

T. O'SHAUGHNESSY.
PERPETUAL CALENDAR.
APPLICATION FILED MAY 5, 1904.

NO MODEL.

4 SHEETS—SHEET 1.

Fig. 1.

First Figures of Centuries						
3 to left	2 to left	1 to left	Center	1 to r'gt	2 to r'gt	3 to r'gt
17' 21' 25' 00' 7' 14'	6' 13' 20'	16' 20' 24' 5' 12' 19'	15' 19' 23' 4' 11' 18'	3' 10' 17'	18' 22' 26' 2' 9' 16'	New Style 1' 8' 15'
JAN. OCT.	APL. JULY <i>Jan.</i>	SEPT. DEC.	JUNE	FEB. MAR. NOV.	AUG. <i>Feb.</i>	MAY.
.89, .95 .72 .78 .61, .67 .44 .50 .33, .39 .16 .22 .05, .11	.84 .90 .73, .79 .56 .62 .45, .51 .28 .34 .17, .23 .00 .06	.96 .85, .91 .68 .74 .57, .63 .40 .46 .29, .35 .12 .18 .01, .07	.86, .97 .75 .80 .58, .69 .47 .52 .30, .41 .19 .24 .02, .13	.98 .87 .92 .70, .81 .59 .64 .42, .53 .31 .36 .14, .25 .03 .08	.93, .99 .76 .82 .65, .71 .48 .54 .37, .43 .20 .26 .09, .15	.88 .94 .77, .83 .60 .66 .49, .55 .32 .38 .21, .27 .04 .10
Sun	Mon	Tue	Wed	Thu	Fri	Sat
Mon	Tue	Wed	Thu	Fri	Sat	Sun
Tue	Wed	Thu	Fri	Sat	Sun	Mon
Wed	Thu	Fri	Sat	Sun	Mon	Tue
Thu	Fri	Sat	Sun	Mon	Tue	Wed
Fri	Sat	Sun	Mon	Tue	Wed	Thu
Sat	Sun	Mon	Tue	Wed	Thu	Fri
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	Apr., June, Sept. and Nov. 30 days, Feb. 28-29, all others 31			
For this and all centuries whose first figures are in center column find color of desired month in col- umn under year. For centuries, one, two or three columns to right or left of center; find color of month in first, second or third column to right or left of year, according to location of first figures of century. Use Jan. and Feb. in italics for leap years.						

Witnesses
E. H. Stewart
Geo. Parker

Thomas O'Shaughnessy, Inventor.
by *C. A. Snow & Co.*
Attorneys

No. 773,669.

PATENTED NOV. 1, 1904.

T. O'SHAUGHNESSY.
PERPETUAL CALENDAR.

APPLICATION FILED MAY 5, 1904.

NO MODEL.

4 SHEETS—SHEET 2.

Fig. 2.

<i>1</i> .89 .95 .72 .78 .61 .67 .44 .50 .33 .39 .16 .22 .05 .11	<i>2</i> .84 .90 .73 .79 .56 .62 .45 .51 .28 .34 .17 .23 .00 .06	<i>.96 3</i> .85 .91 .68 .74 .57 .63 .40 .46 .29 .35 .12 .18 .01 .07	<i>4</i> .86 .97 .75 .80 .58 .69 .47 .52 .30 .41 .19 .24 .02 .13	<i>.98 5</i> .87 .92 .70 .81 .59 .64 .42 .53 .31 .36 .14 .25 .03 .08	<i>6</i> .93 .99 .76 .82 .65 .71 .48 .54 .37 .43 .20 26 .09 .15	<i>7</i> 88 .94 .77 .83 .60 .66 .49 .55 .32 .38 .21 .27 .04 .10
Jan. Oct. Sun.	Apr. July Jan. Mon.	Sept. Dec. Tue.	June Wed.	Feb. Mar. Nov. Thu.	Aug. Feb. Fri.	May Sat.
May Mon.	Jan. Oct. Tue.	Apr. July Jan. Wed.	Sept. Dec. Thu.	June Fri.	Feb. Mar. Nov. Sat.	Aug. Feb. Sun.
Aug. Feb. Tue.	May Wed.	Jan. Oct. Thu.	Apr. July Jan. Fri.	Sept. Dec. Sat.	June Sun.	Feb. Mar. Nov. Mon.
Feb. Mar. Nov. Wed.	Aug. Feb. Thu.	May Fri.	Jan. Oct. Sat.	Apr. July Jan. Sun.	Sept. Dec. Mon.	June Tue.
June Thu.	Feb. Mar. Nov. Fri.	Aug. Feb. Sat.	May Sun.	Jan. Oct. Mon.	Apr. July Jan. Tue.	Sept. Dec. Wed.
Sept. Dec. Fri.	June Sat.	Feb. Mar. Nov. Sun.	Aug. Feb. Mon.	May Tue.	Jan. Oct. Wed.	Apr. July Jan. Thu.
Apr. July Jan. Sat.	Sept. Dec. Sun.	June Mon.	Feb. Mar. Nov. Tue.	Aug. Feb. Wed.	May Thu.	Jan. Oct. Fri.
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	Apr., June, Sept. and Nov. 30 days. Feb. 28-29. All others 31.			
FIRST FIGURES OF CENTURIES.						
3 to left. 17' 21' 25' 00' 7' 14'	2 to left. 6' 13' 20'	1 to left. 16' 20' 24' 5' 12' 19'	Center. 15' 19' 23' 4' 11' 18'	1 to right. 3' 10' 17'	2 to right. 18' 22' 26' 2' 9' 16'	3 to right. N. S. 1' 8' 15'

Witnesses

E. J. Stewart
John E. Barker

Thomas O'Shaughnessy, Inventor.
by *C. A. Snow & Co.*
Attorneys

T. O'SHAUGHNESSY.
PERPETUAL CALENDAR.

APPLICATION FILED MAY 5, 1904.

NO MODEL.

4 SHEETS—SHEET 3.

Fig. 3.

First Figures of Centuries						
3 to left	2 to left	1 to left	Center	1 to r'gt	2 to r'gt	3 to r'gt
17' 21' 25' 00' 7' 14'	6' 13' 20'	16' 20' 24' 5' 12' 19'	15' 19' 23' 4' 11' 18'	3' 10' 17'	18' 22' 26' 2' 9' 16'	New Style 1' 8' 15'
Jan. ¹ Oct.	Apr. ² July. <i>Jan.</i>	Sept. ³ Dec.	June ⁴	Feb. ⁵ Mar. Nov.	Aug. ⁶ <i>Feb.</i>	May. ⁷
.89, .95 .72 .78 .61, .67 .44 .50 .33, .39 .16 .22 .05, .11	.84 .90 .73, .79 .56 .62 .45, .51 .28 .34 .17, .23 .00 .06	.96 .85, .91 .68 .74 .57, .63 .40 .46 .29, .35 .12 .18 .01, .07	.86, .97 .75 .80 .58, .69 .47 .52 .30, .41 .19 .24 .02, .13	.98 .87 .92 .70, .81 .59 .64 .42, .53 .31 .36 .14, .25 .03 .08	.93, .99 .76 .82 .65, .71 .48 .54 .37, .43 .20 .26 .09, .15	.88 .94 .77, .83 .60 .66 .49, .55 .32 .38 .21, .27 .04 .10
Sun. ¹	Mon. ²	Tue. ³	Wed. ⁴	Thu. ⁵	Fri. ⁶	Sat. ⁷
Mon. ⁷	Tue. ¹	Wed. ²	Thu. ³	Fri. ⁴	Sat. ⁵	Sun. ⁶
Tue. ⁶	Wed. ⁷	Thu. ¹	Fri. ²	Sat. ³	Sun. ⁴	Mon. ⁵
Wed. ⁵	Thu. ⁶	Fri. ⁷	Sat. ¹	Sun. ²	Mon. ³	Tue. ⁴
Thu. ⁴	Fri. ⁵	Sat. ⁶	Sun. ⁷	Mon. ¹	Tue. ²	Wed. ³
Fri. ³	Sat. ⁴	Sun. ⁵	Mon. ⁶	Tue. ⁷	Wed. ¹	Thu. ²
Sat. ²	Sun. ³	Mon. ⁴	Tue. ⁵	Wed. ⁶	Thu. ⁷	Fri. ¹
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	Apr., June, Sept. and Nov. 30 days, Feb. 28-29, all others 31			
For this and all centuries whose first figures are in center column find color of desired month in col- umn under year. For centuries, one, two or three columns to right or left of center; find color of month in first, second or third column to right or left of year, according to location of first figures of century. Use Jan. and Feb. in italics for leap years.						

Witnesses

E. J. Stewart
Jno E. Parker

Thomas O'Shaughnessy, *Inventor.*
by *Chas. Snow & Co.*
Attorneys

T. O'SHAUGHNESSY.
PERPETUAL CALENDAR.
APPLICATION FILED MAY 5, 1904.

NO MODEL.

4 SHEETS—SHEET 4.

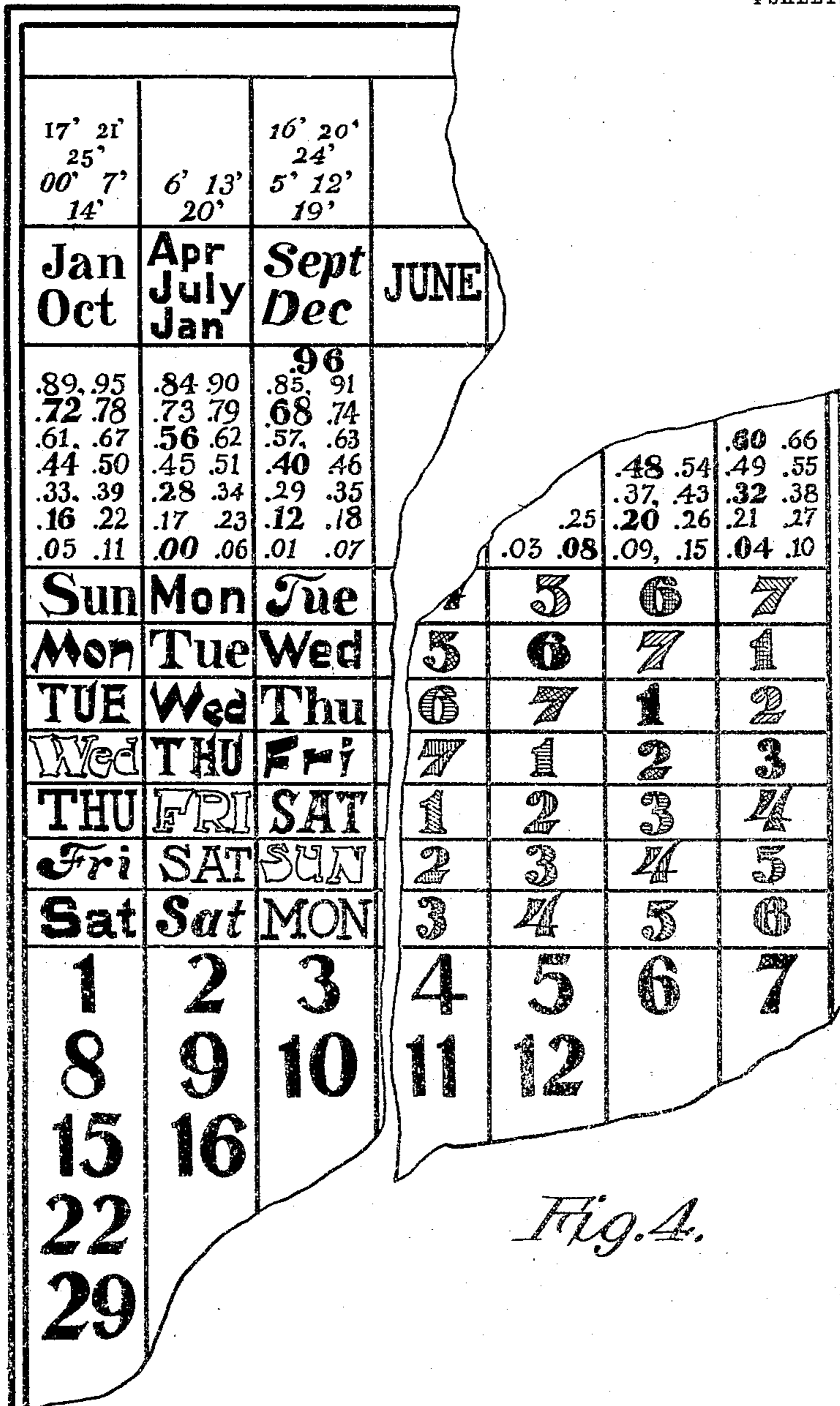


Fig. 4.

Fig. 5.

Witnesses
E. F. Stewart
Jno E. Parker

Thomas O'Shaughnessy
Inventor,
by *CA Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

THOMAS O'SHAUGHNESSY, OF SAN JOSE, CALIFORNIA.

PERPETUAL CALENDAR.

SPECIFICATION forming part of Letters Patent No. 773,669, dated November 1, 1904.

Application filed May 5, 1904. Serial No. 206,586. (No model.)

To all whom it may concern:

Be it known that I, THOMAS O'SHAUGHNESSY, a citizen of the United States, residing at San Jose, in the county of Santa Clara and State of California, have invented a new and useful Perpetual Calendar, of which the following is a specification.

This invention relates to calendars, and has for its principal object to provide in a simple and convenient form a calendar by means of which the month and day of the week of any date may be readily ascertained.

A further object of the invention is to so arrange the calendar-table that dates may be ascertained according to the Julian and the Gregorian calendars, so that it may be conveniently used for ascertaining dates in any country.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in the novel construction and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a view of a perpetual calendar arranged in accordance with the invention. Fig. 2 is a similar view indicating a slight modification of the invention. Fig. 3 is a similar view illustrating a further modification. Figs. 4 and 5 are fragmentary views illustrating still further modifications of the invention.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

In calculating dates it has been found that all of the centuries can be divided into seven groups, and this permits of the convenient grouping of the months and the arrangement of the days of the week in such relation that each will form an indicator for the other.

In carrying out the invention a table is prepared, and said table is ruled in such manner as to divide it into seven parallel vertically-arranged columns, which for convenience are

designated from left to right 1, 2, 3, 4, 5, 6, and 7, and each of these columns are subdivided into spaces by horizontally-disposed parallel lines in the manner hereinafter described. In the second horizontal column 9, which divides the upper portion of the table into seven transverse squares, are arranged two sets of numerals expressing the first figures of each century—in the present instance from "0" to "26," although this number may be increased to any desired extent in order to take in a greater number of future centuries. The upper set of numerals is arranged in two horizontal columns, the numerals running from "15" to "26," inclusive, in order to represent the centuries since the adoption of the Gregorian calendar, and these are printed in ordinary type, and in the last square to the right are printed the words "New style" on the same lines with the figures. Below the numerals designating the centuries of the Gregorian calendar are printed two rows of numerals from "0" to "20," these being in italics and referring to the Julian calendar, and while it would be unnecessary in most cases to continue the line beyond "15" the additional centuries are added in order that the calendar may be used to advantage in the calculation of dates in Russia and other countries which have not yet adopted the Gregorian calendar.

Immediately above the horizontal column 9 is a horizontal column 8, and in the transverse row of squares so formed is printed, reading from left to right, "3 to left," "2 to left," "1 to left," "center," "1 to r'gt," "2 to r'gt," and "3 to r'gt," these serving to direct the user to the proper columns in which to find a month-distinguishing symbol, hereinafter described.

Below the numerals designating the centuries is a horizontal column 10, forming a third transverse row of squares in which are printed the names of the months, and these names are distinguishably designated, being grouped according to their relation to the names of the days of the week. It is important that these different groups of month-names should be distinguishable from each other, and for this purpose they are in the

present instance printed in different colors, "Jan." and "Oct." in the first column being printed in crimson, "Apr.," "July," and "Jan." in the second column being printed in blue, "Sept." "Dec." being printed in dark red, "June" in the fourth column being printed in black. "Feb.," "Mar.," and "Nov." in the fifth column are printed in brown. "Aug." and *Feb.* in the sixth column being printed in yellow, and "May" in the last column is printed in green; but these may be modified by printing auxiliary reference-numerals, such as "1, 2, 3, 4, 5, 6, 7" in the several columns, as shown in Fig. 3, or in similar manner by the printing of other reference characters or symbols by which each group may be instantly recognized.

Below the names of the months is a horizontal column 11, dividing the table into another series of seven transverse blocks or squares, and in these are printed numerals representing the last numbers of the years, as "01," "02," "03," and so on, and these are so grouped that each will appear in its proper column in position to be used as an indicator in following out the name of the desired day of the week. In addition to this attention is directed to the leap-years by printing the numerals representing leap-years in bold-face type, and by thus calling attention to leap-years the user will be properly directed in the use of the names of the months, each table being so arranged that the "*Jan.*" and "*Feb.*" month-names that are printed in italics shall be used in ascertaining the name of a day in those months during leap-years.

Immediately below the squares bearing the final numerals of the years are seven horizontal rows 12, which with the vertical ruling above described divide these spaces into forty-nine blocks or squares in which are printed in abbreviated form the names of the days of the week, and these are printed in different colors, the colors corresponding to the colors used in printing the month-names, or if numerals or other symbols are employed for distinguishably designating the different month groups the same rule is followed that relates to the table of days.

The orderly arrangement of colors is such that if arranged on a cylinder with the end of the column at the right of the table in contact with the beginning of the column at the left the corresponding colors would appear in substantially helical lines, following each other in parallel order around the cylinder, and the names of the days would also appear in continuous relation—that is to say, in the first horizontal column "Sat." at the end of the column will appear in advance of the "Sun." at the beginning of the column, while in the second column "Sun." at the end of the column would appear in advance of "Mon." at the beginning of the column. In addition to this the names of the days are also arranged

in a somewhat similar manner with relation to the vertical columns, and it will be seen that starting from the upper left-hand corner of the table of squares the names of the days of the week may be read in regular order, beginning with "Sun.," either in the first horizontal column or in the first vertical column.

The most conspicuous instance of the relation of the colors in the chart is the central diagonal row of names that are printed in crimson, starting with "Sun.," "Tue.," "Thu.," "Sat.," "Mon.," "Wed.," and "Fri.," and above these and parallel thereto is a diagonal row that is printed in blue, and so on throughout the whole of the day-name table.

Below the horizontal column 12, in which are printed the names of the days of the week, is a month calendar-table 13, bearing numerals from "1" to "31" and arranged in the usual order, while in the lower left-hand corner of the month calendar-space is printed a legend giving the numbers of days in different months.

At a point below the month calendar-table are directions for using the calendar, as follows:

"For this and all centuries whose first figures are in center column find color of desired month in column under year. For centuries, one, two or three columns to right or left of center; find color of month in first, second or third column to right or left of year, according to location of first figures of century. Use Jan. and Feb. in italics for leap-years."

As an instance of use should it be desired to find the day of the week on which July 4, 1901, will fall the user will first seek the "19" in the new-style columns of figures and will find the same in the center square of the horizontal column. This is a primal or basic column from which the other columns start, and the directions from the horizontal column 8 above the remaining squares that bear century-numerals—that is to say, "1 to the left," "1 to the right," and so on—are for the purpose of guiding the user in subsequently finding the name of the day. Having found the numeral "19" in the central column, the user then seeks "04" in the year-columns and finds the same in the end square of the horizontal row 11. The name of the month, "July," is then found, and the user observes the color in which the name of the month is printed—in the present instance blue—or it may be that the designating character "2" or other symbol appear in the square bearing the name of the month. Having ascertained the color or other distinguishing feature of the name of the month, the user follows downward in the column bearing "04," following the names of the days of the week until he arrives at a name the color of which corresponds to that in which the name of the month is printed or a name adjacent to which is printed a distinguishing character or symbol corresponding to that of the month. In the present instance the user

will find "Thu." printed in blue, corresponding to the blue color of the July name. The user then traces down the horizontal column in which "Thu." appears until he arrives at a point over the number "4" of the month-table, whereupon he finds that at the juncture of the two columns of "Thu." and of "4" there is printed the abbreviation "Mon.," showing that July 4, 1904, will fall on Monday. Should he desire to find the name of the day on which July 4, 1805, fell, he will first find "18," the first numerals of the nineteenth century. In the second column to the right of the central column and above this he will find printed "2 to r'gt," meaning two to the right. He will then find the year-number "05" in the first column of the year-table and, following directions, will trace on the first from the column where "05" appears two other columns to the right. Having now ascertained that July is printed in blue, he will trace down this last column until he arrives at the name of a day of the week printed in corresponding color—blue—or one bearing a corresponding designating-mark. He will then trace toward the right until over the numeral "4" of the month-table, and at the juncture of these two last-named columns will be found "Thu.," showing that July 4, 1805, fell on Thursday.

In the modification illustrated in Fig. 2 the names of the months are printed, and instead of the single transverse row of month-squares there are seven of such rows, and this permits of the more convenient use of the calendar in that it is merely necessary to follow down from the year-column whether the dates are in the present century or in any other century of the center column until the name of the month occurs, and thence by following through the vertical column in which the day of the month occurs the name of the day will be at once ascertained. For instance, if it is desired to find the name of the day on which July 4, 1905, will fall the user first locates "05," which is in the column to the extreme left, and thence follows down through until he finds the name of the month "July." The horizontal column of the July month is then followed until the vertical column in which "4" is placed is reached, and at the juncture of these two columns will be found "Tue.," showing that July 4, 1905, will fall on Tuesday. For July 4, 2005, the figures "20," designating periods in the twenty-first century, are found in the first column to the left of the center, and this indicates that the user of the calendar must then start at the first column to the left of the one containing the figures "05," which in this case would be the column at the extreme right of the chart. Following down until the name of the month is found, which is in the second horizontal column from the last, and thence across until the column with "4" is reached it is found that July 4, 2005, will fall on Monday. In similar man-

ner the name of the day of the week of any day in the Christian era may be readily ascertained and either the Julian or Gregorian calculating method followed. It is of course obvious that the numerals representing the centuries may be increased to a practically unlimited extent, the present calendar being used for ascertaining days in but twenty-six centuries; but it is to be understood that this is merely typical and that any desired number of centuries may be added or that the device may be used with but a single century, and thus materially simplify matters.

The division of the name of the months and the figures representing centuries and years into seven columns is rendered necessary by the fact that a month may begin on any day of the week, and a year may also begin on any day of the week. It is obvious that the various columns may bear distinguishing-marks, such as numerals or letters, in order that their relation may be more easily understood, and that instead of using printed abbreviations representing the names of the days the numerals "1" to "7," inclusive, may be employed, as shown in Fig. 4.

It is still further obvious that instead of distinguishing the months by printing the same in different colors they may be printed in different type in order to save the expense of printing in seven different colors. In Fig. 5 is illustrated an arrangement of calendar wherein seven different fonts of type are used for the printing of the day-names, corresponding type being employed for the printing of the month-names in corresponding column.

Having thus described the invention, what is claimed is—

1. In a perpetual calendar, a sheet divided by parallel rulings into a number of vertically-disposed parallel columns and further divided by horizontal rulings into squares or blocks, century-designating tables arranged in one set of blocks, month-designating tables arranged in a second set of blocks, and the month characters or symbols of each block being of the same character and of different character from the month characters or symbols of the other blocks, year-designating tables arranged in a third set of blocks, day-names arranged in a fourth row of blocks, the day-names having distinguishing characteristics corresponding to those of the month symbols, and a day-of-the-month calendar-table arranged in a fifth set of blocks, substantially as specified.

2. In a perpetual calendar, a day-of-the-month calendar-table in which the figures are divided into seven groups or columns, a year-indicating table also arranged in seven corresponding columns, the figures representing years being grouped in predetermined order, month and day-of-the-week indicators also divided into seven different groups arranged in predetermined order, and a century-indicat-

ing table divided into seven groups bearing a predetermined relation to the year, month, day-of-the-week and day-of-the-month groupings, substantially as specified.

5 3. In a perpetual calendar, a day-of-the-month calendar-table, a day-of-the-week-indicating table divided into seven different groups, and all of the names of the days of a week being arranged in each of such groups,
10 a year-indicating table in which are grouped in predetermined order with relation to said day-of-the-month and day-of-the-week tables all of the terminal figures of a century, and a century-indicating table having figures ex-
15 pressing the different centuries arranged in predetermined groups and each of such groups serving by its position to direct the user to the proper day-of-the-week column, substantially as specified.

20 4. In a perpetual calendar, a day-of-the-month calendar-table in which the numerals are divided into seven different columns, a day-of-the-week-indicating table in which the

names of all of the days of a week are divided into seven different groups, each group 25 containing all of the names of the days of a week, such names being distinguishably designated, a month-indicating table also divided into seven groups that are distinguishably designated in similar manner to the day-dis- 30 tinguishing characteristics, year-indicating tables arranged in groups in predetermined relation to and in a position between the month-indicating table and the day-indicating table, and a century-indicating table in which 35 numerals designating the different centuries are grouped in predetermined order and distinguishably designated to indicate periods of both the Julian and Gregorian calendars.

In testimony that I claim the foregoing as 40 my own I have hereto affixed my signature in the presence of two witnesses.

THOMAS O'SHAUGHNESSY.

Witnesses:

J. ROSS COLHOUN,
C. E. DOYLE.