F. P. GORIN.

CALENDAR.

APPLICATION FILED OCT. 4, 1906. RENEWED AUG. 10, 1912.

1,042,337.

Patented Oct. 22, 1912.

3 SHEETS—SHEET 1.

Fig. 2.

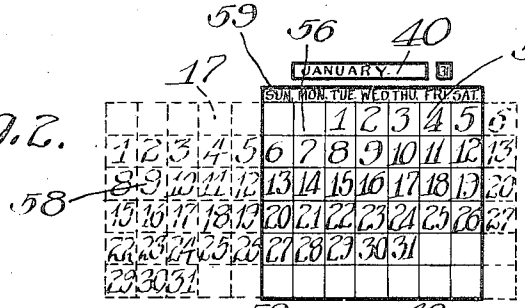


Fig. 3.

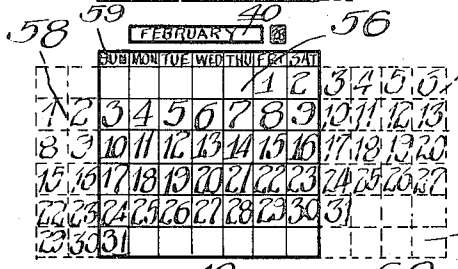
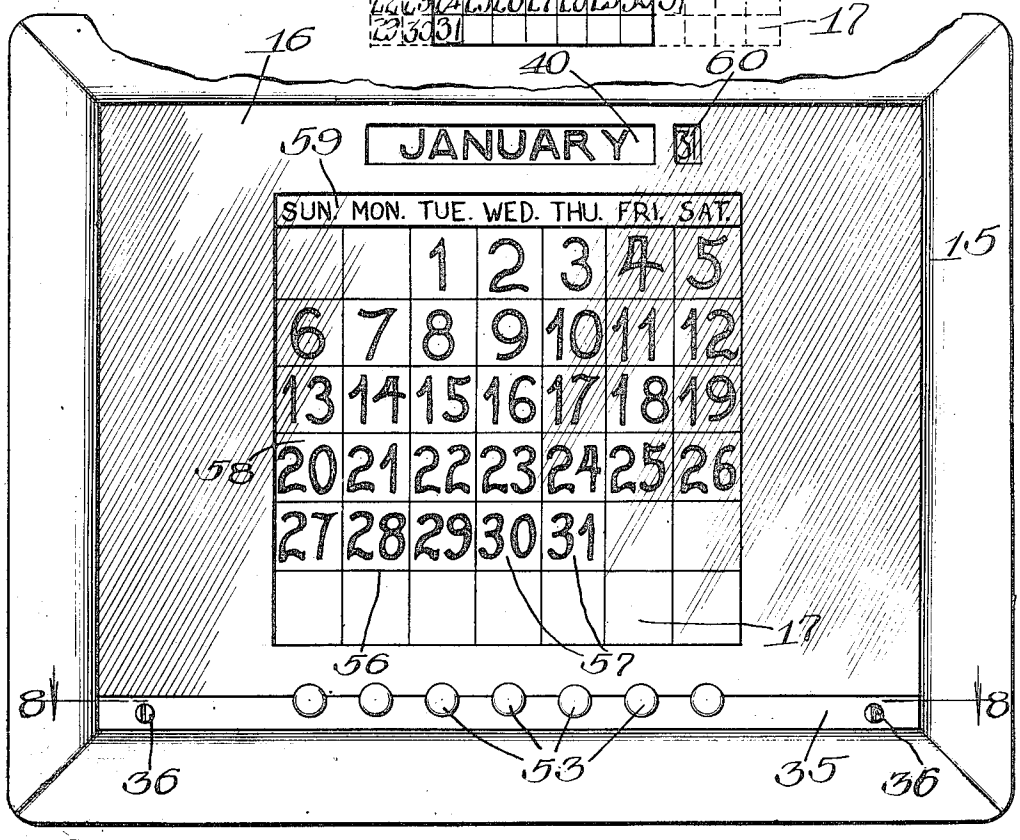


Fig. 1.



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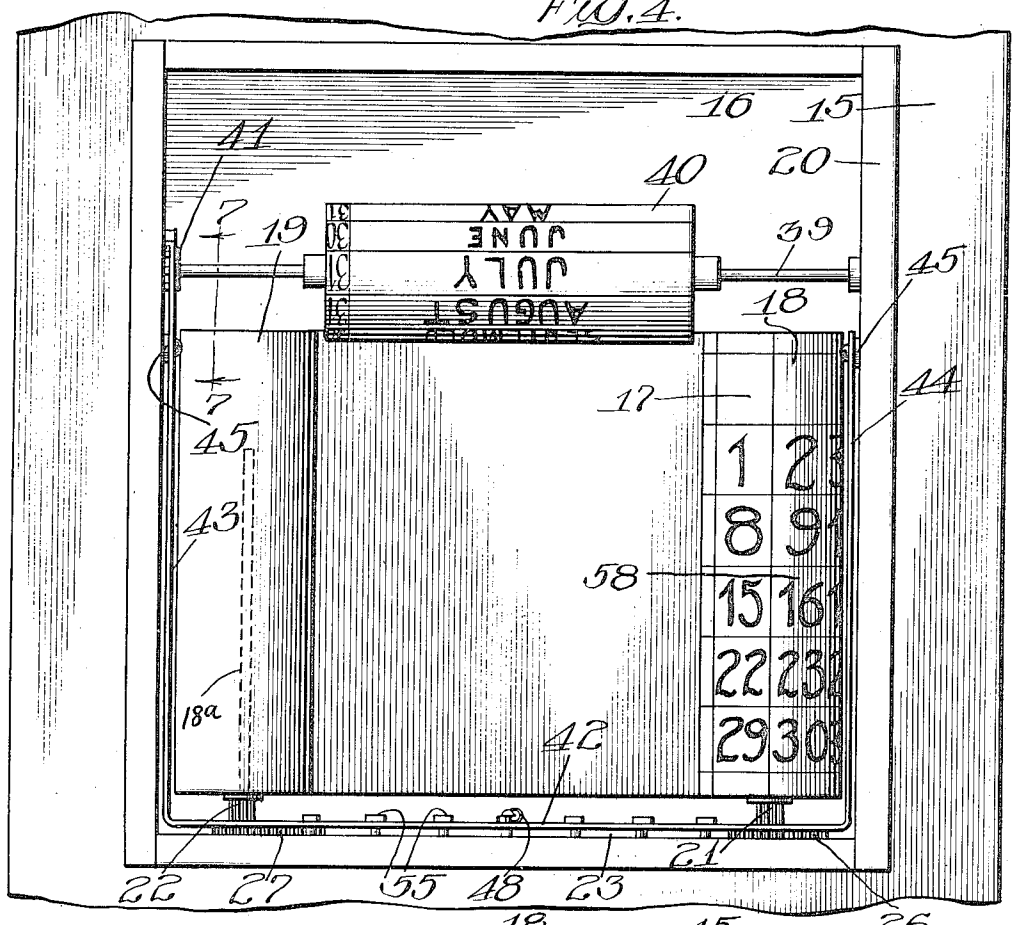
3 SHEETS—SHEET 2.

Fig. 4.



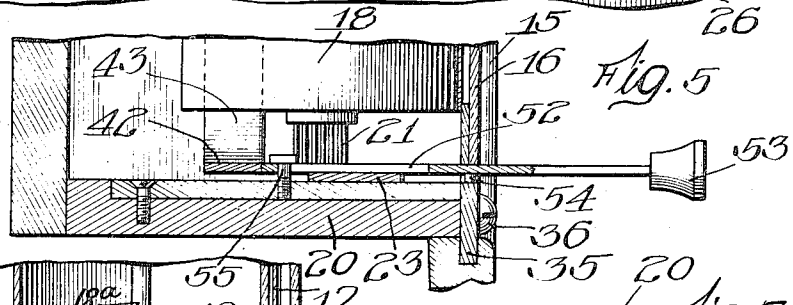


Fig. 5.

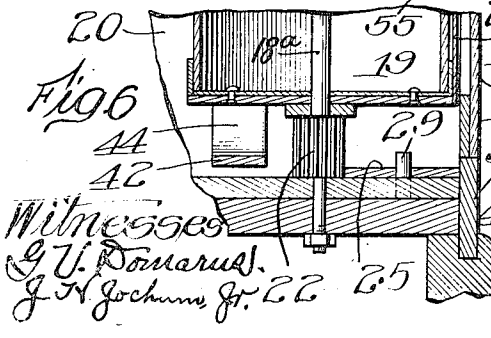


Fig. 6.

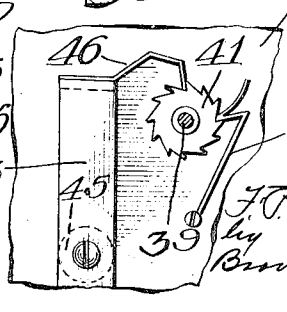


Fig. 7.

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3 SHEETS—SHEET 3.

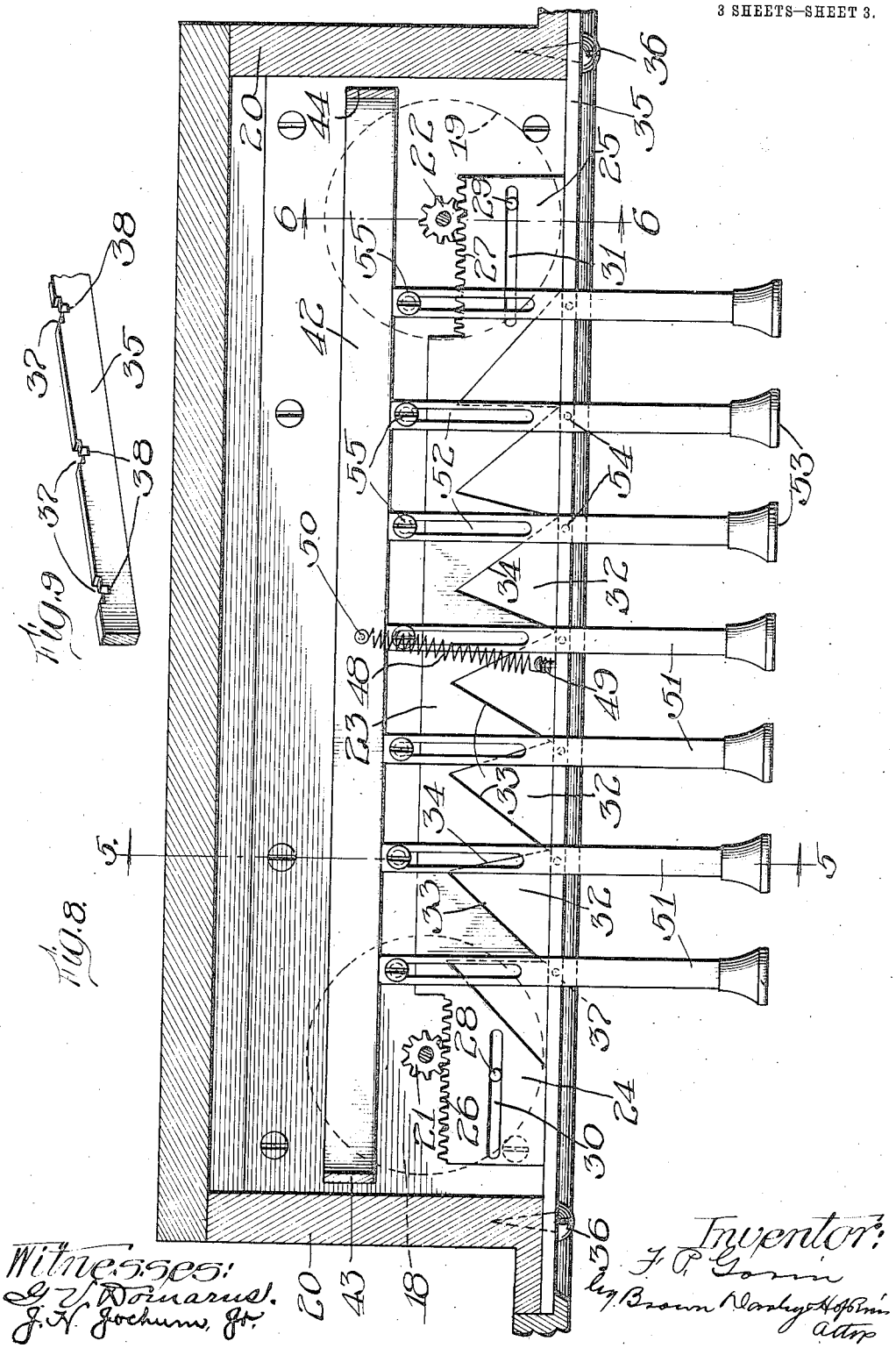

Fig. 3.

Fig. 2.

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UNITED STATES PATENT OFFICE.

FRED P. GORIN, OF CHICAGO, ILLINOIS.

CALENDAR.

1,042,337. Specification of Letters Patent. Patented Oct. 22, 1912.

Application filed October 4, 1906, Serial No. 337,365. Renewed August 10, 1912. Serial No. 714,473.

To all whom it may concern:

Be it known that I, FRED P. GORIN, 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 full, clear, and exact specification.

This invention relates to improvements in calendars, and the primary object of the same is to provide an improved perpetual calendar in which the dates or the weeks may be shifted with relation to each other to produce a correct calendar for the next succeeding month.

A further object is to provide an improved calendar in which the dates may be shifted from one position to another to produce a correct successive series.

A further object is to provide an improved device of this character containing a date web or ribbon, which may be shifted to a predetermined point to present a correct and complete calendar for the next month, and improved means for automatically arresting the web at the pre-determined point.

A further object is to provide improved mechanism for shifting the dates.

A further object is to provide an improved arrangement of dates on the web or ribbon; and a still further object is to provide an improved device of this character which will be simple and cheap in construction, and efficient and accurate in operation.

To the attainment of these ends and the accomplishment of other new and useful objects, as will appear, the invention consists in the features of novelty in the construction, combination and arrangement of the several parts hereinafter more fully described and claimed, and shown in the accompanying drawings illustrating an exemplification of this invention, and in which—

Figure 1 is a front elevation of an improved calendar constructed in accordance with the principles of this invention; Fig. 2 is a diagrammatic view of the date ribbon or web, arranged to display a complete calendar for one month; Fig. 3 is a view similar to Fig. 2, illustrating the web or date ribbon shifted from the position shown in Fig. 2, to display a complete calendar for the next succeeding month; Fig. 4 is a rear elevation of Fig. 1 with the top of the casing removed; Fig. 5 is a sectional view on line 5—5 of Fig. 8; Fig. 6 is a sectional view on line 6—6 of Fig. 8; Fig. 7 is a detail view on line 7—7 of Fig. 4; Fig. 8 is a sectional view on lines 8—8 of Fig. 1. Fig. 9 is a detail perspective view of a portion of the guiding and spacing bar for the operating keys or members.

Referring more particularly to the drawings, and in which the same reference characters designate similar parts throughout the several views, in this exemplification of the invention, the numeral 15 designates generally a frame preferably provided with an opaque glass front 16, provided with a transparent portion through which a sufficient portion of the date ribbon or web 17 is displayed. This date ribbon or web comprises a flexible strip of suitably sized material and is adapted to be wound upon two drums 18, 19, which are arranged within a casing 20 secured in any suitable manner to the back of the frame 15. Secured to and supported preferably by the lower ends of the drums 18, 19, are pinions 21, 22 and these drums are rotatably supported within the casing by means of the axles 18ª, one end of each of which is supported in the casing 20, as shown in Fig. 6, and the other end thereof is free and extends into and terminates short of the length of the drum, as shown in dotted lines in Fig. 5 of the drawings. Slidingly mounted in the base of the frame 20 is a bar or member 23 which is adapted to control the movement of the ribbon or web 17 in a manner as will be set forth. The ends of this bar or member are preferably reduced as at 24, 25, and the reduced portions are provided respectively with rack teeth 26, 27 which engage and mesh respectively with the pinions 21, 22, so that when the bar or member 23 is shifted, the racks will simultaneously rotate the drums 18, 19, through the medium of their respective pinions 21, 22. This bar or member 23 is held from displacement in any desired or suitable manner, preferably by means of lugs or pins 28, 29, projecting from the base of the frame 20, and extending into slots 30, 31, preferably located in the reduced portions thereof. This bar or member 23 is also provided intermediate the reduced portions 24, 25, with a plurality of

notches 32 to produce a series of inclined faces 33, 34. Secured across the front of the casing 20, preferably at the base thereof, is a strip or bar 35 which may be held in position in any desired manner, preferably by means of screws or nails 36 passing through the strip or bar and into the casing 20, and said strip or bar 35 serves also as a means for holding the bar 23 in position and the teeth 26, 27 in engagement with the respective pinions 21, 22. The upper face of this strip or bar 35 is provided with a series of cut-away or reduced portions 37, and the base of the reduced or cut-away portions is further provided with a communicating notch or recesses 38 for a purpose to be hereinafter set forth.

Journaled in and extending across the frame 20 is a shaft 39 to which is secured a month-indicating drum 40 which latter is preferably located so as to extend adjacent and between the upper ends of the drums 18, 19, and in such a position that the months will be successively exposed above the date-web or ribbon and through the glass front 16 of the frame 15. Secured to one end of the shaft 39 is a rack or pinion wheel 41, which is preferably located adjacent one side of the casing 20. A yoke comprising a body portion 42 and side arms 43, 44, is pivotally supported within the casing by means of the side arms, as at 45, and in such position that the body 42 thereof will stand adjacent to and parallel with the bar or member 23. The arm 43 preferably extends above the arm 44, and secured to or supported by the extension is a pawl or dog 46 preferably in the form of a spring; and said pawl or dog is adapted to engage the teeth of the ratchet or pinion-wheel 41 for rotating the shaft 39, and the month-indicating drum 40, when the arm 43 is moved about its point of pivotal support.

A retaining pawl 47 is preferably secured to the side of casing 20 and adapted to engage the ratchet or pinion wheel 41 to prevent a retrograde movement of the month-indicating drum 40, as the yoke assumes its normal position after having advanced or moved the month-indicating drum one step of rotation. A flexible member 48, preferably in the shape of a spring, is secured by one end 49 to the frame 15, and by its other end 50 to the body portion 42 of the yoke, so as to hold the yoke in its normal position.

In operation the yoke may be moved about its pivot in any desired manner, so as to operate the month-indicating drum 40. A suitable means for accomplishing this purpose comprises a series of operating keys or members 51, which constitute the prime movers and as these members are duplicates of each other, a specific description of one of them will apply equally well to each. These members comprise a body portion provided adjacent their rear ends with an elongated slot 52, and at their forward ends with an operating handle or button 53. Depending from the body portion thereof, preferably at a point intermediate the ends and adjacent to the forward end of the slot 52 is a depending lug or pin 54. These members are of a size and shape to fit and move through the recessed or cut-away portions 37 in the strip or bar 35 with their rear portion projecting over in close proximity to the face of the bar or member 23, beyond the rear edge thereof, and terminating adjacent and in contact with the front edge of the body 42 of the yoke when the latter is in its normal position.

Any suitable means may be provided for preventing displacement of these keys or members 51, but, preferably, a screw or bolt 55 which passes through the slot 52 and into the base of the casing 20 is used. These screws or bolts are preferably provided with enlarged heads which rest upon the upper face of the keys. In its normal position the depending lug or pin 54 will stand within the recessed portion 38 of this strip or bar 35, and the keys or members 51 may be further prevented from displacement by means of the lower edge of the glass 16 in the casing which preferably rests upon the top edge of the strip or bar 35. In their normal positions, the inclined faces 33, 34 will stand in the path of movement of the depending lug or projection 54 on the keys or members 51, so that if either one of the keys or members is pushed inward to rock the yoke 42 to set the mouth-indicating drum 40, the pin or lug 54 on the operated key will engage its respective inclined face 33, 34, of the bar or member 23, and move the same laterally until the lug 54 reaches the apex of the angle formed by the inclined faces 33—34, which will limit the movement of the key or member 51, and also the bar or member 23. The keys or members 51, the bar or member 23 and the pins or lugs 54 on the keys coöperating with the respective inclined faces 33 and 34 constitute selective mechanism of which the member 23 constitutes the controlling member and the keys 51 the prime mover and coöperate to predeterminedly establish a proper correlation of the day of the month indicating member and the day of the week indicating symbols without the necessity of computing the movement necessary to set them into proper relative positions for the successive months so that when the prime mover or key 51 is operated the action of the controlling member 23 will be automatic with respect thereto by means of the pin 54 engaging the respective inclined faces 33, 34, on said member. The movement of this bar or member 23 will cause the date web or ribbon to be wound upon one of the drums 18, 19, and pay out

from the other drum, according to the direction of movement of the bar or member 23. After the date web or ribbon has been thus set the same key or member which was used to set the web or ribbon may be then operated any desired number of times to rock the yoke to cause the proper month to be exposed upon the month-indicating drum 40, without further moving the web or ribbon 17.

The arrangement of the dates upon the date web or ribbon is one of the essential features of this invention, and comprises a series of columns of figures which, for want of a more proper name, will hereinafter be designated as an "indicating column or series 56"; and in this exemplification of the invention comprises the numeral "7" and all multiples thereof occurring in the regular calendar, such as 14, 21, and 28. This column or series is preferably arranged at the middle of the web or ribbon, and on each side thereof are arranged a series of dates 57, 58, which combine with this indicating column or series to present a successive series of figures from 1 to 31. This indicating series or column being thus arranged will always be exposed through the face of the frame 15 of the calendar, whereas, none of the remaining columns or series will always be visible.

Arranged above the opening in the casing 15 in the usual manner, are the symbols indicating days of the week 59, which may be either printed upon the face of the glass or upon a strip of paper secured in position over the opening, so as to be immovable. Adjacent each of the months on the month-indicating drum 40 is the numeral or figure designating the proper number of days for that month, and these numerals are adapted to be simultaneously exposed with the month through a suitable aperture 60.

The extremities of the web or ribbon 17 being secured to the drums 18 and 19, and in such position that the web will extend across the opening of the frame 15, with the figures or dates exposed therethrough, the operation of this improved calendar is as follows:—Assuming the web or ribbon 17 to be arranged in the position as shown in Figs. 1 and 2, and that the month of January is exposed through its proper opening, and it is desired to set the calendar for the next succeeding month, all that is necessary is to press the button 53 on the proper operating key or member 51. This operation will rock the yoke and start the rotation of the month-indicating drum 40 which latter will continue to move until the depending lug or pin 54 on the key or member engages the respective incline 33, 34 on the bar or member 23. A further pressure upon the button will cause the bar or member 23 to be shifted laterally, thereby simultaneously moving the month-indicating drum 40 and the date ribbon or web drums 18 and 19. These drums will continue to move until the lug 54 reaches the apex of the angle formed by the inclined faces 33—34 which will act as a stop for the key or member to automatically arrest the movement of the date ribbon or web, and the further operation of the respective parts.

When the key or member is released, the tension of the spring 48 will draw the yoke together with the key or member 51, back to its normal position. The date web or ribbon, having now been set, the same key or member 51 may be pushed any desired number of times to cause the proper month to be exposed in connection with the date web or ribbon should the month-indicating drum have become displaced with relation to the web or ribbon through improper manipulation of the keys or members 51.

By arranging the members upon the date web or ribbon in the manner herein set forth, all that is necessary in order to set the calendar for the next succeeding month is to press the key directly under the day of the last date of the exposed month. This operation will cause the indicating column or series of numbers 56 to assume the position occupied by the column or series of numbers in which the last date of the month occurs. Thus, for instance, in the example illustrated, if it is desired to set the calendar from the month of January to the month of February, the key occurring under the column in which occurs the number 31 (the last day of January) is pressed and the indicating column or series of figures 56 will assume the position previously occupied by the column containing the date 31, as clearly shown in Fig. 3.

In setting the calendar to expose the month of March after the month of February has been exposed, the key occurring under the column containing the date 28 (the last day of February) will be pressed, but as the first date of March will show upon the same week day as the first day of February, and as the indicating column already occupies the position in which the last day of February occurs, the pressure of the key will not operate the web or ribbon, but will simply rock the yoke to move the month-indicating drum 40 one step in its rotation to expose the month of March. After March has passed, and it is desired to set the calendar for April, the key under the column in which occurs the last day of March (the 31st) is pressed in the same manner, and the indicating column or series 56 will be shifted to assume the position previously occupied by the column containing the number 31. Should it happen that February contains 29 days instead of 28, all

that is necessary to do in order to set the calendar from February to March is to press the key under the column containing "29."

If, for any reason, the month-indicating drum 40 and the ribbon 17 should be displaced with relation to each other, such as, for instance, either accidentally or by displaying the merits of the calendar to an interested spectator, and it is desired to properly set the calendar for the ensuing month, the latter may be accomplished in the following manner: The operator must be acquainted with the date and present day of the week, which, for example, and for the sake of illustration, we will say, is Wednesday the ninth. Calculating from this date to the date of the nearest multiple of 7, we will find that if Wednesday is the ninth, "7" is the nearest multiple. Therefore "7" would occur on Monday. By pressing the button under the column of "Monday," the indicating column or series 56 will assume the position in the column "Monday" which will give the proper calendar for the month of January, as shown in Fig. 1. But this operation may at the same time display any other month, such, for instance, as February or April. In order to properly set the month-indicating drum to correspond with the calendar, the same key under the "Monday" column may be pushed any desired number of times until the month of January is exposed through its proper opening; after which the calendar may be set to successive months in the manner already set forth.

As an additional indicator, and a safeguard to recall to the mind of the operator the number of days in the present month, the figure which is exposed through the opening 60, and indicating the proper number of days in each month, may be arranged on the month-indicating drum 40 adjacent the respective month.

In order that the invention might be fully understood, the details of an embodiment thereof have been thus specifically described, but

What I claim is:—

1. In a calendar, the combination of a day of the month indicating member comprising an indicating series of figures, a plurality of series of figures adapted to combine with the first series, means for shifting the indicating series and means for arresting the movement of the indicating series when said series occupies the position occupied by the series containing the last day of the expiring month, to present a complete and correct succeeding series.

2. In a calendar, the combination of a day of the month indicating member, comprising an indicating series of figures, a plurality of series of figures adapted to combine with the first series, means for shifting the indicating series to the position occupied by the series containing the last day of the expiring month to present a complete and correct succeeding series, a month indicating member, and means controlled by one of the elements of the shifting means for moving the last said member.

3. In a calendar, the combination of a day of the month indicating member, comprising an indicating series of figures, a plurality of series of figures adapted to combine with the first series, means for shifting the indicating series to the position occupied by the series containing the last day of the expiring month to present a complete and correct succeeding series, a month indicating member, and means controlled by one of the elements of the first said means for simultaneously shifting the last said member.

4. In a calendar, the combination of a day of the month indicating member comprising an indicating series of figures, a plurality of series of figures adapted to combine with the first series, means for shifting the indicating series to the position occupied by the series containing the last day of the expiring month to present a complete and correct succeeding series, and a month indicating member operatively connected to the first said means and adapted to be operated when the day of the month indicating series is shifted.

5. In a calendar, the combination of a day of the month indicating member, comprising an indicating series of figures, a plurality of series of figures adapted to combine with the first series, a day of the week indicating series, a month indicating series, means for shifting the first said indicating series with relation to the day of the week indicating series and for automatically arresting the series to cause the first said indicating series to assume a position under the specific week-day designated by the last day of the expiring month, to present a correct series in the next month, and means controlled by one of the elements of the first said means for shifting the month indicating series with relation to the day of the month indicating series.

6. In a device of the class described, the combination of a frame through which the dates are exposed, a day of the week indicating series arranged adjacent the frame, a movable month indicating series, a day of the month indicating member comprising an indicating series of numbers, a series of numbers on each side of the indicating series adapted to combine with the indicating series, an operating key arranged below each of the week-days, and mechanism whereby the movement of the key located under the specific day of the week designated by the last day of the expiring month, will cause the indicating series to assume a position

directly over the operated key and shift the month series, to present a correct arrangement and series in the next succeeding month.

7. In a calendar, the combination of a frame through which the dates are exposed, a day of the week indicating series, a movable month indicating series, a day of the month indicating member comprising an indicating series of numbers, a series of numbers on each side of the indicating series and adapted to combine therewith, a plurality of operating keys, means controlled by each of the keys whereby the operation of the specific key designated by the last date of the expiring month will shift the indicating column to a position directly over the said key, and mechanism controlled by the key for shifting the month indicating series, said operated key being adapted to be repeatedly operated after the day of the month indicating member has been shifted, to shift the month indicating series until the desired month is exposed.

8. In a calendar, the combination of a frame provided with an opening through which the dates are exposed, a drum journaled in the frame on each side of the opening, a day of the month indicating web, the ends of which are secured to the drums, a month-indicating drum journaled in the frame adjacent the web, mechanism for operating the drums to shift the dates and change the month, and a plurality of keys for operating said mechanism.

9. In a calendar, the combination of a frame provided with an opening through which the dates are exposed, a drum journaled to the frame on each side of the opening, a day of the month indicating web, the ends of which are secured to the drums, a slide, rack and pinion connections between the slide and each of the drums for simultaneously rotating the same when the slide is moved, means for moving the slide, a month indicating drum, and mechanism controlled by an element of the slide moving means for rotating the month indicating drum.

10. In a calendar, the combination of a frame provided with an opening through which the dates are exposed, a drum journaled to the frame on each side of the opening, a day of the month indicating web, the ends of which are secured to the drums, a slide, rack and pinion connections between the slide and each of the drums for simultaneously rotating the same when the slide is moved, said slide being provided with a plurality of inclined faces, operating keys, means on the keys adapted to engage one of the faces for shifting the slide to simultaneously operate the drums, a month-indicating drum, and mechanism controlled by the keys for shifting the month drum.

11. In a calendar, the combination of a frame provided with an opening through which the dates are exposed, a drum journaled to the frame on each side of the opening, a day of the month indicating web, the ends of which are connected to the drums, a slide, operative connections between the slide and drum, said slide being provided with a plurality of cam faces, operating members, means on said members adapted to engage the cam faces to move the slide, a month drum, a yoke adapted to be engaged by the operating members to rock the same, and means for imparting a step of rotation to the month drum when the yoke is moved.

12. In a calendar, the combination of a frame provided with an opening through which the dates are exposed, a drum journaled to the frame on each side of the opening, a day of the month indicating web, the ends of which are connected to the drums, a slide, operative connections between the slide and drums, said slide being provided with a plurality of cam faces, operating members, means for preventing displacement of said members, means on said members adapted to engage the cam faces to move the slide, a month indicating drum, a yoke adapted to be engaged by the operating members to be moved thereby, and means for imparting a step of rotation to the month indicating drum when the yoke is moved.

13. In a calendar, the combination of a frame through which the dates are exposed, a day of the month indicating member, an operating member for the last said member, said operating member being provided with a plurality of cam faces, a plurality of operating keys, means on said keys for engaging the cam faces to move the operating member to shift the day of the month indicating member, a month indicating member and means controlled by the operating keys for simultaneously shifting said month and day of the month indicating members and by means of which the month indicating member may be independently shifted by the same key after the operating member has been moved.

14. In a calendar, a base bearing the days of the week, a strip bearing a group of numbers so arranged that by shifting said strip a consecutive series will result, and means for shifting the said strip embodying a prime mover and means for controlling the action of said strip with respect to which prime mover the action of the controlling means is automatic.

15. In a calendar, a base bearing the days of the week, a strip bearing the numbers 1 to 31 with all of the numbers duplicated except the number 7 and its multiples and so arranged that by shifting said strip, a con-

secutive series will result, and means for shifting said strip and for arresting the movement of the strip, the number 7 and its multiples always remaining visible.

16. A base bearing the days of the week, a strip bearing a group of numbers so arranged that by shifting said strip a consecutive series will result, one of which constitutes a key number, a plurality of keys, and means whereby when any one of said keys is operated the predetermined key number will be shifted and automatically arrested in line with the actuated key.

17. In a calendar, a base bearing the week days, a strip bearing a group of numbers so arranged that by changing the relation of one to the other a calendar for successive months will result, and means for changing said relation and for automatically arresting the last said means.

18. In a calendar, a support bearing the days of the week, a strip bearing a group of numbers adapted to coöperate with the days of the week, and means for moving and for automatically arresting the strip at a predetermined point.

19. In a calendar, the combination of a day of the month indicating number, comprising an indicating series of figures, a plurality of series of figures adapted to combine with the first series, means for shifting the indicating series to the position occupied by the series containing the last day of the expiring month to present a complete and correct succeeding series, a month indicating member, means for shifting the last said member, and a common means for controlling both of said shifting means.

20. In a calendar, the combination of day of the week symbols, a day of the month indicating series, and selective mechanism for bringing and arresting said symbols and series into different predetermined correlative positions.

21. In a calendar the combination of day of the week symbols, a day of the month indicating series, operating devices for the columns of said series corresponding to the day of the week symbols, and means whereby the operation of the device for the column of the last day of one of the indicated months will cause the symbols and series to be brought into correlative positions to indicate the following month.

22. In a calendar the combination of day of the week symbols, a day of the month indicating series, selective mechanism for bringing said symbols and said series into different predetermined correlative positions, and a month indicator operatively connected to said mechanism and being operable independently of the day of the week symbols and the day of the month indicating series.

23. In a calendar, the combination of day of the week symbols, a day of the month indicating series, selective mechanism for bringing said symbols and said series into different predetermined correlative positions, and a month indicator operatively connected to said mechanism and being operable independently of the day of the week symbols, and the day of the month indicating series, the said day of the month indicator being also adapted to be simultaneously operated with the said day of the week symbols and day of the month indicating series.

24. In a calendar, the combination of the day of the week series, a series of numbers adapted to coöperate with the days of the week, and means for moving one of the series with respect to the other series and for automatically arresting the movement of said series at a predetermined point.

25. A base bearing the days of the week, a strip bearing a group of numbers so arranged that by shifting said strip a consecutive series of numbers will result, a plurality of keys and means whereby when one of said keys is operated a predetermined number will be drawn into line with the actuated key.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 1st day of October A. D. 1906.

FRED P. GORIN.

Witnesses:
J. H. Jochum, Jr.,
Chas. H. Seem.