Jan. 9, 1951 B. R. NONO 2,537,693

PERPETUAL CALENDAR

Filed Dec. 5, 1947

Fig. 1.

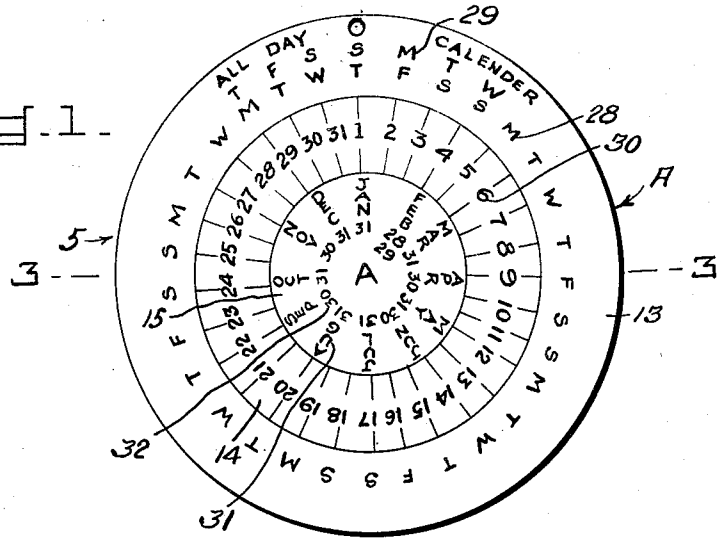


Fig. 2.

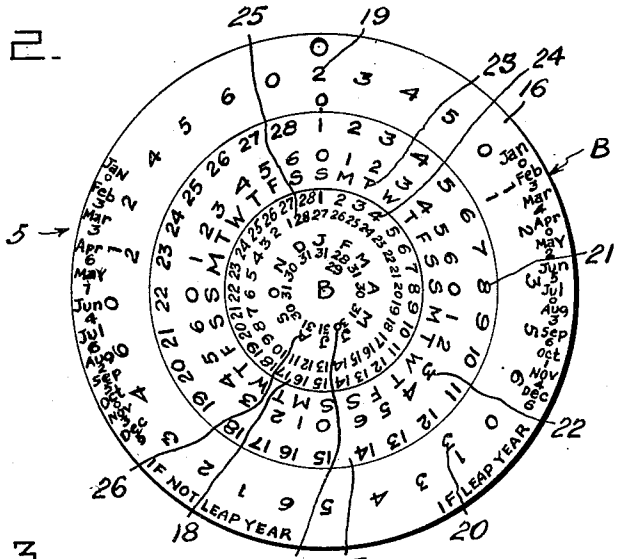
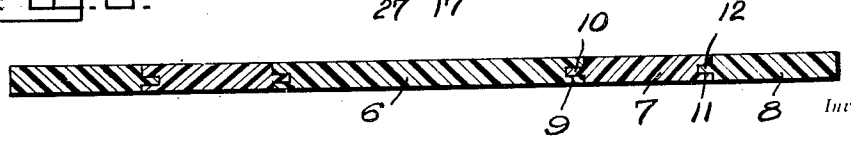


Fig. 3.



Inventor

Basilio R. Nono

By Randolph & Beavers

Attorneys

Patented Jan. 9, 1951

2,537,693

UNITED STATES PATENT OFFICE

2,537,693

PERPETUAL CALENDAR

Basilio R. Nono, Cuyapo, P. I.

Application December 5, 1947, Serial No. 789,797

1 Claim. (Cl. 40—113)

1

This invention relates to a perpetual calendar of extremely simple construction which is very small and compact and relatively light in weight so that it can be conveniently carried in the pocket.

Still another object of the invention is to provide a perpetual calendar which is extremely durable and may be formed of various materials such as steel, ivory or Celluloid or combinations of materials.

Still another object of the invention is to provide a calendar structure which is very simple to employ and capable of being utilized for all months and all years and through the use of which a date may be found a certain number of days in the past or future or by means of which the day of the week of any date past or future may be readily ascertained.

Still a further object of the invention is to provide a calendar for use by pupils, students, professional and business men, in offices and elsewhere.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawing, illustrating a preferred embodiment thereof, and wherein:

Figure 1 is a plan view looking toward one side of the calendar;

Figure 2 is a similar view looking toward the opposite side thereof, and

Figure 3 is a diametral sectional view taken substantially along a plane as indicated by the line 3—3 of Figure 1.

Referring more specifically to the drawing, the perpetual calendar, constituting the invention is designated generally 5 and comprises a disk including a central disk-like section 6, an intermediate annular section 7 and an outer annular section 8. The periphery of the inner section 6 is provided with a groove 9 for slidably receiving an annular tongue 10 which projects inwardly from the interior of the intermediate section 7 and the periphery of said intermediate section 7 is likewise provided with an annular groove 11 for slidably receiving a similar annular tongue 12 formed on the interior of the outer annular section 8, so that the sections 6, 7 and 8 are relatively rotatable. The annular tongues may be engaged in the annular grooves in any suitable manner. For example, if the parts are formed of a material possessing sufficient flexibility or resiliency, this can be accomplished by bowing the inner element so that its peripheral groove will be reduced enough in diameter to receive the tongue of the element to be disposed immediately

2

therearound and thereafter flattening the inner element, or if the parts are not sufficiently flexible or resilient for assembly in this manner, one flange of each groove may be bent outwardly to allow insertion of the tongue of the element to be disposed immediately therearound and said flange thereafter bent inwardly.

Figure 1 illustrates one face, designated generally A, the outer portion of which, formed by the section 8 constitutes a day plate 13, the intermediate portion of which, formed by the section 7 constitutes a date plate 14 and the inner portion of which, formed by the disk section 6 constitutes a month plate 15. The opposite side or face B of the calendar 5, illustrated in Figure 2, includes an outer plate 16, formed by the section 8, an intermediate plate 17, formed by the section 7 and an inner plate 18 formed by the section 6.

The outer plate 16 of the face B contains a ring of numbers 19 extending therearound and inwardly thereof contains another ring composed of four numbers, designated 20 and known as the "remainder ring."

The intermediate plate 17 of the face B has suitably inscribed thereon an outer ring of numerals, designated generally 21 numbered consecutively clockwise from the top thereof from "1" to "28" and a second intermediate ring 22 of numerals of four sets each including the numerals from zero to six in a clockwise direction; and an inner ring 23 of letters extending therearound and reading as follows: "S–M–T–W–T–F–S–S–M–T–W–T–F–S–S–M–T–W–T–F–S–S–M–T–W–T–F–S" reading clockwise from the top thereof and constituting the day row with the initials indicating the days of the week. The inner plate 18 of the face B includes an outer row of numerals 24 extending clockwise therearound and including the numerals from "1" to "28," and beginning at the top thereof, a second row 25 beginning at the top thereof with the numeral "27" and diminishing to the numeral "1" which is followed by the numeral 28. Within the ring of numerals 25 is a month row 26 including the initial letters of the twelve months of the year beginning with the initial "J" for January at the top center thereof and reading clockwise and there within is contained a ring of numerals one of which aligns wtih each of the letters of the month and indicating the number of days therein, as indicated at 27. It will be noted that the letter "F" designating February has the numerals "28" and "29" aligned therewith radially for indicating 29 days therein during leap years.

The side or face A has the outer section 13

thereof provided with a ring of letters, designated 23 representing the initials of the days of the week and beginning with a "T" at the top thereof, representing Thursday and including 31 equally spaced letters and outwardly thereof has a partial ring 29 including the letters "T–F–S–S–M–T–W" reading clockwise representing the days of the week beginning with Thursday and with the letter "S," representing Sunday being disposed at the top center thereof and radially aligned with the top center letter "T" of the ring 28, representing Thursday. The intermediate face 14 of the face A is provided with a ring of numerals 30 including the numerals from 1 to 31 in rotation clockwise therearound and the inner section 15 contains indicia 31 representing the abbreviations of the twelve months of the year and inwardly thereof a ring of spaced numerals 32, corresponding to the ring 27 and representing the number of days in the month.

The use of the face A of the perpetual calendar 5 is believed obvious.

For example, as the face A is set in Figure 1 the calendar is for use for the month of January with the first day of the month falling on Thursday and the ring 28 may be utilized with the ring 31 for indicating the day of the date of the week up to and through Wednesday the 28th and thereafter the outer ring 29 is used to indicate that the 29th, 30th, and 31st of January fall on Thursday, Friday and Saturday. The proper month can be aligned with the top center of the outer disk 8 and by turning the intermediate disk 7 the proper month can be aligned with a letter of the ring 28 located adjacent the top thereof representing the first day of the week of said month after which the intermediate annular section 7 can be rotated to align the numeral 1 of the ring of indicia 30 with said months and day and in this manner the calendar can be adjusted perpetually.

Either of the rings of indicia 27 or 32 may be utilized for quickly recalling the number of days in any particular month and for quickly ascertaining the number of days in any given number of months or between any two given dates or the date of a day a certain number of days subsequent or prior to a given date.

The face A of the calendar may also be utilized for ascertaining the day of the week a certain number of days prior or subsequent to a given day. For example, if it is desired to find the day of the week 100 days prior to a certain Tuesday, by dividing 100 by 7 a remainder of 2 will be obtained meaning that 100 days before Tuesday is 2 days before Tuesday. By placing the numeral "1" in radial alignment with the "T" of the indicia ring 28 and then moving said numeral "1" of the indicia ring 30 counterclockwise two spaces, it will be readily apparent that the numeral "1" will align with the "S," representing Sunday.

The face plate B is employed for finding the day of a certain past or future date with the corresponding year. This is accomplished by first ascertaining the difference of the years, then dividing the smaller year by four and obtaining the remainder. The numeral "28" of the ring 21 is then placed below a number in the remainder row 20 which is equal to said remainder. A number is then found in the row 21 which is equal to the difference of the years and the number in the radially aligned ring of indicia 19, constituting the year row, represents the number desired. If the difference of the years is greater than 28, said difference is first divided by 28 and the resulting remainder is then employed as previously described. By placing a number "28" of the number ring 24 below a number of the ring 22 which is equal to the number just previously found in the year row and by finding a number in the ring 24 which is equal to the number of the present month, if the problem involves a past date, or is equal to the number of the future month, if the problem involves a future date, then the answer is the number in the row 22 which aligns therewith, or if a leap year employ the number in the right half of the face B rather than in the left half thereof. By setting the number 28 of the ring 24 below a number of the ring 22 which is equal to the number just found in said number ring 22 and by finding a number in the ring 24 equal to the present date, if the problem involves a past date, or equal to the future date, if the problem involves a future date, to ascertain the number in the row 22 located in alignment therewith or, if the date is more than 28, subtract 28 from said number to obtain a remainder and find a number in the row 24 equal to said remainder and see in radial alignment therewith the number in the row or ring 22. The number "28" of the ring 25 is set below a number of the ring 22 equal to the number just found in said ring 22. A number is then found in the ring 25 equal to the number of the past month, if the problem involves a past date, or is equal to the number of the present month, if the problem involves a future date and the number in the ring 22 in radial alignment therewith is obtained. If a leap year, the number of the month is indicated on the ring half of the face B. By setting the number "28" of the indicia ring 25 in radial alignment with the number in the number ring 22, just previously found, and thereafter finding a number in the ring 25 equal to the past date, if the problem involves a past date, or equal to the present date, if the problem involves a future date and ascertaining the number in the ring 22 which aligns therewith, or if the date is more than 28, by subtracting 28 therefrom to obtain a remainder, it is possible to find a number in the ring 25 which is equal to this remainder for obtaining a number in the ring 22 which is in radial alignment therewith. The number "28" of the indicia ring 25, if the problem involves a past date, or in ring 24, if the problem involves a future date, is set below the present day of the day ring 23 after which a number in the indicia ring 25 or indicia ring 24, respectively, is found which is equal to the number just found in the number ring 22, and the aligned indicia of the ring 23 provides the solution, that is, the desired day of the week.

For example, if it is desired to find the day of the week of January 19, 1916 on a day, such as for example, Wednesday, December 25, 1946, it can be readily ascertained that the difference of the years is 30. By then dividing the smaller year, 1916 by four, a remainder of zero is obtained. By setting the number "28" below the zero of the indicia row 20 and by dividing the difference of the years, which is 30, by 28, the remainder of 2 is obtained. Above the "2" in the row A is the number "4" of the row 19. By setting the number "28" of the ring 24 below the number "4" of the ring 22 and as 1946 is a leap year, the number "6" in the ring 24 is found which is the number of the present month and in alignment therewith in the number row 22 is the number "3." By setting the number "28" of the ring 24 in radial

alignment with the number "3" of the ring 22, which is the number just found in said ring 22, and by finding the present date 25, in the ring 24 we obtain the number "0" in the ring 22. The number 28 of ring 25 is set below the 0 of the ring 22. The year 1916 is a leap year. By finding the "0" in the row or ring 25, which is the number of the past month, in radial alignment therewith is the "0" in the ring 22. By setting the number "28" of the ring 25 below the "0" of the ring 22, the number "19" is found in the ring 25 which is the past date and in radial alignment therewith is the number "2" in the ring 22. By setting the 28 of the ring 25 below the "3," representing Wednesday of the ring 22 the number "2" in the ring 25 is found and above it in the ring 22 is the number "1" representing Monday, the desired day. The month rings 23 and 27 are used for the same purpose as the rings 31 and 32, as previously described.

Various modifications and changes are contemplated and may obviously be resorted to, without departing from the spirit or scope of the invention as hereinafter defined by the appended claims.

I claim as my invention.

A perpetual calendar comprising a disk composed solely of an inner disk section, an outer annular section and an intermediate annular section interposed between said inner disk section and said outer annular section, said sections being of uniform thickness and having tongue and groove means rotatably connecting the sections to one another, one side of the disk section containing indicia representing the months

of the year and the number of days in each month, a corresponding side of the intermediate annular section containing numerals representing the maximum number of days of any month, and the corresponding side of the outer annular section containing initials indicating the days of the week, the indicia of each of said sections being circumferentially arranged whereby the indicia of said corresponding sides of the sections may be correlated by rotating the sections relatively to one another for visually indicating the number of days in any month and the date of each day of the week in any month of any year.

BASILIO R. NONO.

REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
156,391	Thorp	Oct. 27, 1874
309,271	Welch	Dec. 16, 1884
330,038	McCarthy	Nov. 10, 1885
648,835	Biggs	May 1, 1900
658,028	Steiger	Sept. 18, 1900
683,433	Biggs	Oct. 1, 1901
709,353	Norman	Sept. 16, 1902
784,974	Biggs	May 14, 1905

FOREIGN PATENTS

Number	Country	Date
30,297	Australia	Nov. 12, 1931