Nov. 28, 1950 E. F. LAURIN 2,531,633

INTEREST COMPUTING DEVICE

Filed May 6, 1949 2 Sheets-Sheet 1

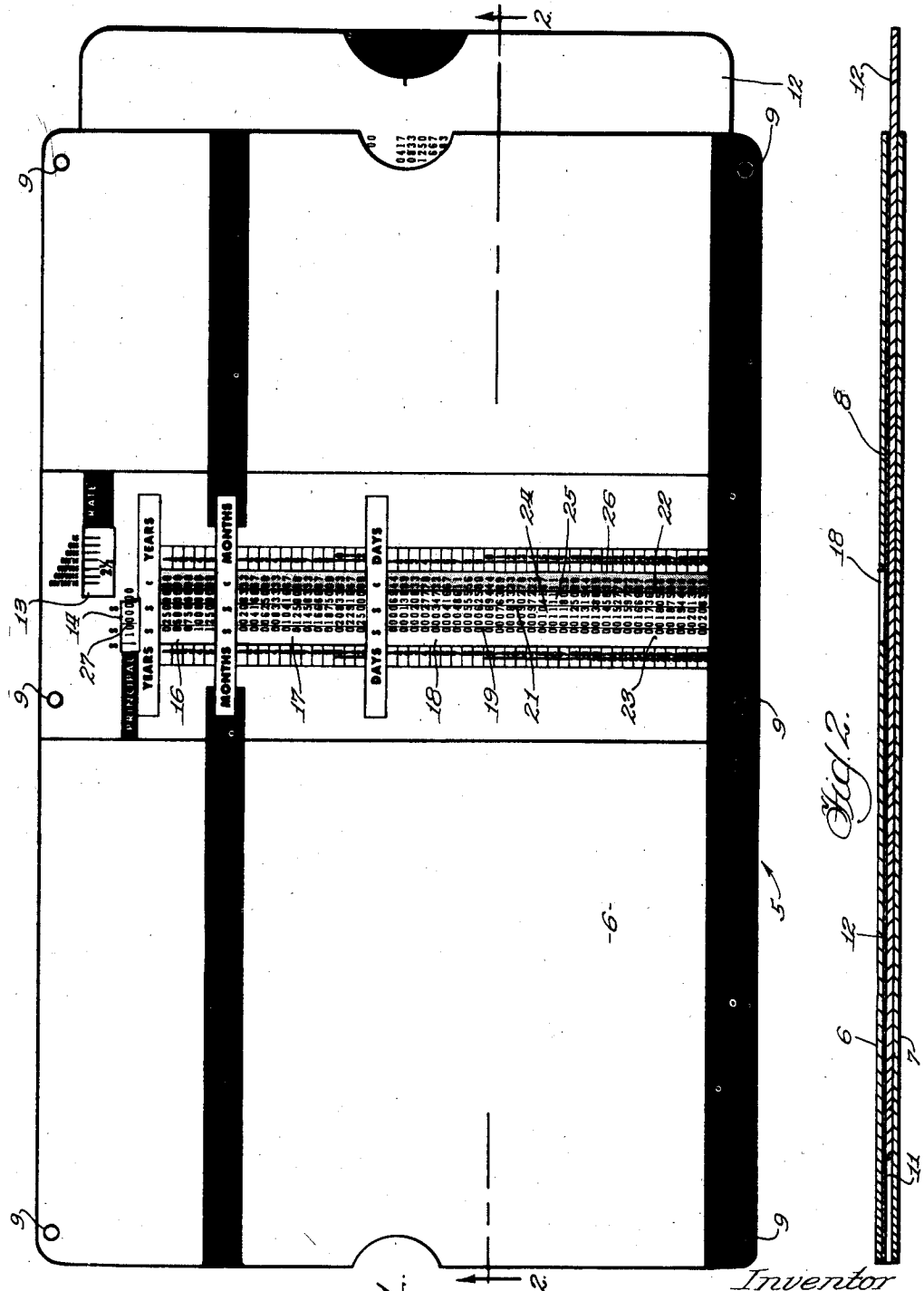


Fig. 1.

Fig. 2.

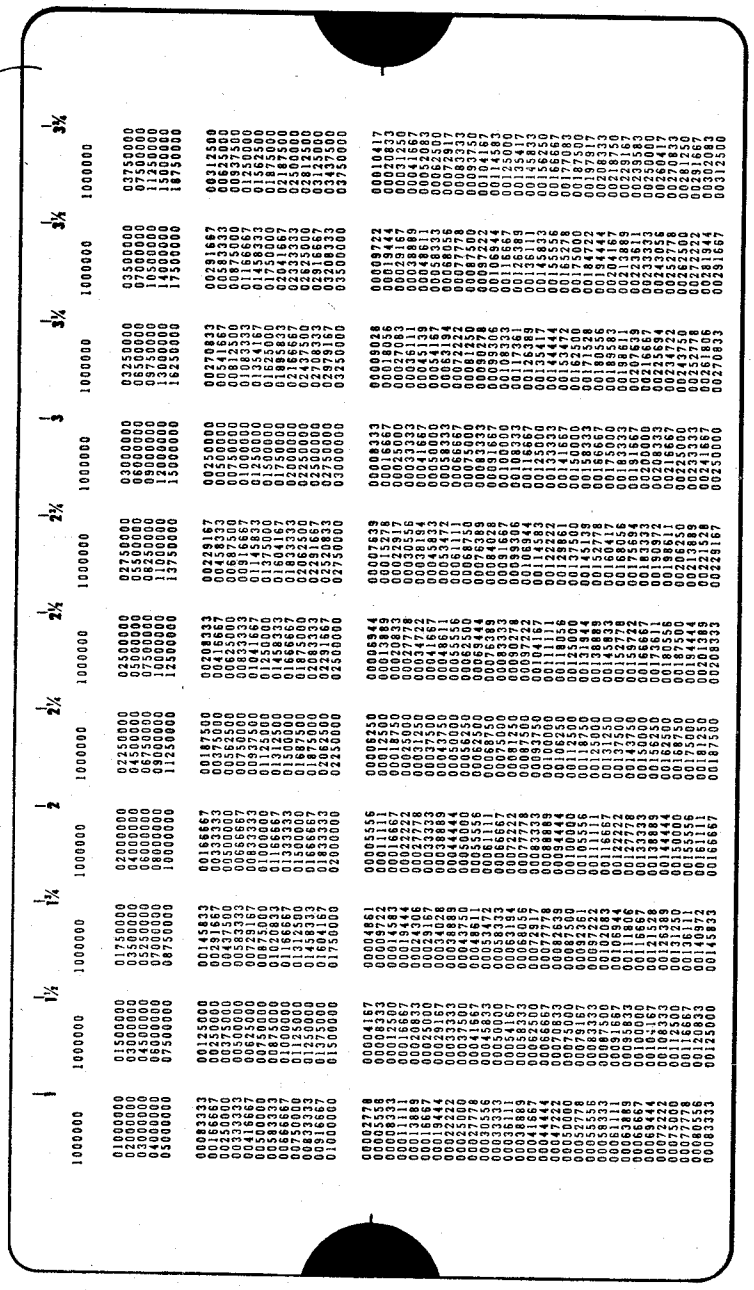
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Filed May 6, 1949 2 Sheets-Sheet 2

Fig. 3.



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INTEREST COMPUTING DEVICE

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Application May 6, 1949, Serial No. 91,807

3 Claims. (Cl. 235—89)

1

My invention relates to devices for computing interest.

One of the objects of my invention is the provision of a device for computing interest which indicates the position of the decimal point in the computed value.

Another object of my invention is the provision of a device of the character set forth which is extremely simple and cheap to construct, which may be operated by an unskilled person, and through the use of which interest values may be readily and easily computed.

Other and further objects and advantages of my invention will be apparent in the course of the following description.

In the drawings:

Fig. 1 is a plan view of a preferred embodiment of my invention.

Fig. 2 is an end view thereof.

Fig. 3 is a plan view of a slide panel embodied in my invention.

Referring to the drawing, the numeral 5 indicates generally a casing formed of two panels 6 and 7 of any suitable sheet material which may be cardboard, plastic, or metal. Immediately underlying the top panel 6 is a sheet 8 of transparent plastic material. The two panels 6 and 7 and the sheet 8 are secured along their longitudinal edges as by rivets 9, both ends of the casing 5 being open. In assembling the above described elements into a casing it is preferred to interpose suitable spacers or washers to space the plastic sheet 8 from the bottom panel 7 to provide a pocket 11 in which a panel 12 is received for longitudinal sliding movement.

The top panel 6 is provided with a window 13 captioned "Rate %." Above the said window are printed principal values ranging from left to right of $1,000,000 to $1.00. Below each of these values is an indicator line inscribed on the plastic sheet 8. Another window 14 is provided in member 6, this window being captioned "Principal" and is positioned below and to the left of window 13. To the right of the window 14 a decimal point and two zeros are imprinted.

Immediately therebelow are three windows 16, 17, and 18, all in vertical alinement and captioned "Years," "Months," and "Days" respectively. In the present embodiment 5 lines numbered 1—5 are provided along opposite vertical e[illegible] of window 16 for computing interest for a [illegible] period of 5 years. Twelve lines num[illegible]re provided along the vertical edges [illegible] and 30 lines numbered 1—30 are [illegible]ned along window 18. The said [illegible]veral windows provide for the

2

computation of interest for fractional periods of one year and of one month, respectively.

The transparent sheet 8 is provided with vertical or columnar lines 19, 21, and 22 which may be red in color and which extend continuously through windows 16, 17, and 18 defining columns 23, 24, 25, and 26. It will be observed that columns 23 and 24 are just wide enough to display three numerical figures in a horizontal direction, and columns 25 and 26 are of a width such as to display only two numerical figures each. Preferably, the column 26 is tinted or shaded any suitable color for a purpose as will be hereinafter explained. The vertical line 21 represents a fixed decimal point for the several columns of figures contained on the movable slide 12 and displayed through the several windows.

It will also be observed that in window 14 the right hand edge thereof is alined with vertical line 21, also that line 19 is continuous through window 14, and that line 27 in window 14 is alined with the left hand edge of column 23.

Referring to Fig. 3, the slide panel 12 has imprinted on its face various rates of interest which are viewable through window 13. The interest rates shown in Fig. 3 range from 1 to 3¾%. It will be understood however that any desired rates of interest and ranges thereof may be used. Below each rate of interest shown are numerical figures representing principal values here up to $1,000,000 which are viewable through window 14. Below each of said principal values are tables of calculated interest values corresponding to the time intervals indicated on the various lines along the side edges of the windows 16, 17, and 18 through which the said tables are viewable.

The operation and use of my invention will best be understood by a specific example of computation.

Assuming for purposes of illustration that it is desired to compute the interest on a principal of $10,000.00 at a rate of interest of 2½%, the computation is carried out as follows: The slide panel 12 is moved so that the numerical value 2½ is displayed in window 13 with the indicator line above the numeral 2½ alined with the indicator line opposite the numerical value of $10,000 shown above the said window. Correspondingly, the same numerical value will appear at window 14 opposite the caption "Principal."

Assuming further that the interval of time for which interest is to be computed is 4 years. Referring to window 16 captioned "Years" and to the tabulated value opposite the numeral 4 the amount of interest is indicated as $1,000.

As another example assuming that the interval of time under consideration is 3 years, 6 months and 12 days. Referring to window 16 opposite numeral 3 the tabulated value is indicated as $750.00. Opposite the numeral 6 in window 17 the tabulated value is indicated as $125.00 and opposite the numeral 12 in window 18 the tabulated value is indicated as $8.3333. By adding all of these tabulated values the interest for the time interval indicated is $883.33, the last two numerals being dropped to confine the total to two decimal places.

It will be observed that in window 18 the numerals 33 falling in the third and fourth decimal place to the right of line 21 indicating the position of the decimal point are in column 26 which is shaded or tinted any suitable color. As is apparent the numerical value of the amounts indicated in column 26 represents fractional portions of one cent. Therefore, in a particular case, if the value indicated is greater than one half of one cent, in accordance with general practice, one cent is added to the value shown in column 25. If the value indicated in column 26 is less than one half of one cent, the column is not considered.

Should it be desired to determine the interest on a principal value such as for example $3,400 at a rate of interest of 2½%, the computation is carried out as follows: The slide panel 12 is moved to aline the indicator line opposite the interest value 2½ with the indicator line opposite the value $100.00 shown above window 13. The tabulated value is then read in windows 16, 17 or 18 opposite the time interval desired and the result multiplied by 34 to give the total interest for the principal value under consideration. In any of such computations where the principal value is a multiple of any of the values shown above window 13, any one of such values may be selected for purposes of computation and then multiplied by whatever the multiplicand may be.

While the device is shown as having windows only in one panel it will be understood that windows may be provided in both the top and bottom panels, and that the slide panel may carry tabulations on both sides thereof so as to increase the range of utility of my device.

It will be apparent from the foregoing that I have provided a device for computing interest which indicates the position of the decimal point in the computed value and which is accurate, simple and efficient in operation.

I claim:

1. A device for computing interest including a panel having window portions divided in a vertical direction by means denoting progressive intervals of time, and divided in a horizontal direction by other means into columns for designating whole number and decimal positions, and a slidable panel bearing figures computed to denote progressive values of interest at given rates and arranged in a series of successive columns, each of the several columns representing interest computations at different rates, said slidable panel being constructed and arranged for sliding movement relative to said first mentionel panel in a direction laterally of the columnar divisions of said window portions, whereby selective positioning of a column of computed interest so that at least a portion thereof is visible through the windows, the visible portions thereof indicate interest computed at a selected rate for the several denoted time periods and the columnar divisions of said window portions locate the whole number and decimal positions of said interest computations.

2. A device for computing interest including a panel having window portions divided in one direction by means denoting progressive intervals of time and in a direction at right angles thereto by vertical lines into columns designating whole number and decimal positions, and a slidable panel bearing figures computed to denote progressive values of interest at given rates arranged in a series of successive columns, each of the several columns representing interest computations at different rates, said slidable panel being constructed and arranged for sliding movement relative to said first mentioned panel in a direction laterally of the columnar divisions of said window portions, whereby selective positioning of a column of computed interest so that a portion thereof is visible through the windows, the visible portion thereof indicates interest computations at a selected rate of interest for the several denoted time periods and the columnar divisions of said windows locate the whole number and decimal positions of said interest computations.

3. A device for computing interest including a panel having transparent window portions divided along a vertical edge thereof by means denoting progressive time periods and by vertical lines scribed on said transparent window portions into columns designating whole number and decimal positions, and a slidable panel bearing figures computed to denote progressive values of interest at given rates arranged in a series of successive columns, each of the several columns representing interest computations at different rates, said slidable panel being constructed and arranged for sliding movement relative to said first mentioned panel so as to selectively position at least a portion of one column of computations to be visible through said window portions and in alignment with the columnar divisions thereof representing whole number and decimal positions, indicia on the slidable panel representing the interest rate of each column of computations thereon, means defining a window in the first mentioned panel for displaying a selected interest rate, and means dividing the last mentioned window into a series of spaces representing various principal sums on which the columns of interest are computed at the interest rates indicated, the last mentioned spaces being arranged in a predetermined relation to the columnar divisions of the first mentioned windows, whereby the alignment of a selected interest rate with a selected principal sum automatically positions the interest computations of a column in proper relation to the columnar divisions of the first mentioned windows to show the whole number and decimal positions of the visible portions of said computations.

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The following references are of record in the file of this patent:

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