

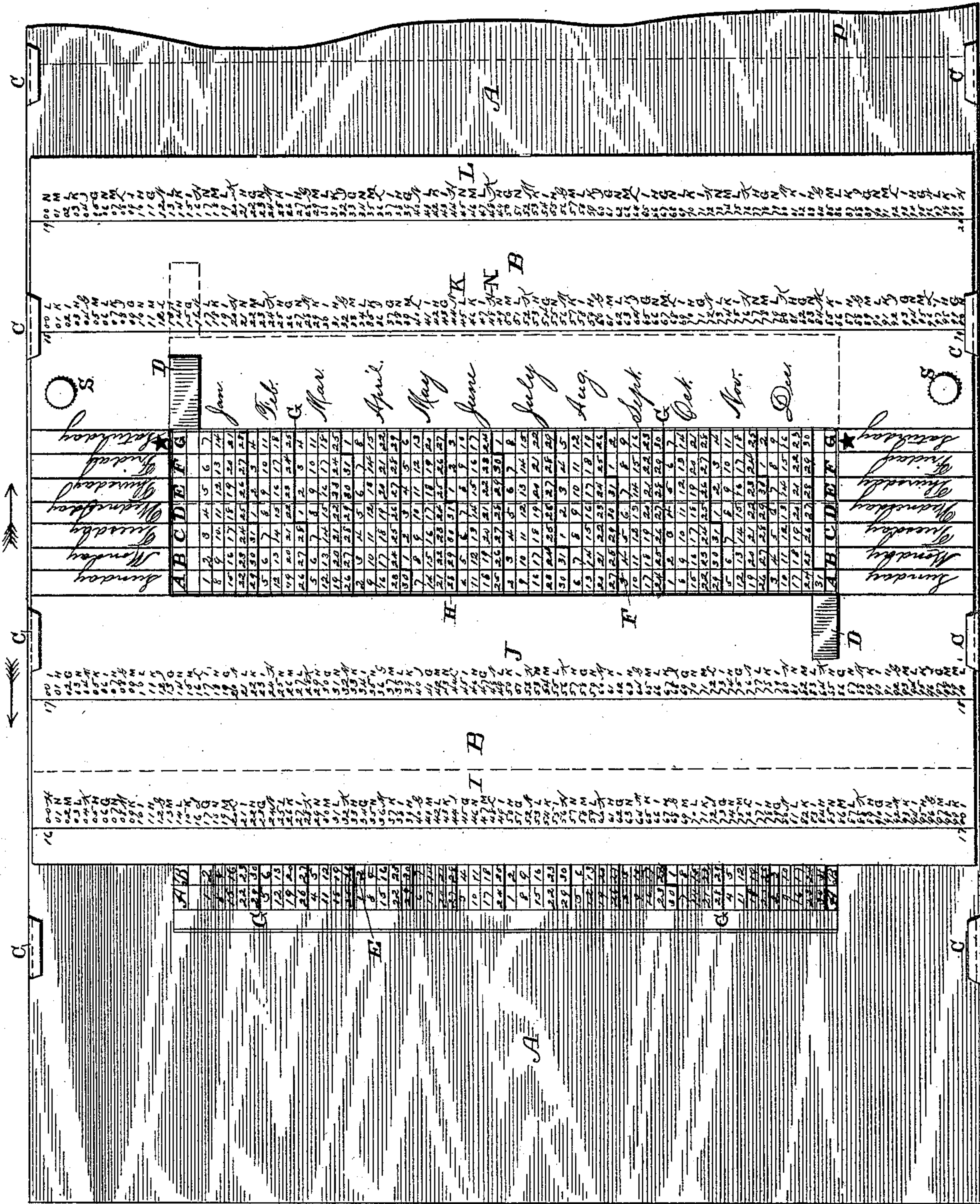
(No Model.)

2 Sheets—Sheet 1.

A. G. MASIUS.  
PERPETUAL CALENDAR.

No. 429,043.

Patented May 27, 1890.



Witnesses:  
E. P. Ellis,  
J. M. Nesbit.

Fig. 1.

Inventor:  
A. G. Masius  
per  
Lehmann & Patterson,  
Attys



2 Sheets—Sheet 2.

Patented May 27, 1890.

No. 429,043.

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E. P. Ellis,  
J. M. Nesbit.

*Fig. 2.*

A. C. Masius,  
per  
Lehmann & Pattison  
attys.



# UNITED STATES PATENT OFFICE.

ALFRED G. MASIUS, OF EGG HARBOR CITY, NEW JERSEY.

## PERPETUAL CALENDAR.

SPECIFICATION forming part of Letters Patent No. 429,043, dated May 27, 1890.

Application filed March 21, 1890. Serial No. 344,828. (No model.)

*To all whom it may concern:*

Be it known that I, ALFRED G. MASIUS, of Egg Harbor City, in the county of Atlantic and State of New Jersey, have invented certain new and useful Improvements in Perpetual Calendars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in perpetual calendars; and it consists in the peculiar arrangement of parts to be fully described hereinafter, and pointed out in the claims.

The object of my invention is to produce a calendar of the character known as "perpetual calendars," and to so arrange the figures and to so construct the parts that by the lateral adjustment of one part of the calendar in relation to the other any future or past day of the week or month of any year *ad infinitum* can be instantly ascertained, or the two parts set for any current year and secured in that relative relation by any suitable mechanical arrangement.

Figure 1 of the drawings represents a plan view of a calendar which embodies my invention complete. Fig. 2 is a detached plan view of the under or lower part of my calendar, and which contains the figures representing the days of the month.

In constructing my calendar I preferably form the lower stationary part A and the upper movable portion B of card-board of a suitable thickness to give them the required stiffness and rigidity to enable them to be conveniently handled. However, if it should be desired, both the said upper and lower parts may be made of thin wood boards and the figures printed either directly upon the boards or upon a piece of paper, which will then be secured to the boards in any convenient manner. The lower portion A will be provided with suitable guiding and supporting ears or projections C, in which the upper and lower edges of the part B loosely fit, whereby it can be freely moved back and forth over the face of the lower portion A,

for the purpose hereinafter described. For the purpose of facilitating the ready movement of the upper portion B, it will be provided with one or more lips or projections D of any kind.

The lower portion A is provided with two separate groups of figures E and F, which are themselves divided into months, as indicated by the heavy lines G, and the group E represents the leap-years and the group F the common years. Each of these groups is divided into two months crosswise and into twelve months lengthwise, thus representing upon their face twenty-four months. The vertical columns have each an index letter, number, or distinguishing character of any convenient or desired kind or nature, and the index-character of the vertical columns of the leap-year group E will be distinguished from the index-characters of the group F. This is preferably done by printing the index-characters of the leap-year group of a different color from that used in printing the index-letters of the group F. However, these may be distinguished in many other ways—such as using numerals for one group and letters for the other, or letters or numerals of different styles for each group, respectively, or characters of any description can be used. I preferably use letters, however, and place them in alphabetical order, as shown, for the purpose of convenience, as will hereinafter appear.

The upper movable portion B is preferably, though not necessarily, secured to the lower portion A by means of suitable guideways, as before described; but it may be entirely separate and disconnected from the lower portion without departing in any manner from my invention.

Made in the upper portion B is a longitudinal opening H, which is of a length equal to the length of each of the groups E F, as shown, and of a width just sufficient to allow seven vertical rows of the figures in the groups to be exposed, and which represents, therefore, seven days, or one week. Marked upon one or both sides of this opening H are the twelve months of the year, and they are placed in the proper position thereon to come opposite the monthly series of fig-



ures of the groups as divided by the heavy lines G. At one or both ends (preferably both) are marked the days of the week, as shown, and which are in spaces of a width  
5 equal to the width of the vertical columns of the two groups, so that they will register therewith as the part B is moved over the face of the part A.

Printed upon the part B are the four vertical columns I J K L of figures, and which  
10 represent the years, each column having a hundred sets of figures, which thus constitute one century for each column. Opposite each set of figures is an index-letter N, which  
15 correspond with the index-letters at the ends of the vertical columns of the groups E F. The column I represents from the year 1600 to the year 1700, the column J the next century, the column K the next, and the column  
20 L the next, thus covering a period of four centuries. Those years which are leap-years in these columns have opposite them index-letters which will correspond with the index-letters at the ends of the vertical columns  
25 of the leap-year group E. An index-star is printed at the upper and lower right-hand corners of the opening H, the purpose of which will be described hereinafter.

The operation of my invention is as follows: If it is desired to know what day of the  
30 week December 5, 1837, was, the operator will turn to the column K, which contains the years from 1800 to 1900, run down that column to the year 1837, notice the index letter or character, which in this instance is G. Now move  
35 the part B over the face of the part A until the index-stars at the corners of the opening H register with the letter G of the group F, and it will be found that December 5, 1837,  
40 was Tuesday. If it should be known that a person was born in the year 1872 on Friday preceding the 4th of July, but the date not known, then by referring to the column K and to the year 1872 it is found that the leap-year  
45 index-letter N is opposite that year. Now move the opening H over the group E until the index-stars register with the index-letter N of that year, and it will be found that the Friday preceding the 4th of July of that year  
50 was the 28th day of June.

While I show only four columns representing centuries, yet by adding to or subtracting the numeral four (4) or any multiple of four from any one of these columns they will  
55 serve to indicate any desired century. For instance, if the twelfth century were wanted, the column I would be referred to, for by subtracting four from that column, which begins with 1600, we have twelve. So, if we wanted  
60 the eighth century, by deducting eight from the column beginning with sixteen we have the eighth century, and so on *ad infinitum*. Or, if we wanted the tenth century, we would refer to the column K, for by deducting eight  
65 therefrom we have the tenth century. So, if we want a century in advance of the century

represented in the column L, we add to the columns in the same manner that has just been described of subtracting for a past century.

A space P is left at one side of the part A for the printing of instructions and useful information which it is appropriate to have accompany a calendar, such as interest-rules, &c.

I do not desire to limit my invention to the  
75 precise arrangement and construction here shown, for they may be varied without departing from the spirit of my invention. For instance, while I show the century-columns upon the movable part B, it will be readily seen  
80 that they could be placed upon the part A or upon a separate part and then referred to. I place them upon the part B for convenience only. So, also, the position of the index-stars could be changed to a different point along  
85 the edges of the opening H and the position of the index-letters at the end of the columns in groups E F changed to correspond. So, also, the lower part A could be made movable and the part B stationary and the result  
90 be the same.

Having thus described my invention, I claim—

1. A calendar consisting of two parts, one having a series of months and the other an  
95 opening for exposing the said series of months, and months indicated at the side of the opening and one part movable in relation to the other, substantially as shown.

2. In a calendar, the combination of two  
100 parts, one having a series of months and index-characters, the other having an opening for exposing the months, and a series of years having index-characters corresponding with the group of index-characters, the two parts  
105 being movable in relation to each other, for the purpose described.

3. In a calendar, the combination of two parts, one having a group of months and index-characters, the other having an opening  
110 equal in width to the width of one month and equal in length to the whole group, and a series of years having index-letters corresponding with the index-letters of the said group of months, the two parts being movable in relation to each other, substantially as shown  
115 and described.

4. In a calendar, the combination of two parts, one having a group of figures crossing it which represents two months, and figures  
120 arranged lengthwise of it which represent twelve months, an index-character for each vertical row of said figures, and the other part having an opening which exposes in width one month and in length the twelve months,  
125 and a series of figures representing years having index-characters which correspond with the index-characters of the said group, the two parts being movable in relation to each other, substantially as set forth.

5. In a calendar, the combination of two parts, one part having a series of months and

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index-characters, the other an opening having days of the weeks at the end and months at its side, a series of years and index-characters therefor to correspond with the said month index-characters, and an index-character at the end of the opening which is to be placed opposite the desired index-character at the end of the series of months, the two parts being movable in relation to each other, substantially as shown and described.

6. In a calendar, the combination of two parts, one part having a series of months and index-characters, the other an opening for exposing the months having week-days at its end and months at its side, and four columns of figures arranged to represent each a century, and index-characters for the years, the two parts being movable in relation to each other, substantially as set forth.

7. In a calendar, the combination of two parts, one part having two separate groups of months, one representing leap-years and the other the common years, distinguishing index-characters for each group, and the other part with an opening for exposing the said months, week-days at the ends and months at the sides, and a series of years having distinguishing index-characters for the leap and common years, which, respectively, correspond with the index-characters for the groups of months, substantially as specified.

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

ALFRED G. MASIUS.

Witnesses:

ALLEN S. PATTISON,  
V. P. HOFMANN.