

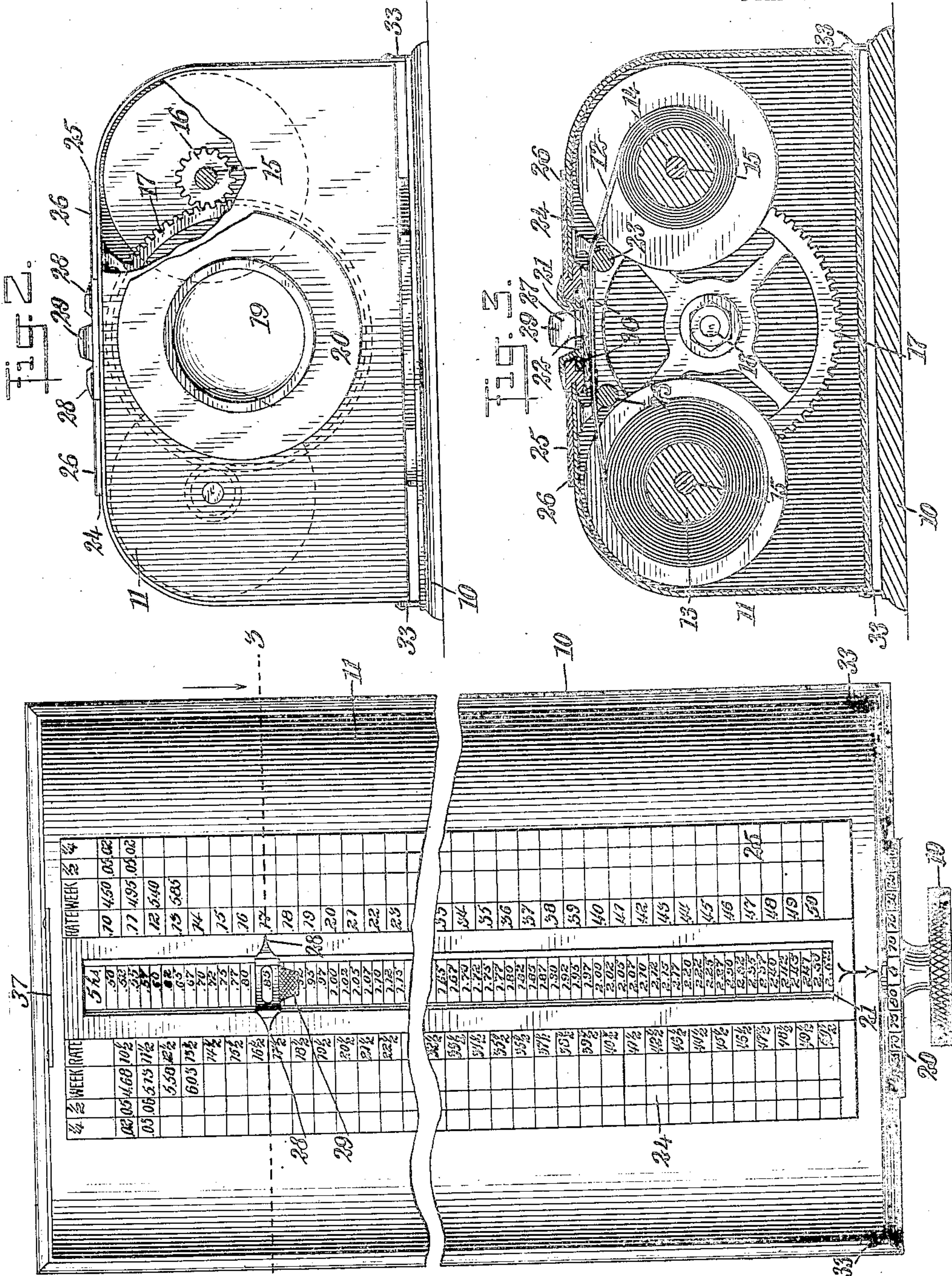
C. A. PITKIN.  
COMPUTER.

APPLICATION FILED JUNE 12, 1908.

Patented June 15, 1909.

3 SHEETS—SHEET 1.

925,377.



WITNESSES  
*John H. [Signature]*  
*C. W. Fairbank*

Fig. 1

INVENTOR  
*Carroll A. Pitkin*  
BY *Munn & Co.*  
ATTORNEYS



C. A. PITKIN.  
COMPUTER.

APPLICATION FILED JUNE 12, 1908.

Patented June 15, 1909.

925,377.

2 SHEETS-SHEET 2

7	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670	680	690	700	710	720	730	740	750	760	770	780	790	800	810	820	830	840	850	860	870	880	890	900	910	920	930	940	950	960	970	980	990	1000	1010	1020	1030	1040	1050	1060	1070	1080	1090	1100	1110	1120	1130	1140	1150	1160	1170	1180	1190	1200	1210	1220	1230	1240	1250	1260	1270	1280	1290	1300	1310	1320	1330	1340	1350	1360	1370	1380	1390	1400	1410	1420	1430	1440	1450	1460	1470	1480	1490	1500	1510	1520	1530	1540	1550	1560	1570	1580	1590	1600	1610	1620	1630	1640	1650	1660	1670	1680	1690	1700	1710	1720	1730	1740	1750	1760	1770	1780	1790	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050	2060	2070	2080	2090	2100	2110	2120	2130	2140	2150	2160	2170	2180	2190	2200	2210	2220	2230	2240	2250	2260	2270	2280	2290	2300	2310	2320	2330	2340	2350	2360	2370	2380	2390	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500	2510	2520	2530	2540	2550	2560	2570	2580	2590	2600	2610	2620	2630	2640	2650	2660	2670	2680	2690	2700	2710	2720	2730	2740	2750	2760	2770	2780	2790	2800	2810	2820	2830	2840	2850	2860	2870	2880	2890	2900	2910	2920	2930	2940	2950	2960	2970	2980	2990	3000	3010	3020	3030	3040	3050	3060	3070	3080	3090	3100	3110	3120	3130	3140	3150	3160	3170	3180	3190	3200	3210	3220	3230	3240	3250	3260	3270	3280	3290	3300	3310	3320	3330	3340	3350	3360	3370	3380	3390	3400	3410	3420	3430	3440	3450	3460	3470	3480	3490	3500	3510	3520	3530	3540	3550	3560	3570	3580	3590	3600	3610	3620	3630	3640	3650	3660	3670	3680	3690	3700	3710	3720	3730	3740	3750	3760	3770	3780	3790	3800	3810	3820	3830	3840	3850	3860	3870	3880	3890	3900	3910	3920	3930	3940	3950	3960	3970	3980	3990	4000	4010	4020	4030	4040	4050	4060	4070	4080	4090	4100	4110	4120	4130	4140	4150	4160	4170	4180	4190	4200	4210	4220	4230	4240	4250	4260	4270	4280	4290	4300	4310	4320	4330	4340	4350	4360	4370	4380	4390	4400	4410	4420	4430	4440	4450	4460	4470	4480	4490	4500	4510	4520	4530	4540	4550	4560	4570	4580	4590	4600	4610	4620	4630	4640	4650	4660	4670	4680	4690	4700	4710	4720	4730	4740	4750	4760	4770	4780	4790	4800	4810	4820	4830	4840	4850	4860	4870	4880	4890	4900	4910	4920	4930	4940	4950	4960	4970	4980	4990	5000	5010	5020	5030	5040	5050	5060	5070	5080	5090	5100	5110	5120	5130	5140	5150	5160	5170	5180	5190	5200	5210	5220	5230	5240	5250	5260	5270	5280	5290	5300	5310	5320	5330	5340	5350	5360	5370	5380	5390	5400	5410	5420	5430	5440	5450	5460	5470	5480	5490	5500	5510	5520	5530	5540	5550	5560	5570	5580	5590	5600	5610	5620	5630	5640	5650	5660	5670	5680	5690	5700	5710	5720	5730	5740	5750	5760	5770	5780	5790	5800	5810	5820	5830	5840	5850	5860	5870	5880	5890	5900	5910	5920	5930	5940	5950	5960	5970	5980	5990	6000	6010	6020	6030	6040	6050	6060	6070	6080	6090	6100	6110	6120	6130	6140	6150	6160	6170	6180	6190	6200	6210	6220	6230	6240	6250	6260	6270	6280	6290	6300	6310	6320	6330	6340	6350	6360	6370	6380	6390	6400	6410	6420	6430	6440	6450	6460	6470	6480	6490	6500	6510	6520	6530	6540	6550	6560	6570	6580	6590	6600	6610	6620	6630	6640	6650	6660	6670	6680	6690	6700	6710	6720	6730	6740	6750	6760	6770	6780	6790	6800	6810	6820	6830	6840	6850	6860	6870	6880	6890	6900	6910	6920	6930	6940	6950	6960	6970	6980	6990	7000	7010	7020	7030	7040	7050	7060	7070	7080	7090	7100	7110	7120	7130	7140	7150	7160	7170	7180	7190	7200	7210	7220	7230	7240	7250	7260	7270	7280	7290	7300	7310	7320	7330	7340	7350	7360	7370	7380	7390	7400	7410	7420	7430	7440	7450	7460	7470	7480	7490	7500	7510	7520	7530	7540	7550	7560	7570	7580	7590	7600	7610	7620	7630	7640	7650	7660	7670	7680	7690	7700	7710	7720	7730	7740	7750	7760	7770	7780	7790	7800	7810	7820	7830	7840	7850	7860	7870	7880	7890	7900	7910	7920	7930	7940	7950	7960	7970	7980	7990	8000	8010	8020	8030	8040	8050	8060	8070	8080	8090	8100	8110	8120	8130	8140	8150	8160	8170	8180	8190	8200	8210	8220	8230	8240	8250	8260	8270	8280	8290	8300	8310	8320	8330	8340	8350	8360	8370	8380	8390	8400	8410	8420	8430	8440	8450	8460	8470	8480	8490	8500	8510	8520	8530	8540	8550	8560	8570	8580	8590	8600	8610	8620	8630	8640	8650	8660	8670	8680	8690	8700	8710	8720	8730	8740	8750	8760	8770	8780	8790	8800	8810	8820	8830	8840	8850	8860	8870	8880	8890	8900	8910	8920	8930	8940	8950	8960	8970	8980	8990	9000	9010	9020	9030	9040	9050	9060	9070	9080	9090	9100	9110	9120	9130	9140	9150	9160	9170	9180	9190	9200	9210	9220	9230	9240	9250	9260	9270	9280	9290	9300	9310	9320	9330	9340	9350	9360	9370	9380	9390	9400	9410	9420	9430	9440	9450	9460	9470	9480	9490	9500	9510	9520	9530	9540	9550	9560	9570	9580	9590	9600	9610	9620	9630	9640	9650	9660	9670	9680	9690	9700	9710	9720	9730	9740	9750	9760	9770	9780	9790	9800	9810	9820	9830	9840	9850	9860	9870	9880	9890	9900	9910	9920	9930	9940	9950	9960	9970	9980	9990	10000	10010	10020	10030	10040	10050	10060	10070	10080	10090	10100	10110	10120	10130	10140	10150	10160	10170	10180	10190	10200	10210	10220	10230	10240	10250	10260	10270	10280	10290	10300	10310	10320	10330	10340	10350	10360	10370	10380	10390	10400	10410	10420	10430	10440	10450	10460	10470	10480	10490	10500	10510	10520	10530	10540	10550	10560	10570	10580	10590	10600	10610	10620	10630	10640	10650	10660	10670	10680	10690	10700	10710	10720	10730	10740	10750	10760	10770	10780	10790	10800	10810	10820	10830	10840	10850	10860	10870	10880	10890	10900	10910	10920	10930	10940	10950	10960	10970	10980	10990	11000	11010	11020	11030	11040	11050	11060	11070	11080	11090	11100	11110	11120	11130	11140	11150	11160	11170	11180	11190	11200	11210	11220	11230	11240	11250	11260	11270	11280	11290	11300	11310	11320	11330	11340	11350	11360	11370	11380	11390	11400	11410	11420	11430	11440	11450	11460	11470	11480	11490	11500	11510	11520	11530	11540	11550	11560	11570	11580	11590	11600	11610	11620	11630	11640	11650	11660	11670	11680	11690	11700	11710	11720	11730	11740	11750	11760	11770	11780	11790	11800	11810	11820	11830	11840	11850	11860	11870	11880	11890	11900	11910	11920	11930	11940	11950	11960	11970	11980	11990	12000	12010	12020	12030	12040	12050	12060	12070	12080	12090	12100	12110	12120	12130	12140	12150	12160	12170	12180	12190	12200	12210	12220	12230	12240	12250	12260	12270	12280	12290	12300	12310	12320	12330	12340	12350	12360	12370	12380	12390	12400	12410	12420	12430	12440	12450	12460	12470	12480	12490	12500	12510	12520	12530	12540	12550	12560	12570	12580	12590	12600	12610	12620	12630	12640	12650	12660	12670	12680	12690	12700	12710	12720	12730	12740	12750	12760	12770	12780	12790	12800	12810	12820	12830	12840	12850	12860	12870	12880	12890	12900	12910	12920	12930	12940	12950	12960	12970	12980	12990	13000	13010	13020	13030	13040	13050	13060	13070	13080	13090	13100	13110	13120	13130	13140	13150	13160	13170	13180	13190	13200	13210	132
---	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-----



# UNITED STATES PATENT OFFICE.

CARROLL A. PITKIN, OF MONTPELIER, VERMONT.

## COMPUTER.

No. 925,377.

Specification of Letters Patent.

Patented June 15, 1909.

Application filed June 12, 1908. Serial No. 438,049.

*To all whom it may concern:*

Be it known that I, CARROLL A. PITKIN, a citizen of the United States, and a resident of Montpelier, in the county of Washington and State of Vermont, have invented a new and Improved Computer, of which the following is a full, clear, and exact description.

This invention relates to certain improvements in computers, and more particularly to that type of computer in which there are provided two relatively movable members, one of which carries a series of multipliers and the other of which carries a series of multiplicands, and for each multiplicand a series of products resulting from the use of each of the several multipliers.

The object of the invention is to provide certain improvements in these relatively movable members and in the mechanism for operating one of them. My improved computer may be used for a variety of different systems of payment such as daily, bi-weekly, monthly, etc., and for a variety of different purposes dependent upon the data printed upon the two relatively movable members, but the device is especially designed for use as a payroll computer.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, and in which—

Figure 1 is a top plan view of a device constructed in accordance with my invention; Fig. 2 is an end view thereof, a portion thereof being broken away; Fig. 3 is a transverse section on the line 3—3 of Fig. 1, taken in the direction of the arrow; Fig. 4 is a side elevation of the device shown on a smaller scale and indicating in dotted lines certain of the parts in elevated position; Fig. 5 is a horizontal section on the line 5—5 of Fig. 4, taken in a direction indicated by the arrow; Fig. 6 is a view of a portion of one end of the casing; and Fig. 7 is a face view of the chart, portions thereof being broken away.

In the specific form of my device illustrated in the accompanying drawings, I provide a base 10 of wood or any other suitable material, and mounted upon the base is a casing 11 of sheet metal or the like. Within the casing is mounted a movable chart, a portion of which may be seen through a slot in

the wall of the casing, and on the wall adjacent the slot is a scale or table of figures, bearing a relationship to those on the chart. As shown, the chart 12 is formed of two thicknesses, one being of paper upon which the numerals are printed and the other or outer being of celluloid to protect the paper and prevent the numerals from being worn or erased. The opposite ends are secured to two spools 13 and 14, journaled on arbors 15 supported by the casing or wall 11. Each of the arbors is provided with a small pinion or gear wheel 16, adjacent one end of the spool, and intermediate the two pinions is a large gear wheel 17 intermeshing with both. The gear wheel 17 is of such size in respect to the size of the pinions 16 and the length of the chart, that one complete revolution of the gear wheel 17 transfers the chart from one spool to the other, so that the maximum rotation of the gear wheel 17 in one direction is a single revolution. The gear wheel is mounted on a short shaft 18 carried by one end of the casing, and on the outer end of the shaft is a hand wheel 19 and a disk 20, the purpose of which will be hereinafter set forth.

Intermediate the spools, the upper wall or top of the casing is provided with a slot 21 closed upon the inner surface of the casing wall by a strip of glass or other suitable transparent material 22. Beneath the glass strip and adjacent the edges thereof, I provide two rollers or idlers 23, over which the chart passes in going from one spool to the other and which serves to hold the chart closely adjacent the under surface of the glass. The top wall of the casing, adjacent opposite sides of the slot, is provided with two scales 24 and 25, each of which may, if desired, be covered by a thin sheet of celluloid 26, to preserve the numbers against wear and erasure. Movable longitudinally of the slot 21 and adjacent the outer surface of the glass, is a slide 27 having an aperture through which one number on the chart may be read and having oppositely-disposed pointed ends 28 directed outwardly toward the scales and 25. The slide may, if desired, be provided with a tongue piece 29, by means of which it may be readily moved along the slot, and is preferably provided with flanges 30, which engage in grooves adjacent the surface of the glass and hold the slide in place.



In using my improved computer for determining the amounts due employees working at different rates and for different times, the chart may be printed substantially as shown.

5 The chart is subdivided into a plurality of columns 31, extending transversely of the chart, and each column is of a width substantially equal to the width of the slot in the casing. The chart is also divided into a series of rows extending longitudinally of the chart and subdividing each of the columns into sections. In the space 33 at the head of each column is printed a series of numerals indicating the hours which a person might

10 work during a week, as, for instance, from "1" to "80", and extending down each column is the amount due a person for working the number of hours indicated at the head of the column and at different rates, as,

15 for instance, from ten cents to fifty cents an hour. As shown, the scale 25 at one side of the slot, is subdivided into four columns, one to indicate the rate at which the employee works, the second to indicate the salary for

20 the week in case the employee has worked the standard number of hours, and the remaining two columns indicate the amounts due for fractions of an hour, as, for instance, a half and a quarter. The scale 24 is substantially identical with the scale 25, save

25 that to facilitate the reading of the numbers, the scale 25 is used for whole numbers and the scale 24 for half numbers. For instance, the scale 25 in the column adjacent the slot would have the rates "10", "11", "12", &c.,

30 and the column of the scale 24, adjacent the slot, would have the rates "10½", "11½", "12½", &c.

In using the device, the hand wheel 19 is

35 turned to bring the number of hours which the employee has worked in view through the slot in the casing. The slide is moved down the slot until one of the pointers 28 thereon is directed toward the rate at which

40 the employee is paid and through the opening in the slide may then be seen the amount due; as, for instance, if the employee has worked five hours at seventeen cents an hour, the numeral "85" will be visible

45 through the opening in the slide. If the employee has been present the standard or required number of hours, it is not necessary to turn the hand wheel to bring that column of the chart to view, but the scale 24 or 25

50 will indicate the total week's wages opposite each rate. For instance, if forty-five hours is considered a week's work, the amount \$4.50 would be presented in the second column adjacent the rate "10 cents" of the

55 first column. If the employee has worked a fraction of an hour, the amount due for that fraction, will be found in the column on the casing, and this amount will be added to the amount due for the whole number of

hours at the head of the column. For instance, if an employee has worked five and one-quarter hours at ten cents an hour, the amount "2 cents" on the casing in the one-quarter column, should be added to the "50 cents" on the chart.

To facilitate the turning of the chart to the desired hour column, the disk 20 is provided with a series of numerals about the periphery thereof, corresponding to the hour columns of the chart. As the wheel is moved its maximum distance by one rotation of the hand wheel 19, the disk 20 may be subdivided into the same number of divisions as there are columns on the chart. Each division may be marked, or, as indicated, only each fifth column. The wheel 19 and disk 20 may be rapidly rotated to bring the desired number on the periphery approximately to the desired position, but as the chart travels at a far greater rate than does the periphery of the wheel, the wheel is used only to adjust the chart to its approximate position and then the exact position is determined by an inspection of the heads of the columns on the chart as the wheel 19 is rotated very slowly.

To facilitate the reading of the numerals and the operating of the device, the casing is preferably pivoted to the base, and so constructed that it may be held at any desired inclination in respect thereto. The base, as shown particularly in Figs. 4 and 5, is provided with two upwardly-extending lugs 33 at the lower front corners thereof, and is provided with a brace 34 pivoted at the rear end thereof. The under surface of the casing is provided with a series of stops 35, against any one of which the brace may be held to support the casing in an inclined position. For holding the casing rigid to the base, the base may carry short hooks 36 pivoted thereto and adapted to engage with pins on the sides of the casing, as shown in Fig. 4.

For permitting the removal of the glass 22, to clean the same, it is preferably mounted in suitable guideways and may be removed through the rear end of the casing. For normally preventing the removal of the glass and holding it in position, I preferably provide a small plate 37 held in place by a couple of screws, one of which may be removed to permit the blade to be swung out of the path of the longitudinal movement of the glass. To further facilitate the reading of the numerals on the chart, a microscopic lens may be mounted on the slide.

It is evident that the numerals at the heads of the several columns on the chart and the numerals in the rate column on the scale, constitute multiplier and multiplicand, and that the number in the column opposite to a given number on the scale, is the product of said last-mentioned number and the one at the head of the column.



For using the device for other purposes than for computing a payroll, the scales and chart may be replaced by others having the desired multipliers, multiplicands and products thereon.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In combination, a casing having a slot therein, two spools within said casing and disposed upon opposite sides of said slot, a chart having its opposite ends secured to said spools and movable beneath said slot, a scale on said casing adjacent said slot, and means for rotating said spools simultaneously in the same direction, to bring the chart beneath said slot, said means including a hand wheel, gearing connecting said hand wheel and said spools whereby a single rotation of the hand wheel moves said chart to the limiting extent, and a dial carried by said hand wheel and exposed to view, said dial traveling at a lower rate of speed than said chart and

being subdivided to correspond to the subdivisions on the chart.

2. In combination, two spools, a chart having its opposite ends secured to said spools, a scale adjacent said slot, means for rotating said spools simultaneously to bring different portions of the chart adjacent the scale, said means including a hand wheel, a gearing connecting said hand wheel and said spools, whereby a single rotation of the hand wheel moves said chart to the limiting extent, and a dial carried by said hand wheel and traveling at a lower rate of speed than said chart and being marked to correspond to subdivisions on the chart.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CARROLL A. PITKIN.

Witnesses:

FRED B. THOMAS,  
W. H. BURNHAM.