E. K. PLOUGH.

CALENDAR.

APPLICATION FILED OCT. 23, 1907.

899,614. **Patented Sept. 29, 1908.**

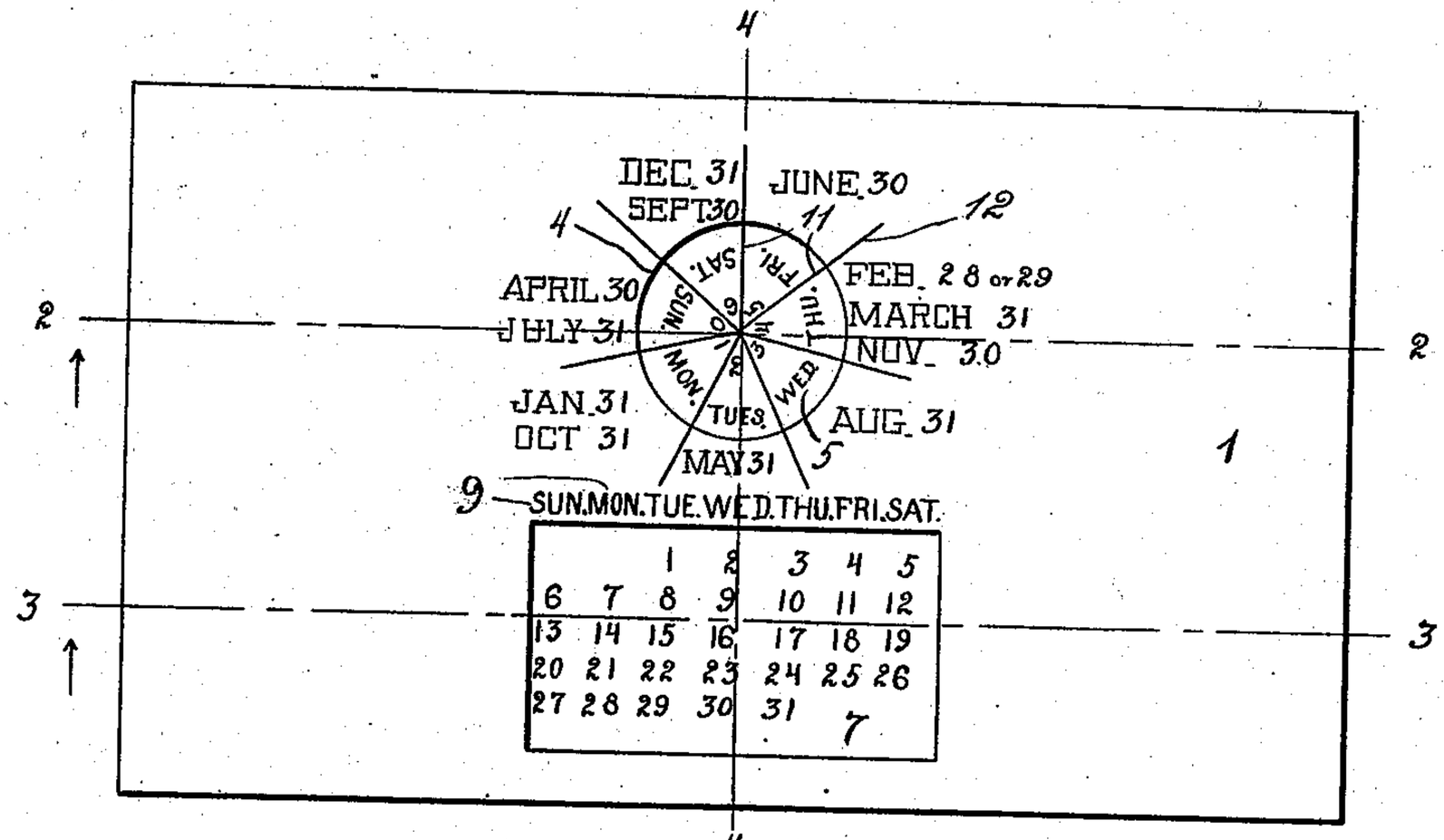

FIG. 1.

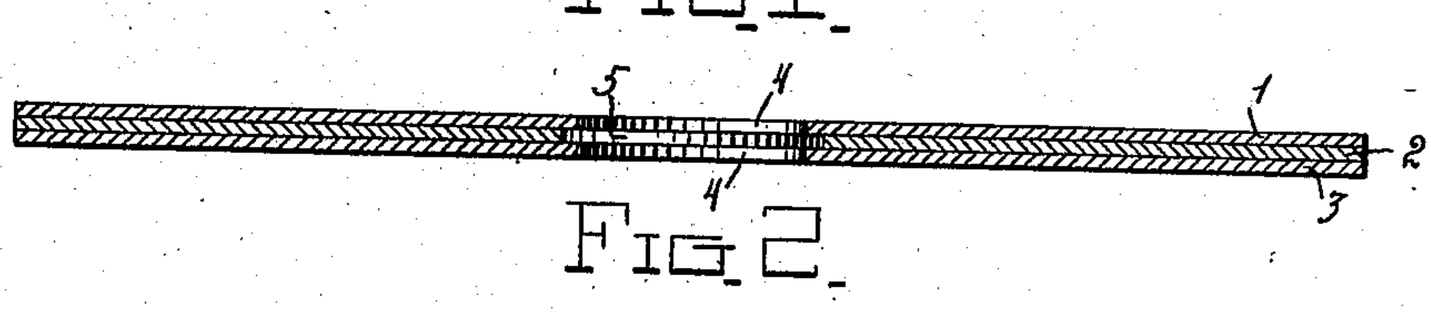

FIG. 2.

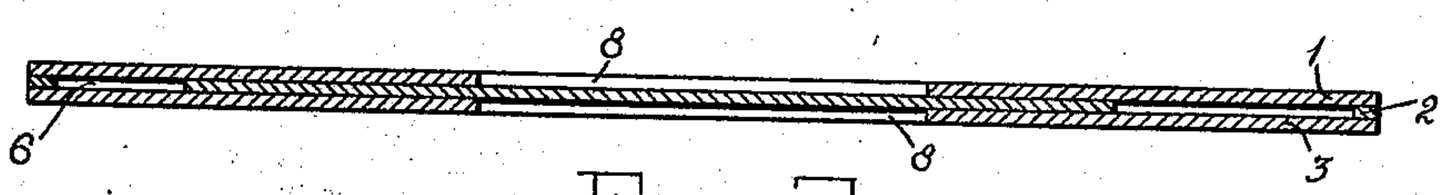

FIG. 3.

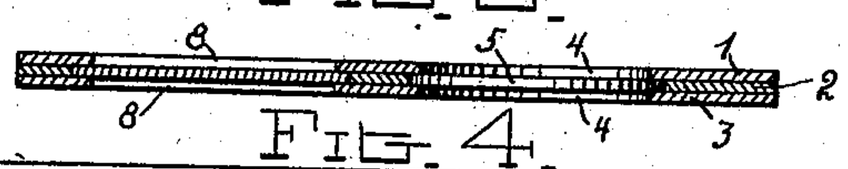

FIG. 4.

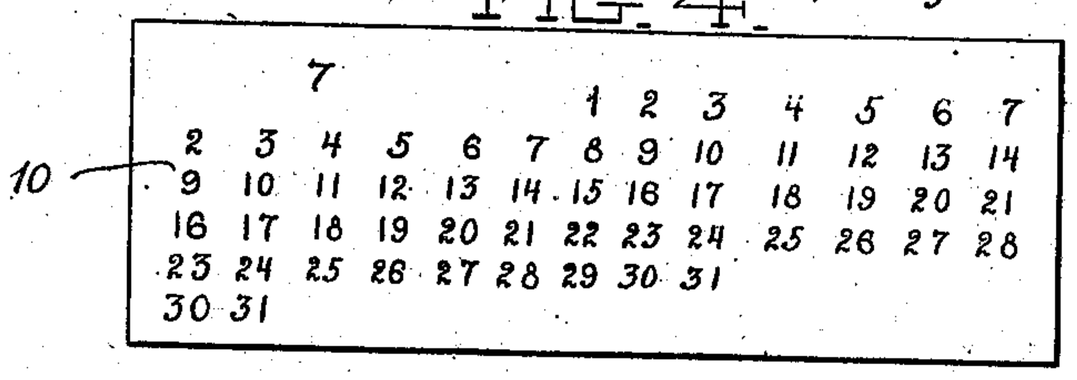

FIG. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

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CALENDAR.

No. 899,614. Specification of Letters Patent. Patented Sept. 29, 1908.

Application filed October 23, 1907. Serial No. 398,823.

To all whom it may concern:

Be it known that I, ERIC K. PLOUGH, citizen of the United States of America, residing at Chambersburg, in the county of Franklin and State of Pennsylvania, have invented certain new and useful Improvements in Calendars, of which the following is a specification.

This invention relates to new and useful improvements in calendars and is intended more especially to be employed as what is known as a perpetual calendar.

It is an object of this invention to provide a novel device of this character whereby the day of the week may be ascertained when the day of the month and the year is known.

It is furthermore an object of the invention to provide a novel calendar having movable parts containing data, the data on one of the parts being brought into such relation with other parts as to indicate the degree of movement to be imparted to still another portion or part of the calendar.

Furthermore, an object of the invention is to produce a novel calendar of the character noted which will be simple in construction, efficient in practice and comparatively inexpensive to manufacture.

With the foregoing and other objects in view, the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail, reference will be had to the accompanying drawings forming part of this specification wherein like characters denote corresponding parts in the several views, in which—

Figure 1, is a plan view of a calendar embodying the invention. Fig. 2, is a sectional view on the line 2—2 of Fig. 1. Fig. 3, is a sectional view on the line 3—3 of Fig. 1. Fig. 4, is a sectional view on the line 4—4 of Fig. 1. Fig. 5, is a view of a detail of the invention.

In the form of invention illustrated, there is a body comprising three layers 1, 2, and 3, having approximately centrally the length thereof and adjacent an edge the alining apertures 4, the aperture in the central layer being greater than the aperture in the remaining layers. Within this central aperture and held therein by the remaining layers is a circular disk 5, and it may here be stated that the apertures in the layers are also circular and that the disk 5, approximates the area of the aperture in the central layer 2. The central layer has its lower half provided with a longitudinal rectangular opening 6, which extends almost entirely across the body and this rectangular portion or opening forms a guideway for the slide 7. The layers, or plates as they may be termed, 1 and 3, are each provided with a smaller rectangular opening 8, alining one with the other, said openings being positioned directly beneath the circular openings hereinbefore referred to, and centrally of the length of the body.

On the plate 1, just above the upper longitudinal edge of the opening 8, are indications 9, denoting the various days of the week. On the side 7, are arranged thirteen vertical rows 10, the first row of the figures beginning with the numeral 2, and each succeeding number is the sum of that number and seven; the second row begins with 3; the third row with 4; the fourth row with 5; the fifth row with 6; the sixth row with 7; the seventh row with 1; the eighth row with 2; the ninth row with 3; the tenth row with 4; the eleventh row with 5; the twelfth row with 6; and the thirteenth row with 7. By having the seventh row begin with 1, the slide 7, can be readily moved within its guideway to bring the date 1, under Sunday and the numerals within the various rows will be so arranged as to give each day of the week its proper day of the month. By having the first row begin with 2, the slide can be moved to have the first day of the month begin on Saturday and the various days of the month will have their proper date. This arrangement of the numerals will, it is thought, be more plainly understood from the detail Fig. 5, of the drawings.

The face of the disk 5, is provided with a series of seven radial lines 11, which are intended to aline with a series of seven lines 12, on the layer or plate 1. The spaces between the lines 11, are identified in succession by the characters 0, 1, 2, 3, 4, 5, and 6. In the space identified by the character 0, is the Sunday indication; in the space identified by 1 is the Monday indication; in the space identified by 2, is the Tuesday indication; in the space identified by 3, is the Wednesday indication; in the space identified by 4, is the Thursday indication; in the space indicated by 5, is the Friday indication and in the space indicated by 6, is the Saturday indication.

In the space formed by the lines 12, di-

rectly beneath the opening 5, is an indication of the month of May. In the next succeeding space to the right is an indication of the month of August; in the next space an indication of the months of February, March and November; in the next space an indication of the month of June; in the next space an indication of the months of December and September; in the next space an indication of the months of April and July; and in the next space an indication of the months of January and October, and each month indication is followed by an indication of the number of days that that month contains.

The general rule by which this calendar is operated is to add to the year in which it is desired to identify a day one-fourth ($\frac{1}{4}$) of that year disregarding the remainder after the division and from this sum subtract the remainder of one-fourth ($\frac{1}{4}$) of the number formed by striking off the last two figures of the year from that number. This result divide by 7. Identify a space on the disk by the remainder and you will have the day on which the year begins and by moving the slide until the character 1, is beneath that day on the indications 9, you will have the calendar set for the month of January. The day indications in the remaining spaces on the disk will register with the spaces on the upper plate containing the month indications on which the first day falls on the day indication.

Should the year desired be a leap year, subtract 1, before dividing by 7, and use the wheel for January and February in the identifications determined by the remainder. For the remaining months set the wheel as for an ordinary year, that is do not subtract before dividing by 7. For example, should it be desired to determine a day of the week in October, 1907, you divide 1907 by 4, which gives 476, the remainder being disregarded. This amount is added to 1907, which gives a sum of 2383. The number formed by striking off the last two figures of the year (19) is then divided by four, which gives a quotient of 4, the remainder being disregarded. This quotient 4, is subtracted from 19, which gives 15. This remainder 15, is subtracted from the sum 2383 before referred to which gives a remainder of 2368. This remainder 2368 is divided by 7, which gives a quotient of 338, and a remainder of 2. By looking on the disk 5, you will see that 2, identifies Tuesday. The slide 7, is then moved until the numeral 1, is beneath Tuesday in the day indications 9. We then know that the 1st of October, 1907, fell on Tuesday and we can therefore readily determine the date of any day in that month. Knowing that Tuesday was the first of October, the Tuesday indication on the disk 5, is moved to register with the space between the lines 12, containing the October month indication. We can then readily determine the name of the first day of any of the other 11 months, as the first day of the month indications in the spaces register with the day indications which fall on that day, that is to say we can readily see that both January and October begin on Tuesday; April and July on Monday; September and December on Sunday; June on Saturday; February, March and November on Friday; August on Thursday; and May on Wednesday.

What I claim is:—

A calendar comprising in combination, an indicator having a single series of the names of the days of the week thereon, identifying characters carried by said indicator, an indicator having the names of the months of the year thereon, said first named indicator being movable with reference to the second named indicator and the names of the days of the week and the names of the months of the year being so arranged that by manipulating the movable indicator the days of the week on which each month of the year begins can be ascertained.

In testimony whereof I affix my signature in the presence of two witnesses this 21st day of October, 1907.

ERIC K. PLOUGH.

Witnesses:
GEO. W. PUGH,
F. C. KASPER.