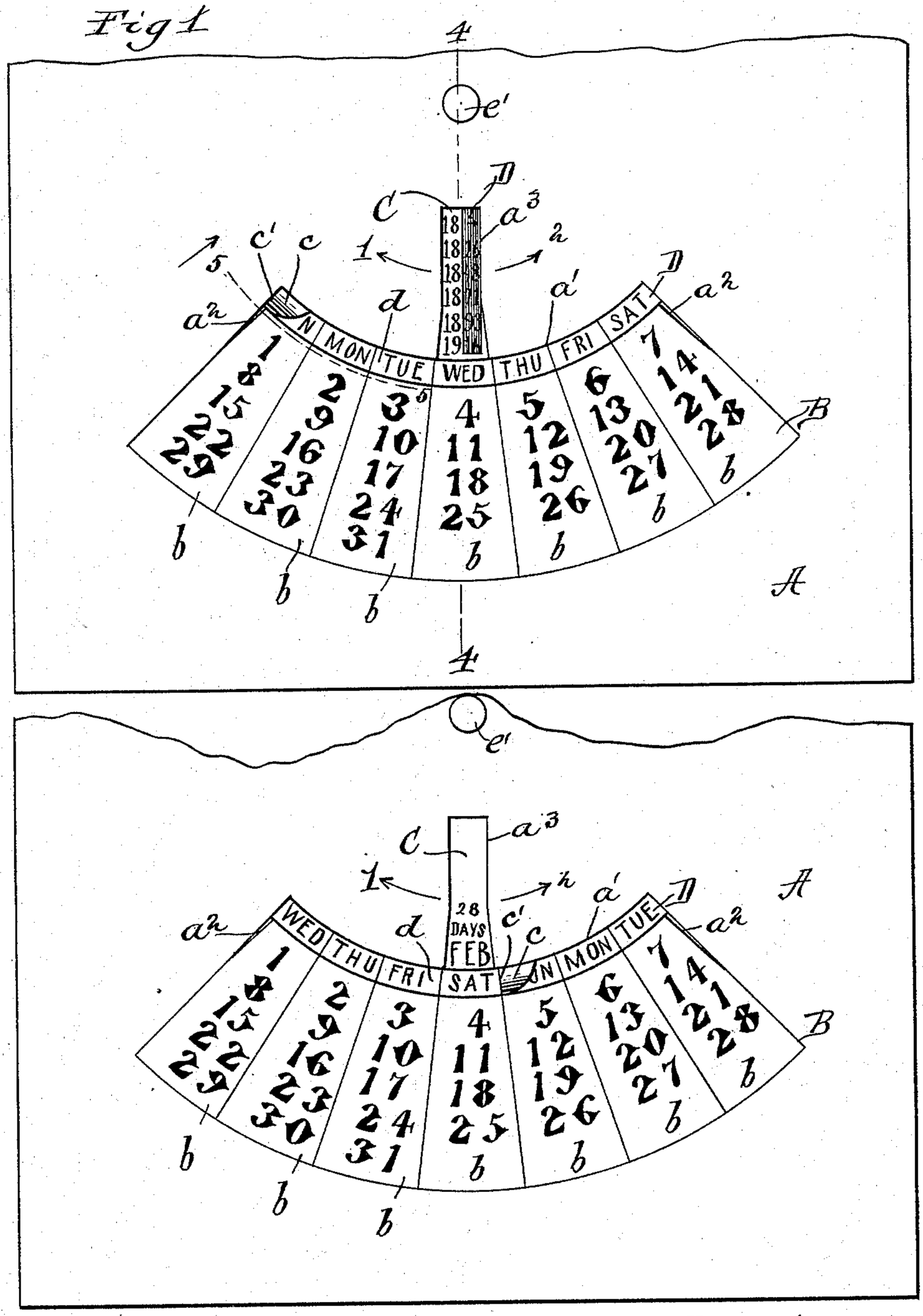
(No Model.) 2 Sheets—Sheet 1.

W. K. DAVID.

CALENDAR.

No. 527,413. Patented Oct. 16, 1894.

Fig 1



Witnesses
W. C. Curtis
R. C. Page

Fig 2

Inventor
William King David

By Coburn & Thacher
Attys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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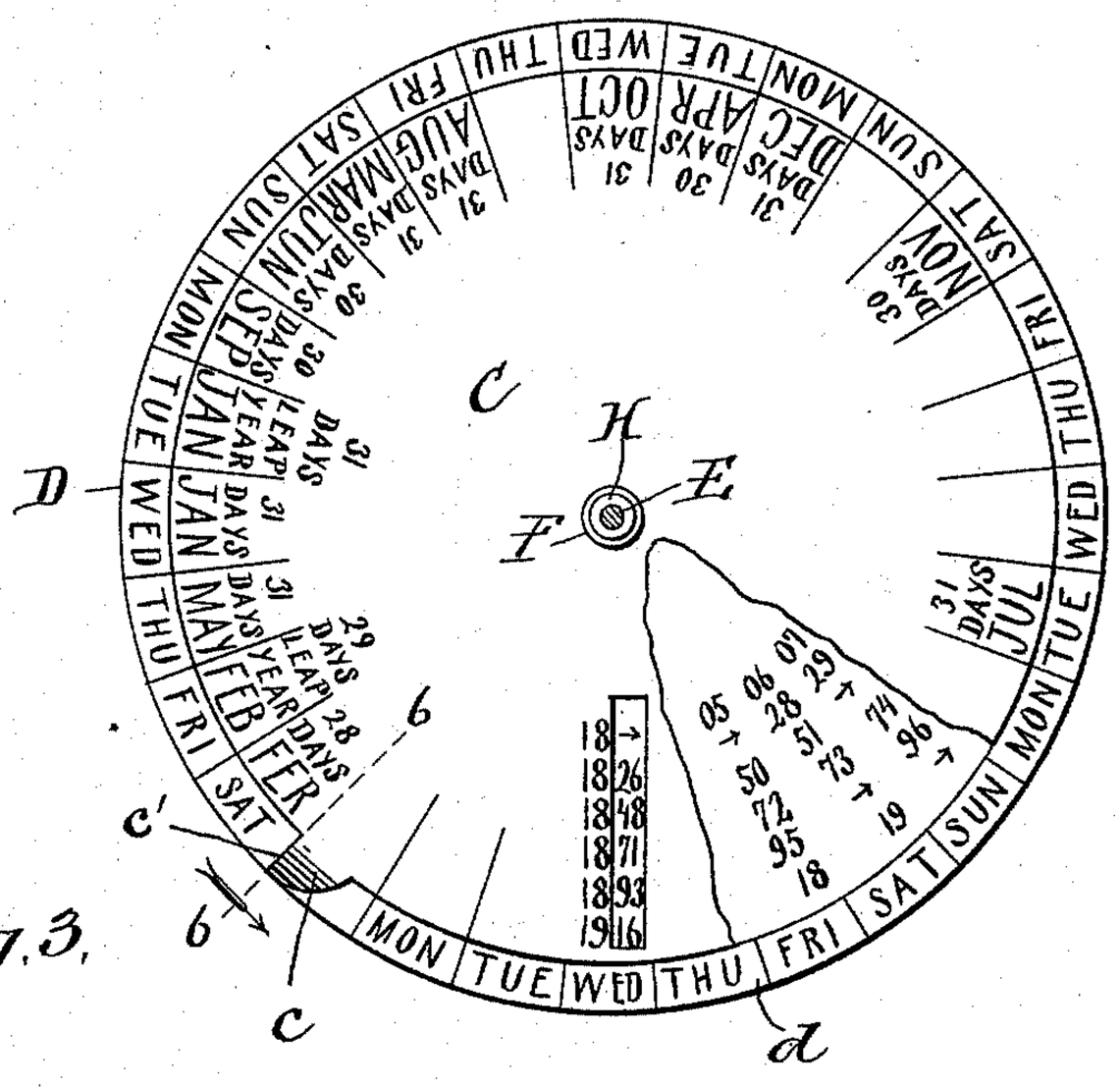


Fig. 3.

Fig 4

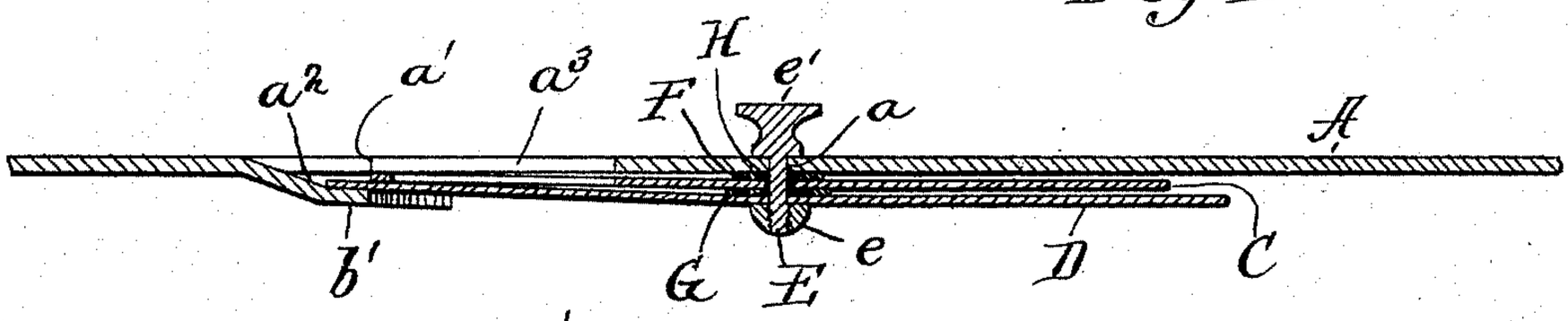
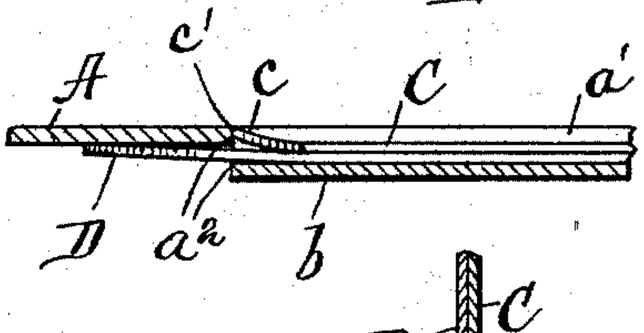


Fig 5



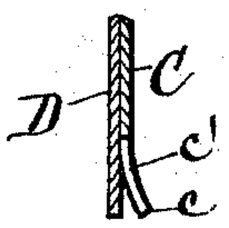


Fig 6.

Witnesses
W. C. Curtis
R. C. Page

Inventor
William King David
By Coburn & Macleod
Attys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM KING DAVID, OF PHILADELPHIA, PENNSYLVANIA.

CALENDAR.

SPECIFICATION forming part of Letters Patent No. 527,413, dated October 16, 1894.

Application filed July 11, 1893. Serial No. 480,182. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM KING DAVID, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Calendars, which is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a front elevation of a calendar embodying my improvements, partly broken away, and with disks adjusted to show the year; Fig. 2, a similar view with the disks adjusted to show the month; Fig. 3, a front elevation of the two disks fastened together but detached from their support, and with the outer one partly broken away; Fig. 4, a cross-section taken on the line 4. 4 of Fig. 1; Fig. 5, a detail section taken on the circular line 5. 5 of Fig. 1, and looking in the direction of the arrow; and Fig. 6, a detail section taken on the line 6. 6 of Fig. 3, looking in the direction of the arrow. Figs. 1, 2, and 3 are upon one scale, and Figs. 4, 5, and 6 are upon another and enlarged scale.

My invention relates to what are generally known as universal calendars, such as shown and described in Letters Patent No. 375,736, issued to me January 3, 1888, and also in my prior application, Serial No. 450,041.

The present invention is an improvement upon the construction shown in my said prior application, and relates to the means whereby one of the disks is stopped at a certain point, when rotated in one direction, while the two will always be rotated together except at this point.

It will not be necessary to describe minutely all the features of the disks and support on which they are mounted, as they are the same as in my prior application aforesaid, except in the means for securing them, so as to normally rotate together, the stop device whereby the movement of one is arrested at a certain point, and a change in the mounting of the disks upon the stationary front. I will, therefore, describe in detail only so much of the calendar as is necessary for an understanding of my present invention, and will then specify in claims the particular improvements which I believe to be new and wish to secure by Letters Patent.

In the drawings, A represents a stationary front for the calendar, which, in this instance, is shown as a sheet of stiff card-board, but may be of any material and construction suitable for the purpose. It is provided with a pivot aperture, a, near its center, and some distance below this aperture it is cut by a circular slit, a', struck from the aperture, a, as a center. Immediately below or outside this circular slit there is laid off on the card a segmental space, B, struck from the same center, a, and divided into radial spaces, b, for the days of the month. At each end of the segment, B, there is also a short slit, a^2, extending outward radially from each end of the slit, a'. The front is also provided with a wide slot, a^3, running from the slit, a', inward toward the center, a, being the same and for the same purpose as in my said prior application.

Two calendar disks, C and D, are employed here, the same as in my said prior patent and application, C, being the front or outer disk, and D the inner or back disk. These disks are constructed and provided with indications upon their surfaces precisely the same as described and shown in my said application, except that the front disk, C, at a certain point on its circumference or circumferential edge is provided with a short projection or lug, c, extending directly outward therefrom. One edge, c', of this lug, which may be called the front edge, is straight and on a radial line with the disk. The contour of the other edge is unimportant. In the drawings, it is shown on the line of a curve, but this is immaterial. For certainty of operation in the manner presently to be described, this lug or projection is preferably bent outward slightly so as to lie a little in front of the plane of the disk, as in Fig. 6. The back disk, D, is constructed and marked precisely the same as the corresponding disk in my said prior application. As the indications or markings constitute no part of the present invention, a further description of this disk is not necessary. The two disks are of slightly different size, the front one, C, being a little smaller than the back one, and the radius of the front one is equal to the distance from the center, a, to the circular slit, a', while the radius of the back

disk is just sufficiently greater to provide a narrow annulus, *d*, on the face of this disk, which projects beyond the edge of the disk, C, when the latter is imposed upon the former, in which annular space the days of the week are arranged, the disks in this respect also having the same relation as in the aforesaid application. These two disks are mounted upon a pivot pin, E, which is passed through the support, A, preferably from the front thereof, and carries the disks, which are mounted upon the projecting portion of the pin, at the back of said front, as seen in Fig. 4. The pin, of course, is inserted in the central aperture, *a*, of the front, and is threaded to receive a nut, *e*, back of the disks, which may be turned up against the latter to clamp them together with any frictional force desired, when mounted on the front, A, as seen in said Fig. 4. When thus mounted in working position, preferably a washer, F, is placed between the front and the first disk, C, and a washer, G, between the two disks, as also seen in Fig. 4. The pivot pin may also be provided with a little knob, *e'*, preferably at the front of the device, for use in adjusting the disks by turning the pin. Now, when the disks are mounted upon the front by means of the pivot pin, as described above, obviously the edge of the smaller front disk, C, registers with the circular slit, *a'*, in the front, A, while the back disk, D, extends out beyond this line the depth of the annulus, *d*. Now in the working of this calendar, it is necessary that this annulus should be exposed along this portion of the front so that the week day indications may be brought into register with the month day columns. For this purpose the short side slits, a^2, are made, so that the edge of the segment, B, along the circular slit, *a'*, may be bent backward to form a kind of offset or ledge, *b'*, which permits the projecting edge of the disk, D, to be brought in front thereof and so exposed in connection with the month day columns, as seen in Figs. 1 and 4. This construction not only provides for the exposure of the week day annulus along this portion of the front, but also serves to hold the edges of the disks together and in place, for the stiff edge of the board being bent back with sufficient force to permit of the adjustment of the disks, as described above, will, of course, react when released sufficiently to bring some pressure upon the back of the disk, D, as will be seen from an inspection of Fig. 4. The disks may also be secured together by means of the nut, *e*, on the pivot pin so as to produce a frictional contact sufficient to cause them to revolve together with the pin; but, at the same time, for the operation intended, and as set forth in my said prior application, this frictional force must be so small that a slight obstruction to one of the disks will stop its movement, while the other disk may be carried along by the pin, on which both are mounted. In operation, the disk to be arrested at a certain point is the front one, and this stoppage is effected by the little lug, *c*, coming in contact with the edge of the front, A, produced by the side slit, a^2, at the left hand of the calendar segment, B, as seen in Fig. 1 in the drawings, while the rotation of the disk in the other direction will not be anywhere stopped because of the contour of the back edge of this lug, which permits it to pass readily underneath the edge of the front which it approaches. The frictional contact of the two disks, causing them to rotate together unobstructed, and this stop device operating to arrest one disk at a certain point, will, therefore, secure precisely the same result in operation as is obtained by the spring clutch and its stop of my aforesaid application, for it is obvious that in operation, the disks being mounted as described and shown in Figs. 1 and 4, if the pivot pin is turned to the left the disks will be rotated together, moving in the direction of the arrow, 1, in Figs. 1 and 2, until the lug on the disk, C, comes in contact with the edge of the front at the left of the segment, as shown in said Fig. 1. The front disk will then be stopped from further movement in this direction, while the back disk may be still moved alone in continuation of the rotation in this direction. The two disks, however, will always rotate together when the pin is turned to the right, or in the direction indicated by the arrow 2, Figs. 1 and 2. The lug on the disk, C, is located so that this stopping action will arrest the disk just at the point when the column of half century figures is exposed at the slot, a^3, as seen in Fig. 1. The rotation of the back disk, D, is then continued alone until the remaining two figures of the year are brought into agreement and exposure at the same slot, as also seen in said Fig. 1, in which it will be found that the present year, 1893, is exposed. The pivot pin is then turned to the right or in the direction of arrow 2, when, as already explained, the disks will move together, and this movement is continued until the month indication is brought into view at the same slot, as seen in Fig. 2, in which the indication for February is exposed, and it will then be found that the days of the month and the days of the week on which they fall for February 1893 are indicated on the segment, B. In this figure, the backward movement of the disk, C, in connection with the back disk, D, is indicated by the position of the lug thereon. Of course this lug will not always appear exposed at some point along the segment, B, but under the greater number of month adjustments will be concealed back of the front.

In order to prevent any uncertainty of action, the back disk, D, may be fastened to the pivot pin in any suitable way; or, if not fixed absolutely on the pin, it may be secured thereto more firmly than the front disk, which is, of course, loose on the pivot pin. This back disk must always be held to the pin

by a force considerably greater than that holding the disks together by frictional contact, which latter may be obtained by eyeleting or otherwise fastening the disks together independent of the pin. The eyelet is lettered H.

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

1. In a calendar, a stationary front provided with a circular opening for the display of the edges of the disks, mounted at the back thereof, and a radial slot connecting therewith, in combination with a disk mounted on a journal at the back of the front piece, a second disk mounted loosely on the same journal between the former disk and the front piece and lightly held to the back disk by frictional contact, so as to normally revolve therewith but having no positive connection thereto, and a flexible stop device on the said front disk, wholly disconnected from the back disk, adapted to contact with a fixed stop on the front when the disks are moved in one direction, and to yield so as to pass under or behind the front piece when the disks are moved in the opposite direction, whereby the disks may be rotated together continuously in the latter direction, but when rotated in the opposite or first named direction the front disk will be automatically stopped at a certain determined point while the rotation of the rear disk may be continued in the same direction, substantially as described.

2. In a calendar, a revoluble pin, E, in combination with a back disk, D, secured thereto, a front disk, C, mounted loosely on the pin, clamped to the back disk with sufficient force to normally revolve therewith and provided with a projecting flexible stop lug, *c*, and a stop or abutment on the calendar front arranged in the path of said lug and adapted to arrest the movement of the front disk at a fixed point in one direction whereby when the disks are rotated together toward the stop on the calendar front the front disk will be arrested at a certain point while the rear disk is free to move on, and when rotated in the opposite direction both disks will move together continuously, substantially as described.

3. In a calendar, a revoluble pivot pin, E, in combination with a back disk, D, secured thereto, the front disk, C, loose on said pin but clamped to the back disk and provided with a projecting stop lug, *c*, and the front, A, provided with circular slit, a', and short radial slits, a^2, at the respective ends of the latter, substantially as described.

WILLIAM KING DAVID.

Witnesses:
R. C. PAGE,
W. C. CORLIES.