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RHYTHMIC CYCLE CALENDAR

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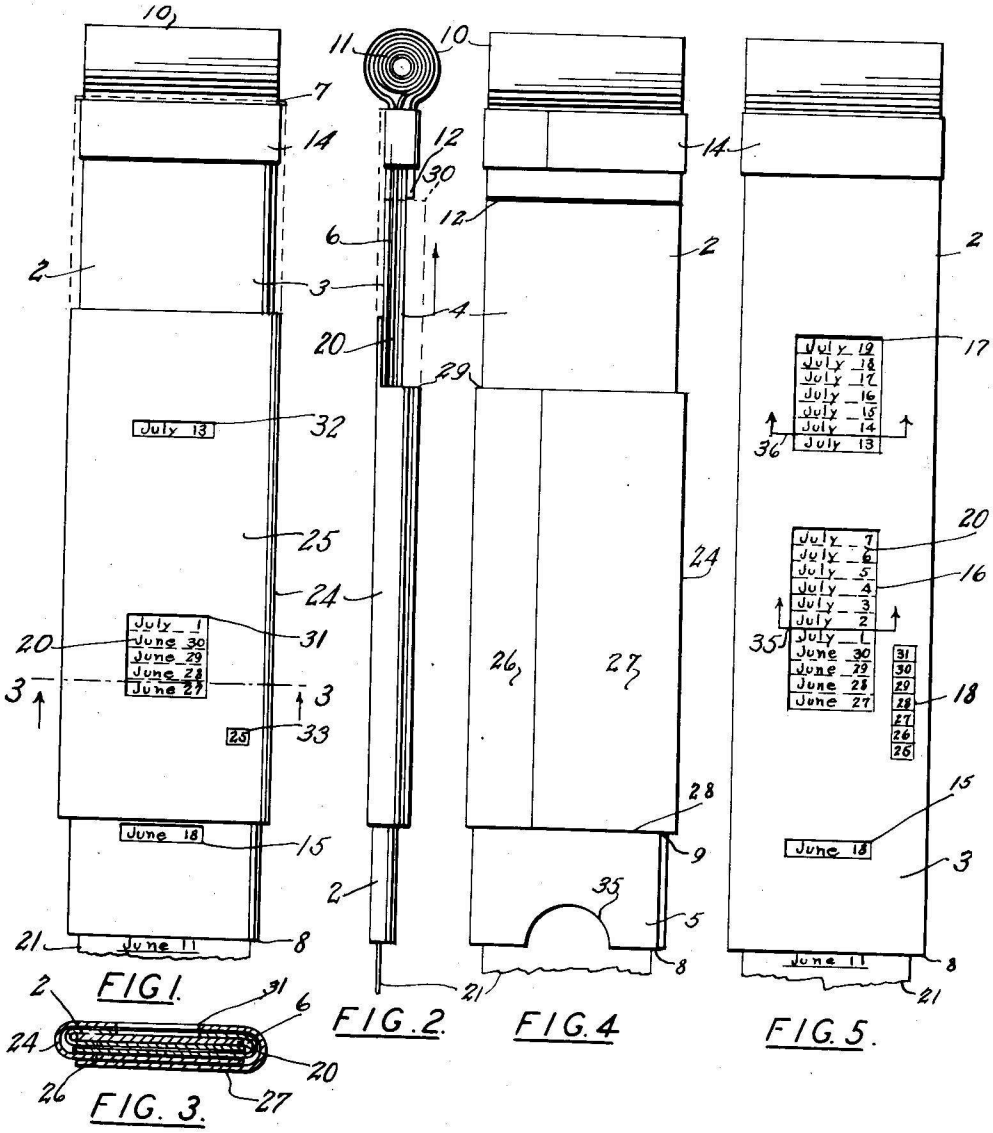

FIG. 1.

FIG. 2.

FIG. 4.

FIG. 5.

FIG. 3.

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RHYTHMIC CYCLE CALENDAR

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3 Claims. (Cl. 40—109)

My invention relates to a calender for calculating the periods of greatest fertility in women in an accurate manner, whereby said periods may be easily and quickly indicated.

The use and operation of the instrument comprising my invention is based upon the biological fact that the period of ovulation in women takes place fourteen days prior to the commencement of the following menstrual period.

The objects of the invention are, first, to provide a device or instrument comprising a minimum number of parts and which can be easily and cheaply manufactured; second, to provide a device in which the mechanical manipulation necessary to the setting of indicating elements may be done with a minimum of manual operations. The third object is to provide a device of this kind in which possible errors of miscalculation are reduced to a minimum and in which no mental computation is necessary in the use thereof. Other objects will appear hereinafter.

I attain the foregoing objects by means of the device illustrated in the accompanying drawing in which Figure 1 is a front elevational view thereof; Figure 2, a side elevation; Figure 3, a section taken substantially on line 3—3, Figure 1; Figure 4, an elevational view of the back thereof, and Figure 5, a front elevation of the face of the instrument with a masking slide removed.

Similar numerals refer to the similar parts thereof.

The invention comprises essentially a case or container, a calendar prepared in tape form slidable therethrough, windows cut through said case to permit viewing of certain portions of said calendar at predetermined intervals, and a means of adjusting the position of certain of said viewing windows relative to others.

In greater detail the instrument herewith illustrated, comprising my invention, consists of the following:

The case 2 constitutes a base or body of the instrument and is formed with a face 3 made by folding a flat sheet of cardboard or other suitable material so as to form a rectangular front face 3 with a side portion folded backward forming a back 4 and an overlapping second fold 5, which extends over a portion of the lower end only. This latter provides an edge closure and a stop 9.

Thus formed, a longitudinal channel-way 6, between the front and back faces, extends from the top 7 to the bottom 8. A transverse cylindrical case 10 is formed at the top 7 of body 2 by bending an upwardly extending portion of the material backward and shaping it into a round cylinder. The remainder of this piece extends downwardly on back 4 to 12 where it constitutes a stop. This top construction is held in place, the front and back held together, and the edges closed by a strip of gummed tape, or other similar material 14.

In the face 3 of the case body the windows marked 15, 16, and 17 are cut out and the index scale 18 is attached or imprinted, provided with indicating numerals at certain predetermined positions and intervals.

A calendar tape 20 is made of a paper strip with the days and dates of a calendar year, or years, imprinted on one face at predetermined definite intervals. These date markings extend consecutively from the bottom, or outer end 21 toward the top. This top or inner end portion of the tape is tightly rolled to form a cylinder 11 and placed within the cylindrical case 10. The outer loose end extends downwardly through channel-way 6 of case 2 and protrudes from the bottom 8, as at 21. The channel-way 6 is sized so that this tape may be easily pulled downwardly therethrough but its position will be retained by friction, and cylinder 10 is made so that the tape roll 11 will be retained therein by the stiffness of the paper in the roll, yet loose enough to easily unroll. The dates on the outer face of this tape may be viewed through the windows 15, 16 and 17 of the case.

A masking and viewing slide 24 is movably affixed on the body of case 2. This slide is composed of a flat sheet of cardboard, or other adaptable material, and has a front face 25, together with sides and a back formed by bending side portions 26 and 27 around case 2. The overlapping portions are glued and secured in position. This slide is sized and shaped so that it may be easily slid longitudinally up and down case 2, but will be practically retained in any set position. This movement is limited by the stop 9 at the bottom, which contacts the lower edge 28 of the back portion, and the stop 12 at the top which similarly contacts the top edge 29 of the back.

Two calendar tape viewing windows 31, 32, and one index viewing window 33 are cut in the face of this slide. The latter opens on scale 18 on the face of the case to permit viewing one numeral thereon at a time; the others permitting the calendar tape to be viewed through windows 16 and 17 in the case, which are made large enough to permit the tape to be viewed throughout all movements of the slide. As illustrated, this slide is at the lower extremity of its motion;

the upper limit of this motion is indicated by the dotted outline 30.

The vertical dimensions of the viewing windows, their positions, the spacing of the date markings on calendar tape 20, and the size and position of scale 18 are all definitely related. For convenience, the dates, as marked on the calendar tape, are referred to as "day spaces." Window 15 in the case permits the viewing of but one date at a time. Window 31, on slide 24, has a vertical depth equal to five day spaces; that is, five calendar days may be viewed through it. Window 32 has a depth equal to only one day space and permits a view of but one date at a time. The middle day space within window 31 is exactly 14 day spaces from window 32. The 2 day spaces above this middle day space are, therefore, 12 and 13 days respectively from window 32 and the 2 spaces below are 15 and 16 day spaces respectively therefrom. Window 33 is positioned so that when slide 24 is at the lower limit of its travel, as fixed by stop 9, the bottommost figure, marked 25, on scale 18, will be visible. In this position there are exactly 25 days spaces from window 15 in the case to window 32 on the slide. Scale 18 extends upward from this position and its several index figures are equally spaced and consecutively numbered so that when slide 24 is at the upper limit of its travel the index number 31 will appear in window 33. There are then 31 day spaces from window 15 to window 32. The distances when intermediate index numbers are viewed correspond. As indicated, this travel is equal to 6 day spaces.

In operation the user first determines her natural rhythmic cycle. For example, if she has a period of 25 days the slide is set in the position illustrated so that numeral 25 on the scale 18 appears in window 33. The user next pulls tape 20 downward through the channel-way 6 until the date of the commencement of her last period of menstruation appears in window 15. Any protruding portion of the tape, as at 21, may then be torn off along edge 8 of the case. A date will now appear in window 32 on slide 24 which, due to the construction of the instrument, as above described, will be 26 days subsequent to the date appearing in window 15. This will be the date on which the next period of menstruation of the user will commence. At the same time, 5 days will appear in window 31. These days represent the period of maximum fertility. The middle one of the five days, being 14 days prior to the next period due date, indicates the date of ovulation; the 2 days prior and subsequent thereto represent dates which may be easily subject to conception for reasons well known to medical science. The entire space, therefore, as exhibited in window 31 may well be considered the period of maximum fertility of the user, when adjustments are made as above explained. On other dates during the menstrual cycle the user may be considered sterile. The date exposed in window 15 may be termed the day of the start of the current menstrual period, that exposed in window 32, the next due date, and those in window 31 the days of maximum fertility.

When the date indicated in window 32 has been reached the tape is again pulled downward through channel 6 unrolling from the cylinder 11, until the date previously exposed in window 32 now appears in window 15. To facilitate grasping the tape after it has been torn off on edge 11, a semi-circular cut 32 is made in the back of the case body. The tape is again torn off along edge 8.

In those instances where the natural rhythmic cycle of the menstrual periods of the user exceeds 25 days, the slide 24 is moved upward until an index number of scale 18 appears in window 33 equivalent to the number of days of this cycle. This adjustment is thereafter maintained by the user throughout use of the device unless due to physical causes the user's period changes when such an adjustment is made. It will be obvious that the day space relation between windows 15 and 32 will be automatically varied to accommodate the greater interval between the periods. The portion of the calendar viewed through window 31 will also be varied relative to window 15. However, the relation between the next due date and the date of ovulation, indicated at the center of window 31, will remain in fixed relation, since the physiological relation between these dates remains fixed.

From the foregoing it will be readily apparent that I have provided a supporting case which may also be termed a base or container 2 through which a specially prepared calendar tape 20 may be moved so as to expose predetermined portions thereof through a plurality of windows, the lowermost (or outermost) window 15 being of sufficient longitudinal height to expose but one day on said calendar at a time. The other 2 windows being positioned to expose portions of the calendar that may be viewed through windows in a movable sliding element throughout the limits of its adjusting movement. Lastly, I provide a sliding element 24 operating on the case which contains a window permitting a single day space to be viewed at its upper end and a larger window permitting 5 day spaces to be viewed at a predetermined fixed distance therefrom and further, a window having a vertical opening equal to one day space permitting the view of an index scale 18 fixed at a predetermined position on the case body so that the relative position of the windows on the slide to the viewing window 15 on the case may be quickly ascertained and indicated.

This sliding element, therefore, serves to mask certain portions of the larger windows 16 and 17 in the case. In instances where adjustment is unnecessary or undesirable, this may be done by covering window 16 above line 35 with a slip of gummed tape or the like. Or the window can merely be shortened to this line. Similarly window 17 may be permanently masked above line 36. The device may then be used by a person whose menstrual period is definitely 25 days. Further, the positions and sizes of windows 16 and 17 may be changed and made to accommodate users having other definite menstrual periods. In all such instances the use of the masking slide, as an additional part of the device, is unnecessary.

Since there may be numerous alternative constructions and variations apparent to those familiar with the art, all of which however, would remain within the spirit of the invention, I wish to be limited only to the following claims:

I claim:

1. A rhythmic cycle calendar comprising, in combination, a case having a front face, longitudinal channel-way therebeneath, and a transverse cylindrical calendar container case at the upper end thereof; a calendar tape having the days of the calendar year marked thereon progressively within uniform day spaces; a plurality of viewing windows provided in said case face,

the outermost being sized and positioned to indicate the date of the commencement of a menstrual cycle on said calendar; the innermost being sized and positioned to represent the commencement of the next succeeding menstrual cycle; and the third viewing window sized and positioned between said windows to indicate a plurality of days on said calendar in definite relation to the dates indicated in said windows above mentioned and adapted to indicate a period of fertility physiologically related thereto.

2. A rhythmic cycle calendar comprising, in combination, a case having a front face, longitudinal channel-way therebeneath, and a transverse cylindrical calendar container case at the upper end thereof; a calendar tape having the days of the calendar year marked thereon progressively within uniform day spaces; a masking slide adapted to move longitudinally within predetermined limits on said case; a window in said case adapted to indicate on said calendar the date of commencement of a menstrual cycle; a window on said masking slide adapted to view a date on said tape corresponding to the commencement of a next succeeding menstrual period; a second window on said slide sized and positioned relative to said window last mentioned, to indicate on said tape a period of fertility; an indicating window on said slide cooperative with an index scale on said case to indicate the relative distance, in terms of day spaces on said calendar, between the commencement date of said menstrual period and the due date of the next succeeding period; and windows cut in the face of said case to permit said calendar to be viewed through the windows in said slide throughout its range of adjustment.

3. A rhythmic cycle calendar comprising, in combination, a case having a longitudinal channel-way adapted to receive a calendar tape and permit same to be moved therethrough, and be observed at desired intervals, a calendar tape having the days of a calendar year marked consecutively thereon within uniform spaces, a masking and viewing slide adapted to move longitudinally on said case, means on said case for observing a predetermined date on said calendar tape corresponding to the commencement of a menstrual period, means on said masking and viewing slide for observing a subsequent date on said tape in definite physiological relation to said date first observed and corresponding to the date of commencement of the next succeeding menstrual period, means on said case and said masking and viewing slide to indicate the position of the latter upon the former whereby the number of days of a given menstrual cycle may be indicated, and means on said masking and viewing slide adapted to indicate on said calendar tape a predetermined number of days prior to the commencement of said subsequent menstrual period, in physiological relation thereto, and constituting a period of maximum fertility.

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