2 Sheets—Sheet 1.

J. M. WOLBRECHT.

Calendars.

No. 219,054. **Patented Aug. 26, 1879.**

Fig. 1.

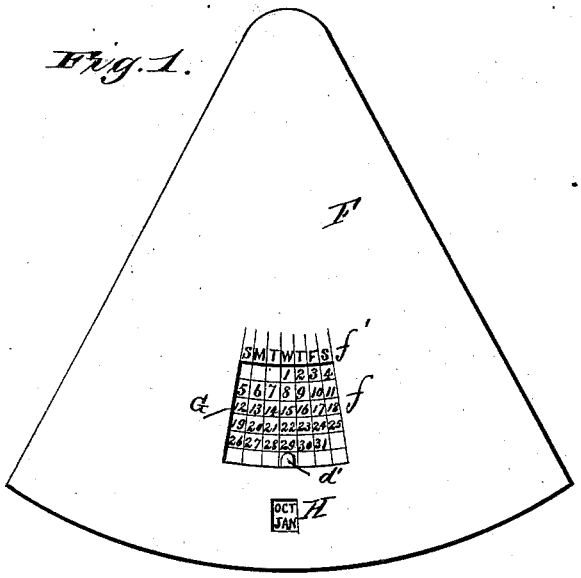
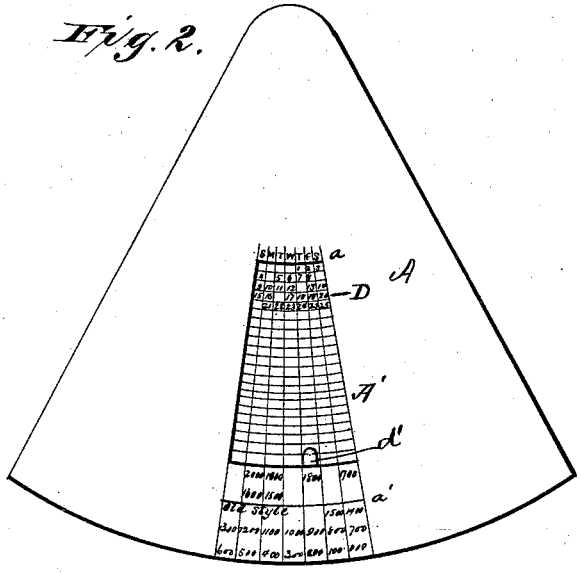


Fig. 2.



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2 Sheets—Sheet 2.

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Fig. 4.

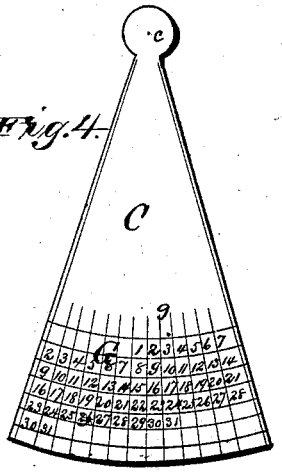

Fig. 6.

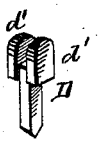

Fig. 3

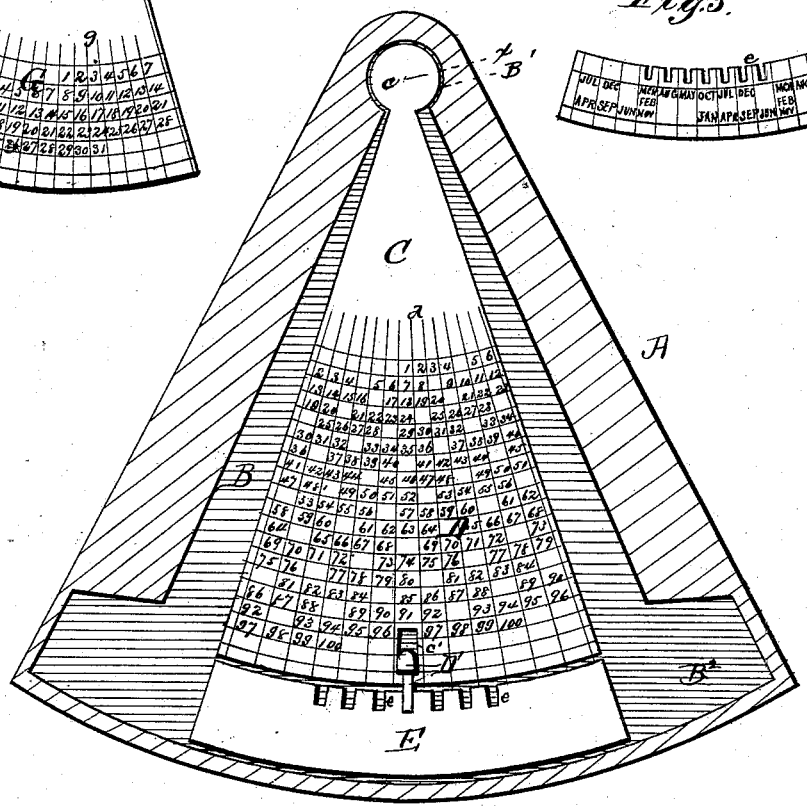

Fig. 5.

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UNITED STATES PATENT OFFICE.

JOHN M. WOLBRECHT, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN CALENDARS.

Specification forming part of Letters Patent No. **219,054**, dated August 26, 1879; application filed July 23, 1879.

To all whom it may concern:

Be it known that I, JOHN M. WOLBRECHT, of St. Louis, in the county of St. Louis and State of Missouri, have invented certain new and useful Improvements in Calendars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to an approximately perpetual calendar, whereby I am enabled to give the day of the week corresponding to any given date for centuries, past or future. In other words, the date ascertained, the day of the week is readily found; and to this end the invention consists, essentially, in a tabular representation of the years of the century upon a movable plate, partly exposed through an orifice in a cover, on which are arranged the days of the week and the centuries of the Christian era in such a manner that, by a simple mechanical operation, the day of the week on which any particular annual event occurs can be determined.

It also consists in a tabular representation of the days of the month on a plate adjustable to an independent plate with a table of the months of the year thereon, both movable and partially exposed through orifices in a cover, on which are arranged the days of the week in such a manner that when the day of the week of one day of the year is known the calendar for any month of that year can be determined by a simple mechanical operation.

In the following device the centuries and months have been arranged to correspond to the 1st of January. For certain purposes it may be considered preferable to use the 1st of March, with corresponding changes in the arrangement of months and centuries, as by such an arrangement no notice need be taken of leap-years.

In carrying out my invention I employ an approximately segmental case, consisting of the body, provided with a segmental recess to receive an oscillating segmental plate, as shown. This recess terminates upon the upper or axis end in a circular portion corresponding with a head upon the oscillating plate of smaller diameter which operates therein, and below said recess terminates in a segmental plane of greater circumferential area, to allow an independent segmental plate to traverse beyond the plane of the pivoted plate. A recess in the pivoted plate carries a thumb-pin, which operates in notches in the independent plate when the said pin is forced down.

The body is provided with a cover of exactly corresponding size and form, which closes the recess, leaving the pivoted plate and independent plate to be operated, one or both, by the thumb-pin. This thumb-pin has two projections or working knobs, one upon each side, which project through segmental openings upon the back and front plate—that is, the body or cover—as shown.

For convenience of description, I shall consider the complete device a segment of a circle with the pivotal point of the pivoted plate as an axis.

It will be observed that the front surface of the pivoted plate carries a perfect lunar calendar, which will serve for any year, the month being known. This calendar may be arranged for any month and serve efficiently, the figures being arranged upon the pivoted plate within radial lines, so that one month's calendar shall appear wherever arranged, the designations for the seven days of the week being above a segmental opening in the caps or cover, and another opening discloses the months on the independent plate.

The back surface of the body presents an orifice with radial sides having within radial lines below said orifice designations for centuries, and above designations for the seven days of the week. Upon the pivoted segment described are radial lines, between which are arranged figures running from one to one hundred, arranged arbitrarily, so as to present a group of four, and a space occurring after each leap-year.

It will be thus observed that the device presents a perpetual calendar, a monthly calendar being upon one side, serving for a whole year, while the opposite side, in connection therewith, serves for centuries.

From the description of the operation hereinafter the advantages of my improved device will be obvious.

Referring to the drawings, A represents the body, of segmental form, and *x* the axis. B represents a recess, segmental in form, having a circular apex, B^1, and a circumferential extension, B^2, formed in said body, as clearly shown in Figure 3. C represents a segmental plate having upon its apex a circular extension, *c*, and upon its central circumference a slot, *c'*, in which operates a thumb-pin, D', having opposite lateral knobs *d'*, as shown. This pin operates in slots *e* in a segmental plate, E, which works loosely in the space B^2, and the apex *c* operates in the circular space B^1, as clearly shown in Fig. 3.

The back face of the body is provided with a segmental orifice, A', (see Fig. 2,) above which are designations of the seven days of the week, as shown at *a*, and below which, at *a'*, an arbitrary arrangement of centuries. The back face of the plate C, Fig. 3, is provided with radial lines *d* and an arbitrary arrangement of figures, D, and at any place in which the plate C may be positioned a system of figures, from one to one hundred, is visible through the orifice A', in groups of four, the vacant space following the leap-year.

F, Fig. 1, represents the face-plate or cover secured to the body A, and it is provided with an orifice, *f*, at the top of which are designations for the days of the week *f'*; and the face of the plate C, Fig. 4, has a system of figures, G, within radial lines *g*, in such an arrangement that, whatever the position of said plate, a monthly calendar will be apparent through the orifice *f*, as shown.

H represents an orifice in the cover F, through which may be discerned the months printed upon the curved plate E, Fig. 5. The curved plate E is made adjustable to the pivoted plate C, and has the designations for the months so arranged that when the two plates are properly adjusted relative to one another for any particular month they will then be correctly adjusted for any other month of the same year.

To find by my improved device the day of the week corresponding to any particular date: First, on back face, bring thumb-pin over the column containing the century of the date, find the remaining numbers of the date among the figures D, and the letter at the head of the column in which they appear will designate the day of the week on which that year enters. Second, on front face, move the thumb-pin until the designations "JAN" appear in opening H, holding it there; raise the thumb-pin, and bring the figure 1 under the day of the week obtained from other side, and then lower the thumb-pin. The calendar will now be adjusted for that year. Any month made to appear in opening H will have its corresponding calendar appearing in opening *f*, every day of the month appearing directly under its respective day of the week. The position of the name of the month appearing in opening H serves as an index to the number of days the month contains.

For the latter ten months of leap-years the adjustment must be made by bringing figure 1 under the day of the week following the one obtained from the other side.

Further explanation of the operation of my device is deemed unnecessary, it being obvious from the foregoing description.

I claim as my invention—

1. The combination of the plate C, having century-dates D and monthly dates G on its opposite sides, with the adjustable strip E, having the months thereon, substantially as specified.

2. The month-strip E, in combination with the plate C, provided with the dates G, and the plate F, with the orifice H, substantially as and for the purpose specified.

3. The combination of the plate A, provided with the centuries *a'* and designations of the days of the week *a*, with the plate C, provided with the century-calendar D, substantially and for the purpose specified.

4. The plate C *c*, body A A', and cover F *f*, combined with the strip E and a connecting lock-pin, D', as herein specified.

5. The body A A', having recess B B^1 B^2, and cover F *f*, combined with plate C, pin D' *d'*, and strip E, substantially as and for the purpose herein shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 16th day of May, 1879.

JOHN M. WOLBRECHT.

Witnesses:

H. CLAY SMITH,

H. J. ENNIS.