

PATENT SPECIFICATION

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DRAWINGS ATTACHED

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(54) TIMEPIECE

(71) We, KABUSHIKI KAISHA SUWA SEIKOSHA, a Japanese company, of 3-4, 4-chome, Ginza, Chuo-ku, Tokyo, Japan, do hereby declare the invention for which we pray that a patent may be granted to us, and the method by which it is to be performed to be particularly described in and by the following statement.

This invention relates to timepieces.

10 According to the present invention there is provided a timepiece comprising a twenty-four hour hand for indicating Greenwich Mean Time in conjunction with a twenty-four hour time scale, and a twelve hour 15 hand for indicating a given local time in conjunction with a twelve hour local time scale, the twelve hour local time scale being fixed relative to the twenty-four hour time scale, said twenty-four hour hand and said 20 twelve hour hand being so arranged that there is always indicated a permanent time difference therebetween equal to the time difference between local time and Greenwich Mean Time so that the local time 25 may be read from the twelve hour local time scale and Greenwich Mean Time from the twenty-four hour time scale.

A rotatable member may be provided adjacent the twenty-four-hour time scale and the twelve hour local time scale, the member having a further time scale such that 30 any local time may be read therefrom.

Preferably the twelve hour local time scale and the twenty-four hour time scale 35 are both provided on a single dial.

The invention is illustrated, merely by way of example, in the accompanying drawings, in which:

40 Figure 1 is a plan view of a conventional timepiece; and

Figure 2 is a plan view of a timepiece according to the present invention.

Referring to the drawings and, in particular, to Figure 1, there is shown a conventional timepiece, e.g. a navigation type 45 [Price 25p]

wrist watch. This timepiece has a twelve hour hand 1 and a minute hand 2 and these indicate local time in conjunction with twelve equi-angularly spaced apart strips 4 on a dial 3. A twenty-four hour hand is 50 associated with the twelve hour hand 1, and, as an example, when local time is Greenwich Mean Time (GMT) and when the twelve hour hand is adjacent to the strip 4 at the twelve o'clock position on the dial 3, 55 the twenty-four hour hand is adjacent the strip at the six o'clock position on the dial and adjacent the twelve o'clock position of a scale 7 on a ring 6 rotatably mounted about the outer periphery of the dial. Thus 60 the scale 7 indicates GMT. If there is a difference between local time and GMT the ring 6 is rotated by an amount equal to the time difference therebetween so that GMT and local time can be read. 65

While, for instance, navigators and airline pilots who need timepieces of this type travel across many time zones during the course of their occupation, they find it convenient to have to make an adjustment of 70 the ring 6 when they require to know GMT and, furthermore, they normally have to use the twenty-four hour clock based on GMT during the course of their occupation. Thus, the conventional timepieces described above 75 have grave disadvantages for such persons.

Referring now to Figure 2, there is shown a timepiece according to the present invention having a twenty-four hour hand 11 for indicating GMT in conjunction with a 80 twenty-four hour scale 13 on a dial 12, and a twelve hour hand 14 for indicating local time in conjunction with twelve strips 13 on the dial 12. A minute hand 15 is provided in the conventional manner, it is to be 85 noted that the twenty-four hour hand 11 and the twelve hour hand 14 are so arranged that there is always indicated permanent time difference therebetween corresponding to the time difference between local time and 90

Price 75p

GMT. For example, assuming the time shown by the twelve hour hand 14 and the minute hand 15 in Figure 2 is local time in Tokyo, there is a nine hour time difference between the twenty-four hand 11 and the twelve hour hand 14 so that GMT (1 o'clock) and local time (10 o'clock) are both indicated by the scales on the dial 12. Therefore, GMT is indicated by the twenty-four hour hand 11 and the minute hand 15 in conjunction with the twenty-four hour scale 13 and the local time is indicated by the twelve-hour hand 14 and the minute hand 15 in conjunction with the strips 13' and no adjustment of the timepiece whatsoever is required to read either GMT or local time.

Because the difference between the time indicated by the twenty-four hand 11 and the twelve hour hand 14 is predetermined, the production of a timepiece with a given predetermined time difference will be in accordance with the sales demand in the country having that particular time difference with GMT. Moreover the timepiece described above has no more parts than the conventional timepiece so it can be produced in large quantities inexpensively and is highly efficient when in operation.

A bezel or ring 16 is provided on the timepiece Figure 2 and the ring 16 has a twelve hour scale and is rotatably mounted about the outer periphery of the dial 12. When the timepiece is temporarily located in a place, where the time is different from the "local time" of the timepiece and different from GMT, the time at that place is indicated by the scale on the ring 16 in conjunction with the twelve-hour hand 14, the ring being rotated by an amount corresponding to the time difference between the "local time" of the timepiece and the time at the place where the timepiece is located. For example, as shown in Figure 2, the time difference between the "local time" of the timepiece i.e. the time in Tokyo, is 2 hours different from the time in the place where the timepiece is located.

In conclusion, three kinds of time (GMT,

the "local time" of the timepiece and the time at the place where the timepiece is temporarily located) are indicated. Thus, in the example shown in Figure 2, GMT is 1 o'clock, the "local time" of the timepiece is 10 o'clock and the time in the place where the timepiece is temporarily located is 12 o'clock.

It will be appreciated that the ring 16 may be mounted either inside or outside a glass (not shown) of the watch.

WHAT WE CLAIM IS:

1. A timepiece comprising a twenty-four hour hand for indicating Greenwich Mean Time in conjunction with a twenty-four hour time scale; and a twelve-hour hand for indicating a given local time in conjunction with a twelve hour local time scale, the twelve hour local time scale being fixed relative to the twenty-four hour time scale, said twenty-four hour hand and said twelve hour hand being so arranged that there is always indicated a permanent time difference therebetween equal to the time difference between local time and Greenwich Mean Time so that the local time may be read from the twelve hour local time scale and Greenwich Mean Time from the twenty-four hour time scale.

2. A timepiece as claimed in claim 1 wherein a rotatable member is provided adjacent the twenty-four hour time scale and the twelve hour local time scale, the member having a further time scale such that any local time may be read therefrom.

3. A timepiece as claimed in claim 1 or claim 2 in which the twelve hour local time scale and the twenty-four hour time scale are both provided on a single dial.

4. A timepiece substantially as herein described with reference to and as shown in Figure 2 of the accompanying drawings.

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Because the difference between the time indicated by the twenty-four hand 11 and the twelve hour hand 14 is predetermined, the production of a timepiece with a given predetermined time difference will be in accordance with the sales demand in the country having that particular time difference with GMT. Moreover the timepiece described above has no more parts than the conventional timepiece so it can be produced in large quantities inexpensively and is highly efficient when in operation.

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In conclusion, three kinds of time (GMT,

the "local time" of the timepiece and the time at the place where the timepiece is temporarily located) are indicated. Thus, in the example shown in Figure 2, GMT is 1 o'clock, the "local time" of the timepiece is 10 o'clock and the time in the place where the timepiece is temporarily located is 12 55 o'clock.

It will be appreciated that the ring 16 may be mounted either inside or outside a glass (not shown) of the watch.

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1. A timepiece comprising a twenty-four hour hand for indicating Greenwich Mean Time in conjunction with a twenty-four hour time scale, and a twelve-hour hand for indicating a given local time in conjunction 65 with a twelve hour local time scale, the twelve hour local time scale being fixed relative to the twenty-four hour time scale, said twenty-four hour hand and said twelve hour hand being so arranged that there is 70 always indicated a permanent time difference therebetween equal to the time difference between local time and Greenwich Mean Time so that the local time may be read from the twelve hour local time scale and 75 Greenwich Mean Time from the twenty-four hour time scale.

2. A timepiece as claimed in claim 1 wherein a rotatable member is provided adjacent the twenty-four hour time scale and the twelve hour local time scale, the member having a further time scale such that any local time may be read therefrom.

3. A timepiece as claimed in claim 1 or claim 2 in which the twelve hour local time scale and the twenty-four hour time scale are both provided on a single dial.

4. A timepiece substantially as herein described with reference to and as shown in Figure 2 of the accompanying drawings. 90

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