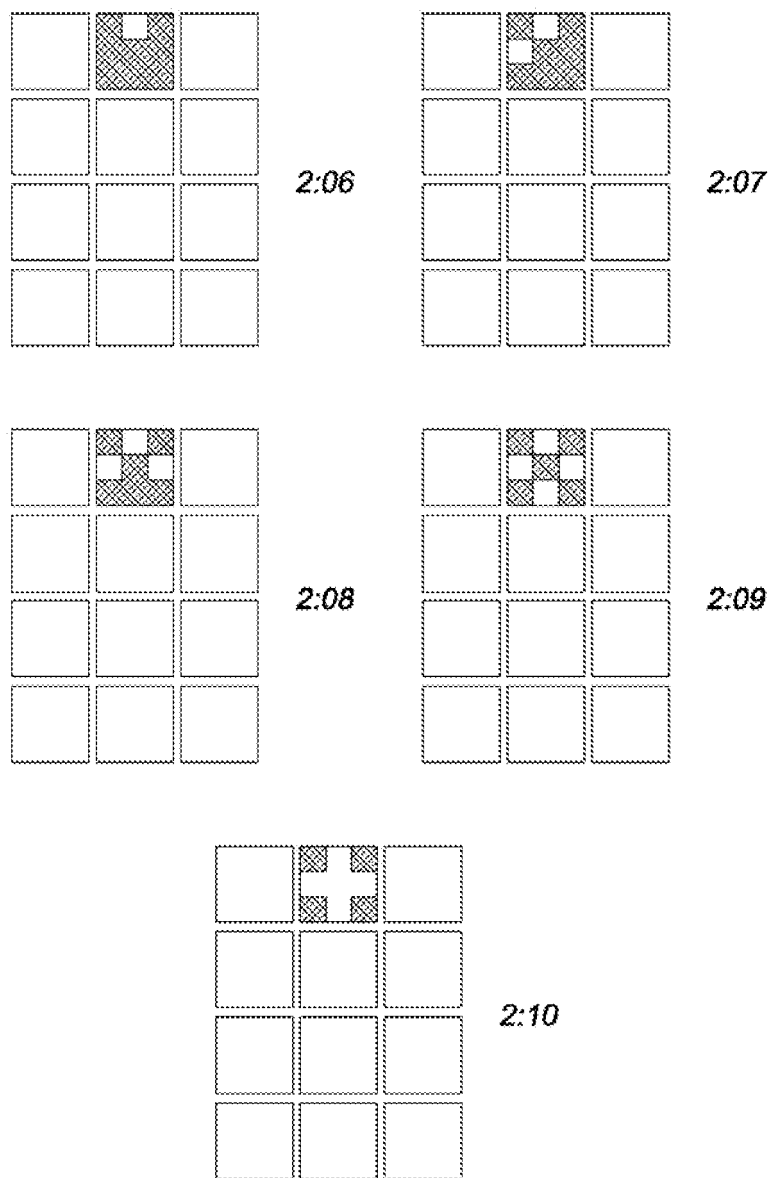


FIG. 6

INTERNATIONAL SEARCH REPORT

International application No.

PCT/ ES 2007/070035

A. CLASSIFICATION OF SUBJECT MATTER

G04B 19/08 (2006.01)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G04B19+, G04B45+

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CIBEPAT, EPODOC, WPI y TXT+

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	ES 2170717 A1 (QUINN LORENZO ALESSANDRO) 01.08.2002, the whole document.	1-12,15 13,14
X Y	US 3943288 A (YOUNG EDGAR D) 09.03.1976, the whole document.	1,3-5,15 13,14
X	ES 2154810 T3 (BOIT INC) 16.04.2001, column 7, line 10 - column 16, line 2; images.	1,3-12
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☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance.		
"E" earlier document but published on or after the international filing date		
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"P" document published prior to the international filing date but later than the priority date claimed	"&"	document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

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