N. MOHLIN.

PERPETUAL CALENDAR.

APPLICATION FILED FEB. 12, 1912.

1,066,642.

Patented July 8, 1913.

2 SHEETS—SHEET 1.

Fig. 1

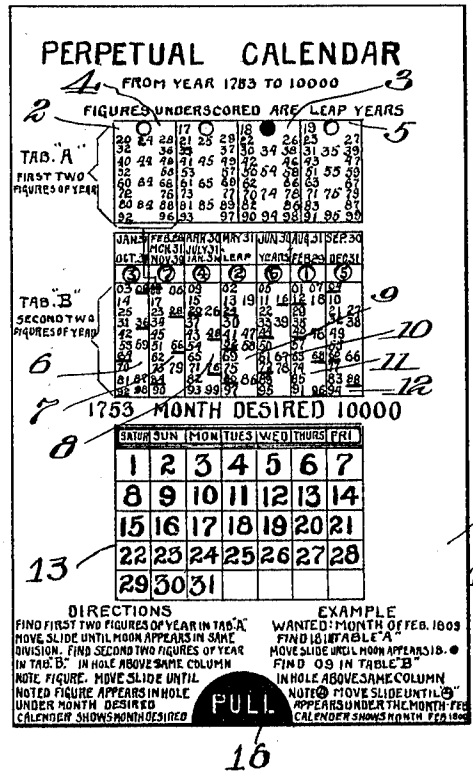


Fig. 2

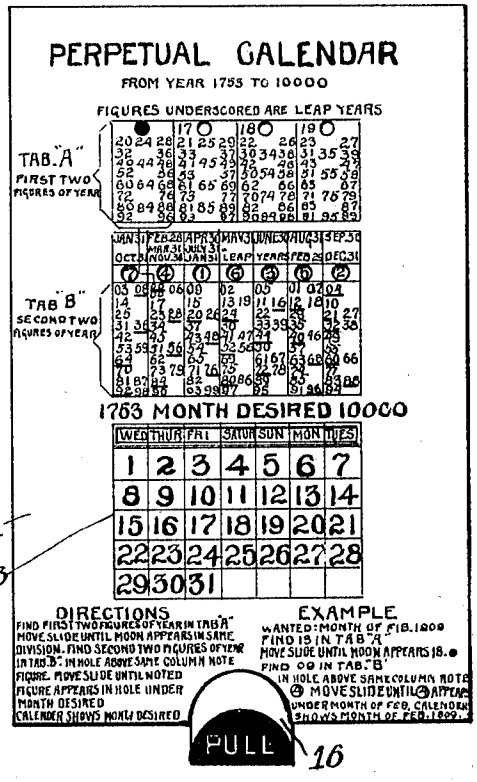
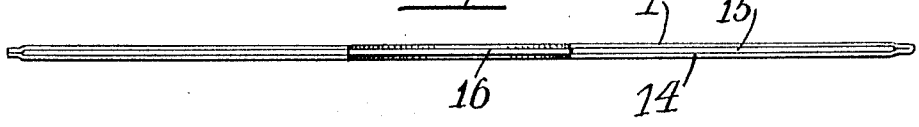


Fig. 4.



Witnesses

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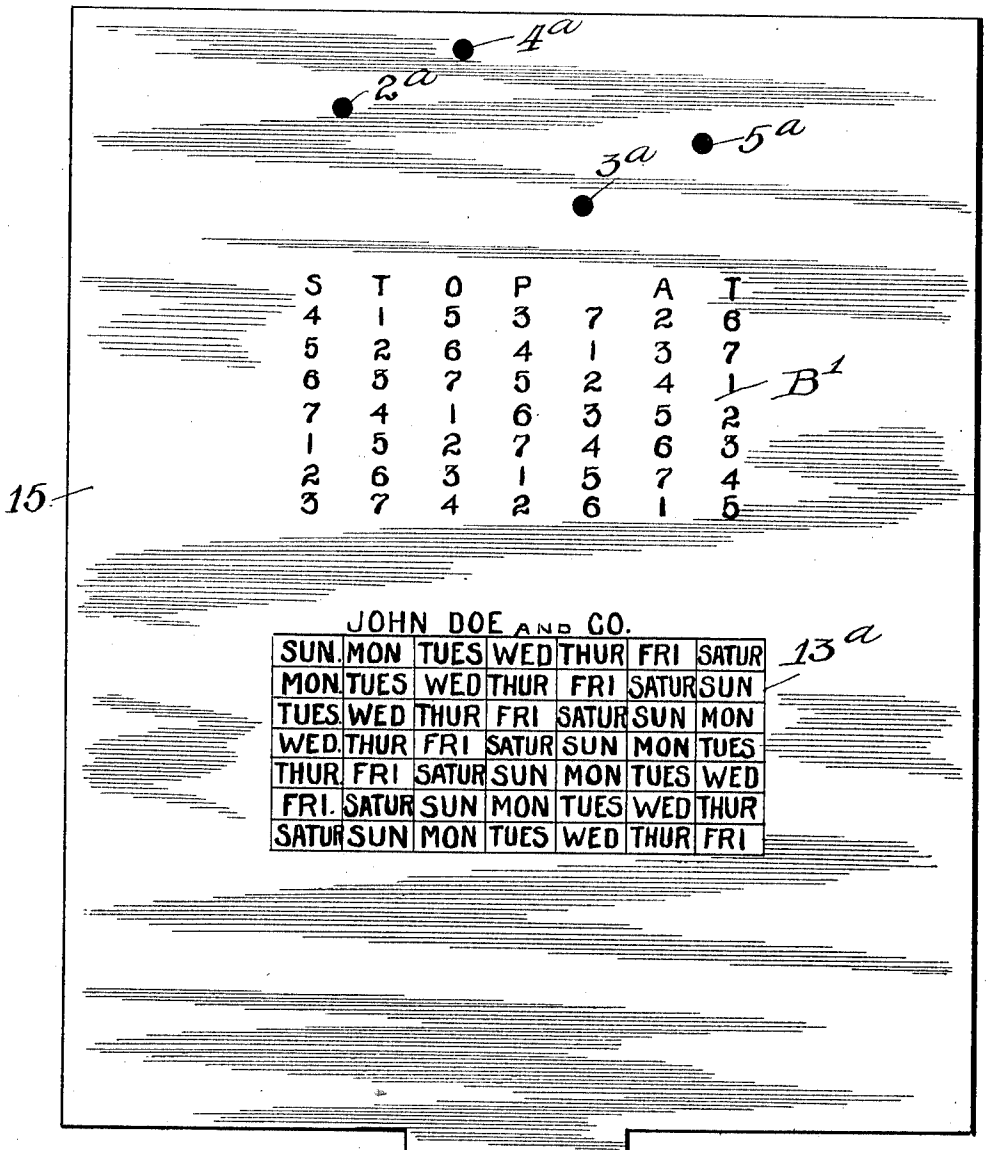
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2 SHEETS—SHEET 2.

Fig. 3.



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PERPETUAL CALENDAR.

1,066,642. Specification of Letters Patent. Patented July 8, 1913.

Application filed February 12, 1912. Serial No. 677,131.

To all whom it may concern:

Be it known that I, NILS MOHLIN, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Perpetual Calendars; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the numbers of reference marked thereon, which form a part of this specification.

The object of the invention is to afford a calendar in compact and simple form, by means of which the calendar for any month of any year for any number of years desired, may be quickly and accurately selected.

It is also an object of the invention to afford a construction whereby the calendar selection and determination, is mechanically effected and without computation on the part of the operator.

It is also an object of the invention to afford a calendar card of the class described adapted to be constructed at a low price and adapted for general use.

The invention also has for an object the construction adapted to afford an instructive and desirable novelty.

The invention in a preferred form, is illustrated in the drawings and hereinafter more fully described.

In the drawings: Figure 1 is a face view of a device embodying my invention. Fig. 2 is a similar face view, showing a different adjustment. Fig. 3 is an enlarged face view of the movable or finding elements of the calendar. Fig. 4 is an end elevation of the calendar.

As shown in the drawings: the calendar comprises an upper, outer face card 1, such as shown in Figs. 1, 2 and 3, which (in the calendar illustrated) is intended to show all the years from the year 1753 to the year 10,000, and which has marked thereon at the top thereof four parallel vertical columns or spaces, having arranged therein respectively the first two figures or the figure indicating the hundred number of the century. The numbers in said respective groups are so arranged, that the century leap years or those in which the century numbers are divisible by 4, fall in the first group indicated by 2. Inasmuch as each of said century leap years begin on the same day of the week, all the remaining even number centuries are arranged in the third column, indicated by 3, inasmuch as the first day of each of said centuries falls on the same day of the week. The odd numbered centuries are arranged in two groups alternating the even number groups, and of these, the odd century numbers arranged in the second group or column 4, are those upon which the first day of each of said centuries falls on the same day of the week. The remaining odd century numbers are placed in the last column marked 5. These are the odd century numbers which begin all on the same day of the week. In a similar manner the table marked "B" is arranged in columns, in this instance there being seven, one for each day in the week. In the first of these columns indicated by 6, are arranged the tens and units numbers of all those years of which the first day of the year fall on the same days for all the centuries of the first group—for instance, Wednesday for the first group of centuries indicated by 2; Monday for the group of centuries indicated by 4; Saturday for the group of centuries indicated by 3; Thursday for the group of centuries indicated by 5; and, inasmuch as the years not leap years have the same calendar for January and October, said column 6, has marked at the head thereof the words "Jan." and the number of days in the month, and "Oct." and the number of days in that month. In a similar manner, all the years in the group marked 7, which begin on the same days of the week for the respective groups of centuries, but upon different days than those for the remaining columns, and inasmuch as February, March, and November have substantially the same calendar for years other than leap year, said months with the number of days in each, are indicated at the head of said column. In a similar manner, the third column indicated by 8, contains grouped therein those years less than a century, in all of which the year begins on the same day of the week for each group of centuries, and at the head of said third column indicated by 8, are indicated the months of April, July and January when the year selected is a leap year. In a similar manner, each of the remaining seven columns

indicated by 9, 10, 11 and 12, is appropriated to those years less than a century in which the first day of January falls on the same day of the week invariably.

Printed at the bottom of the card directly beneath the Table B, is the calendar for one month, indicated by 13, the consecutively arranged day numbers for which begin at the top at the upper left corner, and read transversely to afford in each horizontal line all the days of a week. Said front card 1, is provided with a circular aperture centrally positioned at the head of each century column or space and a similar circular aperture at the head of each of the year columns, 6 to 12 inclusive. A transverse slot is provided through said card or plate of a length transversely the card equal to the width of the calendar and of a width corresponding approximately with the width of one of the day number spaces in said calendar. Said front or face card is rigidly secured at its ends and edges to a back sheet or card 14, as indicated in Fig. 5, and a central finger notch is provided at the lower or bottom ends of said cards.

Slidably engaged in the slide pocket between the front face and back card, is a finding card 15, provided at its lower end with an extension or tab 16, which projects outwardly through the finger notches at the lower end of said front face and back card, as shown in Figs. 1 and 2. Arranged on said finding card near the bottom thereof, and corresponding in position with the calendar 13, on the front face card, is a week calendar 13^a upon which, in succession, is marked the seven possible arrangements for the first week of each month—that is to say, the names of the days or the abbreviations thereof are arranged transversely the card in the columns corresponding with the day numbers in the calendar 13, shown on the front face card, so that, with the upper line of the week calendar 13^a, exposed to the slot at the head of the calendar, it would indicate that the first day of the particular month for which the calendar then was adjusted, fell upon Sunday. In a similar manner, the next succeeding lines of week-days begin successively with Monday, with Tuesday, with Wednesday, with Thursday, with Friday, and with Saturday, thereby enabling the correct calendar for any month to be indicated on the calendar 13, by shifting the card 15, to bring the week calendar 13^a into proper position for the appropriate week arrangement to show through said slot above the month calendar.

Arranged at the top of the card above each of the century columns, are characters or figures 2^a, 3^a, 4^a and 5^a, respectively adapted to be seen through the aperture at the head of each century column to indicate the correct century adjustment for the January or October calendar for the century of the particular group of centuries for which each of said indicators is in alinement. These indicators or characters may be any fanciful figure. As shown, they are mere circles of a distinguishing color of approximately the same size as the apertures therefor in the front face card. They may be termed "moons" if desired. Said position of the card also adjusts the calendar correctly for the months written at the head of the column for the tens and unit years found in said column for all the centuries in the column above which the indicator or moon is visible through its aperture, that is to say, with the adjustment shown in Fig. 2, with the moon or indicator 2^a, appearing in view at the aperture above the first century column, the calendar is correctly adjusted for January and October of any of the years appearing in the first, or the column indicated by 6, in Table "B", excepting those underscored, which are leap years. It is correctly positioned for any of the months at the head of column 2, for any year of the same group of centuries in said column, except the underscored, which are leap years, and in the same manner, the said calendar is correctly arranged for the years in any of said columns and the particular month written at the head of the column in which the year appears. Of course, said moons or indicators are arranged at the top of the card to afford the desired shift of the week calendar to adjust the appropriate week calendar into view above the month day calendar. For this purpose, inasmuch as all the leap year centuries in the first column 2, begin on the same day, as shown in Fig. 2, said moon 2^a, is so placed on the card that when the card is adjusted to bring said indicator in register with the aperture at the head of said column, the week calendar beginning with Wednesday for February, March and November in column 7, of Table B, appears in the slot above the month calendar. This adjustment indicates that February, March and November for any of the years in group 2, of centuries marked in column 7, of Table B, also have the same calendar for February, March and November. In a similar manner the indicator or moon 4^a, for the odd century column 4, is arranged above the moon for the first column, so that when the finding card 15, is drawn downwardly to bring said moon in register with the aperture in the odd century column 4, the month calling for January and October for all the years for said odd centuries written in column 6, of Table B, begins on Monday.

The same calendar is used for the months of February, March and November for all the years of said centuries marked in the column 7, for April, July and January, when a leap year for all the years in said

century marked in column 8, for May for the years in said century marked in column 9, for June for all the years of said centuries marked in column 10, for August and February when a leap year for all the years of said centuries marked in column 11, for September and December for all the years of said centuries marked in column 12. In a similar manner, as shown in Fig. 1, when the moon or indicator 3^a, is shown in the aperture in the even century column 3, the calendar is adjusted as before described to indicate all the respective months of any of the years of the centuries included in said column 3, upon which the first day of the month falls upon Saturday, and in a similar manner, when adjusted so that the moon 5^a, shows at the aperture in odd century column 5, the calendar is adjusted so that all the months of the years of the centuries shown in column 5, upon which the first day of the month is Thursday, are indicated. Means are also provided for adjusting the finding card to show the calendar for any month of any one of said years after the first adjustment thereof. For this purpose, the respective week calendars are indicated by numbers B′, upon the card 15, back of the Table B, and referring to Figs. 2 and 4, it will be seen that with the moon appearing above column or space 2, for leap year centuries, the numerals 7, 4, 1, 6, 3, 5, and 2 may be read through the apertures above the respective columns in Table B, and that the calendar is so adjusted as to indicate that the month began with Wednesday for any of the years and months indicated in the respective columns of Table B.

Each of the numbers appearing at the aperture at the head of the respective columns in Table B, is a finding number for the century above which the moon appears, and for the particular year above which the number appears. For example, the first day of January for the year 2003 will fall on Wednesday and the significant digit or finding number 7, appears at the head of column 6, in Table B, in which the year "1903" for said century is written. Should February, March, or November of said year be required, the finding card is pushed upwardly by means of its tab until the finding number 7 appears beneath the aperture for the months February, March and November written at the head of the column 8, in Table B. Each of said three months for said year begin on Saturday. In consequence, the second row or column of finding numerals B′ reads from the top downwardly from 1 to 7 consecutively. Each of said significant digits indicate, when exposed at the view apertures at the head of said columns, that the corresponding week calendar is exposed above the month calendar. Should the months of April or July be required for said year or any of the years found in column 6, of Table B, the finding card is adjusted until the finding digit 7, appears at the head of said column. Inasmuch as said months begin on Tuesday for said year, the third week calendar is required, hence the finding numbers B′, number from the top downwardly from 1 to 7 inclusive, and then from 1 to 4 inclusive, as shown in Fig. 4. Should the month of May be required for said year, or any year found in the leap year century column, Table 4, Table A, or B, the finding card is again adjusted until Table 7 appears in the view aperture of the required month, inasmuch as the month of May for all said years begins on Thursday, the arrangement of the numerals in the fourth column of finding numbers shown on Fig. 4, reads downwardly from 3 to 7 inclusive, and thence downwardly from 1 and 2, progressively should June be required, inasmuch as the month of June for any and all of said years mentioned begin on Sunday, the fifth column of finding digits begins at the top with the digit 7, which indicates the upper week calendar shown on Fig. 4, and thence read downwardly from 1 to 6 inclusive, and horizontally should August or February (when a leap-year) be required for any of said years, the finding digit 7, is adjusted to appear beneath said months in column 11, of Table B, thereby adjusting the week calendar to indicate that the months in question began upon Friday, and correspondingly the finding digits in said column 6, shown on Fig. 4, read from 2 to 7 inclusive, downwardly, the digit 1, coming last, and in arranging for September and December of any of said years, said months begin on Monday, consequently the second week calendar from the top is required, hence in the seventh and last column the finding numerals B′, (if the figures are arranged properly) reading from the top downwardly, 6 and 7, and then 1 to 5 inclusive.

This somewhat arbitrary arrangement is followed with reference to all the various groupings of years indicated in the respective columns, so that having adjusted the finding card to show in the aperture for the century number the significant digit showing in the aperture above that column in Table B, in which the tens and units of the year are written, may be used as a key number in finding the calendar for any required month in the year selected. For example, assuming the month of February for the year 1809, to be required, inasmuch as the century number 18, appears in column 3, of Table A, the finding card is adjusted until the moon or indicator 3^a, shows in the aperture at the head of said group or column. The remaining two figures of the year, to wit "09" appear in column 8. The

finding number shown at the head of the column with such adjustment is "4", as shown in Fig. 1, and the calendar is now adjusted to indicate that April and July of said year begin on Saturday, said week calendar being the bottom week calendar shown on Fig. 4, and consequently the digit 4, in the third column of finding figures, is at the bottom of the column. In the second column, however, said digit is the fourth figure from the top, inasmuch as February, March and November of the years in question begin with Wednesday. Variation from these dates are occasioned only by leap-year, and in the months of January and February. In practice, all leap-year numbers are indicated on the calendar in red ink. For purposes of illustration herein, such leap-year numbers or dates are underscored in the drawings. Leap-year Januarys are indicated in column 8, of Table B, and leap-year Februarys are indicated in column 6, of Table B. For example, in adjusting the calendar for 1912, the moon 5^a, appears at the apertures in the column 5, Table A, inasmuch as the century numbers are found therein. The remaining numbers, 12, the tens and units for the year, are found in column 11, of Table B, and are shown underlined in the drawings to show that the year is leap-year. Leap-year February also occurs in column 11, consequently the first adjustment of the calendar indicates that the month for February and August for 1912, begin with Thursday. January of said year began with Monday, adjusting the finding figure 6, to column 8, containing leap-year January, and which appears as the second finding figure from the top in the third finding column indicated in Fig. 4, the week calendar is correctly adjusted to show that the first day of January of 1912, was Monday as will also be the first day of April and July.

Printed or marked at the bottom of the card on each side the card, are the following words at the left:—

"*Direction.*—Find first two figures of year in Table 'A'. Move slide until moon appears in said division. Find second two figures of year in Table 'B'. In hole above same column note figure. Move slide until noted figure appears in hole under month desired. Calendar shows month desired."

And on the right the followings words:—

"*Example.*—Wanted: Month of Feb. 1809. Find 18 in Table 'A'. Move slide until moon appears 18. Find 09 in Table 'B'. In hole above same column note 4. Move slide until (4) appears under the month of Feb. Calendar shows month of Feb. 1809."

Of necessity the operation has been fully described in the foregoing specification. It is, of course, to be understood that in the same manner a calendar for any desired number of years may be constructed. I have, for convenience, however, and to economize space, indicated a calendar from 1700 to 10,000.

While I have preferred to use significant digits in lieu of dominical letters as the finding numbers for the calendars for the various numbers, it is to be understood, of course, that the calendar numbers from A to G inclusive may be substituted therefor. Of course, details of construction may be varied, and if desired, the back of the calendar may have printed thereon the usual directions to permit the calendar to be made of the proper size to be used as a postcard.

I do not purpose limiting the patent to be granted on this application otherwise than necessitated by the prior art.

I claim as my invention:

1. A calendar of the class described comprising an apertured envelop, a table thereon comprising the century numbers, a second table comprising the year numbers, a third table comprising a month of thirty one days, and a member slidable in said envelop comprising a table of the numerals 1 to 7 arranged in proper sequence in seven different columns, a table of the week days arranged in sequence in columns reading both horizontally and vertically, and a table of indicating characters to enable the operator to bring the proper numerals and days into register at the apertures in the envelop for the dates desired.

2. A calendar embracing a front face card having the centuries arranged in groups in accordance with the day of the week upon which the respective centuries begin, an aperture above each group, a table of years arranged beneath the same and divided into seven columns, with reference to the dominical letters of the respective years, said card having an aperture therethrough above each column, a month calendar below the last named table, a slot opening through the card above the calendar, a finding card slidable beneath the face card and having indicating marks thereon to register with the apertures for the century groups, a week calendar adapted to register with the slot above the month calendar, and an arrangement of dominical letters or characters for registering with the apertures in the respective year columns to indicate the position for shifting the week calendar to indicate any required month in any required year.

3. A perpetual calendar comprising an apertured envelop, a plurality of tables thereon, one containing centuries, one containing the tens and units of the centuries, and another containing the numerals of a month calendar, a member slidable within said envelop, a plurality of finding groups thereon, one containing indications for the century

tables, another containing indications for the said tens and units table, and a group of progressively arranged week days, said groups on said slidable member adapted to indicate the respective year and century for any month respectively.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

NILS MOHLIN.

Witnesses:
CHARLES W. HILLS, JR.,
GEORGE R. MOORE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."