No. 733,054. PATENTED JULY 7, 1903.

L. M. LANDING.

INTEREST COMPUTER.

APPLICATION FILED MAR. 18, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

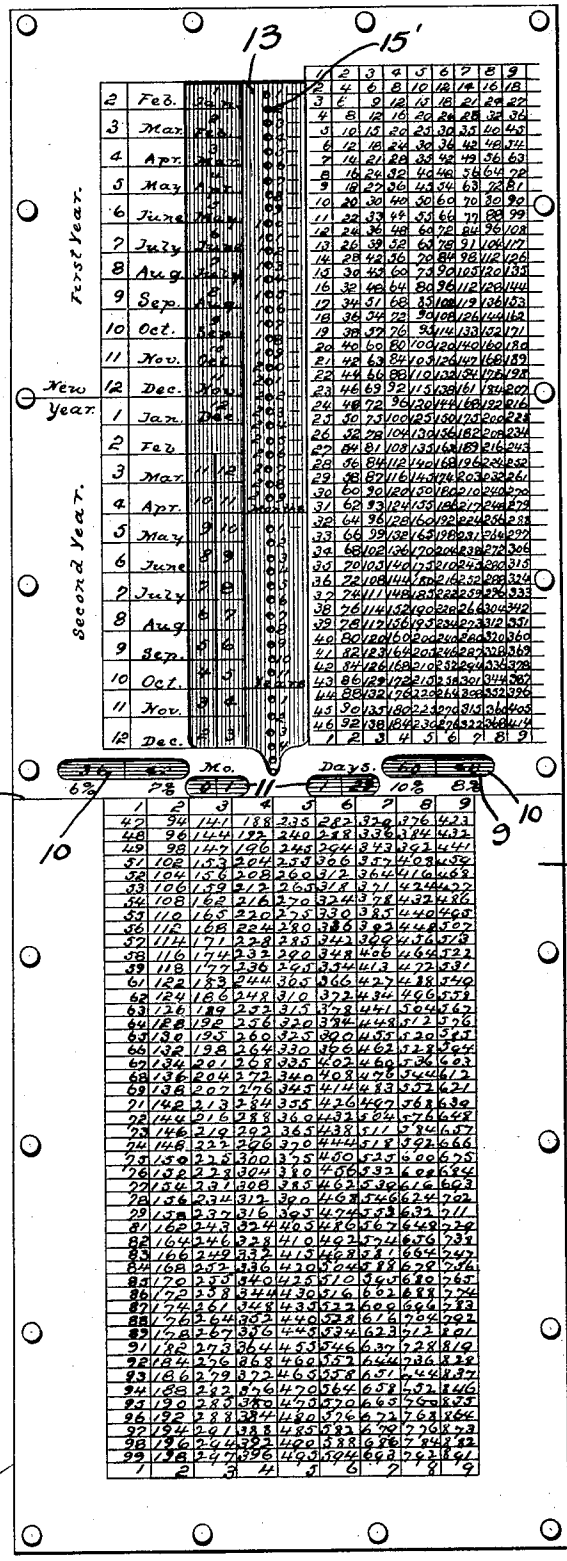


FIG. 1.

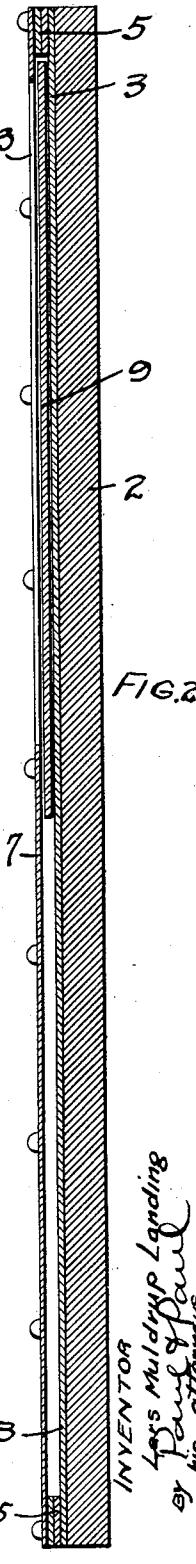


FIG. 2.

WITNESSES
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APPLICATION FILED MAR. 18, 1902. 2 SHEETS—SHEET 2.

NO MODEL.

6%	7%			Days	15'		8%	10%
00016	00019	1		0			00027	00022
00033	00038	Jan.		01			00055	00044
00050	00058	2		02			00083	00066
00066	00077	Feb.		03			00100	00088
00083	00097	3		04			00138	00111
00100	00116	Mar.		05			00166	00133
00116	00136	4		06			00194	00155
00133	00155	Apr.		07			00222	00177
00150	00175	5		08			00250	00200
00166	00194	May		09			00277	00222
00183	00213	6		100			00305	00244
00200	00233	June		101			00333	00266
00216	00252	7		102			00361	00288
00233	00272	July		103			00388	00311
00250	00291	8		104			00416	00333
00266	00311	Aug		105			00444	00355
00283	00330	9		106			00472	00377
00300	00350	Sep.		107			00500	00400
00316	00369	10		108			00527	00422
00333	00388	Oct.		109			00555	00444
00350	00408	11		200			00583	00466
00366	00427	Nov.		201	30		00611	00488
00383	00447	12.		202	29	1	00638	00511
00400	00466	Dec.		203	28	2	00666	00533
00416	00486			204	27	3	00694	00555
00433	00505			205	26	4	00722	00577
00450	00525			206	25	5	00750	00600
00466	00544	11	12	207	24	6	00777	00622
00483	00563			208	23	7	00805	00644
		10	11	209	22	8		
005	00583			Months	21	9		
010	01166	9	10	01	20	10	00833	00666
015	01750			02	19	11	01666	01333
020	02333	8	9	03	18	12	02500	02000
025	02916			04	17	13	03333	02666
030	03500	7	8	05	16	14	04166	03333
035	04083			06	15	15	05000	04000
040	04666	6	7	07	14	16	05838	04666
045	05250			08	13	17	06666	05333
050	05833	5	6	09	12	18	07500	06000
055	06416			100	11	19	08333	06666
		4	5	101	10	20	09166	07333
06	07			Years	9	21		
12	14	3	4	01	8	22	10	08
18	21			02	7	23	20	16
24	28	2	3	03	6	24	30	24
30	36			04	5	25	40	32
36	42	1	2	05	4	26	50	40
				06	3	27	60	48
		0	1		2	28		
					1	29		

9

FIG. 3

WITNESSES
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 733,054. Patented July 7, 1903.

UNITED STATES PATENT OFFICE.

LARS MULDRUP LANDING, OF GLENWOOD, MINNESOTA.

INTEREST-COMPUTER.

SPECIFICATION forming part of Letters Patent No. 733,054, dated July 7, 1903.

Application filed March 18, 1902. Serial No. 98,757. (No model.)

To all whom it may concern:

Be it known that I, LARS MULDRUP LANDING, of Glenwood, in the county of Pope, State of Minnesota, have invented certain Improvements in Interest-Computers, of which the following is a specification.

This invention relates to improvements in computers designed to simplify the figuring of all kinds of interest and time as applied to simple interest, bank-discount, annual interest, partial payments, averaging accounts, &c., as well as lessening the possibility of error in such computations.

The invention consists, generally, in an interest-computer provided with a slotted front plate having thereon suitable words and figures indicating the months of the year, the days of the month, and the amount obtained by the multiplication of any number from one to one hundred by any number representing an annual rate of interest, together with a movable slide, properly figured and so arrranged as by its movement to indicate the interest on one dollar for any number of years, months, or days.

The invention consists, further, in the constructions and combinations hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a front elevation of an interest-computer embodying my invention. Fig. 2 is a longitudinal section of the same. Fig. 3 is a front elevation of the back plate.

In the drawings, 2 represents a suitable base or back plate, preferably formed of wood or other suitable material and having a smooth thin plate 3 preferably secured thereto. A suitable ledge 5 is preferably formed around the edge of the plate 3, and a plate 7 is secured over the ledge 5, thereby bringing the back of said plate a slight distance away from the plate 3. A plate 9 is arranged between the plates 7 and 3 and is free to slide longitudinally in the space between said plates. The plate 7 is provided with the transverse slots 10 10 and 11 11, preferably arranged as shown, and also with the longitudinal slot 13.

In Fig. 1 of the drawings the parts represented by the shaded lines are the portions of the rear or back plate 9 which are to be seen through the slots 10, 11, and 13. The front plate 7 is divided into two divisons by the transverse line 15, and the slots hereinbefore described are all arranged above said line. The space at the left hand of the slot 13 is divided into two columns by suitable lines marked thereon, and the space at the right-hand side of said slot is divided into nine parallel columns. The space below the line 15 is also preferably divided into nine vertical columns. The first column at the right of the slot 13 has its spaces marked, preferably, from "2" to "46." At the top and bottom of these columns are the numerals "1" to "9," arranged consecutively, and each column at the right of the first has a number represented by the multiplication of the corresponding figure in said first right-hand column by the number of the column, as indicated by the figure placed at the top of the column. The columns in the lower division, or below the line 15, are similarly marked at the top and bottom, and the first column contains in consecutive order the numerals "47" to "99," and the succeeding columns contain the result of multiplication of the figures in the first column by the figures at the top or bottom of the respective succeeding vertical column. The columns at the left of the vertical slot 13 are marked with the names of the months and with numerals indicating the order of said months, beginning with February and running through to the end of the year and then being followed by the names of all of the months in the succeeding year. The other column contains the figures corresponding to the names of said months. The plate 9 contains also a series of vertical columns and a series of perforations 15′, preferably arranged at about the center of the plate and, if preferred, between the figures forming the numerals for the days of the months. The first column to the left of the center contains the words indicating in order the names of the months and the numbers represented by the order in which said months occur in the calendar year. The other vertical columns contain an amount representing the interest on one dollar at the given rate per cent. for any number of days from one to thirty, for any number of months from one to twelve, and for

any number of years from one to six. The lower part of the plate has at the left of the center two columns of figures running in the reverse direction, one of them containing numbers representing the months of the year, represented by the numerals "1" to "12," and the other corresponding numerals, but beginning with "0" and running to "11."

The operation of the device is as follows: In computing time carefully note the following: When the number representing the day of the month from which time is to be computed is less than the number representing the day of the month to which time is to be computed, use the inside figures for months and days, as seen through the slots 11 11. When the number representing the day of the month from which time is to be computed is greater than the number representing the day of the month to which time is to be computed, the outside figures, shown through the slots 11 11, are to be used. Computation is always made from the months on the sliding plate to the months on the front plate 7. The months on the front plate marked "First year" are always in the same year as the year computed from on the slide, whatever year that may be, and the months on the front plate marked "Second year" are in the year following. The crossing of the line marked "New year" changes the year. With the slide moved to its upper position take month of starting found on the slide and by inserting a pencil or pointer into the hole opposite said month move the slide downward until this month is opposite the name of the month of settlement or month to which time is to be computed, found on the front plate, and through the slots 11 may be seen the time in months between the two months taken. If the slide is not moved far enough to carry the name of the month from which computation is to be made across the line marked "New year," both months are in the same year; but if the name of the month from which computation is made passes the line marked "New year" the month to which computation is to be made is in the next year. The operator must remember this in computing succeeding years up to the required time, as this computation is made mentally. Likewise, with the slide at its upper position, find the smaller of the days of the months between which computation is to be made and move the slide down until said number is opposite the other number representing the other day of the month to be used in computation, and through the slot 11, marked "Days," can be seen, in time, the number of days between the two dates used. If the earlier date in actual time comes earlier in the month than the later day in actual time, so that the computation is made from a number on the plate to a smaller number on the slide, the number of days required in the computation will be shown by the inside figures. If, however, the earlier date in actual time is represented by the larger number, use the outside figures shown in the right-hand slot 11. The number of years will of course be computed mentally, and the operator will now have the time between the two dates represented by years, months, and days. To find the interest on one dollar for this time, first insert the pointer into one of the holes on the side below the word "Years" and move the pointer down until it strikes the end of the slot in the recess shown in Fig. 1 of the drawings. The interest on one dollar for a given number of years at six, seven, eight, or ten per cent. will be shown through one of the slots marked 10. In order to find the interest for the given number of months, insert the pointer into one of the holes below the word "Months" on the slide and move the slide down until the pointer strikes the end of the slot, and the interest on one dollar will then be shown through the left-hand slot 11 or the one that is marked "Mo." In a similar manner to find the interest on any number of days from one to thirty insert the pointer in the proper hole in the slide below the word "Days" and move the slide downward until the pointer strikes the end of the slot. The interest for the number of days will now be shown through the slots 10. These three amounts added together will give the interest on one dollar for the required number of years, days, and months. To find the interest on any number of dollars, multiply the interest on one dollar by the number of dollars. If it is required to find the interest on tens, hundreds, or thousands of dollars, it is only necessary to move the decimal point the required distance to the right in the amount representing the interest on one dollar. The other columns of figures on the front plate furnish a ready means for permitting this multiplication. This will readily be understood by an illustration of the method of computing interest with this device. For instance, to find interest on sixty-nine dollars and fifty cents at ten per cent. from February 7, 1900, to May 30, 1900, we note first that the earlier day of the month is represented by the numeral "7" and the later day of the month by the numeral "30." We therefore use the inside column of figures, representing months and days, as shown through the slots 11. We first insert the pointer into the hole in the slide 9 that is opposite the word "Feb." and we move the pointer down until the word "Feb." comes opposite the word "May" on the front plate of the device. The figure "3" will now be shown at the inside or right hand of the left-hand slot 11 and will represent the time in months. Now move the slide back to its original position and insert the pointer in the hole marked "7," near the top of the slide, and move the slide down until the "7" comes opposite the numeral "30" at the right of the slot. The number of days will be shown through the slot 11 and at the left hand thereof and will be found to be "23." The time is therefore shown to be

three months and twenty-three days. Now insert the pointer in the hole marked "3," below the word marked "Months" on the slide, and move the pointer down until it strikes the bottom of the slot. The interest on one dollar at ten per cent. for three months will be shown at the left hand of the slot 10, or above the "10%" on the plate 7. This will be found to be ".025." Then insert the pointer into the hole marked "23" in the slide 9 and move the slide downward until the pointer strikes the end of the slot. The interest on one dollar for twenty-three days at ten per cent. will be shown at the same place and the amount now shown will be ".00638." The sum of these two amounts, or .025 plus .00638, equals .03138, which is the interest on one dollar for three months and twenty-three days at ten per cent. To find the interest on sixty-nine dollars for this time, multiply sixty-nine by this number. To multiply sixty-nine by three, (the first figure at the left,) we look upon the lower part of the plate 7 and we find opposite the number "69" and under the column marked "3" the number "207." Proceeding in this manner we secure the result as follows:

207	Found opposite "69" in third column on front plate.
69	Found in first column on front plate.
207	Found opposite "69" in third column on front plate.
552	Found opposite "69" in eighth column on front plate.
$2.16522	Interest on sixty-nine dollars for the given time at the given rate.
.01569	Interest on fifty cents, being one-half of interest on one dollar.
$2.18091	Interest on sixty-nine dollars and fifty cents from February 1, 1900, to May 30, 1900.

This computer is figured for thirty days to the month, or three hundred and sixty days per year. Bearing in mind that when the day of the month from which the computation is to begin is represented by a larger number than the day of the month at which the computation is to end and that when the month from which the computation is to begin is represented by a larger number than the month at which the computation is to end, the outside figures in the slot 11 will be used in computation of time, and consequently any computation of interest may be quickly and readily made. While I have shown the computer arranged to compute interest at six, seven, eight, and ten per cent., it will be understood that it may readily be enlarged or added to, so as to make the computation for any other rate per cent.

The details of the construction may of course be varied in many particulars without departing from my invention.

I claim as new and desire to secure by Letters Patent—

1. The combination, with the slotted front plate 7, of the sliding plate 9, provided with a series of numbered holes representing years, months and days, and with columns of figures representing the interest on one dollar for the designated years, months or days, at different rates of interest, whereby upon insertion of a pointer in any one of the holes, and movement of the slide until the pointer strikes the end of the slot, the amount of interest upon one dollar for the corresponding number of years, months or days will be shown through the slotted front plate, substantially as described.

2. The combination, with the slotted front plate 7, of the movable plate or slide 9, said slide being provided with the names of the months of the year, arranged in order, and with a series of numbers representing said months, and said front plate being provided with two series of names, which represent the months of the year, arranged in the order of said months, whereby upon the movement of said slide to bring the name of any month thereon opposite the name of any month upon the plate, the number of intervening months will be shown through a slot in the front plate, substantially as described.

In testimony whereof I have hereunto set my hand this 11th day of March, 1902.

LARS MULDRUP LANDING.

In presence of—

A. C. PAUL,

C. G. HANSON.