July 8, 1924.

1,500,913

D. R. ADAMS

PERPETUAL CALENDAR

Filed May 22, 1923

2 Sheets-Sheet 1

Fig. 1.

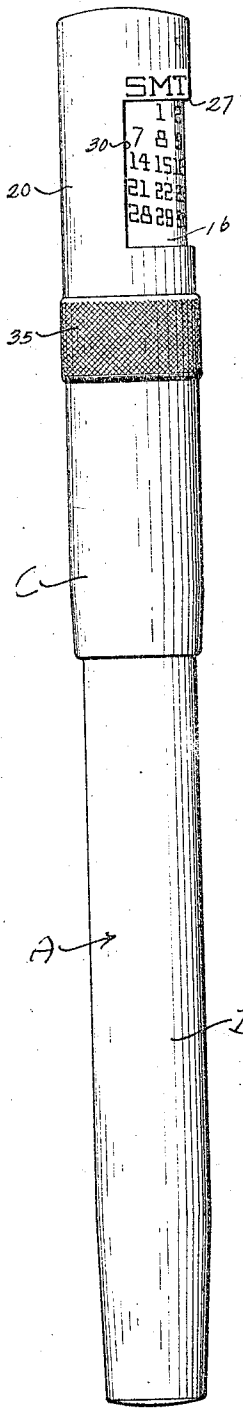


Fig. 2.

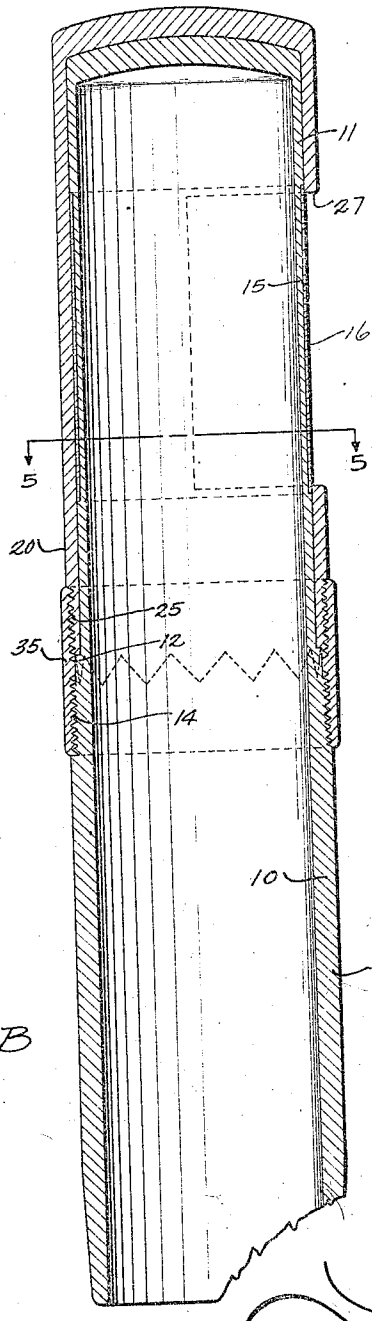
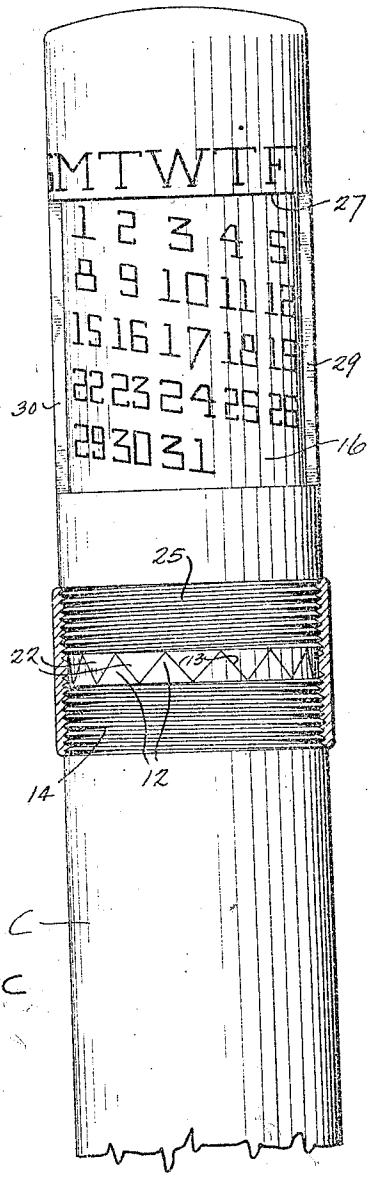


Fig. 3.



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2 Sheets-Sheet 2

Fig. 6.

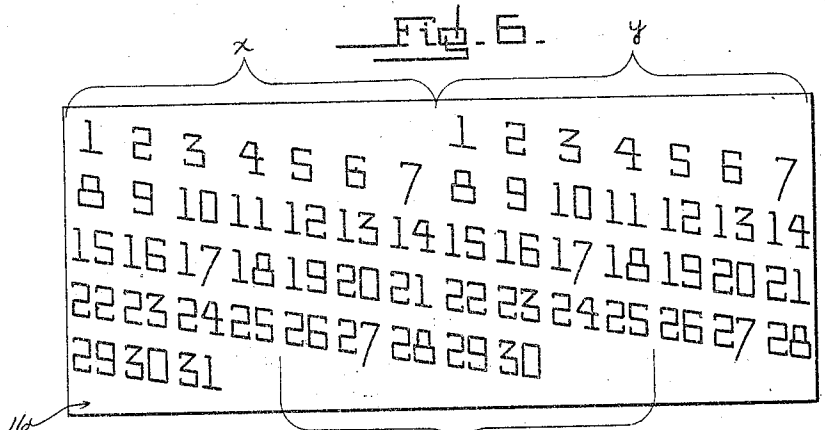


Fig. 4.

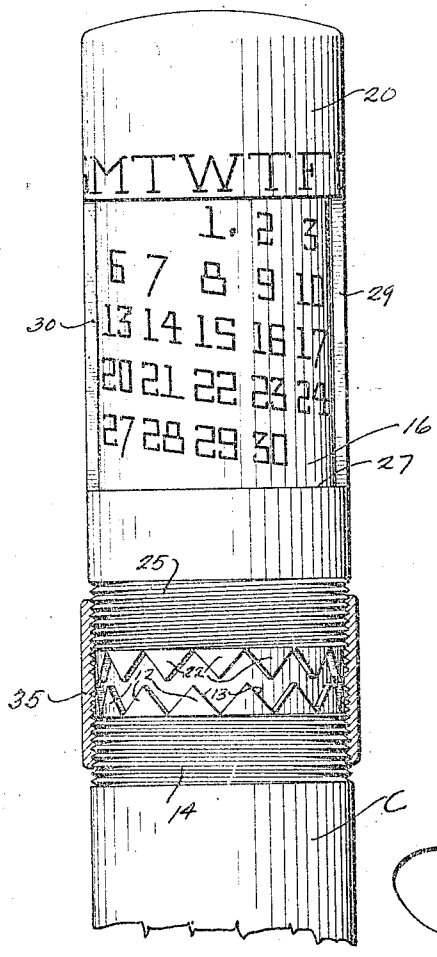
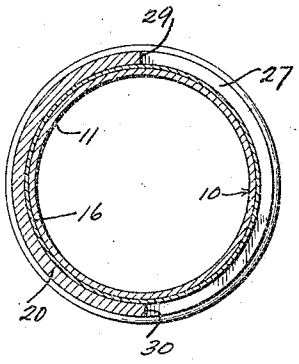


Fig. 5.



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UNITED STATES PATENT OFFICE.

DONALD R. ADAMS, OF ANCHORAGE, TERRITORY OF ALASKA.

PERPETUAL CALENDAR.

Application filed May 22, 1923. Serial No. 640,751.

To all whom it may concern:

Be it known that I, DONALD R. ADAMS, a citizen of the United States, residing at Anchorage, Territory of Alaska, have invented certain new and useful Improvements in Perpetual Calendars, of which the following is a specification.

This invention relates to a calendar which may be used from month to month and year to year, embodying an adjustable feature to selectively arrange the days of the month for cooperation with the days of the week during any current period.

A further object of this invention is the provision of a calendar adapted for perpetual use, which can be adapted to various articles and constructions, being so arranged that months having unequal numbers of days therein may be correctly presented to view.

A further object of this invention is the provision of a relatively compact construction embodying means to provide a calendar for any current month with the correct numbers of days therein for the current month, so that the necessity of renewing the calendar from month to month and year to year is obviated.

A further object of this invention is the provision of a calendar construction of the above mentioned character which may be formed in various constructions, such as upon a fountain pen, pencil, upon a pillar such as in a bank or business house, upon a desk paper weight, or the like.

A further object of this invention is the provision of a construction of the above mentioned character which may be selectively adjusted to show a month of a determined number of days, and in which the first day thereof starts on any day of the week.

Other objects and advantages of this invention will be apparent during the course of the following detailed description.

In the accompanying drawings, forming a part of this specification, and wherein similar reference characters designate corresponding parts throughout the several views:

Figure 1 is a side elevation of a fountain pen, showing the cap thereof as provided with the improved perpetual calendar.

Figure 2 is an enlarged fragmentary cross sectional view, taken longitudinally through the cap of the fountain pen illustrated in Figure 1, and showing certain novel features of construction as details of the calendar construction.

Figure 3 is a side elevation, partly in cross section, showing calendar details of the fountain pen cap illustrated in Figures 1 and 2.

Figure 4 is a side elevation, showing details illustrated in Figure 3, but with parts of the improved calendar construction in position so that the numerals of the calendar may be adjusted in selective manner with the days of the week as delineated thereon.

Figure 5 is a transverse cross sectional view, taken substantially on the line 5—5 of Figure 2.

Figure 6 is a developed view of the system of numerals as employed in connection with the improved perpetual calendar.

In the drawings, wherein for the purpose of illustration is shown but the preferred embodiment of this invention, the letter A may generally designate a fountain pen or analogous construction embodying the stock portion B and cap C; the latter of which is of novel construction to provide the perpetual calendar.

The cap or member C may of course be of any formation in so far as the application of details of the improved perpetual calendar is concerned, but as the application of the calendar features are shown in connection with a fountain pen cap, it is preferred that this cap include a body portion 10 of hollow cylindrical construction, having the upper end 11 thereof circumferentially reduced to form an annular shoulder intermediate the ends of the cap, which provides a plurality of V-shaped teeth 12 with corresponding V-shaped recesses 13 therebetween. Immediately below the shoulder provided by the V-shaped teeth 12, the body portion 10 is provided with the left hand

screw threading 14 cut therein. The reduced end 11 of the cap 10 is further annularly reduced intermediate its ends to provide an annular recess 15 exteriorly upon the outer circumference thereof, within which a slip of paper or analogous material 16 may be placed, so that the outer surface of said element or material 16 lies flush with the outer circumference of the reduced part 11 of the cap B. This element or material 16 contains a numerical calendar arrangement which will be subsequently set forth.

A sleeve, ferrule, or auxiliary cap member 20 is preferably provided for rotatable mounting over the reduced end portion 11 of the cap 10, being of hollow cylindrical formation and having the extreme lower margin thereof provided with substantially V-shaped teeth 22 for interfitting with the teeth 12 of the cap C, and which when interfitting therewith will prevent relative rotation of the sleeve member 20 upon the cap portion 11. The sleeve portion 20 is preferably of such thickness that when the same is placed upon the reduced end 11 of the cap 10, the exterior surface thereof will lie flush with the outer surface of the lower portion of the body 10, substantially as is illustrated in the drawings. The lower end of the member 20 is exteriorly screw threaded, just upwardly of the teeth 22 and in opposite manner to the threads 14 of the body 10, as at 25. The sleeve or member 20 is preferably provided with a relatively large opening 27 therein, adapted to expose at any one time sufficient of the numerals upon the legend 16 to provide a calendar having a predetermined number of days in the month exposed as a calendar; the side marginal edges 29 and 30 defining the opening 27, thus cooperate in marking the limit of the portion of the member 16 which is exposed through the opening 27. Upwardly of the opening 27, the exterior of the member 20 is preferably provided with the initials S—M—T—W—T—F—S, which of course respectively designated the days of the week, and are adapted to have a vertical column of figures fall thereunder, as depicted upon the calendar member 16.

A locking sleeve 35 is preferably provided for securing the portions 10 and 20 of the cap against movement, and which exteriorly thereof, at its upper and lower ends is respectively provided with right hand and left hand threads for receiving the right and left hand threaded portions 25 and 14 of the cap portions 20 and 10 respectively. It is obvious that upon rotation of the sleeve 35 to the left, the part 20 of the cap C will be moved away from the body portion 10 thereof, and thus moving the teeth 12 and 22 from out of their interengaging relation so that the part 20 may move relatively to the cap body portion 10. This adjustment is provided, in order that the days of the week as designated by the initials upon the member 20 may be selectively arranged with respect to the numerals upon the sheet of material 16, to show which particular day of the week the first day in the month falls upon.

Referring to the arrangement of numerals which appears upon the calendar strip or member 16, it is preferred to provide transverse rows of numerals thereon, at an acute angle to the horizontal, substantially as is illustrated in Figure 6. In the form shown it is preferred to provide two complete sets of numerals, each of which sets designate the numerical arrangement in the months of a calendar having a predetermined number of days therein. Thus, as is illustrated in Figure 6 of the drawings, those numerals embraced within the bracket designated by the letter "x" are arranged to designate a month having thirty-one days therein. The numerals as arranged in this set "x", are arranged in seven vertical rows as in any calendar month. It is preferred that the first transverse row of numerals contain numerals from 1 to 7; the second row contain numerals from 8 to 14 inclusive; the third row contain numerals from 15 to 21 inclusive; the fourth transverse row containing numerals from 22 to 28 inclusive; and the fifth transverse row containing numerals 29, 30 and 31. The second set of numerals "y" contains thirty numerals arranged in seven vertical rows, as in any calendar arrangement. The transverse rows of numerals appearing in set "y" are analogous to the set "x", the first row containing numerals 1 to 7 inclusive, the second transverse row containing numerals 8 to 14 inclusive, the third transverse row of numerals containing numerals 15 to 21 inclusive; the fourth transverse row in this set containing numerals 22 to 28 inclusive, and the fifth transverse row containing numerals 29 and 30. It will thus be seen that set "x" contains numbers for thirty-one days, while set "y" contains numbers for thirty days. The sets "x" and "y" are cooperatively positioned so that the first transverse row of numerals appearing in set "x" aligns with the second transverse row of numerals appearing in set "y", so that numerals appearing in these rows consecutively increase in value. The rows in both sets "x" and "y" below these rows are similarly arranged in alignment as is illustrated in Figure 6. Other sets of numerals may likewise be included in similar cooperative manner to that illustrated in Figure 6. For instance, for the month of February, there being 28 or 29 days, additional sets or numerals containing 28 and 29 days may be extended upon the member 16.

The member 16 is of course annularly placed about the reduced end 11 of the body portion 10 of the cap C, so that the marginal ends thereof are in abutting relation and the numerals are circumferentially arranged about said reduced end 11, substantially as is illustrated in the drawings. In lieu of providing the numerals upon a sheet or member 16, the numerals may be engraved or embossed in contrasting manner upon the reduced end 11 of the cap C.

The manner of operation of the improved perpetual calendar to selectively provide the calendar arrangement for any current month will be obvious from the above description taken in connection with the illustrations in the drawings. Only that portion of the numeral system upon the member 16, is visible to an observer, which is exposed through the slot or opening 27 in the member 20. As is illustrated in Figure 3 of the drawings, to provide a calendar month in which thirty-one days appear, the first day of the month starting on Monday, the sleeve or member 20 is rotated upon the body 10 until the letter "M" thereon, which designates "Monday" is disposed over the first numeral in the first transverse row of the set of numerals "*x*." There will then be seven vertical rows of numerals visible through the opening 27, which includes six vertical rows in the set "*x*" and one vertical row in set "*y*," as is obvious from Figures 1 and 3 of the drawings.

If it is desired to shift the calendar arrangement from that above described to provide a calendar month in which but thirty days appear, the first day of the month falling on Wednesday, the member 20 is elevated by rotation of the adjusting sleeve 35 into the position substantially designated in Figure 4. The member 20 then may be relatively rotated upon the reduced end 11 of body 10, until the "W" thereon, designating "Wednesday," is directly over the numeral 1 in the set "*y*" of numerals. When in this position, the locking sleeve 35 may be rotated so that the teeth 12 and 22 of the body 10 and sleeve 20 of the cap C respectively, intermesh and the body 10 and sleeve 20 will be locked against rotation so that a person may have a desired calendar arrangement for the current month. The vertical rows of numerals which appear through the opening 27 of the cap C, in Figure 4 of the drawings, are included within the bracket designated "*z*" in Figure 6 of the drawings.

From the foregoing description of this invention, it is apparent that a perpetual calendar has been provided, in which it is possible to secure a month having a predetermined number of days starting on any day of the week. It is to be noted that the intermeshing teeth 12 and 22 are cooperatively formed with the placing of the numerals, so that the vertical rows of numerals may properly align with the letters designating the days of the week. Other locking expedients to secure a desired calendar arrangement, may be provided.

Various changes in the shape, size and arrangement of parts may be made to the form of invention herein shown and described, without departing from the spirit of the invention or the scope of the claims.

I claim:

1. In a calendar of the class described the combination of a cylindrical shaped supporting body having the upper end thereof annularly reduced and at the juncture of said annularly reduced portion with the body, the latter having substantially V-shaped teeth annularly arranged about the body, said body being screw threaded adjacent said teeth, means carried by the reduced portion designating a set of numerals arranged in the form of a calendar month, a sleeve member for receiving therein the reduced portion of said cylindrical body, said sleeve member having a transverse opening therein with indicia arranged along an edge of said opening representative of the days of the week, the sleeve member when receiving the reduced portion of the cylindrical body therein, having a set of numerals of the reduced portion displayed through said opening in the form of a calendar month having a predetermined number of days therein with the first day of the month selectively falling on a particular day of the week as designated by the indicia on said sleeve, said sleeve at an end thereof having substantially V-shaped teeth extending therefrom for interengagement with the teeth of said body, said sleeve adjacent said teeth having screw threads thereon oppositely threaded with respect to the threads of said body, and a coupling band internally screw threaded in opposite directions from the ends thereof adapted for threaded engagement with the threads of the cylindrical body and said sleeve whereby upon rotation of said coupling band the teeth of the sleeve and body may be forced into locking engagement for maintaining the sleeve in a desired relation upon the reduced portion of said cylindrical body.

2. In a perpetual calendar the combination of a cylindrical shaped body having numerals arranged circumferentially thereabout and providing two independently complete sets of numerals depicting the numbers in calendar months, said months as designated containing unequal numbers of days, the numerals of the months being so related that certain transverse rows of one set are in circumferential alignment and

in successive relation with certain rows of the other set, a sleeve member slidable along and rotatable upon said cylindrical shaped supporting body having an opening therein by means of which a calendar month set of numerals may be displayed through the opening, said sleeve member having indicia arranged thereon designating the days of the week with which the numerals of the cylinder member are cooperatively associated, interengaging teeth carried by the cylindrical body and the sleeve member, and means for locking the teeth in a desired interengaged relation so that the indicia of the sleeve member will be arranged in a desired relation with respect to the numerals exposed through the opening thereof.

DONALD R. ADAMS.