United States Patent [19]

Sanchez

[11] **3,771,716**

[45] **Nov. 13, 1973**

[54] **FERTILITY CALCULATORS**

[76] Inventor: **Elias Sanchez,** 507½ Fulton St., Elizabeth, N.J.

[22] Filed: **Aug. 16, 1971**

[21] Appl. No.: **172,004**

[52] **U.S. Cl.** ..... **235/85 FC**
[51] **Int. Cl.** **G06c 3/00**
[58] **Field of Search** ..... 235/85 FC, 88

[56] **References Cited**

UNITED STATES PATENTS

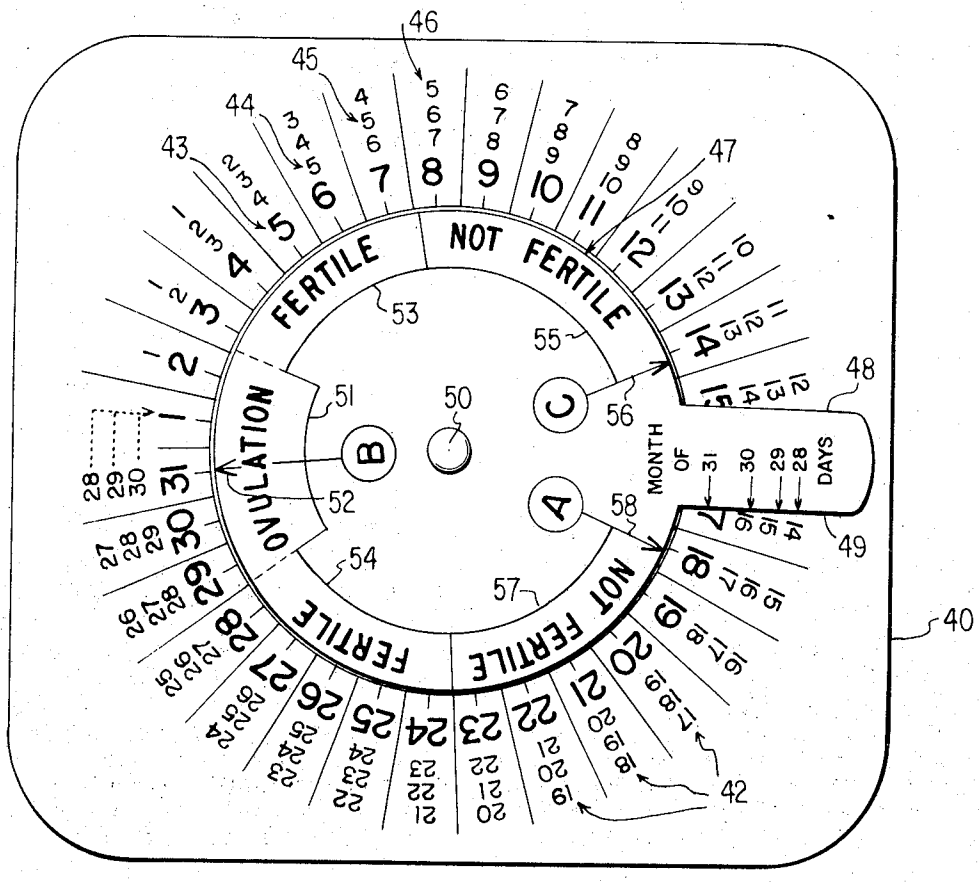
2,343,592	3/1944	Tilbrook	235/85 FC
2,727,686	12/1955	Thalmann	235/85 FC
3,486,691	12/1969	Rodriguez	235/85 FC

Primary Examiner—Stephen J. Tomsky
Attorney—D. C. Roylance et al.

[57] **ABSTRACT**

A fertility calculator including two members, one being larger than the other and having the dates of the month arranged in four concentric rings, each date number occupying the same angular space as each other, and each ring representing months of different lengths. The second member is mounted concentrically with respect to the rings and is rotatable, the second member being essentially circular and having a projection with an edge calibrated in month lengths. The second member is movable to place the calibrated edge adjacent the day on which the most recent menstrual period commenced, this being the only setting necessary. Fertile and non-fertile periods based on the normal menstrual cycle can then be read on the first member adjacent the calibrated sectors of the second member.

2 Claims, 3 Drawing Figures



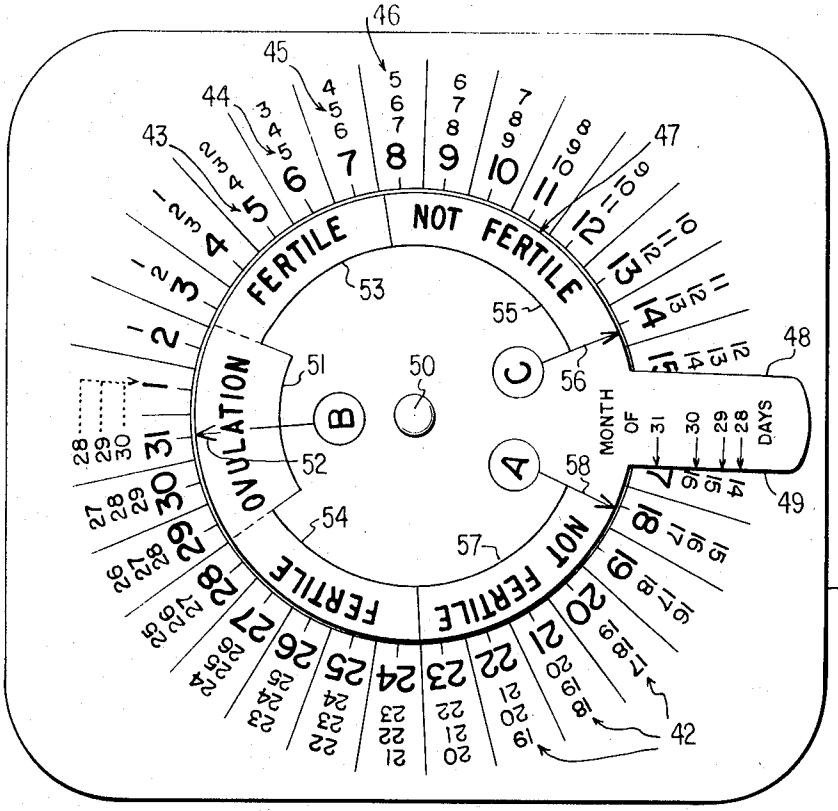


FIG. 1

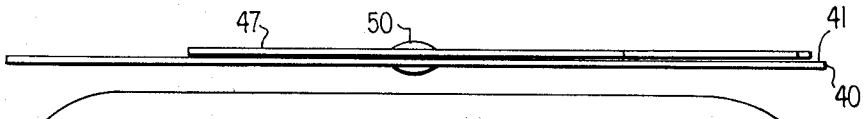


FIG. 2

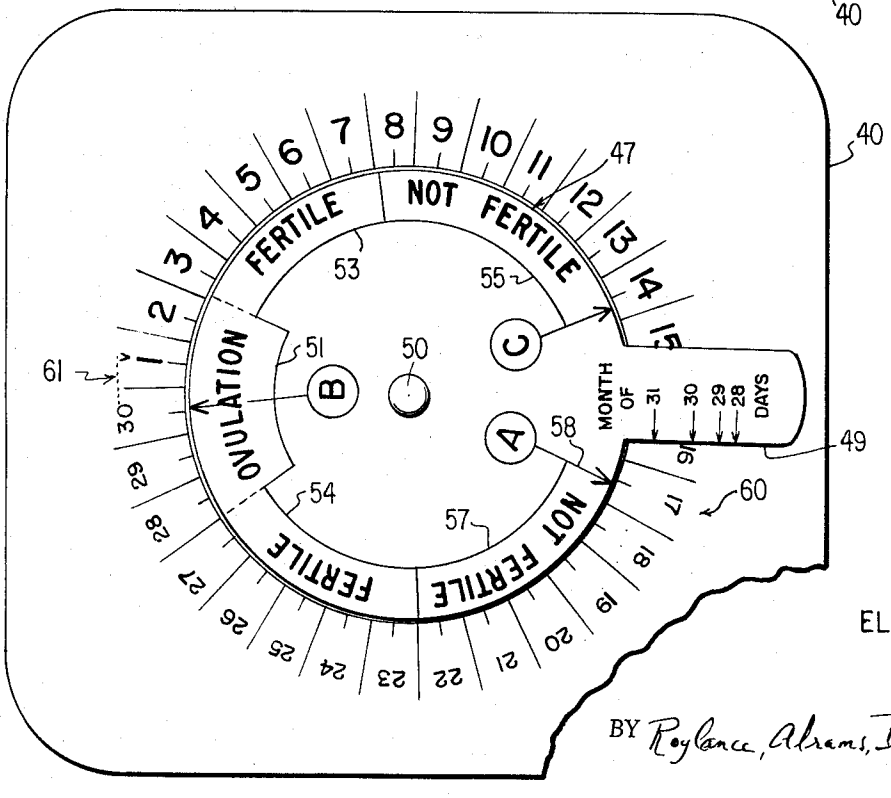


FIG. 3

INVENTOR
ELIAS SANCHEZ

BY Roylance, Abrams, Berdo & Kaul
ATTORNEYS.

FERTILITY CALCULATORS

This invention relates to fecundity indicators, specifically to an apparatus for indicating intervals of greater and lesser fertility.

In these days of greatly expanding population, it is not necessary to comment at length upon the importance of family planning. For those individuals who are unable to use, or who prefer not to use, mechanical or chemical devices to prevent unwanted conception, the remaining alternative is the cyclic calculation of high and low fertility intervals based on the menstrual cycle. Also, for those individuals who are interested in conceiving, and especially for those who have difficulty conceiving, it is important to known precisely when the highest probability of conception is likely to occur, again based upon the menstrual cycle.

While various calculating devices for determining these periods have been developed in the past, these devices have been either extremely complicated or have overlooked certain features of the menstrual cycle, which features make a significant difference to the individual attempting to predict periods of fertility and infertility. Also, they were frequently complicated by requiring adjustment to the cycle of the person using the device.

Accordingly, it is an object of the present invention to provide a simple, clear and easily adaptable and usable fecundity indicator or calculator based on the normal menstrual cycle of 28 days.

In order that the manner in which the foregoing is attained in accordance with the invention can be clearly understood, an advantageous embodiment thereof will be described with reference to the accompanying drawings, which form a part of this specification, and wherein:

FIG. 1 is a plan view of a fecundity calculator in accordance with the invention;

FIG. 2 is a side elevation of the calculator of FIG. 1; and

FIG. 3 is a plan view of the apparatus of FIG. 1 with portions deleted to more clearly illustrate the use of the device.

As shown in FIGS. 1 and 2, the calculator includes a base member 40 which is rectangular in shape and has a major surface 41 on which is inscribed a series of scales with the days of the month in a specific sequence. A band of calibrations is divided into 31 segments, indicated generally at 42, of equal angular measurement. The band of calibrations also includes four concentric rings of numerals indicated at 43, 44, 45 and 46. It will be observed that the inner ring 43 of numerals includes the digits 1 through 31 in sequence, there being no gap between number 31 and number 1. It will further be observed that the next larger ring 44 includes 30 numbers, there being no digit in ring 44 in the segment which contains number 1 in ring 43, the number 1 for ring 44 being radially outwardly spaced from digit 2 in ring 43. Similarly, ring 45 contains 29 numbers, and ring 46 contains 28 numbers, these latter rings having blank spaces at the early numbers in their rings.

The apparatus of FIGS. 1 and 2 also includes a generally circular opaque member 47 having a radius equal to or smaller than the inner ring 43 of numbers. Member 47 also carries a protrusion 48 which extends radially outwardly from the periphery of member 47 and

includes one essentially radial edge 49 which carries calibrations 31, 30, 29 and 28 with arrows indicating rings 43, 44, 45 and 46, respectively. Member 47 is rotatably connected to member 40 by a rivet or other suitable device 50 which holds the two members together but permits free rotation. Rivet 50 passes through the center of member 47 and through the center of rings 43–46 on member 40. Thus, regardless of the position of protrusion 48 the calibrations along edge 49 identify the rings as being related to months of 28 through 31 days.

The remainder of the periphery of member 47 is divided into five segments, by indicia inscribed thereon, one of these segments being centered at a point which is diametrically opposite the center of protrusion 48. This segment, indicated generally at 51, is labeled "ovulation" and has an arrow 52 centered therein, arrow 52 terminating in a letter B. It will be observed that the segment 51 occupies an arc equivalent to approximately 5 days on rings 43–46.

On both sides of segment 51 are segments 53 and 54 bearing the indicia "fertile." Each of these segments is approximately 5 days in arc length, measured on rings 43–46. Adjacent segment 53 is a segment 55, approximately 7 days long, bearing the indicia "not fertile" and terminating near protrusion 48 with an arrow 56 which is identified on member 47 by the inscription C. Also, adjacent segment 54 is a segment 57, of approximately 6 days duration, bearing the indicia "not fertile" and terminating in an arrow 58 which is identified by the indicia A.

In order to use the above described apparatus, a woman wishing to ascertain those intervals in which she is most likely to conceive, or those intervals in which she is least likely to conceive, uses the device in the following manner. First, she determines the length of the month in which her last period of menstruation occurred and selects the one of rings 43–46 which corresponds to the length of that month as indicated by the calibrations along edge 49 of projection 48. She then rotates member 47 until arrow A indicated by number 58 points to the date when that period of menstruation commenced, such date being in the appropriate concentric ring indicated at 43, 44, 45, and 46. The calculator is then set and, by reading the ring to which the arrow was set and, at the end of the month indicated by that ring, the inner ring 43, the various fertile and nonfertile intervals can be determined.

As an example of the above process, reference is made to FIG. 3 in which the calculator is set for a woman whose most recent period commenced on the 17th of June, a 30-day month. As will be seen in FIG. 3, arrow A (number 58) is placed directly at number 17 in ring 44, indicated generally at 60. The calculator, so set, indicates that the interval including June 17–22 opposite segment 57, is an infertile interval and is relatively "safe" for the woman who does not wish to conceive. The interval including June 23–27, opposite segment 54, must be regarded as a fertile interval. The most fertile interval is that corresponding to segment 51, which includes June 28–30 and July 1 & 2. It will be observed that at the end of June the user simply follows the arrow indicated generally at 61 to the inner ring to start the following month. The day on which conception is most likely to occur, in this circumstance, is the 30th of June, which is clearly identified by the letter B on member 47.

To complete the information provided by the calculator, the interval June 3–7 is regarded as a fertile interval, and the interval July 8–14 is regarded as an infertile interval, the letter C and arrow **56** indicating the last day of menstrual cycle.

From the foregoing it will be seen that the present invention provides a simple, straightforward and easily usable technique to provide a woman with means for ascertaining the dates on which she is most and least likely to conceive.

While one advantageous embodiment has been chosen to illustrate the invention, it will be understood by those skilled in the art that various changes and modifications can be made therein without departing from the scope of the invention as defined in the appended claims.

What is claimed is:

1. A fertility calculator comprising: a first member having a major surface, the surface having the numbers of the days of months in four concentric rings, each of said rings corresponding to the days of one month of 28, 29, 30 and 31 days, respectively, each day number occupying the same angular space as each other, the ring corresponding to a month of 31 days occupying 360°; an opaque member mounted at its center for rotation about the center of said concentric rings of said first member with said opaque member having a major surface parallel to the major surface of said first member, said opaque member being generally circular in shape, the radius of the periphery being no greater than the smallest of said concentric rings, said opaque member having a radially outwardly extending portion with one radial edge thereof calibrated to identify said rings as being usable with months of 28, 29, 30 and 31 days, the relative portions of said first and opaque members being usable to indicate the calculate intervals of greater fecundity for a fixed menstrual cycle.

2. A calculator according to claim **1** wherein the periphery of said opaque member is divided into at least three arcuate portions to indicate, on at least one of said rings, the intervals of greater and lesser fertility.

* * * * *