

(No Model.)

Y. PAEZ.
CALENDAR.

No. 430,036.

Patented June 10, 1890.

FIG. 1.

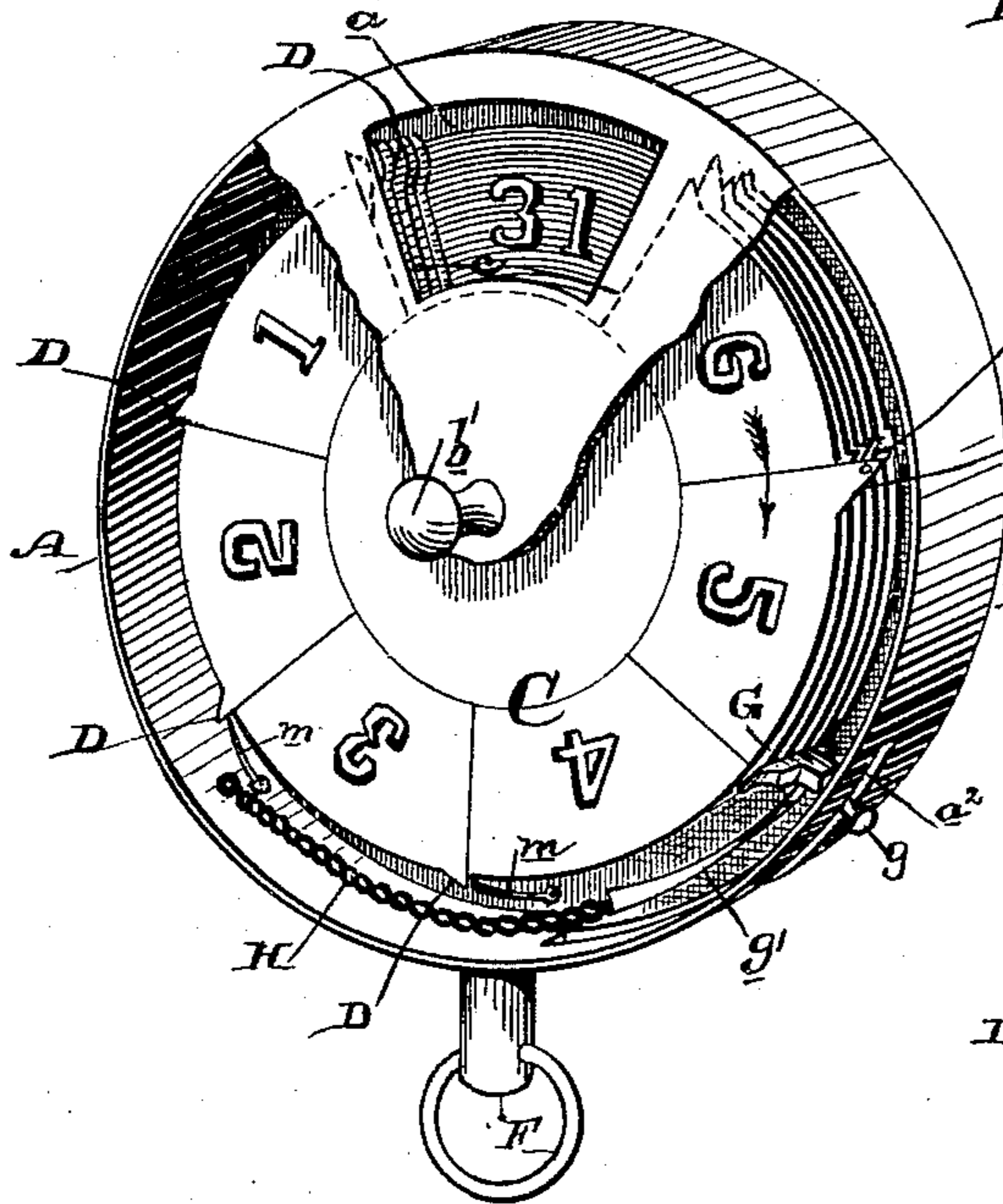


FIG. 2.

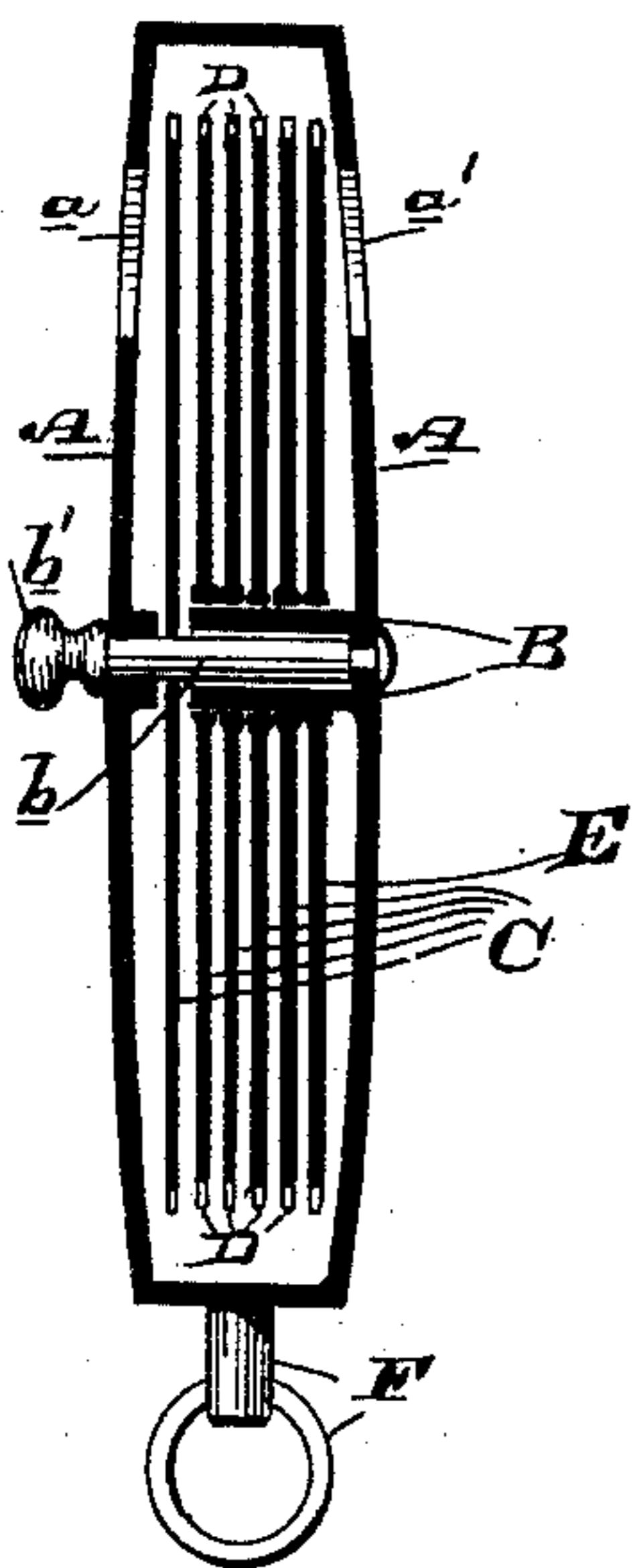


FIG. 2.

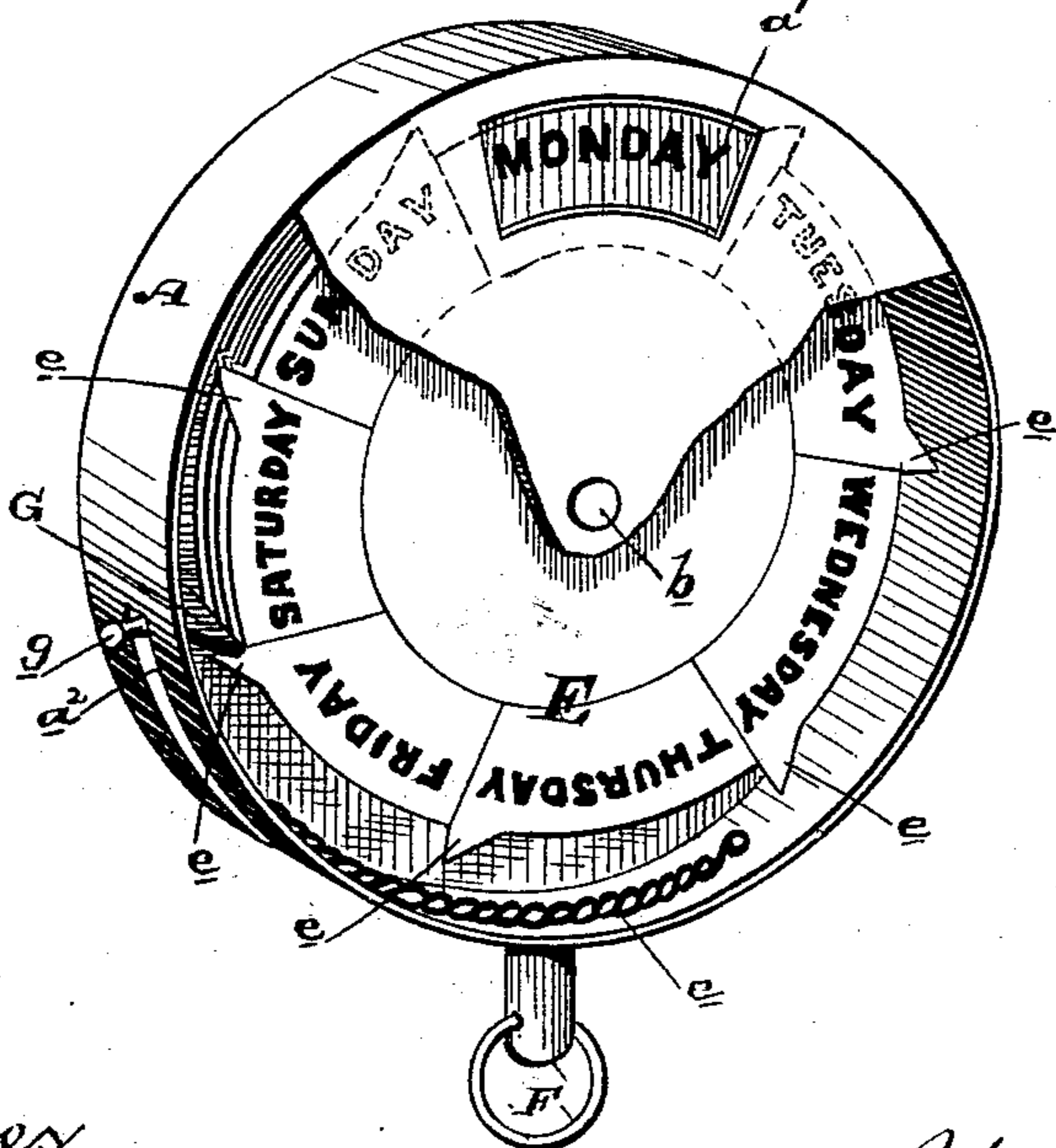
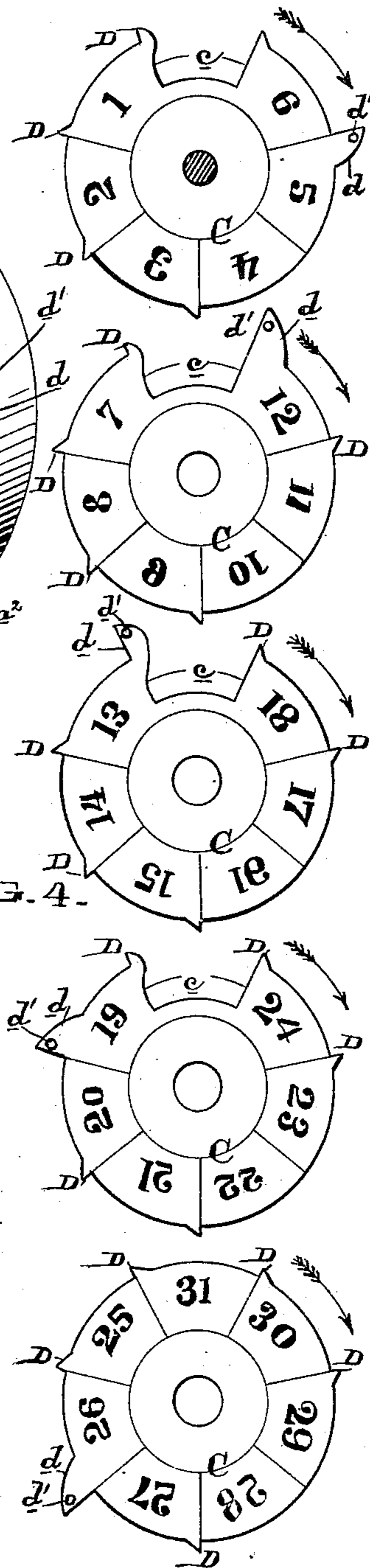


FIG. 4.



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UNITED STATES PATENT OFFICE.

YNDALECIO PAEZ, OF ALAMEDA, CALIFORNIA.

CALENDAR.

SPECIFICATION forming part of Letters Patent No. 430,036, dated June 10, 1890.

Application filed July 19, 1889. Serial No. 318,081. (No model.)

To all whom it may concern:

Be it known that I, YNDALECIO PAEZ, of Alameda, Alameda county, State of California, have invented an Improvement in Calendars; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of calendars in which a number of independent disks or plates are mounted within a suitable casing or shell having a sight-aperture, said disks or plates being adapted to have a rotary motion imparted to them and having upon their faces characters giving the necessary information of a calendar; and my invention consists in the hereinafter-described series of novel disks or plates and the mechanism for moving them, whereby their characters are successively and properly brought into line with the sight-aperture.

The object of my invention is to provide a simple and portable calendar adapted to be readily operated.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of the obverse face of my calendar, the front plate of the case being almost wholly broken away. Fig. 2 is a perspective view of the reverse face. Fig. 3 is a vertical central cross-section of case and contained disks or plates. Fig. 4 is a diagram of each calendar disk or plate.

A is a hollow casing or shell having the shape of a watch and of such dimensions as will adapt it to be easily carried in the pocket, though I do not confine myself to this shape or size, as larger sizes or other designs may be made. In the obverse face of the shell is made the sight-aperture *a*. In this casing or shell, and extending inwardly from its back wall, is a hollow shaft B, upon which are mounted and adapted to rotate all the independent separate disks or plates C except the foremost one, which is made fast on a spindle *b*, extending through the front wall into the hollow shaft B, and carrying a button *b'* on its outer end, whereby it and the said foremost disk or plate may be rotated.

Each disk or plate is provided with an annular series of numbers arranged about its outer edge and adapted by the rotation of the disks or plates to be brought into line with

the sight-aperture *a* of the shell or casing, whereby each number may be seen. The numbers upon these plates or disks are arranged according to the number of plates or disks employed. For example, the foremost disk may have the numbers 1, 2, 3, 4, 5, and 6 upon it; the adjacent disk the numbers from 7 to 12 upon it; the next disk the numbers from 13 to 18 upon it; the next disk the numbers from 19 to 24 upon it, and the next disk the numbers from 25 to 31, inclusive, upon it.

Each of the disks or plates, except the rear-most one, has a sight-opening (represented by *c*) in its rim, which corresponds in shape and size to the divisions in which the numbers are marked, and the first number on each disk begins at the first space to the left of the opening. This arrangement of the numbers is merely for the purpose of getting a practically equal division, and yet allowing them to be made large enough for the convenient purposes of sight by reason of having a sufficiently-large number of disks or plates in the series. Each disk or plate is provided on its rim with teeth or projections D, arranged at regular intervals apart, with the exception of one portion, where a tooth is entirely omitted. One of the teeth D of each disk, which tooth is represented by *d*, is provided with a contact-pin or bent end *d'*, which is adapted to come in contact with a tooth of an adjacent disk or plate, whereby when said contact is formed the two disks or plates are moved together. Interference of this tooth with the teeth of the other disks or plates is avoided by making said contact-teeth longer, or having their projections or bent ends farther out than the other teeth, so that they pass them by.

Upon the shaft B, and with its face toward the reverse side of the shell or casing, is a single disk or plate E, mounted so as to turn on the shaft as an axis. This disk or plate is provided with teeth *e* on its rim, separated by regular intervals, and upon this disk or plate are marked the days of the week, each one of which is adapted to be brought into line behind a sight-aperture *a'* on the reverse face of the shell or casing. The shell or casing has an ordinary stem and ring F, so that the device may be attached to a chain, if desired, and said stem and ring serve as a finger-hole, as I shall hereinafter describe.

Mounted in a slot a^2 in the rim of the shell or casing is a pawl G, having an outwardly-projecting end g . This pawl is adapted to come in contact with all of the teeth of the plates or disks. A spring H holds said pawl to its normal position at the end of the slot. The pawl is carried by a spring-arm g' , against which the spring H acts. This arm enables the pawl to ride over the teeth and fall in behind them to engagement. Small springs m on the inside of the case prevent the disks from moving backwardly by coming in contact with their teeth.

The operation of the calendar is as follows:

The disks are all arranged in the first place so that the portions of their peripheries where the teeth D are omitted lie opposite the pawl, and their rim apertures or openings c are all in line with the sight-apertures a , thereby showing only through said aperture the number 31, which happens to occupy the space which is not cut out on the rearmost disk. This is because said disk has to have one more figure than the others to make up the full complement of a thirty-one-day month. Now to set the device for the first day of the month the button b' on the obverse face of the shell or case is turned so as to turn the foremost plate partially, thereby bringing its figure 1 into line behind the sight-opening a , and this movement also brings the first of its teeth D into the line of operation of the pawl G. When the second day of the month is reached, the operator, grasping the head of the pawl with his forefinger and using the stem and ring as a rest for his thumb, draws the pawl toward the stem and ring, so that engaging the tooth of the first plate or disk it will turn said plate or disk through another movement, so as to bring its figure 2 into line with the sight-aperture a . As soon as the pawl is released its spring H throws it back to the position to engage the second tooth of the foremost plate or disk, and in this operation the pawl does not engage any of the other plates or disks, for the reason that they are set with those portions having the omitted tooth opposite the pawl. For the third day of the month a similar operation is repeated, turning the foremost disk so as to expose its figure 3, and so on until the sixth day of the month is brought into line with the sight-aperture. This being the last number on the foremost disk, it is necessary that upon the next movement of said disk the adjacent disk or plate shall be moved to bring its first number into line with the sight-aperture a . This is done by the tooth d of the first disk or plate coming in contact with the engaging-tooth of the succeeding disk or plate, so that when the foremost disk or plate is moved for the last time by the pawl it carries with it the adjacent disk or plate, thus presenting the figure 7 of said disk or plate behind the sight-aperture a , and said figure is plainly seen through said aperture and through the rim-opening c in the foremost

plate, which has thus been moved to its initial position. Therefore the pawl will cease to act upon said outer plate or disk, for it has now presented its toothless portion, while the adjacent plate or disk being turned, as described, presents the first of its series of teeth to the action of the pawl. Thereupon the second plate or disk is turned around until it arrives at one place from its former position, whereupon its tooth d will engage the tooth of the next disk or plate, so as to turn it and present the first of its numbers behind the sight-aperture a and in line with the rim-openings c of the two preceding disks, said disks being now out of action, while the third disk is brought into action by presenting the first of its teeth to the operation of the pawl. Thus all the disks are moved successively, presenting their numbers behind the sight-opening a . The same pawl engaging the teeth e of the plate or disk E turns it so as to cause it to successively present the days of the week at the sight-opening on the reverse face of the shell or casing.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a calendar, a shell or case having a sight-aperture, a series of toothed axially-rotary calendar plates or disks mounted therein and having sight-openings through which the figures of adjacent plates or disks may be seen, and a pawl for actuating the plates or disks, substantially as described.

2. In a calendar, the series of independently-rotary calendar plates or disks having sight-openings through which the figures of adjacent plates or disks may be seen, and teeth arranged at intervals around their rims, one tooth being omitted at a corresponding portion of each plate or disk, in combination with a pawl adapted to engage the teeth of the plates or disks as they are successively brought around into its path, and a contact-connection between successive plates or disks for bringing the first tooth of each into line with the pawl, substantially as described.

3. In a calendar, the series of independent calendar plates or disks having sight-openings through which the figures of adjacent plates or disks may be seen, and teeth on their rims arranged at intervals, a tooth being omitted at a corresponding portion of each plate or disk, in combination with a movable pawl, and contact-pins upon one tooth of each plate or disk adapted to engage a tooth of the succeeding disk or plate, whereby each disk or plate is turned at the proper time to carry the first of its teeth into the line of operation of the pawl, substantially as described.

4. In a calendar, a shell or case having a central shaft and a sight-aperture, a series of independently-rotary calendar disks or plates mounted upon said shaft within the case or shell, and having sight-openings and teeth arranged at intervals on their rims, a corresponding portion of each having one tooth

omitted, in combination with the sliding pawl operating in the rim of the case or shell, and a contact-connection between given teeth of successive disks, whereby the first tooth of each disk is brought around at the proper time into the path of the pawl, substantially as described.

5. In a calendar, the shell or case having a sight-aperture, a central hollow shaft, and a rotary central spindle, the series of independently-rotary calendar plates or disks, the first of said plates or disks being fixed to the rotary spindle and the others free to move on the shaft, a button by which the spindle is moved to carry the first plate or disk to position, sight-openings in the plates or disks, and teeth arranged at intervals upon the rims of the plates or disks, corresponding portions of each plate or disk having a tooth omitted, in combination with the spring-controlled movable pawl in the rim of the shell or case, and a contact-connection between certain teeth of successive plates or disks, whereby each is brought around at the proper time to carry its first tooth into the path of the pawl, substantially as described.

6. A calendar consisting of the combination of the shell or case having the sight-apertures in its obverse and reverse faces, the independent rotary series of calendar disks or plates within said shell or case and facing the sight-aperture in front, the single rotary calendar disk or plate facing the sight-aperture behind, sight-openings in the series of disks or plates, teeth on their rims, a portion of each having one tooth omitted, teeth on the rim of the single disk or plate, the spring-controlled pawl in the rim of the shell or case and operating against the teeth of the disks or plates, and the contact-connection between certain teeth of the series of disks or plates, whereby each is brought around to be acted upon by the pawl, substantially as described.

In witness whereof I have hereunto set my hand.

YNDALECIO PAEZ.

Witnesses:

S. H. NOURSE,
H. C. LEE.