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

UHR MIT EINER ZEIGERLOSEN ANZEIGE

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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 of 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 means 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. Likewise, in both cases the time is difficult to see for people with sight problems (myopia, presbyopia, etc).

[0004] Furthermore, GB 2323688 discloses a display based on 12 cells, each comprising a main portion for indicating the hour and a first auxiliary section for indicating the minutes. This presents the disadvantage that the first auxiliary section is rather small and is thus difficult to see for people with sight problems.

[0005] These drawbacks are resolved with the use of the clock of the invention, as defined in independent claim 1.

DESCRIPTION OF THE INVENTION

[0006] The clock of the invention has a simple constitution according to which it is easy for any person with sight problems to read the time.

[0007] 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, an electronic time base, or a time base of any other applicable type.

[0008] Said time base incorporates the components (electronic and/or mechanical elements) to act on different coloured indicators which can change shades (or colours), as well as position by cells implemented in the medium.

[0009] Another aspect of the present invention could be aimed at indicators which, instead of different colours, have the same colour, with or without shade changes.

[0010] The support shall incorporate twelve cells. Furthermore, the arrangement of the cells can be regular or irregular, for example forming groupings by rows and columns, or random, although in accordance with a preferred embodiment of the invention, the cells are arranged in four rows and three columns. Preferably, moreover, these cells are materialised by means of colour display means or screens, which can represent the dif-

ferent colours of the indicators as well as their shade changes. Also, and preferably, the cells shall be constituted by different dedicated areas of a single screen or display means, 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.

[0011] To represent the time, preferably two indicators of different colours will be used; one which will change cells at longer time intervals, preferably of duration equivalent to one hour, and the other which will change cells at shorter time intervals which are fraction of the greater, whose duration will preferably be of five minutes. In one embodiment, the longer time interval indicator is always of the same colour. Additionally, the five-minute indicator, or both, will be able to change shades as fractions of the time unit measured pass, i.e. for example the minutes indicator will be able to change from one shade to a lighter shade or darker shade at one-minute intervals.

BRIEF DESCRIPTION OF THE DRAWINGS**[0012]**

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

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

Figure 3 shows the clock of a further example not forming part 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

[0013] 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 shaded in some cases, as time passes.

[0014] Consequently, markers 4a and 4b are equipped with means which cause their change of cell or of shade.

[0015] Each indicator represents a time unit, so that if one wishes for the clock to indicate hours, minutes of five-by-five and other minimal intervals, such as seconds of five-by-five, three indicators of different colours will be used; in the event that one only wishes for it to mark hours and minutes only two different coloured indicators will be necessary; and if one only wishes for it to mark hours, only a single indicator. Additionally, the change of shade of the indicator also represents a passage of time. For example, if the five-minute indicator is red, its change will be produced at one-minute intervals, which permits shorter indicators (seconds) to be discarded.

[0016] As an example, it can be observed in the figures

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

[0017] For the materialisation of the cells 3 and indicators 4a, 4b the invention preferably considers the use of colour screens or display means, which can be grouped in a single display means 5 or screen where the different cells are defined.

[0018] 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 indicators pass mechanically.

[0019] In any of the cases, the clock will incorporate a (mechanical or electronic) time base, not represented, 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 indicators.

[0020] The medium 2, for its part, has means for attaching to 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.

[0021] The nature of the invention having been sufficiently described, as well as the manner of embodying it in practice, it must be stated that the details in the previously indicated and represented arrangements in the attached drawings can be modified as long as they do not change the fundamental principle, without departing from the scope of the claims.

Claims

1. Clock comprising: a medium (2) which incorporates electronic and/or mechanical elements, support means (6, 7) of said medium, twelve cells (3) implemented in the medium (2) adapted to receive at least a longer time interval indicator (4a) and a shorter time interval indicator (4b), said indicators adapted to change cell (3) with the passage of time, a time base which acts on said indicators (4a, 4b) in such a way that the twelve cells (3) are configured to receive both the longer time interval indicator (4a) and the shorter time interval indicator (4b), **characterised in that:** only one of said cells (3) is adapted to receive one indicator (4a, 4b) and only the same or any other one of said cells (3) is adapted to receive the other indicator (4b, 4a); and **in that** each of said indicators (4a, 4b) is configured to uniformly fill each of said cells (3).
2. Clock according to claim 1, **characterised in that** the cells are materialised by means of engraved or

projecting squares in the medium wherethrough position changes of the indicators will pass mechanically.

3. Clock according to claim 1, **characterised in that** it has a third minimum time interval indicator which are fractions of the shorter time intervals.
4. Clock according to claim 1, **characterised in that** the indicator for longer time intervals (4a) is always of the same colour.
5. Clock according to claim 1 **characterised in that** the indicator for shorter time intervals (4b) indicates the time intervals by means of a change of shade.
6. Clock according to claim 1, **characterised in that** the longer time intervals are hours and the shorter time intervals are five-minute intervals.
7. Clock according to claim 1, **characterised in that** the cells (3) comprise screens or display means which are illuminated in different colours or shades.
8. Clock according to claim 1, **characterised in that** the cells (3) are constituted by different areas of a single colour screen or display means.
9. Clock according to claim 8, **characterised in that** the single screen or display means is a computer, television, mobile telephone, urban display or such-like screen.
10. Clock according to any of the previous claims, **characterised in that** the twelve cells (3) are arranged according to four rows and three columns.

Patentansprüche

1. Eine Uhr, welche umfasst: ein Medium (2), das elektronische und/oder mechanische Elemente einschließt, Stützmittel (6, 7) des besagten Mediums, zwölf in dem Medium (2) implementierte Zellen (3), die dazu ausgelegt sind, mindestens einen Anzeiger eines längeren Zeitintervalls (4a) und einen Anzeiger eines kürzeren Zeitintervalls (4b) zu empfangen, wobei die besagten Anzeiger dazu ausgelegt sind, Zellen (3) im Verlauf der Zeit zu verändern, eine Zeitbasis, die auf die besagten Anzeiger (4a, 4b) auf eine solche Weise einwirkt, dass die zwölf Zellen (3) dazu konfiguriert werden, sowohl den Anzeiger des längeren Zeitintervalls (4a) als auch den Anzeiger des kürzeren Zeitintervalls (4b) zu empfangen, **dadurch gekennzeichnet, dass:** nur eine der besagten Zellen (3) dazu ausgelegt ist, einen Anzeiger (4a, 4b) zu empfangen, und nur dieselbe bzw. irgendeine andere der besagten Zellen (3) dazu ausgelegt ist,

den anderen Anzeiger (4a, 4b) zu empfangen; und dadurch, dass jeder der besagten Anzeiger (4a, 4b) dazu konfiguriert ist, jede der besagten Zellen (3) gleichmäßig auszufüllen.

2. Eine Uhr nach Anspruch 1, **dadurch gekennzeichnet, dass** die Zellen durch eingravierte oder vorspringende Quadrate in dem Medium ausgeführt sind, durch die Positionsänderungen der Anzeiger mechanisch verlaufen.
3. Eine Uhr nach Anspruch 1, **dadurch gekennzeichnet, dass** diese einen dritten Anzeiger eines Mindestzeitintervalls besitzt, bei dem es sich um Fraktionen des kürzeren Zeitintervalls handelt.
4. Eine Uhr nach Anspruch 1, **dadurch gekennzeichnet, dass** der Anzeiger für längere Zeitintervalle (4a) immer dieselbe Farbe hat.
5. Eine Uhr nach Anspruch 1, **dadurch gekennzeichnet, dass** der Anzeiger für kürzere Zeitintervalle (4b) die Zeitintervalle mittels einer Änderung der Schattierung anzeigt.
6. Eine Uhr nach Anspruch 1, **dadurch gekennzeichnet, dass** die längeren Zeitintervalle Stunden und die kürzeren Zeitintervalle Intervalle von jeweils 5 Minuten sind.
7. Eine Uhr nach Anspruch 1, **dadurch gekennzeichnet, dass** die Zellen (3) Bildschirm- bzw. Anzeigenmittel umfassen, die mit unterschiedlichen Farben oder Schattierungen beleuchtet sind.
8. Eine Uhr nach Anspruch 1, **dadurch gekennzeichnet, dass** die Zellen (3) durch unterschiedliche Bereiche eines einzigen farbigen Bildschirm- bzw. Anzeigenmittels gebildet werden.
9. Eine Uhr nach Anspruch 8, **dadurch gekennzeichnet, dass** es sich bei dem einzigen Bildschirm- bzw. Anzeigenmittel um einen Computer, einen Fernseher, ein Handy, eine städtische Anzeigentafel oder einen ähnlichen Bildschirm handelt.
10. Eine Uhr nach irgendeinem der vorherigen Ansprüche, **dadurch gekennzeichnet, dass** die zwölf Zellen (3) in vier Zeilen und drei Spalten angeordnet sind.

Revendications

1. Réveil comprenant: un support (2) qui comprend des éléments électroniques et/ou mécaniques, des organes d'appui (6, 7) dudit support, douze cellules (3) implantées dans le support (2) adapté pour recevoir

au moins un indicateur d'intervalles de temps plus longs (4a) et un indicateur d'intervalles de temps plus courts (4b), lesdits indicateurs adaptés pour changer de cellule (3) avec le passage du temps, une base de temps qui agit sur lesdits indicateurs (4a, 4b) de telle façon que les douze cellules (3) sont configurées pour recevoir à la fois l'indicateur d'intervalles de temps plus longs (4a) et l'indicateur d'intervalles de temps plus courts (4b), **caractérisé en ce que** : seulement une desdites cellules (3) est adaptée pour recevoir un indicateur (4a, 4b) et seulement la même ou toute autre desdites cellules (3) est adaptée pour recevoir l'autre indicateur (4b, 4a) ; et **en ce que** chacun desdits indicateurs (4a, 4b) est configuré pour recharger uniformément chacune desdites cellules (3).

2. Réveil selon la revendication 1, **caractérisé en ce que** les cellules sont matérialisées au moyen de caractères gravés ou saillants dans le support à travers lesquels les changements de position des indicateurs passeront mécaniquement.
3. Réveil selon la revendication 1, **caractérisé en ce qu'il** possède un troisième indicateur d'intervalles de temps minimum qui sont des fractions des intervalles de temps les plus courts.
4. Réveil selon la revendication 1, **caractérisé en ce que** l'indicateur pour les intervalles de temps plus longs (4a) est toujours de la même couleur.
5. Réveil selon la revendication 1, **caractérisé en ce que** l'indicateur pour les intervalles de temps plus courts (4b) indique les intervalles de temps au moyen d'un changement de ton.
6. Réveil selon la revendication 1, **caractérisé en ce que** les intervalles de temps les plus longs sont des heures et les intervalles de temps les plus courts sont des intervalles de cinq minutes.
7. Réveil selon la revendication 1, **caractérisé en ce que** les cellules (3) comprennent des écrans ou des organes d'affichage qui sont illuminés dans des couleurs ou tons différents.
8. Réveil selon la revendication 1, **caractérisé en ce que** les cellules (3) sont constituées de différentes zones d'un unique écran ou organe d'affichage couleur.
9. Réveil selon la revendication 8, **caractérisé en ce que** l'unique écran ou organe d'affichage est un ordinateur, une télévision, un téléphone portable un afficheur urbain ou un écran de ce type.
10. Réveil selon n'importe laquelle des revendications

précédentes, **caractérisé en ce que** les douze cellules (3) sont disposées selon quatre lignes et trois colonnes.

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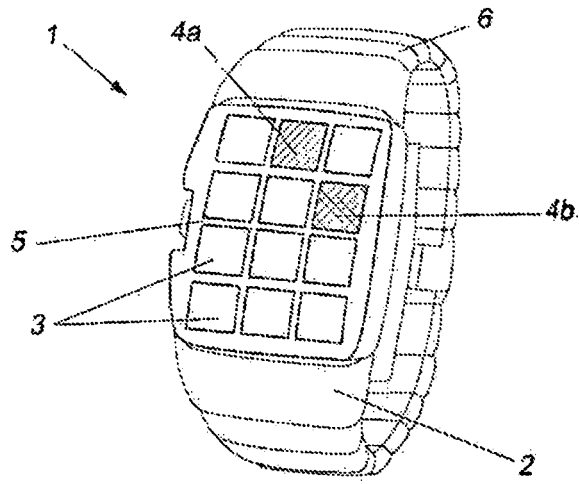


FIG. 1

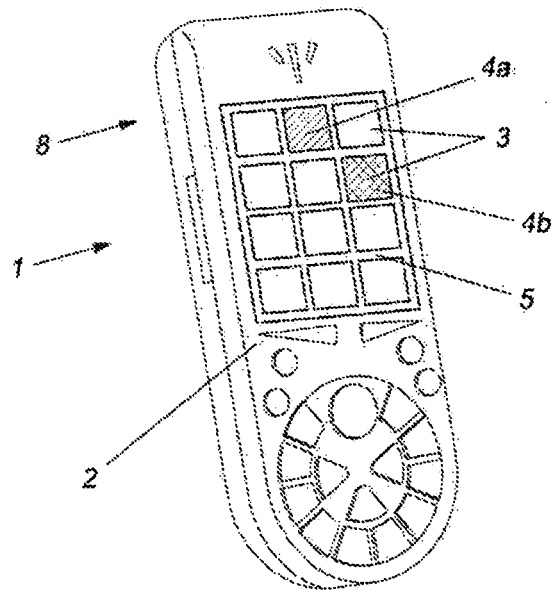


FIG. 2

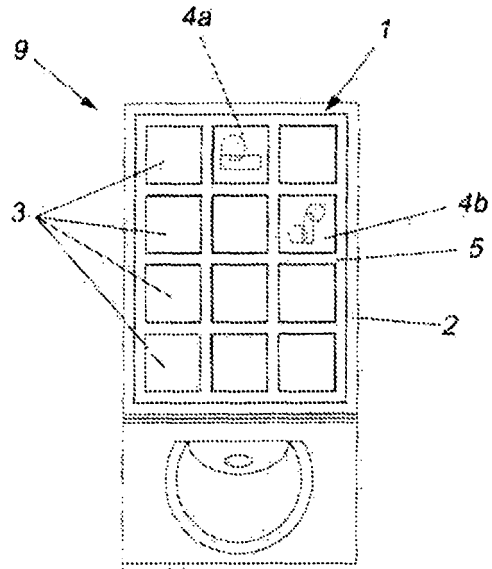


FIG. 3

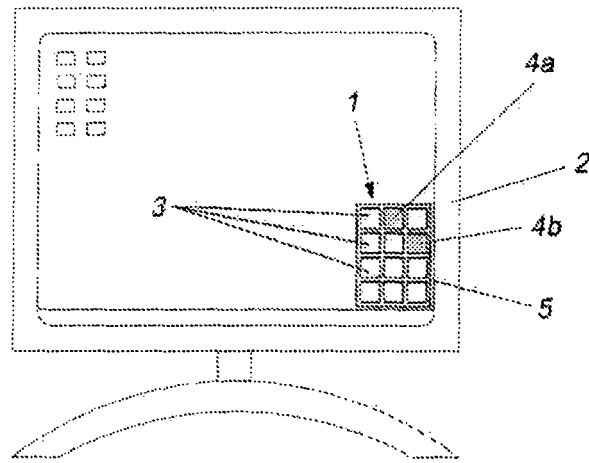


FIG. 4

REFERENCES CITED IN THE DESCRIPTION

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