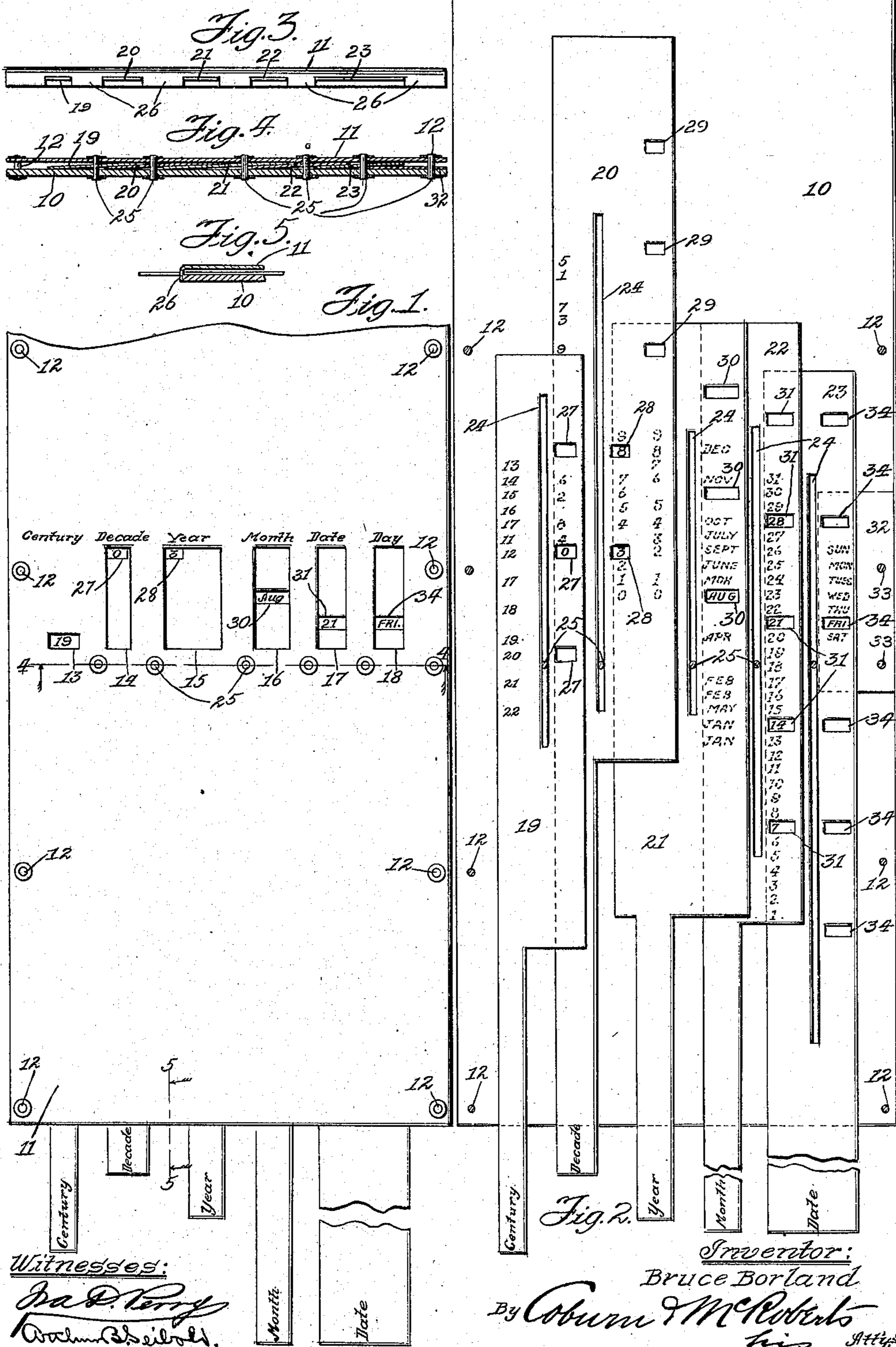


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B. BORLAND.
CALENDAR.

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BRUCE BORLAND, OF CHICAGO, ILLINOIS.

CALENDAR.

No. 885,222.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, BRUCE BORLAND, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Calendars, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a perpetual calendar by means of which the day of the week on which any day of the month of any year falls may be determined mechanically and without resorting to any of the systems of computation ordinarily employed for this purpose.

The invention consists of the combinations and arrangements of parts hereinafter described and then pointed out in the appended claims.

In the drawings—Figure 1 is a front elevation of one embodiment of my invention; Fig. 2 is a similar view with the front of the calendar removed; Fig. 3 is an end elevation of the calendar; Fig. 4 is a section on the line 4—4 of Fig. 1; and Fig. 5 is a section on the line 5—5 of Fig. 1.

In the present embodiment of the invention, 10 indicates a back and 11 a front which together provide a container or case for the indicia bearing slides to be hereinafter referred to. The back 10 and front 11 may be made of any suitable material, such as sheet metal, but in order to render the calendar of light weight I preferably employ stiff card-board. The back 10 and front 11 may be suitably secured together as by rivets or staples 12. The front 11 is provided with a series of six apertures, as shown in Fig. 1. Of such apertures 13 is designed to display the numbers indicating centuries, 14 the numbers indicating decades, and 15 the exact year, while the openings 16, 17 and 18 are designed to disclose the months, the days of the month, and the days of the week respectively. These openings may be marked or designated in any suitable manner, as for example, as shown in Fig. 1, with suitable wording indicating the character of the information disclosed through the openings.

Between the back 10 and front 11 and adapted to slide longitudinally is a series of slides arranged in successive order, five of such slides being employed and designated 19, 20, 21, 22 and 23. Each of these slides is provided with an elongated slot 24 through

which passes a guide pin 25 secured to the front and back, as shown in Fig. 4. The ends of the slides project beyond one end of the case to permit of their being moved, and as shown in Fig. 2 these ends are reduced in width. As shown in Figs. 3 and 5, the front 11 is provided with rearwardly bent extensions 26, and by reason of these extensions and the pins 25 the slides are guided rectilinearly but held against lateral movement.

As shown in Figs. 2 and 4, each slide beginning with the slide 19 overlaps the succeeding slide. These slides have thereon, for example, indicia designating the year, month and day of the month, and the arrangement thereof may be as illustrated in the drawings.

The slide 19, which is designed to indicate the century, is, in the present embodiment of the invention, provided with a column of numerals running from "13" to "22," the calendar illustrated being arranged to give the day of the week for any date from 1300 A. D. to 2300 A. D. These numbers are not arranged in progressive order, but in a manner determined by the arrangement of the indicia on the other slides. The side of the slide 20 overlapped by the slide 19 is provided with a column of numbers running from "0" to "9" designed to designate the decades. The numbers are also arranged in a manner determined by the arrangement of the indicia on the other slides, and this is true of the indicia on each slide. The slide 19 where it overlaps the slide 20 is provided with suitable openings 27, each being of such size as to disclose but one numeral on the slide 20. The slide 21 where it is overlapped by the slide 20 is provided with two rows or columns of numerals each running from "0" to "9." These numerals, as shown, are arranged in successive order but not spaced equally apart. The slide 20 is provided with openings 28, similar to 27, designed to expose the numerals of the left hand column on the slide 21 and a series of openings 29 cooperating with the other column of numerals on the slide 21. The slide 22 at the portion thereof overlapped by the slide 21 has imprinted thereon the names of the months of the year, arranged as shown, and the slide 21 is provided with suitably arranged openings 30. The slide 23 is provided at the portion thereof overlapped by the slide 22 with a column of numbers running from "1" to "31" to indicate the days of the longest

months, such numbers being arranged in successive order, as shown. The slide 22 at that portion overlapping the slide 23 is provided with suitably spaced openings 31. A slip 32 having imprinted thereon the names of the days of the week in the order in which they occur, is secured, as by pins 33 to the case of the calendar. The portion of the slide 23 overlapping the slip 32 is provided with suitable apertures 34 through which the names of the days of the week on the slip 32 may be observed. While I have shown an attached slip containing the names of the days of the week it is obvious that such names may be imprinted or stamped directly on the back 10.

The calendar shown in Fig. 1 is set to disclose as the date August 21, 1903, such day being Friday. In manipulating the calendar in order to determine upon what day of the week any date, as for example August 21, 1903, falls, the slide 19 is moved to disclose the number indicating the century, such number in this instance supposed being "19," at the aperture 13. By this movement of the slide 19 one of the openings 27 of such slide is brought opposite the aperture 14. The slide 20 is then moved until "0" is disclosed through the opening 27 at the decade aperture 14, one of the openings 28 in such slide 20 then being opposite the aperture 15. The slide 21 is next moved until the numeral "3" designating the exact year is disclosed through the opening 28 at the aperture 15, and this movement of the slide 21 brings one of its openings 30 opposite the aperture 16. Next the slide 22 is adjusted until the month desired, "August", is disclosed through the opening 30 at the aperture 16, one of the openings 31 of the slide 22 thereby being moved opposite the opening 17. Finally the slide 23 is adjusted to disclose the numeral 21 through the opening 31 at the aperture 17. By this final manipulation of the slide 23 one of the openings 34 in the said slide is brought opposite the name of the day of the week sought, which happens to be Friday, on the slip 32, and it is thereby disclosed through the opening 18. It will be observed that the slide 22 bears the name of the months January and February twice. The first or upper of these in the case of each of the said months is utilized for ordinary years and the other is so arranged as to adapt the calendar to indicating the days of the week in leap years. With the indicia arranged as shown, the manipulation of the slides in the manner described necessarily discloses the day of the week upon which any day of the month of any year falls, irrespective of whether the year is a leap year or not.

The size and arrangement of the apertures 13, 14, etc., is determined by the arrangement of the indicia on the slides, and the arrangement of the apertures here em-

ployed is for the arrangement of indicia illustrated, but it may obviously be varied with any change in the arrangement of the indicia without departing from the spirit of the invention. It will be noted that while the apertures 14, 15, 16, 17 and 18 are larger than any single number on the slides associated with such apertures, owing to the size of the aperture of the overlapping slide only one numeral is ever visible. The aperture 13, however, is only large enough to disclose one number on the slide 19.

Having described my invention what I claim is—

1. In a perpetual calendar, a series of movable slides, a stationary slip, all provided with indicia and arranged in successive order, each movable slide overlapping the succeeding slide and slip respectively and provided with openings through which the succeeding indicia is adapted to be exposed.

2. A perpetual calendar, comprising a stationary slip a series of movable indicia carrying slides, such indicia designating the year, month, and day of the month, each of such movable slides being provided with openings through which the characters of an adjacent slide are exposable, and a column of characters on the stationary slip indicating the days of the week and which characters are adapted to be exposed through the openings in the day of the month slide.

3. In a perpetual calendar, a series of movable slides comprising a century indicating slide, a decade indicating slide, a year indicating slide, month and day of the month slides; a stationary slip, all arranged in the order mentioned, the said movable slides having openings through which the characters of the succeeding slide are exposable, and a column of characters on the stationary slip indicating the days of the week and which characters are adapted to be exposed through the openings in the day of the month slide.

4. In a perpetual calendar, a series of movable slides provided with indicia designating the year, month, and day of the month, a stationary slip, all arranged in the order mentioned and each movable slide overlapping the succeeding slide and having openings through which the indicia on the succeeding slide is adapted to be exposed, and a column of characters on the stationary slip indicating the days of the week adapted to be exposed through the openings of the day of the month slide.

5. In a perpetual calendar, a case provided with a front having a series of apertures, a century indicating slide, a slide carrying characters indicating decades, a year indicating slide, month, and day of the month slides, all of said slides being movable, a stationary slip, all arranged in the order mentioned and each movable slide overlapping the succeed-

ing slide and provided with openings adapted to register with the apertures in the front and through which the characters on the succeeding slide are adapted to be exposed, the
5 said movable slides being provided with elongated slots, guide pins fastened to the case and passing through the slots, and a column of characters on the stationary slip indicating the days of the week and adapted to be

exposed through the openings in the day of 10 the month slide.

In testimony whereof I affix my signature in presence of two witnesses.

BRUCE BORLAND.

Witnesses:

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