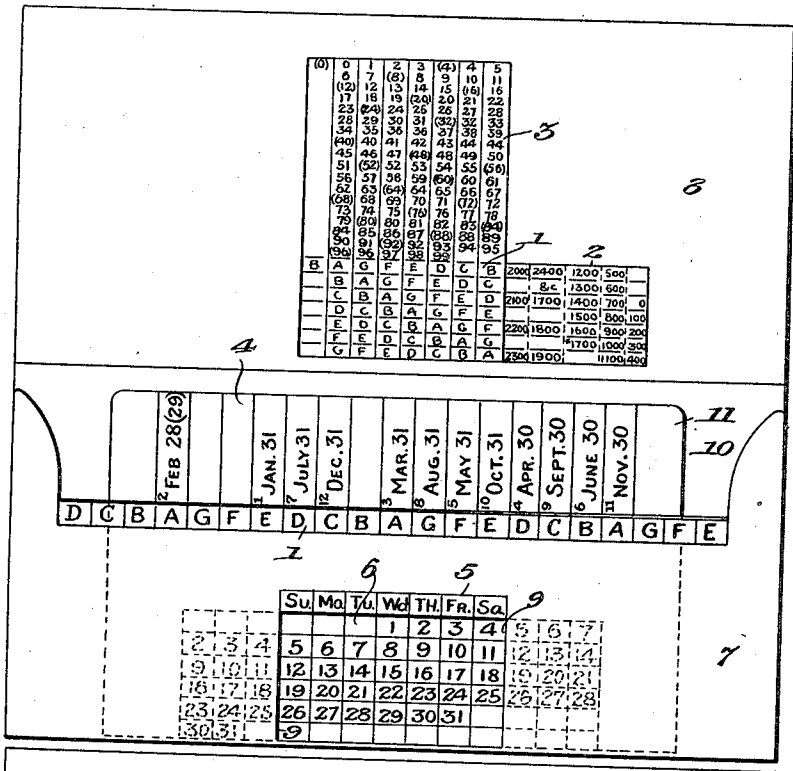
E. D. GRABER.

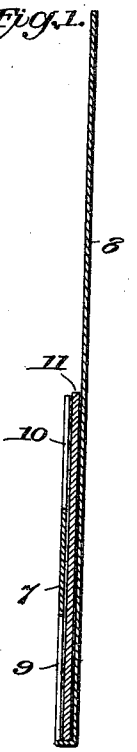
PERPETUAL CALENDAR.

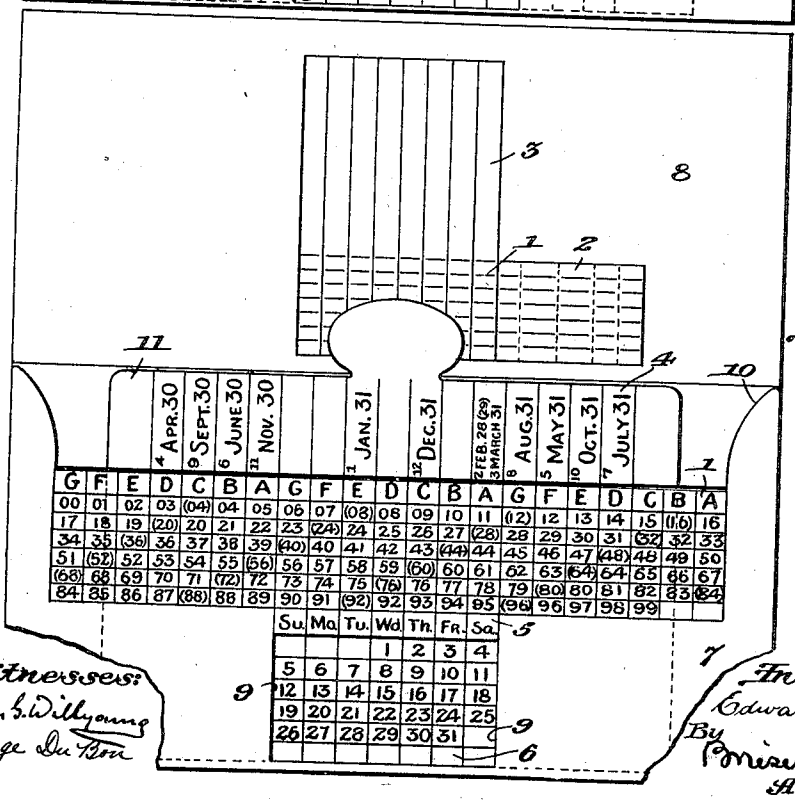
APPLICATION FILED MAY 13, 1911.

1,092,208.

Patented Apr. 7, 1914.







Witnesses:
Chas. S. Williams
George Du Bois

Inventor:
Edward E. Graber
By Morsell & Mauth
Attorneys

UNITED STATES PATENT OFFICE.

EDWARD D. GRABER, OF GREENWICH, CONNECTICUT.

PERPETUAL CALENDAR.

1,092,208. Specification of Letters Patent. Patented Apr. 7, 1914.

Application filed May 13, 1911. Serial No. 626,917.

To all whom it may concern:

Be it known that I, EDWARD D. GRABER, a citizen of the United States, and a resident of Greenwich, Fairfield county, State of Connecticut, have invented a new and useful Improvement in Perpetual Calendars, of which the following is a specification.

My invention relates to perpetual calendars and has for its object to provide a novel arrangement or charting of the calendar elements, viz., the centuries, years, months, days of month, and days of week, with reference to one another such that there is secured a compact, easily understood and easily read calendar, capable of instant use without calculation, for any year from the beginning of the Christian era for all time.

A further object of my invention is to produce a calendar as aforesaid which may readily be modified as to its embodiment so as to be suitable for either wall or pocket use, or for binding in book form with other matter. Such a calendar may be used like any other conventional calendar and in addition may also be advantageously employed for the solution of a variety of special problems as *e. g.*:—to determine the particular day of the week upon which a given President of the United States was inaugurated, the date being known as March 4, 1861; to determine the day of the week upon which a given individual was born, the year, month and day of month being known; to determine the day of the month upon which the first Tuesday after the first Monday (election day) in the year 1917 will fall; to determine in what month the battle of Bunker Hill was fought, it being known to have taken place on a Saturday 17, 1775; to find all the years in any century in which inauguration day for Presidents of the United States will fall on Sunday, etc. Such problems may at times be of practical importance in the affairs of business, politics or judicial investigations; at all times they are of interest.

In arranging my improved calender I involve the several calendar elements with the dominical letters as will hereafter be described.

The nature of my invention will be better understood by reference to the accompanying drawings which illustrate several embodiments thereof and which are made a part of this specification.

In the drawings Figure 1 represents one form of my improved calendar in which all the elements are permanently related to one another as parts of a simple chart; Fig. 1 represents a preferred embodiment of my improved calendar in which the calendar elements are divided between two separate printed charts adapted to be linearly adjusted or set with reference to one another; Fig. 2 is a central vertical section through Fig. 1; Fig. 3 represents a modification derived directly from that of Fig. 1.

Referring to Fig. 1, a central rectangle 1 comprises seven horizontal rows each containing the seven dominical letters arranged in their natural order corresponding to the succession of the days of the week. The letters of the several rows are arranged in columns but the first letter of each succeeding row, counting from the top, is the letter corresponding to the preceding day of the week. It thus follows that a given letter will appear once only in each horizontal column, each time in a different vertical column; and once only in each vertical column, each time in a different horizontal row.

The horizontal lines of rectangle 1 are prolonged to the right and intersected with vertical lines to make up a second rectangle 2 in which the centuries are arranged in successive vertical columns, and the vertical lines of rectangle 1 are prolonged upwardly to include a rectangle 3 in which the years of a century are arranged successively in horizontal rows. If now, the letter lying at the intersection of a row containing a given century and of a column containing a given year be noted it will be found to be the correct dominical letter for that particular year, *i. e.*, said letter will correspond with and point out the day of the week on which the first of January will fall in that particular year. To insure this result it is only necessary to locate the centuries on such horizontal lines as will cause the correct dominical letter for the first year of said century *e. g.*, to fall under said year in the rectangle 3. Since January 1st occurs one day later each year and since the linear succession of the years corresponds with the linear succession of the dominical letters the general rule follows.

As above described, no provision is made for leap years and as every year divisible by four, except even centuries divisible by one hundred but not by four hundred, is a leap year, account must be taken thereof.

This I accomplish by adding the dominical B in a column to the left of the top row of dominicals in rectangle 1 and a cipher in parentheses, thus (0), at the left of the cipher in "Year column 0" of rectangle 3. As it happens that all the even centuries which will ever be leap years must have the dominical B, it is only necessary to locate such centuries on the particular horizontal line (the upper one) on which I have this extra B. The leap years throughout the century are provided for by causing each of said years to be duplicated in the succeeding horizontal space and placing a parenthesis () about the first occurrence of each such year. In practice, therefore, one needs only find the dominical letter for a given year as previously described and locate that letter on a horizontal line for any desired month. The vertical line involving that letter will then contain the week-day column 5 corresponding to the month-day columns 6.

Fig. 1 represents a folding calendar comprising a bottom section provided with a pocket 7 and a cover flap 8. Upon the inside of this flap are printed the three rectangles 1, 2 and 3 (Fig. 1) from which the dominical letter for a given year is found. In the lower part of pocket 7 is cut a rectangular aperture, 9, above the top of which are arranged in order the days of the week; constituting a "week-day" column. The top of the pocket is cut away as at 10 and along its upper edge are arranged the dominical letters, which may begin arbitrarily (D being chosen in the embodiment shown), in the same order as in the rectangle 1, the sequence of seven being repeated several times. Within the pocket is a slide 11 having five lines of spaces, thirteen spaces to the line. In these spaces are arranged two separate groupings of the days of the month from one to thirty one, one group employing the seven right hand columns and the other group the seven left hand columns the figures in the central column being thus common to both groups. These constitute the "month-day" columns. The width of the spaces is such that seven columns will always appear within the aperture 9; the spaces also agree with the days of the week at the top of the aperture. Along the upper edge of slide 11 so as to show above the row of dominical letters and arranged in spaces corresponding in size to the spaces provided for said letters, are arranged the several months of the year constituting a "month" column. Months, the first days of which come on the same day of the week are placed in the same space (or in the space 7th removed therefrom), and when their first days come on different days of the week, then on spaces separated numerically just as are the corresponding days of the week. Since the numerical separation as to days of the week on which the first days of given months fall, is the same irrespective of the year chosen it follows that, if the months are once correctly located in appropriate spaces, the day of the week on which the first of any month will fall, will always be known for a given year once the dominical letter for that year is known. To use this calendar, the dominical letter being found as before by means of the rectangles 1, 2 and 3, the slide 11 is shifted to right or left until the month selected is directly over said letter. The days of the month for said month will then appear within the aperture in their proper columns with reference to the days of the week at the top of the aperture.

Fig. 3 shows a form of calendar very similar to that of Fig. 2 but intended primarily for the 20th century only. Here the years of the century are arranged in sequence under the row of dominical letters at the top of the pocket and the rectangles 1, 2 and 3 upon the cover flap 8 need only be used when it is desired to use the calendar for a century other than the 20th.

I claim—

A perpetual calendar comprising a pocket provided with an aperture, and a slide projecting from said pocket, said slide being of less width than the pocket and being adapted to slide laterally therein, said pocket having a single row of dominical letters arranged recurrently and in order along the edge thereof and a week-day column arranged along an edge of the aperture, while the slide has a month-column in which each month is printed but once arranged along its projecting edge adjacent to the dominical letters, and month-day columns adapted to appear through the aperture adjacent to the week-day column.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

EDWARD D. GRABER.

Witnesses:
ANTOINETTE A. GRABER,
EDWARD D. GRABER, JR.