

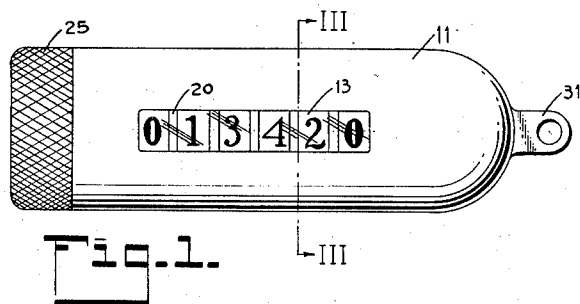
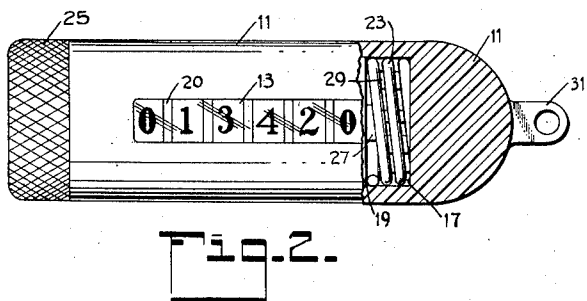
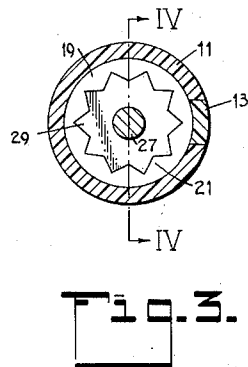
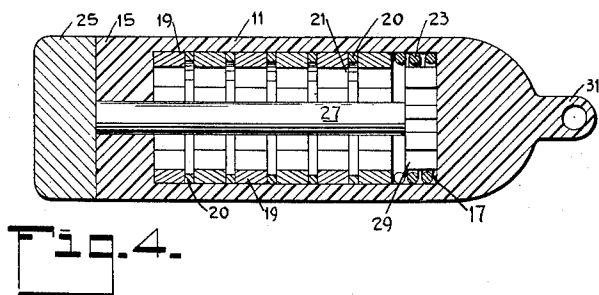
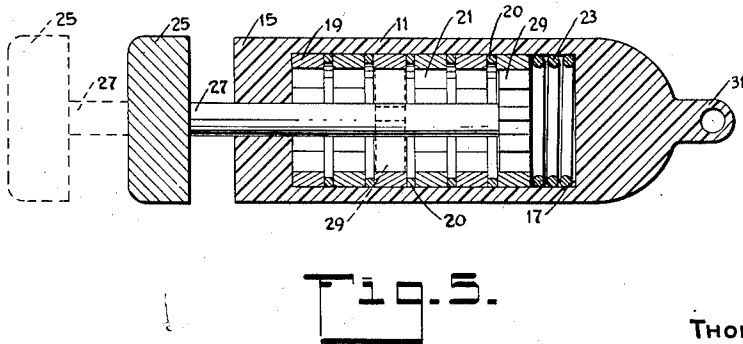
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2,785,488

POCKET RECORD DEVICE

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1

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POCKET RECORD DEVICE

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3 Claims. (Cl. 40—68)

This invention relates to certain new and useful improvements in devices for recording series of numbers which are particularly adapted for use as for example in recording a specified mileage appearing upon a motor vehicle speedometer or other set of numbers as desired. Devices have heretofore been contemplated which were readily portable and easily carried for the purpose of providing a means of recording a series of numbers or for score keeping purposes or other entertainment purposes.

The prior devices have in general been characterized by an inefficiency in operation which has permitted distortion of the series of numbers intended to be preserved on the device or have required elaborate devices supplementing the recording device for the purpose of preventing such distortion.

The principal object of the present invention is to provide a simple and efficient device by which a series of numbers may be accurately registered and the registered record thus established be accurately maintained for such period of time as is desired and which may as easily be changed to establish a new record when and as desired.

A further object of the invention is to provide such a device which may readily be carried in the pocket of the user or may be suspended from a key chain or the like.

A further object of the invention is to provide a portable record device which is adapted for use as by a motorist in recording certain mileage record, as for example when an oil change has been accomplished.

A further object of the invention is to provide a record device comprising a compact casing, a plurality of number carrying rings rotatably mounted in the casing, means retaining the rings against accidental rotation, and a reciprocable and rotatable plunger having a pinion at its distal end, the interior of the number rings being provided with a series of teeth adapted to mesh with the pinion of the plunger, and upon meshing and pinion rotation to effect desired rotation of the number rings independently; and

A further object of the invention is to generally improve the design, construction and efficiency of record devices.

The means by which the foregoing and other objects of the present invention are accomplished and the manner of their accomplishment will be readily understood from the following specification upon reference to the accompanying drawings, in which:

Fig. 1 is a side elevational view of the record device of the present invention.

Fig. 2 is a view similar to Fig. 1 with parts broken away for purpose of illustration.

Fig. 3 is a cross sectional view as on the line III—III of Figs. 1 and 2.

Fig. 4 is a longitudinal sectional view taken as on the line IV—IV of Fig. 3; and

Fig. 5 is a view similar to Fig. 4 illustrating selected use positions of the device during adjustment.

2

Referring now to the drawings in which the various parts are indicated by numerals, the device is housed in a suitable casing 11 provided along one side with a viewing window 13. At one end the casing 11 is provided with a thickened end portion constituting a bearing block 15, and at its opposite end the casing is provided with an internal flat seat 17. Between the bearing block 15 and flat seat 17 casing 11 is chambered to provide a substantially cylindrical hollow interior, viewing window 13 communicating through the wall of casing 11 with the hollow interior thereof. Rotatably mounted in the hollow interior of casing 11 are a plurality of band-like annular rings 19, each of the rings 19 being preferably provided with a series of numerals preferably arranged in numerical order in the usual fashion from 1 through zero.

Preferably the rings 19 comprise, as shown, a group of six rings and are thus capable of being arranged to register a series of numbers to a substantial extent. Intermediate resilient expansion rings 20 may be interposed between rings 19. The rings 19, 20 are arranged in abutting relationship with the endmost ring 19 adjacent bearing block 15, being seated firmly against the bearing block 15, and with the opposite endmost ring 19 being spaced from flat seat 17. The rings 19 are slidably and frictionally engaged with the interior of casing 11, this frictional engagement serving to limit undesired rotation of the rings after desired position thereof has been established. As shown in the drawings, the rings 19 are centrally open and each of the rings 19 is provided with a series of equally spaced, internally projecting teeth 21, each of the rings being preferably provided with a series of ten teeth spaced equally with the digits appearing on the external face of the respective rings.

Interposed between the opposite endmost ring 19 and flat seat 17 is a compression spring 23 which bears against seat 17 and against the edge of the endmost ring 19, constantly urging the series of number rings 19 and expansion rings 20 into edge engagement, additionally serving to prevent undesired rotation of the rings. It will be observed that compression spring 23 is centrally open and that the material of spring 23 does not extend inwardly beyond the inward extent of the material of rings 19, thus leaving an elongated central passageway from end to end of the interior of casing 11. The device further includes number adjustment means which preferably comprise a rotatable and slidable plunger assembly. Preferably the number adjustment means includes an external knurled cap 25 to which is rigidly connected an elongated rod 27, the rod 27 being journaled in bearing block 15 and supported thereby for sliding and rotating movement. At its distal end the rod 27 carries a pinion 29, the rod 27 being of a length to position pinion 29 in the open interior of the spring 23 when fully inserted into the casing. The pinion 29, being provided with the same number of teeth as are rings 19, is adapted to be shifted by movement of rod 27 by the rotation of external cap 25 to shift the engaged number ring so as to position a desired numeral carried by the number ring opposite the viewing window 13. If desired, the casing 11 may be provided with a loop 31 as for attachment to a key chain or similar device.

In the use of the device, the pinion 29 is selectively shifted by sliding rod 27 through bearing block 15 successively and independently into engagement with number rings 19. Each number ring is independently rotated as described until a desired numeral has been moved opposite the viewing window 13, then the pinion is shifted into meshing engagement with the next adjacent or another of the number rings, the operation being repeated until the desired series of numbers in the desired se-

quence have been shifted into view through the viewing window 13. It will be observed that the internal teeth 21 on rings 19 are arranged in longitudinal alinement so as to facilitate the longitudinal shift of pinion 29 into successive engagement with the number rings. It will further be observed that when the number ring has been shifted to move a desired numeral opposite the viewing window the internal teeth 21 of the rings are reestablished in longitudinal alinement due to the uniform spacing of the internal teeth.

This device is particularly useful, as for example in recording a specific mileage reading upon a motor vehicle speedometer, the user being enabled to exactly reproduce the sequence of numerals appearing upon the speedometer reading, and to thus retain a record of such mileage reading for such length of time as is desired. The action of spring 23 against the series of rings cooperating with the frictional engagement between the number rings and the interior of casing 11 is thoroughly effective to prevent undesired rotation of the number rings after the desired position has been established. This effect is further enhanced by expansion rings 20, interposed between rings 19, which effectively prevent the transmission of rotation from a pinion-engaged number ring to one or more unengaged number rings.

It will be understood that the foregoing description refers to a preferred embodiment of the invention, and that modifications may be made therein without departing from the spirit of the present invention.

I claim:

1. In an indicia record device, a casing having a hollow interior, a lateral viewing window extending longitudinally of the casing and communicating with the interior, a series of abutting annular rings arranged in parallel edge relationship, at least part of said rings bearing record indicia, said rings slidably engaging the interior of said casing against accidental rotation, part of the indicia of said rings being exposed through said window, one end of said ring series engaging one end of said interior, a coiled compression spring interposed between the opposite end of said ring series and the other end of said interior and urging said rings into abutting relation, said spring holding said rings against accidental rotation, the interiors of said rings and of said spring being longitudinally alined to establish a longitudinal passage, each said indicia-bearing ring being internally toothed and the teeth of said rings being longitudinally alined, a rod turnably and slidably supported by said casing at said one end of said interior, said rod extending coaxially of said passage, and a pinion fixed to the distal end of said rod, said pinion being of a size to mesh with the internal teeth of a selected said indicia-bearing ring and being shiftable with said rod into independent meshing engagement with the respective said toothed rings,

said rod being of a length to position said pinion within said spring when said rod is extended into said casing to disengage said pinion from said rings, rotation of said rod rotating said pinion and rotating a selected said toothed indicia-bearing ring when engaged by said pinion.

2. In an indicia record device, a casing having a hollow interior, a lateral viewing window extending longitudinally of the casing and communicating with the interior, a series of abutting annular rings arranged in parallel edge relationship, at least part of said rings bearing record indicia, said rings slidably engaging the interior of said casing against accidental rotation, part of the indicia of said rings being exposed through said window, one end of said ring series engaging one end of said interior, a coiled compression spring interposed between the opposite end of said ring series and the other end of said interior and urging said rings into abutting relation, said spring holding said rings against accidental rotation, the interiors of said rings and of said spring being longitudinally alined to establish a longitudinal passage, each said indicia-bearing ring being internally toothed and the teeth of said rings being longitudinally alined, a rod turnably and slidably supported by said casing at said one end of said interior, said rod extending coaxially of said passage, and a pinion fixed to the distal end of said rod, said pinion being of a size to mesh with the internal teeth of a selected said indicia-bearing ring and being shiftable with said rod into independent meshing engagement with the respective said toothed rings, rotation of said rod rotating said pinion and rotating a selected said toothed indicia-bearing ring when engaged by said pinion.

3. In an indicia record device, a casing having a hollow interior, a lateral viewing window extending longitudinally of the casing and communicating with the interior, a series of abutting annular rings arranged in parallel edge relationship, at least part of said rings bearing record indicia, said rings slidably engaging the interior of said casing against accidental rotation, part of the indicia of said rings being exposed through said window, one end of said ring series engaging one end of said interior, a coiled compression spring interposed between the opposite end of said ring series and the other end of said interior and urging said rings into abutting relation, said spring holding said rings against accidental rotation, and means for selectively rotating said indicia-bearing rings, said rings and said spring being coaxially alined to provide a passageway, said rotating means being positioned in said passageway.

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