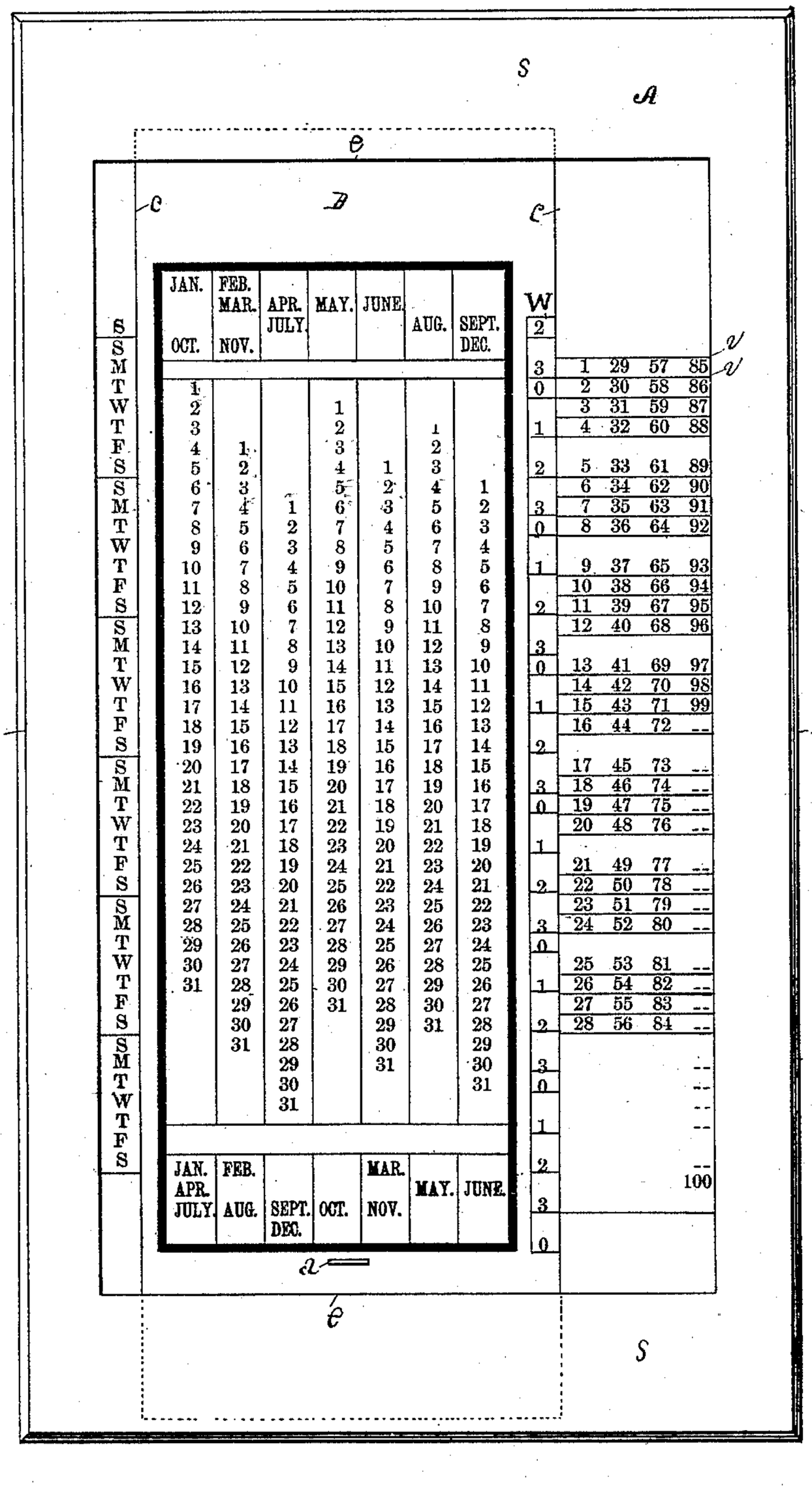
(No Model.) 2 Sheets—Sheet 1.

A. HADLOCK.

PERPETUAL CALENDAR.

No. 448,796. Fig. 1 Patented Mar. 24, 1891.



S	JAN. OCT.	FEB. MAR. NOV.	APR. JULY.	MAY.	JUNE.	AUG.	SEPT. DEC.
S	1						
M	2			1			
T	3			2		1	
W	4	1		3		2	
T	5	2		4	1	3	
F	6	3		5	2	4	1
S	7	4	1	6	3	5	2
S	8	5	2	7	4	6	3
M	9	6	3	8	5	7	4
T	10	7	4	9	6	8	5
W	11	8	5	10	7	9	6
T	12	9	6	11	8	10	7
F	13	10	7	12	9	11	8
S	14	11	8	13	10	12	9
S	15	12	9	14	11	13	10
M	16	13	10	15	12	14	11
T	17	14	11	16	13	15	12
W	18	15	12	17	14	16	13
T	19	16	13	18	15	17	14
F	20	17	14	19	16	18	15
S	21	18	15	20	17	19	16
S	22	19	16	21	18	20	17
M	23	20	17	22	19	21	18
T	24	21	18	23	20	22	19
W	25	22	19	24	21	23	20
T	26	23	20	25	22	24	21
F	27	24	21	26	23	25	22
S	28	25	22	27	24	26	23
S	29	26	23	28	25	27	24
M	30	27	24	29	26	28	25
T	31	28	25	30	27	29	26
W		29	26	31	28	30	27
T		30	27		29	31	28
F		31	28		30		29
S			29		31		30
			30				31
			31				
	JAN. APR. JULY.	FEB. AUG.	SEPT. DEC.	OCT.	MAR. NOV.	MAY.	JUNE.

W				
2				
3	1	29	57	85
0	2	30	58	86
	3	31	59	87
1	4	32	60	88
2	5	33	61	89
	6	34	62	90
3	7	35	63	91
0	8	36	64	92
1	9	37	65	93
	10	38	66	94
2	11	39	67	95
	12	40	68	96
3				
0	13	41	69	97
	14	42	70	98
1	15	43	71	99
	16	44	72	--
2				
	17	45	73	--
3	18	46	74	--
0	19	47	75	--
	20	48	76	--
1				
	21	49	77	--
2	22	50	78	--
	23	51	79	--
3	24	52	80	--
0				
	25	53	81	--
1	26	54	82	--
	27	55	83	--
2	28	56	84	--
				--
3				--
0				--
				--
1				--
				--
2				100
3				
0				

Witnesses:
Walter S. Wood
George H. Fisher

Inventor.
Alexander Hadlock
By Lucius C. West
Att'y.

(No Model.) 2 Sheets—Sheet 2.

A. HADLOCK.

PERPETUAL CALENDAR.

No. 448,796. Patented Mar. 24, 1891.

Fig. 2

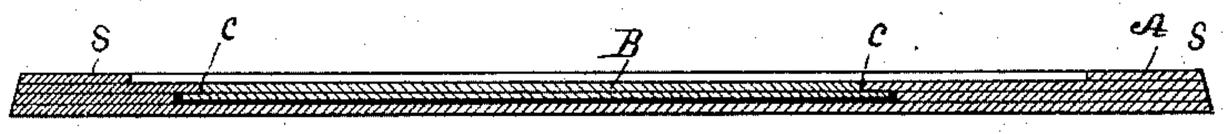
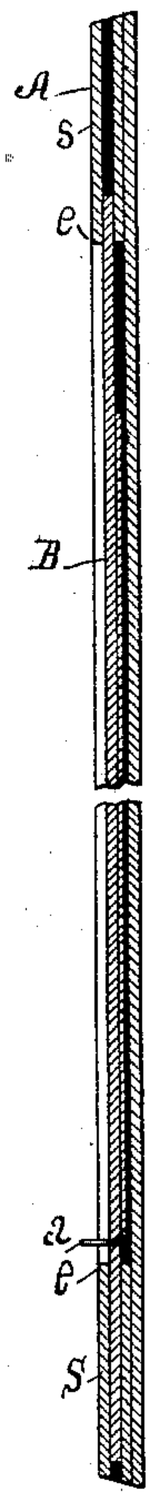


Fig. 3



Witnesses:
Walter S. Wood
George H. Fisher

Inventor.
Alexander Hadlock
By Lucius C. West
Att'y.

UNITED STATES PATENT OFFICE.

ALEXANDER HADLOCK, OF KALAMAZOO, MICHIGAN.

PERPETUAL CALENDAR.

SPECIFICATION forming part of Letters Patent No. 448,796, dated March 24, 1891.

Application filed December 27, 1890. Serial No. 375,993. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER HADLOCK, a citizen of the United States, residing at Kalamazoo, county of Kalamazoo, State of Michigan, have invented a new and useful Perpetual Calendar, of which the following is a specification.

The invention below described and claimed is a perpetual calendar.

In the drawings forming a part of this specification, Figure 1 is a plan view showing the different characters of the calendar and their arrangement. Fig. 2 is a cross-section of Fig. 1, so taken as to pass through the slide B; and Fig. 3 is a longitudinal section passing through said slide.

Referring to the lettered parts of the drawings, A represents a frame, and B a slide arranged in said frame so as to slide up and down a given distance, as explained below. *c c* represent the side limits of said slide, and *e e* the end limits of the exposed surface. *a* is a handle, by means of which the slide is moved up and down.

The construction of the frame and slide will be understood from Figs. 2 and 3. The frame and slide, as here shown, are made of card-board, and the figures and letters of the calendar are printed on their outer face; but it will be understood that they may be made of any other suitable material. That part of the frame lettered S is raised a little above the other portion of the calendar which is bounded by said part S; but this is merely a matter of taste and not an essential feature of the calendar.

In the following explanation of the significance and arrangement of the characters on the calendar the distance apart of the lines *v v* will be termed a "space." The letters on the left side of the frame of the calendar represent days of the week. The first letter S in the column indicates Saturday, and the other letters, following the first in order, indicate the days of the week following Saturday in order. The numbers on the right side of the frame of the calendar indicate the years of any century. These numbers, from 1 to 100, inclusive, are arranged in order, in four vertical columns, and also, with the exception of 100, in seven groups of four horizontal lines each. Any two consecutive groups are separated from each other one space. The last number, 100, occupies the eighth space below the last group. The relative position of this table of numbers on the right and the column of letters on the left is such that the first horizontal line of the table stands directly opposite, or in the same horizontal line with the first M in the column of letters.

The central slide bears numbers representing the days of the month for each month in the year, the names of the months, and in its right-hand margin a column lettered W in the drawings containing the remainders that may arise from dividing the number representing the hundreds of any year by four.

The numbers representing the days of the months are arranged in seven columns, the names of the months represented by each column standing at the head of the column for common years and at the foot of the column for leap-years. The arrangement of these columns with reference to their beginning is such that when the figure 1, that indicates the first day of January, is set opposite the letter that indicates the day of the week on which January begins the figure 1 of every other column, representing the first day of the month, will stand opposite the day of the week on which the month begins. In the column of remainders, the order in which the remainders recur, beginning with 2, is 2, 3, 0, 1. Every 0, except the last, occupies the next space below the immediately preceding 3. In every other case, including the last 0, the remainder occupies the second space below the immediately-preceding remainder. The position of the column of remainders on the slide B is such that the first 0 in the column stands opposite the figure 1 that indicates the first day of January. The central slide moves a distance of six spaces, its highest position being that in which the first 1 in the column of remainders stands opposite the number 1 in the table on the right and its lowest position being that in which this 1 in the column of remainders stands opposite the number 6 in the table. If the slide, as shown in Fig. 1, were three spaces lower, it would be in its lowest position, and if it were moved three spaces higher it would be in its highest position.

It will be seen that the arrangement of the column of remainders and table on the right

and the movement of the slide between its limits, all as above described, allow one 0, 1, 2, or 3 to be brought opposite any number in the table, but that no two 0's, 1's, 2's, or 3's can be brought opposite the same number.

How to use the calendar may be learned from the following directions and illustrative example:

Let it be required to set the calendar for the year 1895. First. Note the number of hundreds there are in 1895. There are eighteen. Second. Note what year of the century 1895 is. It is the ninety-fifth. Third. Divide eighteen, the number of hundreds, by four and note the remainder. It is two. Fourth. Move the central slide up or down till the remainder 2, found in column W, comes opposite 95, the year of the century, found in the table on the right. This sets the calendar for 1895. Fig. 1 shows it in this position.

Proceed in the same way to set the calendar for any other year of the Christian era—that is, always divide the hundreds by four and set the remainder opposite the year of the century.

To set the calendar for old style, observe the following rule: Divide the number of hundreds in the given year by seven, instead of by four, and note the remainder. Then set 1, found in column W, as many spaces above the year of the century, found in the table on the right, as is indicated by the remainder obtained by the first step of the rule.

For commom years find the names of the months at the top. For leap-years find them at the bottom. By new style every centennial year is a common year, unless the number representing the hundreds is divisible by four. By old style every centennial year is a leap-year. By either old style or new style the years of any century which occupy the last line of any one of the groups in the table on the right are leap-years. Those occupying any other line are common years.

A statement of the reasons which underlie the construction of the calendar is deemed unnecessary.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

The calendar consisting of the frame bearing the column of letters indicating the days of the week and the table of numbers indicating the years of any century, the relative position of said column of letters and table of numbers being as described, and consisting, further, of the central slide having sliding bearings in said frame and having seven columns of numbers representing the days of each month of the year, arranged as described, and having the names of the months at the head of the columns for common years and at the foot of the columns for leap-years, and said slide having, also, the remainders 2 3 0 1, representing the centuries, recurring in a column, as described, and occupying the position described relative to the other columns of the slide, all substantially as set forth.

In testimony of the foregoing I have hereunto subscribed my name in the presence of two witnesses.

ALEXANDER HADLOCK.

Witnesses:
DAVID PARK,
FRANK BAUMANN.