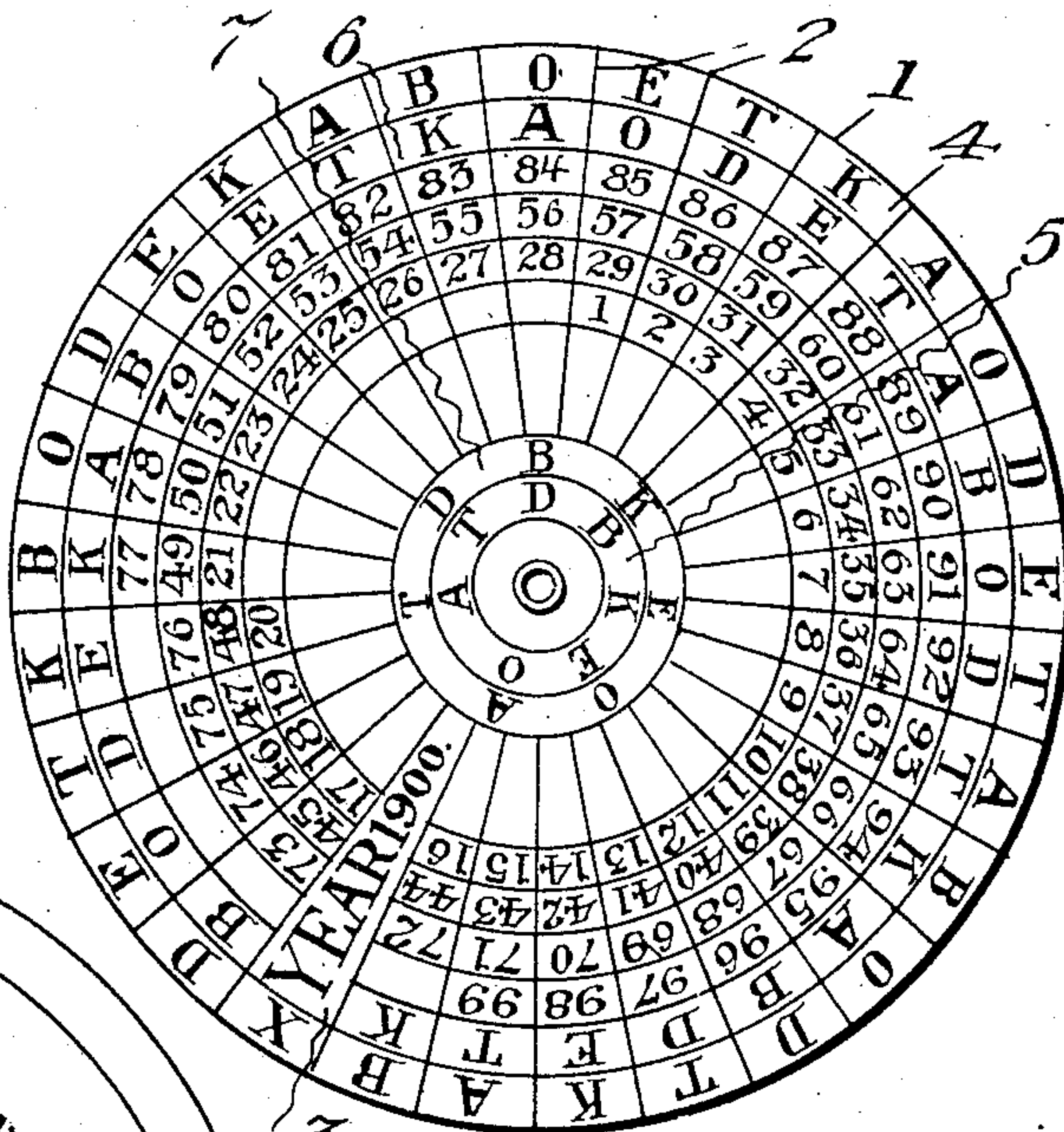


No. 786,177.

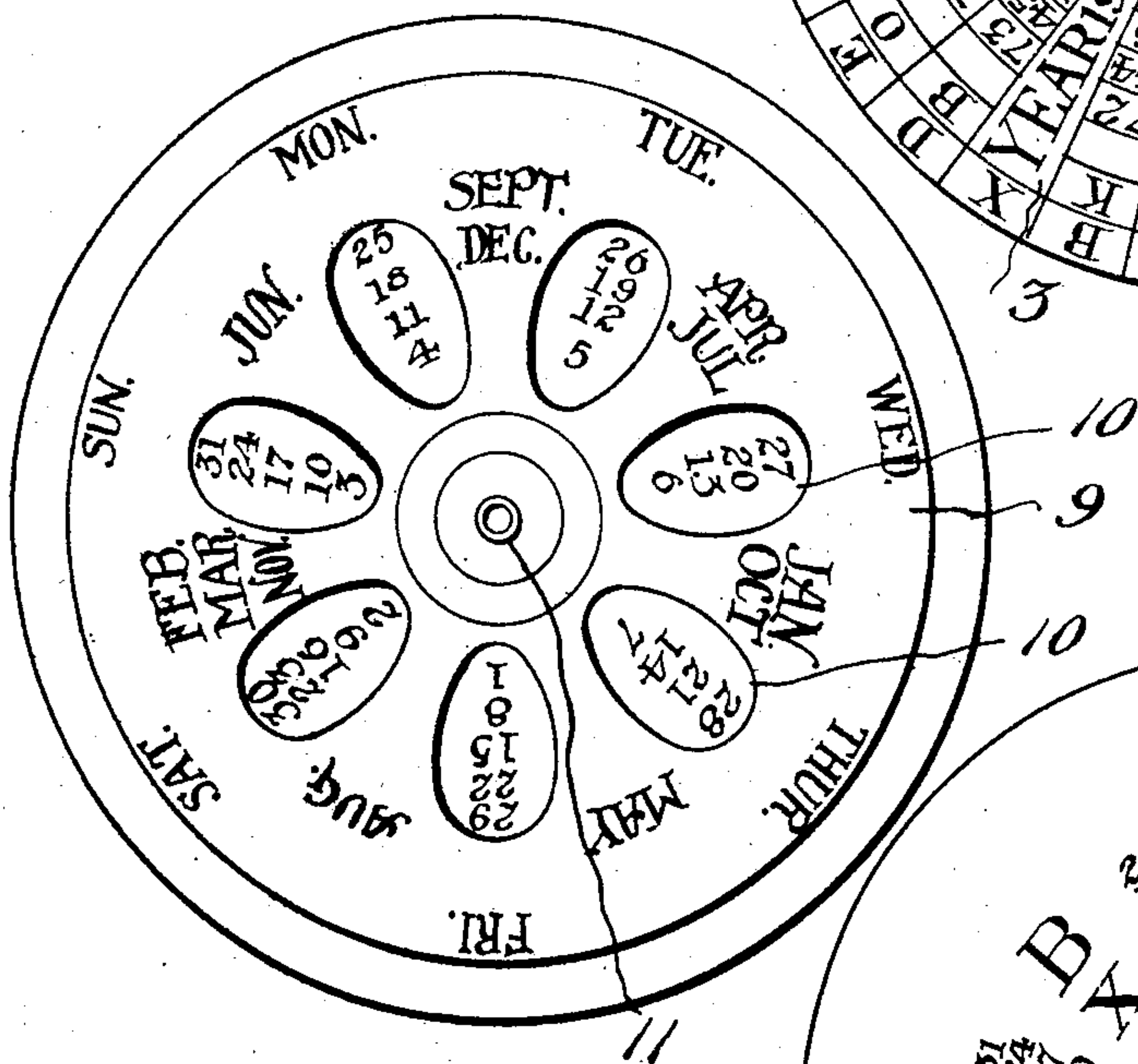
PATENTED MAR. 28, 1905.

J. ANDREW.  
DATE REFERENCE DEVICE.  
APPLICATION FILED JULY 5, 1904.

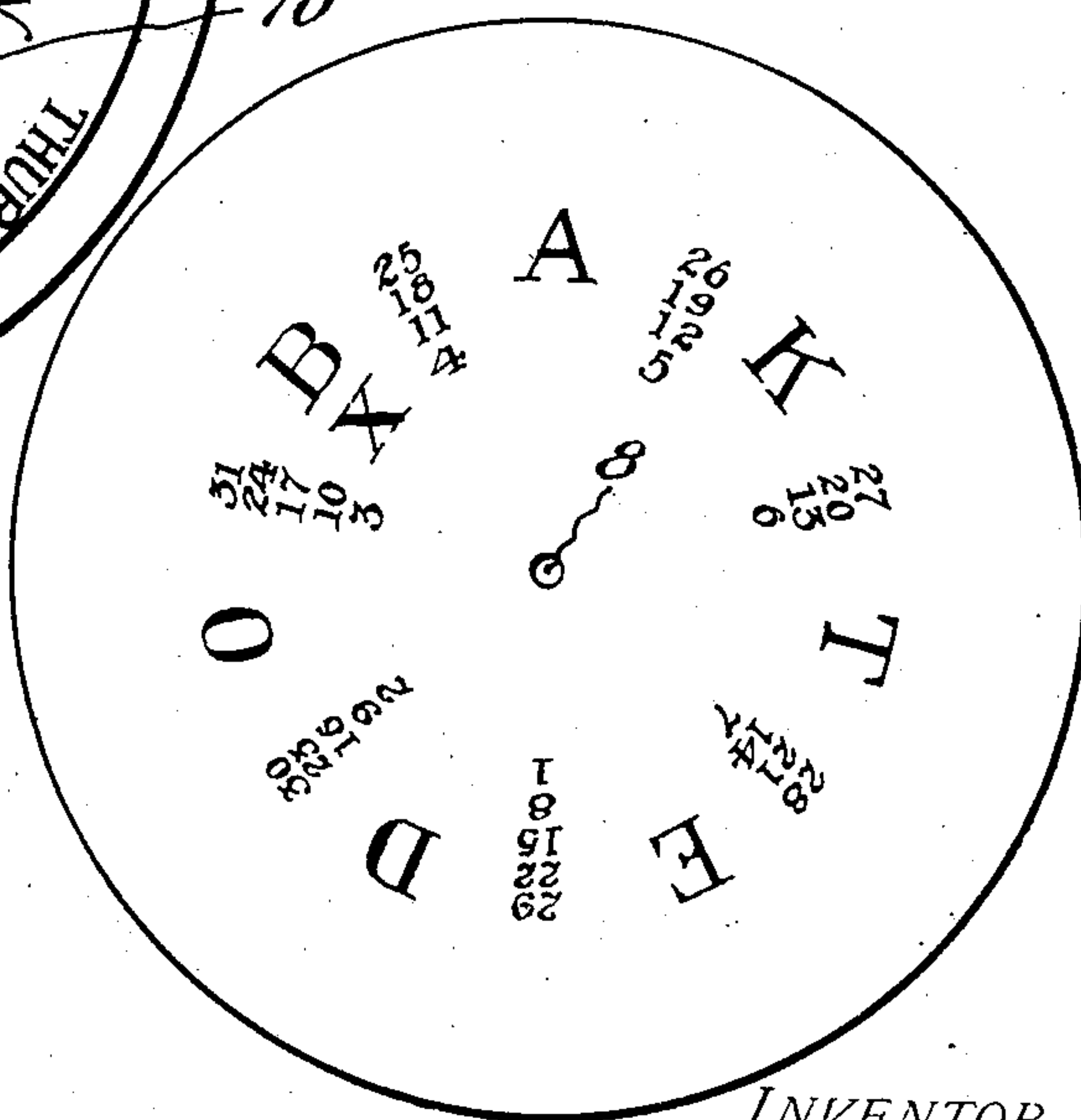
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

JAMES ANDREW, OF SAYLESVILLE, RHODE ISLAND.

## DATE REFERENCE DEVICE.

SPECIFICATION forming part of Letters Patent No. 786,177, dated March 28, 1905.

Application filed July 5, 1904. Serial No. 215,417.

*To all whom it may concern:*

Be it known that I, JAMES ANDREW, a citizen of the United States, residing at Saylesville, in the county of Providence and State of Rhode Island, have invented new and useful Improvements in Date Reference Devices, of which the following is a specification.

This invention relates to date reference devices.

The principal object of the invention is to determine the day of the week upon which a certain date in a certain month of a certain year of a century occurred in the past or will occur in the future.

A further object of the invention is to arrange in convenient and compact form the improved means for attaining the object first specified.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the arrangement of symbols and in the combination of parts hereinafter described and claimed as a practical embodiment of the invention.

In the accompanying drawings, forming part of this specification, Figure 1 is a view illustrating one side of a disk containing radiating columns of figures representing the years of a century, together with the symbols used in conjunction therewith. Fig. 2 is a similar view of a disk adapted to be mounted for rotation upon the reverse side of the disk illustrated in Fig. 1. Fig. 3 is a view showing the arrangement of symbols and numerals upon the reverse side of the disk shown in Fig. 1.

The embodiment of invention illustrated in the drawings is adapted to determine the day of the week of any given date during the nineteenth and twentieth centuries. It will be understood, however, that the idea of invention herein disclosed is capable with slight modification of being utilized to determine the day of the week of dates in other centuries than the two which have been chosen for convenience of illustration.

Referring to Fig. 1, the numeral 1 indicates a disk, which may be constructed of any suitable material. Radiating from the central portion of the disk is a plurality of columns

formed by lines, such as 2. Arranged concentrically upon the disk 1 is a series of numerals ranging from "1" to "99," each representing one year in a century. It will be observed that each column contains a plurality of the numerals or symbols which represent the years of the century and that each numeral exceeds the next lower numeral in the column by twenty-eight units. One of the columns, such as 3, is utilized to indicate the last year of the century, such as "year 1900." A series of arbitrarily-selected symbols—such, for instance, as "A," "K," "T," "E," "D," "O," "B," and "X"—is arranged around the periphery of the disk 1 in the outer concentric circle thereof, as shown, each symbol being used several times to complete the circuit. In the embodiment of invention illustrated the outer series of symbols in the circle 4 is used to indicate a year occurring in the nineteenth century, as will appear more clearly hereinafter. Similar symbols representing the leap years of the nineteenth century are arranged in the inner concentric circle 5 of the disk. The years occurring in the twentieth century are designated by a similar series of symbols arranged in the circle 6 of the disk, the leap years of said twentieth century being indicated by the similar symbols in the circle 7. It will be observed that a single symbol "X" is used to indicate the year 1900.

The reverse side of the disk illustrated in Fig. 1 is shown in Fig. 3. Arranged circularly upon said reverse side of the disk 1 is the series of symbols "A," "K," "T," "E," "D," "O," and "B," the symbol "X" being arranged beneath the symbol "B." A series of numerals ranging from "1" to "31" and indicating the days of a month is arranged concentrically upon the disk, said symbols being placed in radiating columns between the various letters or symbols. It will be observed that each numeral in the radiating columns exceeds the next lower numeral by seven units.

By means of a rivet or other suitable device extending through the central perforation of the disk 1 a similar disk 9 (illustrated in Fig. 2) is revolvably mounted upon the re-



verse side of said disk 1. The disk 9 is formed with a plurality of perforations 10. Upon the disk 1, between the perforations 10 therein, is placed a plurality of words or symbols indicating the months of the year. The names of the months are preferably arranged as illustrated in Fig. 2—that is, the months January and October between two of the perforations, May between the next two, August between the next two, February, March, and November between the next two, June between the next two, September and December between the next two, and April and July between the next two. The days of the week are indicated by suitable words or symbols arranged upon the periphery of the disk 9, as shown.

In Fig. 2 the disk 9 is represented as revolvably mounted upon the reverse side of the disk 1 by means of the rivets 11. For this reason the radiating columns of numerals representing the days of the month in Fig. 3 are visible through the perforations 10 of said disk 9, the symbols on Fig. 3 being obscured by the intervening portions of the disk between the various perforations thereof. In other words, the symbols are concealed beneath the portion of the disk 9 on which the words indicating the months of the year are placed.

Arranged as hereinbefore described the method of using the improved device is as follows: Let it be presumed that the user of the device desires to determine the day of the week on which the date July 4, 1803, occurred: The first step is to find the numeral 3 on the disk 1. This will be found in the radiating column, indicated by the symbols "K" and "E." As the date, however, occurred in the nineteenth century, only the symbol "K," which is in the circle relating to the nineteenth century, is necessary in calculating the day of the week. Having found the symbol "K," the device is reversed and the disk 9 is rotated until the portion of the said disk 9 on which the month "July" is marked covers or obscures the symbol "K." It is now necessary only to inspect the numerals denoting the days of the month, when it will be found that the numeral "4," which completes the date July 4, 1803, lies beneath the portion of the disk 9 marked "Monday." In this way it is determined that the date July 4, 1803, occurred on Monday.

Should the selected date occur after February in a leap year the leap-year symbols in the circles 5 and 7 of the disk 1 will be consulted. For instance, if the selected date were after February in the year 1832, the leap-year symbols "K" and "B" would be found at the bottom of the column. As the year would be in the nineteenth century, the symbol "B" in the leap-year circle 5, which relates to the nineteenth century, would be used in the manner described to determine the day of the week on which any particular day after

February in the year 1832 occurred, this being accomplished, as previously indicated, by revolving the disk 9 until the selected month covered or obscured the symbol "B" and then ascertaining the day of the week which was above the desired date in the month.

When it is desired to determine the day of the week of a date occurring in the year 1900, the disk 9 is rotated until the proper month covers and obscures the symbol "K," which in the embodiment of invention illustrated is arranged beneath the symbol "B."

Having thus fully described the invention, what is claimed as new is—

1. A date reference device comprising a member having columns of numerals or symbols representing the years of a century, each column having a code-symbol and said member having on its reverse side code-symbols corresponding with those on the columns, and numerals or symbols representing the days of the month; and a disk revoluble upon the first-mentioned member and containing symbols or words representing the months of the year and the days of the week, whereby when the year of a century is selected in one of the columns and the second disk is revolved upon the first until a selected month covers the symbol corresponding with the symbol of the selected year, the selected day of the month will lie beneath the symbol indicating the day of the week.

2. A date reference device comprising a member having radiating columns of numerals representing the years of a century, each numeral exceeding the next lower numeral by twenty-eight units and each column being designated by a code-symbol, the member having on its reverse side a series of code-symbols corresponding with those on the columns, and numerals or symbols representing the days of the month; and a disk having perforations and being revoluble upon the first-mentioned member, said perforated disk containing symbols or words representing the months of the year and the days of the week; whereby when the year of a century is selected in one of the columns and the disk is revolved upon the first-mentioned member until a selected month covers the symbol corresponding with the symbol of the selected year, the selected day of the month will lie beneath the symbol indicating the day of the week.

3. A date reference device comprising a disk having radiating columns containing numerals indicating the years of a century, one of the columns representing the year 1900, a plurality of concentric series of symbols representing the common years and the leap years of two centuries, and a symbol representing the year 1900; the reverse side of said disk having symbols corresponding with the symbols representing the common and leap years, a symbol representing the year 1900, and con-



centrically-arranged numerals representing the days of a month; and a perforated disk revolvably mounted upon the reverse side of the first-mentioned disk and having words or  
5 symbols indicating the days of the week and words or symbols arranged thereon between the perforations and indicating the months of a year.

4. A date reference device having columns  
10 of numerals or symbols representing the years of a century, each column having a code-symbol, an arrangement of code-symbols corresponding with those on the columns, and numerals or symbols representing the days of  
15 the month; and a disk revolvable adjacent to said last-named arrangement of code symbols

and numerals, said disk containing symbols or words representing the months of the year and the days of the week, whereby when the year of a century is selected in one of the col- 20 umns and the disk is revolved until a selected month covers the symbol corresponding with the symbol of the selected year, the selected day of the month will lie beneath the symbol indicating the day of the week. 25

In testimony whereof I affix my signature in presence of two witnesses.

JAMES ANDREW.

Witnesses:

F. L. ALLEN, Jr.,

JOHN ANDREW.