

PATENT SPECIFICATION (11)

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(54) TIMEPIECE MECHANISM

(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 timepiece mechanisms and, in particular, although not so restricted, to watch mechanisms.

Heretofore, when plastics material has been used in the construction of a timepiece, it has been used for a toothed date wheel of a calendar watch. In such a watch a date correcting wheel is made of metal and when a date correction is effected during date advancing time (that is to say, when the date is in the process of being changed by a calendar mechanism of the watch) the teeth on the date wheel are damaged by the date correcting wheel.

According to one aspect of the present invention there is provided a timepiece mechanism having a date correcting means consisting of a first part made of plastics material and a second part made of metal, and a friction drive arranged between said parts.

According to another aspect of the present invention, there is provided a timepiece having a mechanism as recited above.

The invention is illustrated, merely by way of example, in the accompanying drawing which shows, in cross-section, a timepiece mechanism according to the present invention.

A timepiece mechanism according to the present invention and shown in the accompanying drawing comprises an hour wheel 1, a date driving wheel 2 which is integral with the hour wheel, and a date advancing wheel 3 which meshes with the hour wheel so that it performs one complete revolution every 24 hours. A date advancing finger 4 is integral with the date advancing wheel 3 and is arranged to index a toothed date wheel 5 by one tooth space every 24 hours. A date correcting wheel 6 meshes with the teeth of the date wheel so that a date correction may be effected by rotation of a stem 8. A date

correcting wheel bush 7 is meshed with a splined part 9 on the stem 8. A friction drive is arranged between the date correcting wheel bush 7 and the date correcting wheel 6 so that the former may drive the latter.

If the hour wheel 1, the date driving wheel 2, the date advancing wheel 3, the date advancing finger 4, the date wheel 5 and the date correcting wheel 6 are all made of plastics material and the date correcting wheel bush 7 and the stem 8 are both made of metal, when a date correction is effected at the date advancing time (that is to say, when the date advancing finger 4 is in engagement with the date wheel to advance the same) the date correcting wheel 6 and the date correcting wheel bush 7 slip relative to one another so that no damage can occur to the plastics parts.

In the case where the date correcting wheel 6 is made of metal, even if the date correcting wheel and the date correcting wheel bush 7 slip relative to one another, the teeth of the date wheel 5 are damaged by the teeth of the date correcting wheel 6. In the case where the date correcting wheel 6 and a date wheel 5 are made of metal, the date advancing finger 4 will be broken by the force transmitted by the stem. In the case where the date correcting wheel bush 7 is made of plastics material, the date correcting wheel bush will be damaged by the splined part 9 of the stem so that the rotation of the stem will not be transmitted to the date wheel 5.

Where plastics material is used in a timepiece care has to be taken not to make the parts of plastics material which mesh with the stem. Even if one of the plastics parts is only slightly damaged the precise engagement between the parts will be destroyed.

In the timepiece mechanism described above meshing parts are made either of plastics material or of metal and a frictional drive is arranged between plastics parts and metal parts so that a meshing engagement between plastics parts and meshing parts is avoided. This arrangement has the advantage that breakage of, or damage to, the plastics parts is avoided and, therefore, plastics parts may be used to a considerable extent in a

timepiece and this has not been possible heretofore. The invention is particularly applicable to watches, especially those of the calendar type. The use of plastics parts in a watch reduces the cost of the watch as a whole.

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WHAT WE CLAIM IS:—

1. A timepiece mechanism having a date correcting means consisting of a first part made of plastics material and a second part made of metal, and a friction drive arranged between said parts.

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2. A timepiece mechanism as claimed in

claim 1 in which the said first part is a date correcting wheel and the second part is a date correcting wheel bush.

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3. A timepiece mechanism substantially as herein described with reference to and as shown in the accompanying drawing.

4. A timepiece provided with a mechanism as claimed in any preceding claim.

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