

ASTRONOMICAL INFORMATION, ETC.

CHRONOLOGICAL CYCLES.

Minutal Letter	B	Julian Period	6583
Year	28	Solar Cycle	3
Golden Number	9	Roman Indiction	13

SIGNS OF THE PLANETS.

The Sun.	☉ or ☿	The Earth.	♁	Saturn.
The Moon.	☾	Mars.	♂	Uranus.
Mercury.	☿	Jupiter.	♃	Neptune.
Venus.	♀			

SIGNS OF THE ZODIAC.

♈ Aries.	♌ Leo.	♏ Sagittarius.
♉ Taurus.	♍ Virgo.	♐ Capricornus.
♊ Gemini.	♎ Libra.	♑ Aquarius.
♋ Cancer.	♏ Scorpio.	♒ Pisces.

ASPECTS.

1. Conjunction, or having the same Longitude or Right Ascension.
2. Quadrature, or differing 90° in " " "
3. Opposition, or differing 180° in " " "

ABBREVIATIONS.

♊ Ascending Node.	° Degrees.
♋ Descending Node.	' Minutes of Arc.
N. North. S. South.	" Hours.
E. East. W. West.	" Minutes of Time.

ECLIPSES IN 1870.

In the year 1870 there will be six eclipses, — four of the Sun and two of the Moon.

I. A total eclipse of the Moon, January 17, 1870. The penumbral phase is partly visible throughout the United States. The partial phase is partly visible throughout the Western States. The total phase is partly visible in Colorado, Utah, etc., and wholly visible in the Pacific States.

	Washington Time.	Chicago Time.	Salt Lake Time.	San Francisco Time.
	h. m.	h. m.	h. m.	h. m.
Moon enters Penumbra	6 47.3 A.M.	6 51 A.M.	4 23.9 A.M.	3 46.9 A.M.
Moon enters Shadow	7 49.3 A.M.	7 53 A.M.	5 25.9 A.M.	4 48.9 A.M.
Total phase begins	8 48.5 A.M.	8 53 A.M.	6 23.1 A.M.	5 47.1 A.M.
Middle of total phase	9 38.1 A.M.	9 43 A.M.	7 13.7 A.M.	6 37.7 A.M.
Total phase ends	10 27.7 A.M.	10 32 A.M.	8 3 A.M.	7 27.3 A.M.
Moon leaves Shadow	11 27.9 A.M.	11 32 A.M.	9 8.5 A.M.	8 26.5 A.M.
Moon leaves Penumbra	0 29.0 P.M.	11 48.8 A.M.	10 9.6 A.M.	9 27.7 A.M.

Magnitude of eclipse = 1.664 (Moon's diameter = 1).

II. A partial eclipse of the Sun, January 30, 1870. Visible only in the Antarctic region.

III. A partial eclipse of the Sun, June 28, 1870. Visible at Sydney and at Melbourne, in Australia, and in New Zealand. Invisible in America. Magnitude of the eclipse = 0.633 (Sun's diameter = 1).

IV. A total eclipse of the Moon, July 12, 1870. More or less of the penumbral phase is visible east of the Mississippi River, and part of the partial phase is visible in Eastern New England.

	Chicago Time.	Washington Time.	Boston Time.
	h. m.	h. m.	h. m.
Total phase ends	5 34.3 P.M.	6 16.5 P.M.	6 40.2 P.M.
Moon leaves Shadow	6 34.0 P.M.	7 16.2 P.M.	7 39.9 P.M.
Moon leaves Penumbra	7 32.4 P.M.	8 14.6 P.M.	8 38.3 P.M.

V. A partial eclipse of the Sun, July 27, 1870. Visible in Northern Alaska. Magnitude of greatest eclipse = 0.073 (Sun's diameter = 1).

VI. A total eclipse of the Sun, December 22, 1870. In the United States, only a very small portion of the penumbral phase is visible just after sunrise in the northeastern extremity of Maine. The penumbral phase is visible over the North Atlantic Ocean, Europe, Eastern Asia, and Northern Africa. The total phase is visible in Southern Spain, the southeastern extremity of Italy, in Greece, and in Turkey. The eclipse is total at apparent noon in longitude 5° 4' 8" east of Greenwich, or 13° 2' 3" west of Ferro, and in latitude 36° 26' 8" north. At this point the duration of totality is two minutes.

TIDES.

To find the time of high tide, enter the following table* at the

* From the Coast Survey Report for 1864.

top with the name of the place, and at the side with the hour of the moon's southing found in the calendar, and in the body of the table will be found a number which, added to the time of the moon's southing, will give the time of high tide.

Time of Moon's Southing.	Boston, Mass.	New York, N. Y.	Philadelphia, Penn.	Old Pt. Comfort, Va.	Baltimore, Md.	Southville, N. C.	Charleston, S. C.	Fort Pulaski, Savannah, Ga.	Key West, Fla.	San Francisco, Cal.
h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
0 0	11 33	8 20	1 31	6 47	6 47	6 47	6 47	6 47	6 47	6 47
0 30	11 33	8 18	1 28	6 43	6 43	6 43	6 43	6 43	6 43	6 43
1 0	11 23	8 15	1 25	6 37	6 37	6 37	6 37	6 37	6 37	6 37
1 30	11 24	8 10	1 21	6 31	6 31	6 31	6 31	6 31	6 31	6 31
2 0	11 20	8 6	1 18	6 26	6 26	6 26	6 26	6 26	6 26	6 26
2 30	11 16	8 0	1 14	6 21	6 21	6 21	6 21	6 21	6 21	6 21
3 0	11 13	7 55	1 11	6 17	6 17	6 17	6 17	6 17	6 17	6 17
3 30	11 10	7 52	1 8	6 13	6 13	6 13	6 13	6 13	6 13	6 13
4 0	11 7	7 52	1 6	6 11	6 11	6 11	6 11	6 11	6 11	6 11
4 30	11 6	7 52	1 3	6 10	6 10	6 10	6 10	6 10	6 10	6 10
5 0	11 6	7 53	1 0	6 10	6 10	6 10	6 10	6 10	6 10	6 10
5 30	11 9	7 56	0 59	6 13	6 13	6 13	6 13	6 13	6 13	6 13
6 0	11 13	7 59	0 59	6 19	6 19	6 19	6 19	6 19	6 19	6 19
6 30	11 19	8 5	1 1	6 25	6 25	6 25	6 25	6 25	6 25	6 25
7 0	11 25	8 11	1 7	6 32	6 32	6 32	6 32	6 32	6 32	6 32
7 30	11 32	8 17	1 15	6 38	6 38	6 38	6 38	6 38	6 38	6 38
8 0	11 38	8 23	1 23	6 44	6 44	6 44	6 44	6 44	6 44	6 44
8 30	11 43	8 27	1 29	6 49	6 49	6 49	6 49	6 49	6 49	6 49
9 0	11 47	8 32	1 34	6 52	6 52	6 52	6 52	6 52	6 52	6 52
9 30	11 49	8 34	1 39	6 54	6 54	6 54	6 54	6 54	6 54	6 54
10 0	11 49	8 35	1 42	6 53	6 53	6 53	6 53	6 53	6 53	6 53
10 30	11 48	8 34	1 45	6 52	6 52	6 52	6 52	6 52	6 52	6 52
11 0	11 47	8 31	1 41	6 50	6 50	6 50	6 50	6 50	6 50	6 50
11 30	11 43	8 25	1 37	6 48	6 48	6 48	6 48	6 48	6 48	6 48

PLANETS.

Mercury will be visible about the 10th of May, after sunset, and about the 20th of October, before sunrise. On the 10th of May it may be distinguished from Jupiter by being farther from the sun.

Venus will be an evening star until about the 22d of February, attaining its greatest brilliancy about the 17th of January. After the 23d of February it will be a morning star until the 7th of December, attaining its greatest brilliancy on the 30th of March. After the 8th of December it will again be an evening star.

Mars, which in January will be visible after sunset, will begin to rise before the sun during the second week of April, and will continue to rise earlier and earlier throughout the year, without ever reaching opposition and its maximum brilliancy. Upon the last day of December it will rise at about 11h. 10m. p. m.

Jupiter will be seen in the evening, from the 1st of January to the latter part of May. It will at first be seen in the constellation Aries, and after the 4th of January will move into Taurus, passing between the Pleiades and the red star Aldebaran. On the 1st of January it will set at about 2h. 50m. a. m., on the 1st of February, at 0h. 50m. a. m., on the 1st of March, at 11h. 20m. p. m., on the 1st of April, at 9h. 45m. p. m., on the 1st of May at 8h. 20m. p. m., and on the 1st of June at 7h. 0m. p. m. Early in June Jupiter will begin to be a morning star, and will rise earlier and earlier throughout the year, reaching its quadrature on the 17th of September, and opposition on the 12th of December. During the whole of this time it will be in the constellation Taurus. It will move away from Aldebaran until the 14th of October, when it will be stationary, and after that it will slowly approach that red star again.

Saturn will throughout the year be between the constellations Scorpio and Sagittarius, but nearer to the latter and between the two branches of the milky-way, or in the westernmost one. At the beginning of the year it will be a morning star. On the 18th of March it will be in quadrature, and about the middle of April will begin to rise before midnight. On the 16th of June it will come to opposition, after which it will be visible longer before midnight than after. It will again reach its quadrature on the 14th of September, after which it may be regarded as an evening star. On the 22d of December it will be in conjunction with the sun. (This planet will twice be stationary among the stars; namely, on the 6th of April, and on the 26th of August.)

The greatest elevation of the earth above the plane of the ring which will occur in fifteen years takes place about the first of October, 1870. The planet will, on the whole, be most favorably situated for observation during July, August, and September. In several books, August, 1869, is stated to have been the best time for observations of the rings, but this is incorrect.

Uranus will come to opposition on the 9th of January, and Neptune will be in the same situation on the 13th of October.

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WITH ILLUSTRATIONS BY

DARLEY, GILBERT, EYTINGE, BROWN, FENN, DU MAURIER, HOMER, FREDERICKS, HENNESSY, HOPPIN, PERKINS, AND OTHERS.

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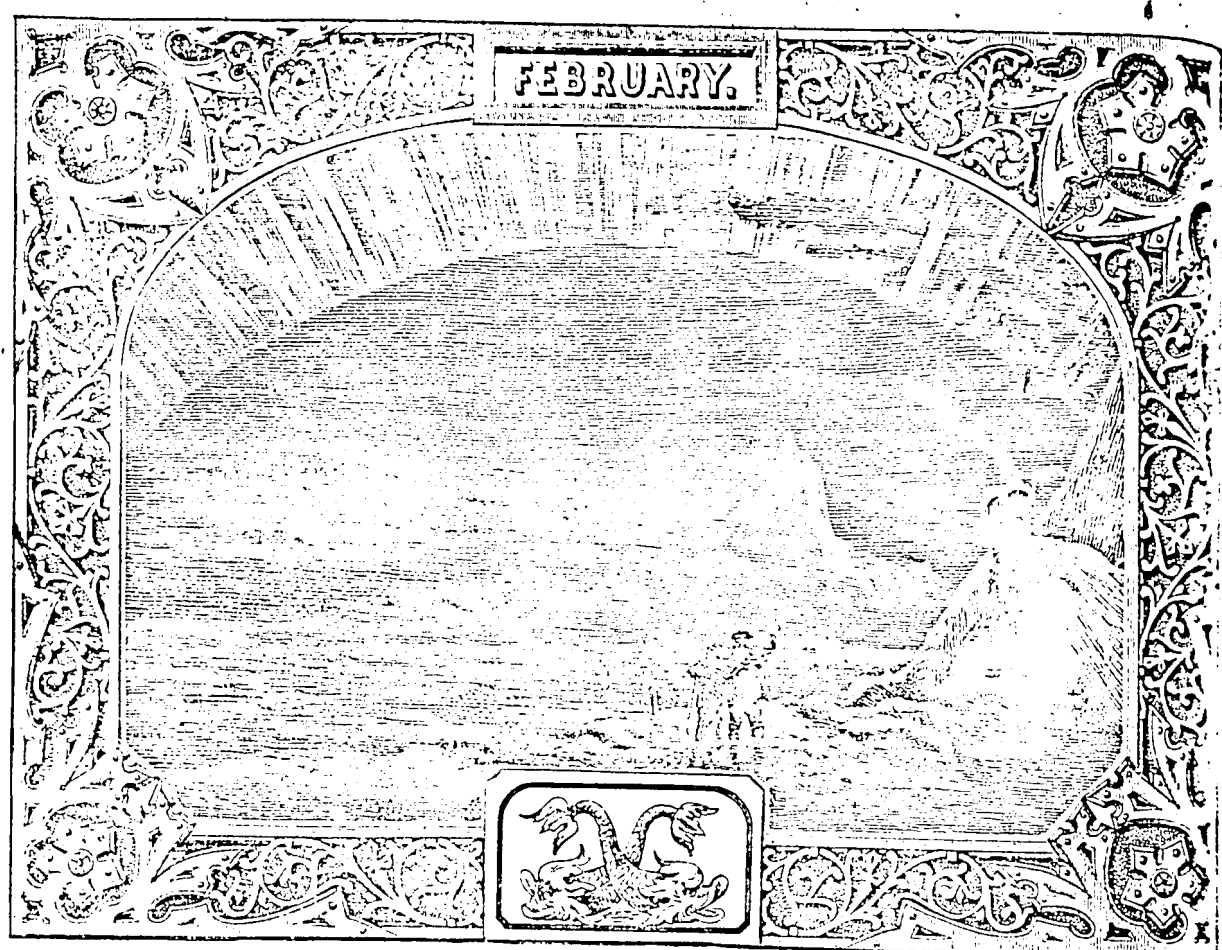
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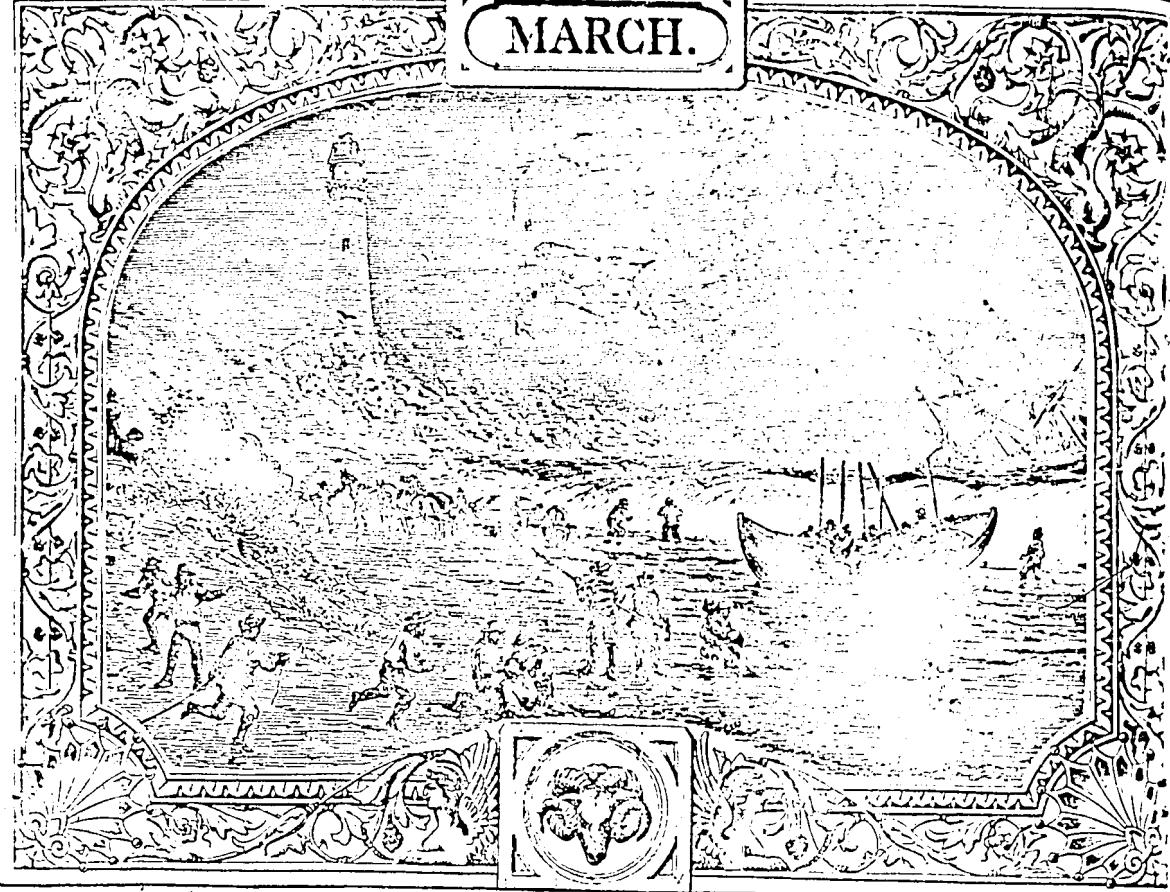


			THE SUN.						THE MOON.						PHENOMENA.		SUNDAYS, HOLY DAYS, and ANNIVERSARIES.	
Day of Year.	Day of Month.	Day of Week.	Latitude of Boston.		Latitude of New York.		Latitude of Wash. Ton.		Washington.		Boston.		New York.		Wash. Ton.		San Fran.	
			Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	Age at Noon.	South.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.		
1	1	Sat.	7 29	4 39	7 23	4 45	7 19	4 49	29 6	11 47	4 34	4 40	4 45	4 55			Circumcision.	
2	2	S.	29	40	23	46	19	50	0 7	11 47	5 33	5 38	5 43	5 53			2d Sun. after Christmas.	
3	3	Mo.	29	41	23	46	19	51	1 7	1 37	6 34	6 38	6 43	6 52				
4	4	Tu.	29	42	23	47	19	52	2 7	2 28	7 36	7 40	7 44	7 52				
5	5	Wd.	29	43	23	48	19	53	3 7	3 16	8 38	8 40	8 43	8 54				
6	6	Th.	29	44	23	49	19	54	4 7	4 1	9 38	9 40	9 42	9 49			Epiphany.	
7	7	Fri.	29	45	23	50	19	55	5 7	4 44	10 37	10 38	10 39	10 45				
8	8	Sat.	29	46	23	51	19	56	6 7	5 25	11 35	11 35	11 35	11 41			Lucian. Battle of New Orleans.	
9	9	S.	29	47	23	52	19	57	7 7	6 7	mor.	mor.	mor.	mor.			1st Sun. after Epiphany.	
10	10	Mo.	29	48	23	53	19	58	8 7	6 49	33	33	32	36				
11	11	Tu.	28	49	23	54	18	59	9 7	7 32	1 32	1 30	1 28	1 32				
12	12	Wd.	28	50	22	56	18	50	10 7	8 17	2 31	2 28	2 25	2 29				
13	13	Th.	28	51	22	57	18	1	11 7	9 6	3 32	3 29	3 25	3 29				
14	14	Fri.	27	52	22	58	18	2	12 7	9 57	4 34	4 29	4 25	4 28				
15	15	Sat.	27	54	21	59	17	3	13 7	10 52	5 34	5 29	5 24	5 26				
16	16	S.	26	55	21	50	17	4	14 7	11 48	rises.	rises.	rises.	rises.			2d Sun. after Epiphany.	
17	17	Mo.	26	56	20	1	16	5	15 7	mor.	5 10	5 14	5 19	5 29				
18	18	Tu.	25	57	20	2	16	6	16 7	45	6 18	6 22	6 26	6 35				
19	19	Wd.	25	58	19	3	15	7	17 7	1 41	7 28	7 32	7 36	7 44			Prisca.	
20	20	Th.	24	50	19	4	15	8	18 7	2 36	8 42	8 43	8 46	8 54				
21	21	Fri.	23	1	18	5	14	10	19 7	3 29	9 54	9 54	9 55	10 2			Fabian.	
22	22	Sat.	23	2	17	7	14	11	20 7	4 21	11 5	11 5	11 5	11 11			Agnes.	
23	23	S.	22	3	17	8	13	12	21 7	5 12	mor.	mor.	mor.	mor.			Vincent.	
24	24	Mo.	21	4	16	9	12	13	22 7	6 3	16	15	14	19			3d Sun. after Epiphany.	
25	25	Tu.	20	5	15	10	12	14	23 7	6 55	1 27	1 24	1 22	1 27				
26	26	Wd.	20	7	15	12	11	15	24 7	7 48	2 37	2 33	2 29	2 34				
27	27	Th.	19	8	14	13	11	16	25 7	8 42	3 44	3 40	3 35	3 40			Conversion of Paul.	
28	28	Fri.	18	9	13	14	10	17	26 7	9 38	4 48	4 43	4 38	4 42				
29	29	Sat.	17	11	12	16	9	19	27 7	10 33	5 46	5 41	5 36	5 39				
30	30	S.	16	12	11	17	8	20	28 7	11 27	sets.	sets.	sets.	sets.			4th Sun. after Epiphany.	
31	31	Mo.	7 15	13 7	10 5	18 7	7 5	21 0	1 P.M.	19	5 21	5 25	5 30	5 38				



			THE SUN.						THE MOON.						PHENOMENA.		SUNDAYS, HOLY DAYS, and ANNIVERSARIES.	
Day of Year.	Day of Month.	Day of Week.	Latitude of Boston.		Latitude of New York.		Latitude of Wash. Ton.		Washington.		Boston.		New York.		Wash. Ton.		San Fran.	
			Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	Age at Noon.	South.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.		
32	1	Tu.	7 14	5 15	7 9	5 19	7 6	5 22	1 1	1 8	6 23	6 26	6 30	6 37			2d, 4 P.M. ☉ ☽ ☿ +9° 28'	
33	2	Wd.	13	16	9	21	6	23	2 1	1 54	7 25	7 27	7 29	7 36			2d, 9 P.M. ☉ ☽ ☿ Inf.	
34	3	Th.	12	17	8	22	5	24	3 1	2 38	8 25	8 26	8 27	8 34			3d, 10 A.M. ☉ gr. hel. Lat. N.	
35	4	Fri.	10	19	6	23	4	25	4 1	3 20	9 24	9 24	9 24	9 30			5th, 4 P.M. ☉ ☽ ☿ +3° 47'	
36	5	Sat.	9	20	5	24	3	26	5 1	4 2	10 22	10 21	10 21	10 26			6th, 4 A.M. ☉ ☽ ☿ +4° 24'	
37	6	S.	8	21	4	25	2	28	6 1	4 43	11 20	11 18	11 17	11 21			7th, 9 P.M. ☉ ☽ ☿ +4° 24'	
38	7	Mo.	7	23	3	26	0	29	7 1	5 26	mor.	mor.	mor.	mor.			7th, 12 P.M. ☉ in Perihelion.	
39	8	Tu.	6	24	2	27	6 59	30	8 1	6 9	18	16	14	17				
40	9	Wd.	5	25	1	29	58	31	9 1	6 56	1 18	1 15	1 11	1 16				
41	10	Th.	3	26	0	30	57	32	10 1	7 45	2 18	2 14	2 10	2 13				
42	11	Fri.	2	28	6 59	31	56	33	11 1	8 37	3 18	3 13	3 8	3 12			11th, 10 A.M. ☉ in Perihelion.	
43	12	Sat.	1	29	57	32	55	35	12 1	9 32	4 17	4 12	4 6	4 10				
44	13	S.	6 59	30	56	34	54	36	13 1	10 28	5 12	5 7	5 2	5 6			13th, 3 A.M. ☉ ☽ ☿ +1° 22'	
45	14	Mo.	58	32	55	35	53	37	14 1	11 26	6 3	5 58	5 53	5 58			14th, 8 P.M. ☉ stationary.	
46	15	Tu.	57	33	53	36	51	38	15 1	A.M. rises.	rises.	rises.	rises.					
47	16	Wd.	55	34	52	37	50	39	16 1	23	6 21	6 24	6 26	6 35				
48	17	Th.	54	35	51	38	49	40	17 1	1 18	7 36	7 37	7 39	7 46			17th, 11 P.M. ☉ ☽ ☿ +1° 22'	
49	18	Fri.	52	37	50	39	48	41	18 1	2 12	8 47	8 48	8 48	8 55			18th, 4 A.M. ☉ ☽ ☿ +1° 21'	
50	19	Sat.	51	38	48	41	47	42	19 1	3 5	10 5	10 4	10 3	10 8				
51	20	S.	49	39	47	42	45	43	20 1	3 58	11 18	11 15	11 13	11 18			Septuagesima Sunday.	
52	21	Mo.	48	41	45	43	44	45	21 1	4 51	mor.	mor.	mor.	mor.			Valentine.	
53	22	Tu.	46	42	44	44	42	46	22 1	5 44	29	26	22	28			Washington's Birthday.	
54	23	Wd.	45	43	42	45	41	47	23 1	6 39	1 38	1 33	1 29	1 34			23d, ☉ ☽ ☿ Inf.	
55	24	Th.	43	44	41	46	39	48	24 1	7 33	2 42	2 38	2 33	2 37			24th, 6 A.M. ☉ ☽ ☿ +1° 26'	
56	25	Fri.	42	45	40	48	38	49	25 1	8 28	3 42	3 37	3 31	3 35				
57	26	Sat.	40	47	38	49	37	50	26 1	9 22	4 44	4 30	4 24	4 27			26th, 10 P.M. ☉ in ☿	
58	27	S.	38	48	37	50	35	51	27 1	10 13	5 19	5 15	5 10	5 14			27th, 6 P.M. ☉ ☽ ☿ +1° 28'	
59	28	Mo.	6 37	5 49	6 35	51	6 34	5 52	28 1	11 3	5 58	5 54	5 50	5 54			28th, 3 P.M. ☉ gr. elon. W. 27° 6'	

MARCH.



Day of Year.	Day of Month.	Day of Week.	THE SUN.						THE MOON.						PHENOMENA.						SUNDAYS, HOLY DAYS, and ANNIVERSARIES.		
			Latitude of Boston.		Latitude of New York.		Latitude of Wash. Ton.		WASHINGTON.		Bos- TON.	NEW YORK.	WASH- ING- TON.		SAN FRAN.	Moon's Phases. d. h. m.							
			Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.		h. m.	h. m.
			h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.		h. m.	h. m.
60	1	Tu.	6 35	5 51	6 33	5 52	6 32	5 53	29 1	11 49	5 18	5 21	5 23	5 30	1st, 12 P.M. ♀ gr. hel. Lat. N	Shrove Tuesday, Le-							
61	2	Wd.	34	52	32	53	31	54	0 8	P.M. 34	6 14	6 16	6 18	6 25	2d, 6 A.M. ♂ ♂ . . ♂ +2° 54'	Ash Wednesday, Co-							
62	3	Th.	32	53	30	54	29	55	1 8	1 17	7 14	7 14	7 15	7 21	5th, 1 A.M. ♂ ♀ . . ♀ +3° 41'								
63	4	Fri.	30	54	29	55	28	56	2 8	1 58	8 12	8 12	8 12	8 17	5th, 8 P.M. ♂'s Apogee.								
64	5	Sat.	29	55	27	56	26	57	3 8	2 40	9 10	9 9	9 8	9 12	6th, 12 P.M. ♂ ♀ . . ♀ +4° 13'	[Quadrangle] 1st Sunday in Le-							
65	6	S.	27	56	26	57	25	58	4 8	3 22	10 9	10 7	10 5	10 8	Perpetua.								
66	7	Mo.	26	58	25	59	23	59	5 8	4 4	11 7	11 4	11 1	11 5									
67	8	Tu.	24	59	23	6 0	22	6 0	6 8	4 49	mor.	mor.	11 59	mor.									
68	9	Wd.	23	6 0	21	1	21	1	7 8	5 36	6	3	mor.	2	9th, 2 A.M. ♀ in Aphelion.								
69	10	Th.	21	1	20	2	19	2	8 8	6 26	1 3	1 1	56	1 0	10th, 6 A.M. ♂ ♀ ♀ . . ♀ -9° 51'								
70	11	Fri.	19	2	18	3	18	3	9 8	7 18	2 2	1 58	1 53	1 56	12th, 1 P.M. ♂ ♂ . . ♂								
71	12	Sat.	17	3	17	4	16	4	10 8	8 12	2 57	2 53	2 48	2 51	12th, 1 P.M. ♂ ♂ . . ♂ +1° 16'	Gregory.							
72	13	S.	15	4	15	5	14	5	11 8	9 8	3 48	3 44	3 39	3 43	14th, 2 P.M. ♀ stationary.	2d Sunday in Le-							
73	14	Mo.	14	6	13	6	13	6	12 8	10 5	4 36	4 32	4 27	4 32									
74	15	Tu.	12	7	12	7	11	7	13 8	11 1	5 19	5 16	5 12	5 17									
75	16	Wd.	10	8	10	8	10	8	14 8	11 56	rises.	rises.	rises.	rises.									
76	17	Th.	9	9	9	9	8	9	15 8	A.M.	6 26	6 26	6 27	6 34	18th, 6 A.M. ♂'s Perigee.	Patrick.							
77	18	Fri.	7	10	7	10	7	10	16 8	51	7 42	7 42	7 21	7 47	18th, 8 P.M. ☐ h ☉								
78	19	Sat.	5	12	5	11	5	11	17 8	1 45	8 59	8 57	8 35	8 59		[begins.]							
79	20	S.	3	13	3	12	4	12	18 8	2 40	10 14	10 11	10 8	10 13	20th, 2 P.M. ☉ enters ♉ spring	3d Sunday in Le-							
80	21	Mo.	1	14	2	14	2	13	19 8	3 36	11 26	11 22	11 18	11 23	Benedict.								
81	22	Tu.	0	15	0	15	0	14	20 8	4 32	mor.	mor.	mor.	mor.									
82	23	Wd.	5 58	16 5 58	16 5 59	15 21	8 5 28	25 31	26 30						23d, 3 P.M. ♂ h ☉ . . h -1° 6'								
83	24	Th.	56	17 57	17 57	16 22	8 6 24	137 132	127 130														
84	25	Fri.	55	18 55	18 55	17 23	8 7 18	232 227	222 225														
85	26	Sat.	53	19 54	19 54	18 24	8 8 11	320 314	310 314														
86	27	S.	51	21 52	20 52	19 25	8 9 0	4 0	3 56	3 52	3 56				26th, 2 A.M. ☉ stationary.								
87	28	Mo.	49	22 50	21 51	20 26	8 9 47	4 35	4 31	4 27	4 32				28th, 5 A.M. ♂ ♀ ☉ . . ♀ +7° 30'								
88	29	Tu.	47	23 48	22 49	21 27	8 10 32	5 5	5 1	4 59	5 5				29th, 0 A.M. ♀ gr. hel. Lat. S.								
89	30	Wd.	45	24 46	23 47	22 28	8 11 15	5 32	5 29	5 27	5 34				30 h, 1 P.M. ♂ ♀ ☉ . . ♀ +22° 21'								
90	31	Th.	44	25 45	24 46	23 29	8 11 57	5 57	5 54	5 54	6 2				30th, ♀ at greatest brilliancy.								

APRIL.



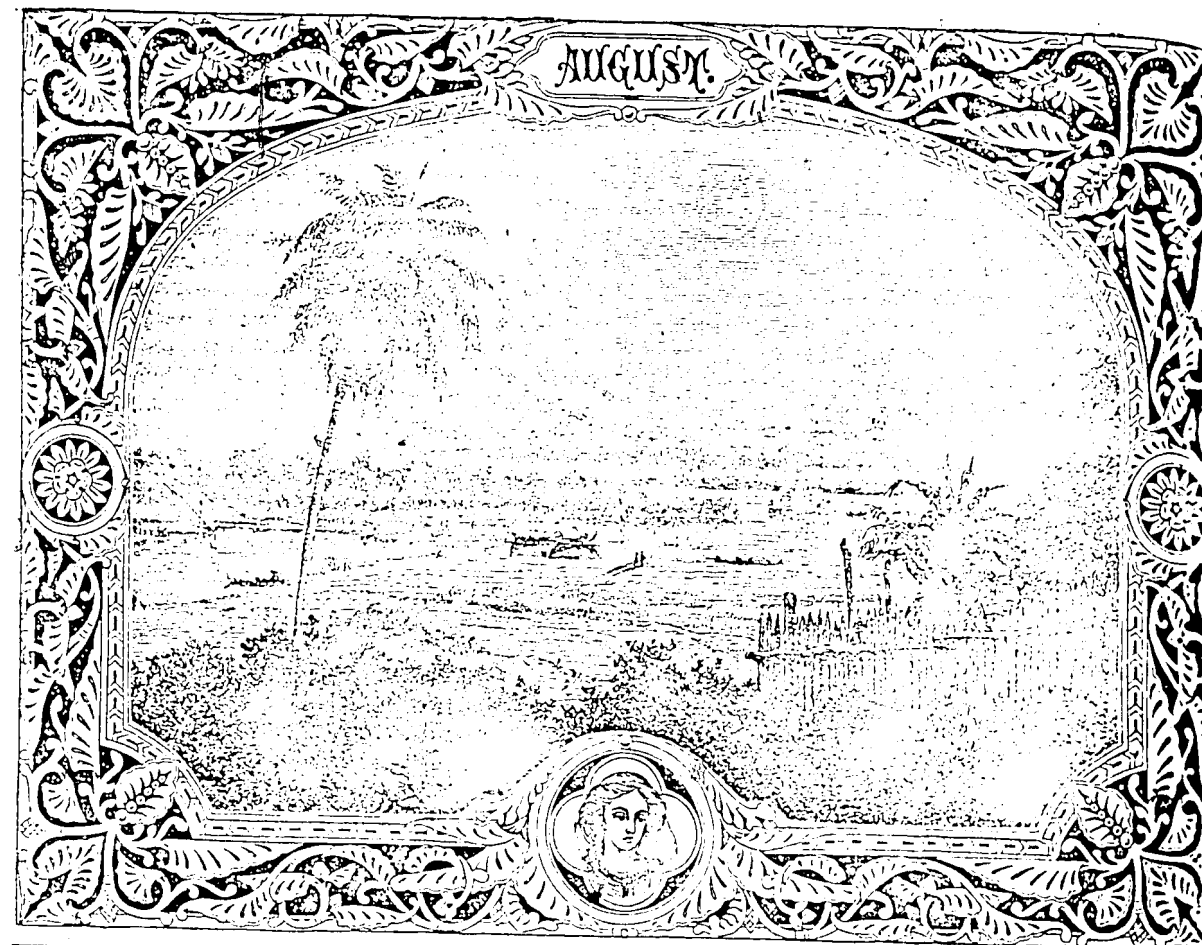
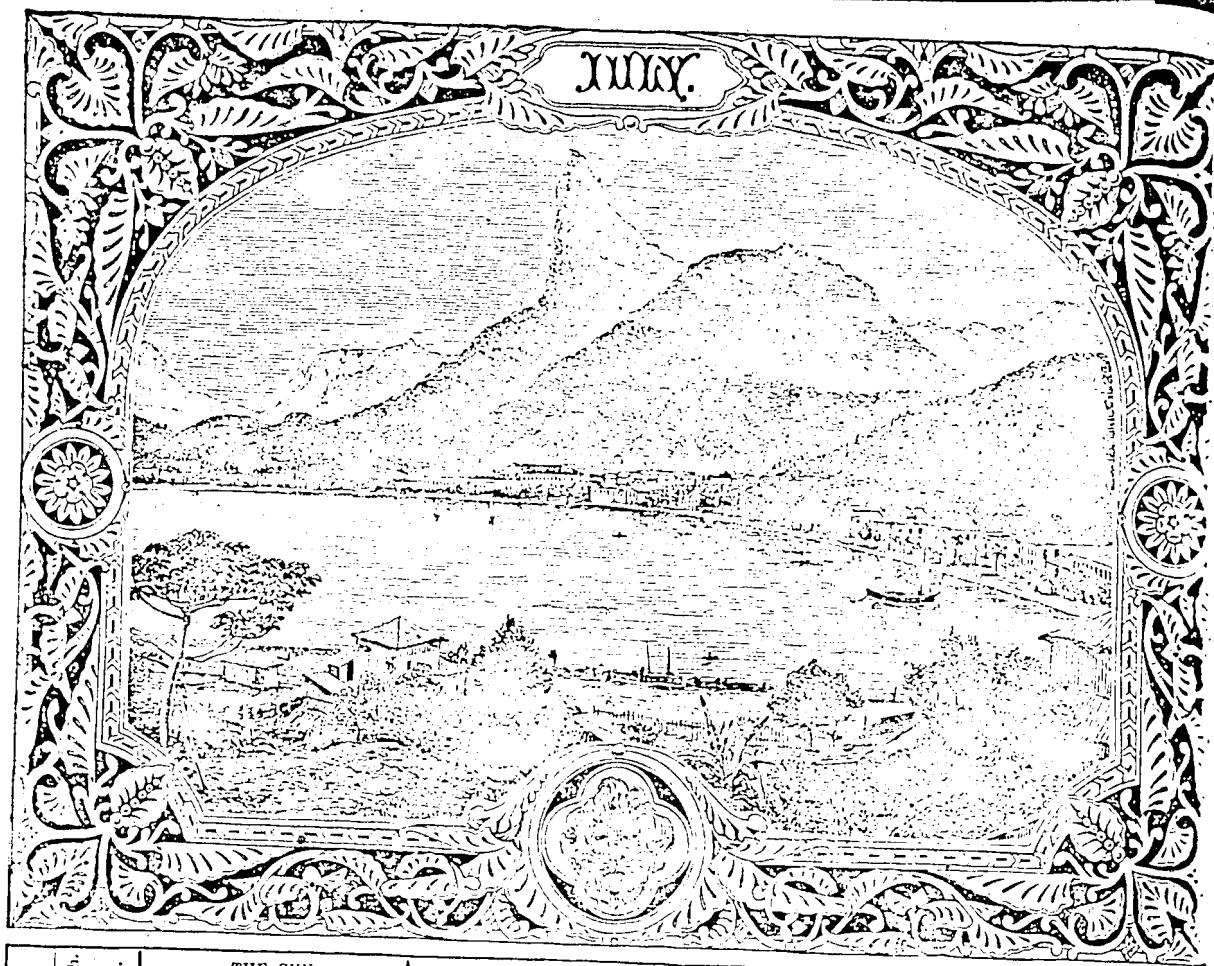
Day of Year.	Day of Month.	Day of Week.	THE SUN.						THE MOON.						PHENOMENA.						SUNDAYS, HOLY DAYS, and ANNIVERSARIES.									
			Latitude of Boston.		Latitude of New York.		Latitude of Wash. Ton.		WASHINGTON.		BOS- TON.		NEW YORK.		WASH- ING- TON.		SAN FRAN.		Moon's Phases.			C. h. m.								
			Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	☾ FIRST QUARTER . . .	☾ FULL MOON . . .		☾ LAST QUARTER . . .	☾ NEW MOON . . .	☾ 8 11 17 P.M.	☾ 15 6 18 P.M.	☾ 22 11 17 A.M.	☾ 30 1 29 P.M.			
			h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
			Age at Noon.	South.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.		Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.
91	1	Fri.	5 42	6 26	5 44	6 25	5 45	6 24	0 15	P.M. 38	7 3	7 2	7 1	7 6	1st, 10 A.M. ☽ ☽ ☽ +3° 37'															
92	2	Sat.	41	27	42	26	43	25	1 15	1 20	8 1	8 0	7 58	8 1	2d, 4 A.M. ☽'s Apogee.															
93	3	S.	39	28	41	27	42	26	2 15	2 2	9 0	8 58	8 55	8 59																
94	4	Mo.	37	29	39	28	40	27	3 15	2 46	9 59	9 56	9 52	9 56	4th, 6 A.M. ☽ ☽ ☽ +3° 53'															
95	5	Tu.	36	30	37	29	38	28	4 15	3 32	10 58	10 54	10 49	10 53																
96	6	Wd.	34	31	36	30	37	28	5 15	4 20	11 56	11 51	11 46	11 49																
97	7	Th.	32	33	34	31	36	29	6 15	5 10	mor.	mor.	mor.	mor.	7th, 4 A.M. ☽ stationary.															
98	8	Fri.	31	34	32	32	34	30	7 15	6 2	52	46	41	44	7th, 7 P.M. ☽ ☽ ☽															
99	9	Sat.	29	35	31	33	32	31	8 15	6 56	1 44	1 38	1 33	1 36	7th, 10 P.M. ☽ ☽ ☽ -0° 50'															
100	10	S.	27	36	29	34	31	32	9 15	7 50	2 31	2 25	2 21	2 25	8th, 9 P.M. ☽ ☽ ☽ +1° 1'															
101	11	Mo.	25	37	28	35	29	33	10 15	8 45	3 13	3 9	3 4	3 9	9th, 3 A.M. ☽ ☽ ☽															
102	12	Tu.	24	38	26	36	28	34	11 15	9 39	3 51	3 48	4 45	3 49	11th, 2 P.M. ☽ ☽ ☽ +0° 42'															
103	13	Wd.	22	40	24	37	26	35	12 15	10 33	4 26	4 24	5 22	4 28	13th, 10 A.M. ☽ ☽ ☽ sup.															
104	14	Th.	20	41	23	38	25	36	13 15	11 28	rises.	rises.	rises.	rises.																
105	15	Fri.	19	42	21	39	23	37	14 15	A.M.	6 30	6 29	6 28	6 24	15th, 5 P.M. ☽'s Perigee.															
106	16	Sat.	17	43	20	40	22	38	15 15	23	7 48	7 45	7 43	7 45																
107	17	S.	15	44	18	41	21	39	16 15	1 19	9 4	9 0	8 57	9 2	17th, 11 A.M. ☽ in ☽															
108	18	Mo.	14	45	16	42	19	40	17 15	2 17	10 18	10 13	10 9	10 13	17th, 7 P.M. ☽ ☽ ☽ +1° 5'															
109	19	Tu.	13	46	15	43	18	41	18 15	3 16	11 25	11 16	11 11	11 16	19th, 11 P.M. ☽ ☽ ☽ -0° 49'															
110	20	Wd.	11	47	14	44	16	42	19 15	4 14	mor.	mor.	mor.	mor.																
111	21	Th.	9	48	13	45	15	43	20 15	5 11	26	19	15	19																
112	22	Fri.	8	49	11	46	14	44	21 15	6 6	1 18	1 12	1 9	1 13	22d, 1 A.M. ☽ in Perihelion.															
113	23	Sat.	6	51	10	47	12	45	22 15	6 57	2 1	1 56	1 53	1 58																
114	24	S.	5	52	8	48	11	46	23 15	7 46	2 38	2 34	2 32	2 36																
115	25	Mo.	3	53	7	49	9	47	24 15	8 31	3 8	3 5	3 3	3 8																
116	26	Tu.	2	54	5	50	8	48	25 15	9 14	3 35	3 33	3 32	3 37	26th, 5 A.M. ☽ ☽ ☽ +4° 36'															
117	27	Wd.	1	55	4	51	7	49	26 15	9 56	4 0	3 59	3 59	4 5	27th, 1 A.M. ☽ in ☽															
118	28	Th.	4 59	56	3	52	5	50	27 15	10 37	4 26	4 26	4 26	4 32	28th, 6 P.M. ☽ ☽ ☽ +3° 39'															
119	29	Fri.	58	57	2	53	4	51	28 15	11 19	4 51	4 51	4 53	5 0	29th, 11 A.M. ☽ ☽ ☽ +4° 48'															
120	30	Sat.	4 56	58	0	54	3	52	29 15	P.M. 1	5 16	5 17	5 20	5 27	29th, 6 A.M. ☽'s Apogee.															

MAY.

Day of Year.	Day of Month.	Day of Week.	THE SUN.						THE MOON.						PHENOMENA.						SUNDAYS, HOLY DAYS, and ANNIVERSARIES.
			Latitude of Boston.		Latitude of New York.		Latitude of Wash. Ton.		Washington.		Bos- ton.	New York.	Wash- ing- ton.	San Fran.	Moon's Phase. d. h. m.						
			Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	Ave at Noon.	South.	Sets.	Sets.	Sets.	Sets.	☾ FIRST QUARTER . . .	☾ FULL MOON . . .	☾ LAST QUARTER . . .	☾ NEW MOON . . .			
			h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	d. h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.		
121	1	S.	4 55	6 59	4 59	6 55	5 26	5 2	0 23	P. M. 44	7 54	7 50	7 47	7 50	1st, 4 A. M. ☾ ♀ ♀ . . ♀ +2° 54'	2d Sunday after Epiphany					
122	2	Mo.	54	7 0	58	56	1 53	1 23	1 29	8 53	8 49	8 45	8 48	2d, 1 A. M. ☾ ♀ ♀ . . ♀ +3° 30'							
123	3	Tu.	53	2	57	57	0 54	2 23	2 17	9 51	9 47	9 42	9 45	2d, 3 A. M. ☾ ♀ ♀ . . ♀ +6° 24'	Intention of the Congress						
124	4	Wd.	51	3	55	58	4 58	5 32	3 8	10 46	10 43	10 37	10 40	2d, 9 A. M. ♀ gr. hel. Lat. N.							
125	5	Th.	50	4	54	59	57	56	4 23	3 58	11 41	11 35	11 30	11 33	4th, 1 P. M. ♀ gr. elon. W. 46° 5'						
126	6	Fri.	49	5	53	7 0	56	57	5 23	4 50	mor.	mor.	mor.	mor.	6th, 5 A. M. ☾ ☾ ☾ . . ☾ +0° 43'	Johan. a. Port. Lat.					
127	7	Sat.	47	6	52	1	55	58	6 23	5 43	27	22	17	21							
128	8	S.	46	7	50	3	54	59	7 23	6 36	1 10	1 6	1 1	1 6		3d Sunday after Epiphany					
129	9	Mo.	45	8	49	4	53	7 0	8 23	7 28	1 49	1 46	1 42	1 47							
130	10	Tu.	44	9	48	5	52	1	9 23	8 21	2 24	2 22	2 19	2 25							
131	11	Wd.	42	10	47	6	51	2	10 23	9 13	2 56	2 55	2 53	3 0	11th, 5 A. M. ♀ gr. elon. E. 21° 42'						
132	12	Th.	41	11	46	7	50	3	11 23	10 6	3 27	3 27	3 27	3 34							
133	13	Fri.	40	12	45	8	49	4	12 23	11 1	3 58	3 59	4 0	4 8							
134	14	Sat.	39	13	44	9	48	5	13 23	11 58	rises.	rises.	rises.	rises.	14th, 3 A. M. ☾ 's Perigee.						
135	15	S.	38	14	43	10	47	6	14 23	A. M. 7	50	7 46	7 42	7 47		4th Sunday after Epiphany					
136	16	Mo.	37	15	42	11	47	6	15 23	57	9 7	9 2	8 56	9 1							
137	17	Tu.	36	16	42	12	46	7	16 23	1 57	10 13	10 8	10 2	10 6	17th, 7 A. M. ☾ h. d. . h. -0° 44'						
138	18	Wd.	35	17	41	13	45	8	17 23	2 57	11 10	11 5	11 0	11 4							
139	19	Th.	34	18	39	13	44	9	18 23	3 55	mor.	11 58	11 53	11 56		Dunstan.					
140	20	Fri.	33	19	39	14	43	10	19 23	4 50	3	mor.	mor.	mor.							
141	21	Sat.	32	20	38	15	43	11	20 23	5 41	40	34	32	37							
142	22	S.	32	21	37	16	42	12	21 23	6 28	1 12	1 7	1 6	1 11	23d, 10 P. M. ♀ stationary.	5th Sunday after Epiphany					
143	23	Mo.	31	22	37	17	41	13	22 23	7 13	1 37	1 36	1 36	1 40	24th, 9 P. M. ☾ ☾ ☾						
144	24	Tu.	30	23	36	18	40	13	23 23	7 55	2 6	2 4	2 3	2 10	25th, 9 P. M. ☾ in ☾						
145	25	Wd.	29	24	35	19	39	14	24 23	8 36	2 32	2 31	2 31	2 38	26th, 0 A. M. ☾ ♀ ♀ . . ♀ +3° 19'						
146	26	Th.	28	25	35	19	39	15	25 23	9 17	2 55	2 56	2 56	3 4	26th, 2 A. M. ☾ ♀ ♀ . . ♀ +3° 47'	Ascension. Andrew					
147	27	Fri.	28	26	34	20	38	16	26 23	9 59	3 19	3 21	3 22	3 30	26th, 3 P. M. ☾ 's Apogee.						
148	28	Sat.	28	27	33	21	38	16	27 23	10 42	3 45	3 48	3 50	3 59	26th, 5 P. M. ☾ ♀ ♀ . . ♀ -0° 29'						
149	29	S.	27	28	33	22	37	17	28 23	11 27	sets.	sets.	sets.	sets.	28th, 2 P. M. ☾ ☾ ☾ . . ☾ +4° 27'	1st Sun. after Ascension					
150	30	Mo.	26	29	32	23	37	18	0 7	P. M. 14	7 46	7 42	7 37	7 40	29th, 8 P. M. ☾ ☾ ☾ . . ☾ +3° 6'						
151	31	Tu.	4 26	7 29	4 32	7 23	4 36	7 19	1 7	1 3	8 44	8 38	8 33	8 36	30th, 7 P. M. ☾ ♀ ♀ . . ♀ +1° 27'						

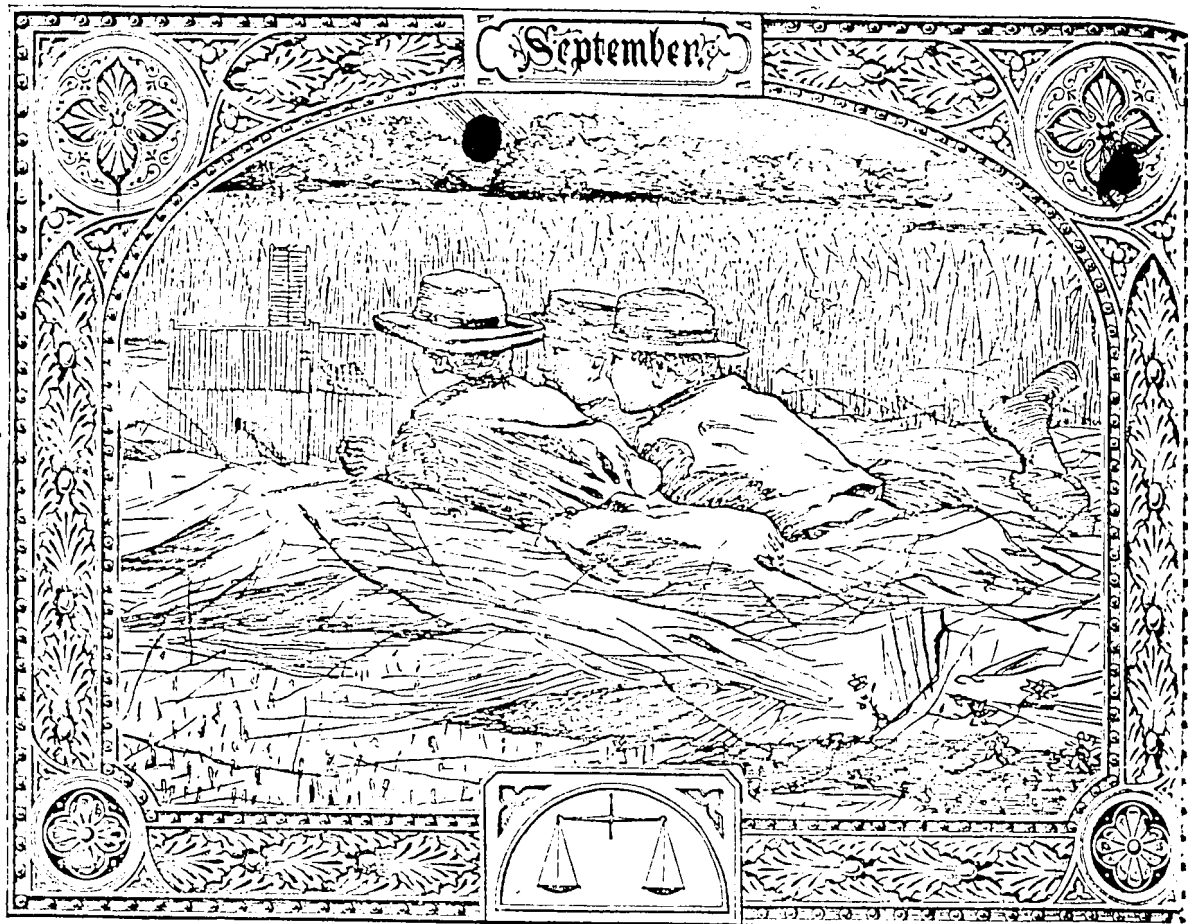
A black and white woodcut illustration of three people in a field, framed by a decorative border. The word "JUNE" is at the top. The scene shows a man in a hat and a woman in a bonnet working in a field, with a third person in the background. The border is ornate with floral and leaf patterns, and a small circular emblem is at the bottom center.

Day of Year.	Day of Month.	Day of Week.	THE SUN.								THE MOON.								PHENOMENA.				SUNDAYS, HOLY DAYS, and ANNIVERSARIES.
			Latitude of Boston.		Latitude of New York.		Latitude of Wash. Ton.		WASHINGTON.		BOS- TON.	NEW YORK.	WASH- ING- TON.	SAN- FRAN.	Moon's Phases.		d. h. m.						
			Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	Evening Noon.	Souths.					Sets.	Sets.		Sets.	Sets.	First Quarter.	Full Moon.		
			h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	d. h.	Sets.					Sets.	Sets.		Sets.	h. m.	h. m.			
152	1	Wd.	4 25	7 30	4 32	7 24	4 36	7 20	2 7	1 55	9 38	9 33	9 27	9 21	2d, 12 M.	☉ ☽ ☾ ☿ ♀ +0° 27'	Nicomede.						
153	2	Th.	25	31	31	25	35	20	3 7	2 47	10 28	10 23	10 18	10 21									
154	3	Fri.	24	32	31	25	35	21	4 7	3 40	11 13	11 8	11 3	11 7									
155	4	Sat.	24	32	30	26	35	22	5 7	4 32	11 52	11 48	11 44	11 48	4th, 10 A.M.	☉ ☽ ☾ ☿ ♀ Inf.							
156	5	S.	24	33	30	27	34	22	6 7	5 23	mor.	mor.	mor.	mor.	5th, 1 A.M.	☽ in Aphelion.	Whitsunday. Prater [Basil]						
157	6	Mo.	23	34	30	27	34	23	7 7	6 15	25	23	20	0 25									
158	7	Tu.	23	34	29	28	34	24	8 7	7 5	57	55	55	1 0									
159	8	Wd.	23	35	29	29	34	24	9 7	7 56	1 28	1 27	1 28	1 34									
160	9	Th.	22	36	29	29	33	25	10 7	8 48	1 58	2 00	2 0	2 8									
161	10	Fri.	22	36	29	30	33	25	11 7	9 43	2 29	2 32	2 34	2 42									
162	11	Sat.	22	37	29	30	33	26	12 7	10 39	3 3	3 7	3 10	2 19	11th, 8 A.M.	☾'s Perigee.	Earnabas.						
163	12	S.	22	37	29	31	33	26	13 7	11 39	rises.	rises.	rises.	rises.			Trinity Sunday.						
164	13	Mo.	22	38	29	31	33	26	14 7	A.M.	7 52	7 47	7 42	7 46	13th, 2 P.M.	☉ h ☾ h -0° 51'							
165	14	Tu.	22	38	29	32	33	27	15 7	0 39	8 56	8 51	8 45	8 49									
166	15	Wd.	22	39	29	32	33	27	16 7	1 39	9 49	9 44	9 39	9 43	15th, 4 A.M.	☽ in ♍							
167	16	Th.	22	39	29	32	33	28	17 7	2 37	10 34	10 29	10 25	10 29	16th, 11 A.M.	☽ h ☉							
168	17	Fri.	22	40	29	33	33	28	18 7	3 31	11 11	11 8	11 4	11 8	16th, 1 P.M.	☽ stationary.	Alban. Battle of Marston.						
169	18	Sat.	22	40	29	33	33	28	19 7	4 21	11 43	11 40	11 37	11 41									
170	19	S.	22	40	29	33	34	29	20 7	5 8	mor.	mor.	mor.	mor.	[Summer begins.								
171	20	Mo.	22	40	29	34	34	29	21 7	5 51	10	8	6	12	21st, 11 A.M.	☉ enters ♌.	1st Sunday after Trinity.						
172	21	Tu.	23	41	29	34	34	29	22 7	6 34	35	34	33	39	22d, 10 A.M.	☉ ☽ ☾ ☿ ♀ +3° 53'							
173	22	Wd.	23	41	30	34	34	29	23 7	7 15	59	59	59	1 6	22d, 10 P.M.	♀ gr. hel. Lat. S.							
174	23	Th.	23	41	30	34	34	29	24 7	7 56	1 23	1 24	1 26	1 33	23d, 7 A.M.	☾'s Apogee.							
175	24	Fri.	23	41	30	34	35	30	25 7	8 38	1 49	1 51	1 54	2 1	25th, 4 A.M.	☉ ☽ ☾ ☿ ♀ ☽ +2° 11'							
176	25	Sat.	24	41	31	34	35	30	26 7	9 22	2 17	2 20	1 23	2 31	25th, 11 A.M.	♀ gr. hel. Lat. S.	Nativity of John the Baptist.						
177	26	S.	24	41	31	34	35	30	27 7	10 9	2 48	2 52	1 56	3 4	26th, 3 P.M.	☉ ☽ ☾ ☿ ♀ +3° 27'							
178	27	Mo.	25	41	31	34	36	30	28 7	10 58	3 24	3 29	2 33	3 42	26th, 4 P.M.	☉ ☽ ☾ ☿ ♀ +2° 42'							
179	28	Tu.	25	41	32	34	36	30	29 7	11 49	sets.	sets.	sets.	sets.	26th, 10 P.M.	☉ ☽ ☾ ☿ ♀ -0° 28'	2d Sunday after Trinity.						
180	29	Wd.	26	41	32	34	37	30	0 18	0 42	7 25	7 20	7 14	7 18	27th, 8 A.M.	☉ ☽ ☾ ☿ ♀ +0° 44'							
181	30	Th.	4 27	7 41	4 33	7 34	4 37	7 30	1 18	1 36	8 17	8 11	8 6	8 10	27th, ☉ eclipsed, invis. at W.		Peter.						
															28th, 7 P.M.	♀ gr. cl. W. 21° 53'							
															29th, 9 P.M.	☉ ☽ ☾ ☿ ♀ +0° 16'							

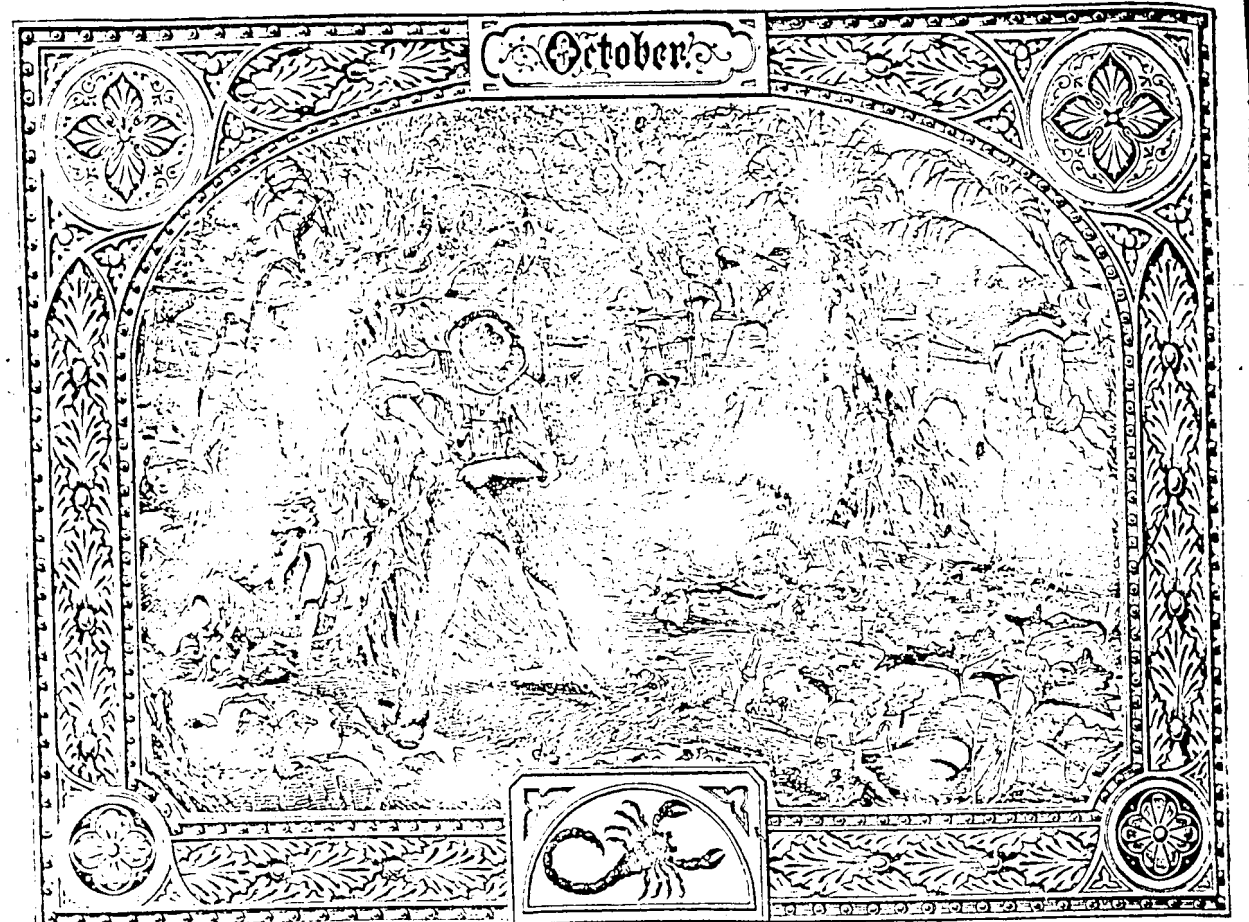


Day of Year.	Day of Month.	Day of Week.	THE SUN.						THE MOON.						PHENOMENA.	SUNDAYS, HOLY DATES, and ANNIVERSARIES.				
			Latitude of BOSTON.		Latitude of NEW YORK.		Latitude of WASH. TON.		WASHINGTON.		BOS- TON.		NEW YORK.				WASH- ING- TON.		SAN FRAN.	
			Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	Age at Noon.	Souths.	Sets.	Sets.	Sets.	Sets.			Sets.	Sets.	Sets.	Sets.
			h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	d. h.	h. m.	h. m.	h. m.	h. m.	h. m.			h. m.	h. m.	h. m.	h. m.
182	1	Fri.	4 26	7 41	4 33	7 34	4 38	7 30	2 18	2 29	9 52	9 48	9 44	9 48	1st, 8 P.M. ☉ in Apogee.					
183	2	Sat.	27	41	33	34	38	29	3 18	3 21	10 30	10 27	10 24	10 27		Visitation of Mary.				
184	3	S.	27	41	34	34	39	29	4 18	4 12	11 2	11 0	10 58	11 3		3d Sunday after Trinity				
185	4	Mo.	28	40	34	34	39	29	5 18	5 2	11 32	11 31	11 30	11 37		Translation of St. John				
186	5	Tu.	28	40	35	33	40	29	6 18	5 52	mor.	mor.	mor.	mor.		Declaration of Independence				
187	6	Wd.	29	40	36	33	40	29	7 18	6 43	1	1	1	8						
188	7	Th.	30	39	36	33	41	29	8 18	7 34	29	30	32	40						
189	8	Fri.	30	39	37	33	41	28	9 18	8 28	1 2	1 5	1 7	1 16	8th, 10 P.M. ☾'s Perigee.					
190	9	Sat.	31	38	37	32	42	28	10 18	9 25	1 39	1 43	1 46	1 55						
191	10	S.	32	38	38	32	43	27	11 18	10 23	2 21	2 25	2 30	2 40	10th, 8 P.M. ☽ h. ☾ -1°4'	4th Sun. after Trinity				
192	11	Mo.	33	37	39	31	43	27	12 18	11 23	rises.	rises.	rises.	rises.						
193	12	Tu.	34	37	40	31	44	27	13 18	A.M.	7 37	7 32	7 26	7 26	12th, ☾ eclipsed, invis. at W.					
194	13	Wd.	34	36	40	30	45	26	14 18	21	8 31	8 26	8 20	8 20	13th, 2 P.M. ☽ ♀ ♀ -1°7'					
195	14	Th.	35	36	41	30	45	25	15 18	1 18	9 7	9 3	8 59	9 3	14th, 7 A.M. ☽ ☽ ☽					
196	15	Fri.	36	35	42	29	46	25	16 18	2 10	9 41	9 35	9 35	9 40	14th, 7 P.M. ☽ ☽ ☽	St. John.				
197	16	Sat.	37	34	43	28	47	24	17 18	2 59	10 11	10 9	10 6	10 43						
198	17	S.	38	34	43	28	48	24	18 18	3 45	10 37	10 36	10 35	10 41		5th Sun. after Trinity				
199	18	Mo.	39	33	44	27	48	23	19 18	4 28	11 6	11 6	11 6	11 8	19th, 1 A.M. ☽ in Perihelion.					
200	19	Tu.	39	32	45	27	49	22	20 18	5 10	11 27	11 28	11 29	11 34	19th, 7 P.M. ☽ ☽ ☽ +3°53'					
201	20	Wd.	40	31	46	26	50	22	21 18	5 52	11 51	11 53	11 55	mor.	21st, 1 A.M. ☽'s Apogee.	Margaret.				
202	21	Th.	41	31	47	25	51	21	22 18	6 34	mor.	mor.	mor.	2	21st, 4 P.M. ☽ ☽ ☽ +0°43'					
203	22	Fri.	42	30	48	25	52	20	23 18	7 17	16	19	22	30	24th, 12 M. ☽ ☽ ☽ +2°15'	Mary Magdalen.				
204	23	Sat.	43	29	48	24	53	19	24 18	8 2	45	49	52	1 1	25th, 11 A.M. ☽ ☽ ☽ +0°41'					
205	24	S.	44	28	49	23	54	18	25 18	8 50	1 19	1 23	1 28	1 37	25th, 2 P.M. ☽ ☽ ☽ +2°8'	6th Sun. after Trinity				
206	25	Mo.	45	27	50	22	54	17	26 18	9 40	2 0	2 5	2 10	2 20	26th, 7 A.M. ☽ stationary.	James.				
207	26	Tu.	46	26	51	21	55	16	27 18	10 33	2 48	2 53	2 59	3 9	26th, 11 P.M. ☽ ☽ ☽ Sup.	Anne.				
208	27	Wd.	47	25	52	20	56	16	28 18	11 27	sets.	sets.	sets.	sets.	27th, 10 A.M. ☽ ☽ ☽ +0°7'					
209	28	Th.	48	24	53	19	57	15	0 6	P.M. 21	7 51	7 47	7 41	7 43	27th, ☽ eclipsed, invis. at W.					
210	29	Fri.	49	23	54	18	58	14	1 6	1 15	8 30	8 27	8 23	8 26	28th, 9 A.M. ☽ ☽ ☽ +0°8'					
211	30	Sat.	50	22	55	17	59	13	2 6	2 8	9 4	9 2	8 59	9 5	29th, 10 A.M. ☽ gr. hel. Lat. N.					
212	31	S.	51	21	56	16	59	12	3 6	2 59	9 35	9 34	9 33	9 39	29th, 11 A.M. ☽ ☽ ☽ +1°29'	7th Sun. after Trinity				

Day of Year.	Day of Month.	Day of Week.	THE SUN.						THE MOON.						PHENOMENA.				SUNDAYS, HOLY DAYS, and ANNIVERSARIES.	
			Latitude of BOSTON.		Latitude of NEW YORK.		Latitude of WASH. TON.		WASHINGTON.		BOS- TON.	NEW YORK.	WASH- ING- TON.	SAN- FRAN.	Moon's Phases.		d. h. m.			
			Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	Age at Noon.	Souths.	Sets.	Sets.	Sets.	Sets.	☾ FIRST QUARTER . . .	☾ FULL MOON . . .	☾ LAST QUARTER . . .	☾ NEW MOON . . .		4 3 43 A.M. 11 4 5 A.M. 19 2 42 A.M. 26 4 17 P.M.
			h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	d. h.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.		h. m.
213	1	Mo.	4 52	7 20	4 57	7 15	5 0	7 11	4 6	3 50	10 6	10 5	10 5	10 11						
214	2	Tu.	53	19	58	14	1	10	5 6	4 40	10 35	10 36	10 37	10 43						
215	3	Wd.	54	17	59	13	2	9	6 6	5 31	11 6	11 8	11 11	11 17						
216	4	Th.	55	16	59	12	3	8	7 6	6 23	11 40	11 43	11 47	11 54						
217	5	Fri.	56	15	5	10	4	7	8 6	7 18	mor.	mor.	mor.	mor.						
218	6	Sat.	57	14	1	9	4	6	9 6	8 14	17	21	25	35						
219	7	S.	58	13	2	8	5	5	10 6	9 12	1 3	1 8	1 13	1 23	7th, 1 A.M. ☽ h. ☽ -1°13'					
220	8	Mo.	59	11	3	7	6	4	11 6	10 10	1 56	2 1	2 7	2 17						
221	9	Tu.	5	10	4	6	7	3	12 6	11 6	2 54	2 59	3 4	3 14						
222	10	Wd.	1	8	5	4	8	1	13 6	12 0	rises.	rises.	rises.	4 16						
223	11	Th.	2	7	6	3	9	0	14 6	A.M.	7 39	7 36	7 32	rises.						
224	12	Fri.	3	6	7	2	10	6	59	15 6	50	8 8	8 8	8 5	8 10					
225	13	Sat.	4	4	8	0	11	5	16 6	1 38	9 38	9 37	9 35	8 41						
226	14	S.	5	3	9	6	59	12	56	17 6	2 22	9 4	9 3	9 9						
227	15	Mo.	6	1	10	58	13	55	18 6	3 5	9 29	9 29	9 29	9 35	15th, 9 P.M. ☽ ☽ ☽ -0°34'					
228	16	Tu.	7	0	11	56	14	53	19 6	3 47	9 53	9 54	9 56	10 3	16th, 3 A.M. ☽ ☽ ☽ -3°45'					
229	17	Wd.	8	6	58	12	55	15	52	20 6	4 29	10 19	10 21	10 31						
230	18	Th.	10	57	13	54	16	51	21 6	5 11	10 47	10 50	10 53	11 1	18th, 5 A.M. ☽ in ☽					
231	19	Fri.	11	55	14	52	17	50	22 6	5 55	11 19	11 23	11 27	11 34						
232	20	Sat.	12	54	15	51	18	49	23 6	6 41	11 50	mor.	mor.	mor.	21st, 6 A.M. ☽ ☽ ☽ +1°46'					
233	21	S.	13	52	16	49	18	47	24 6	7 30	mor.	1	6	12	21st, 8 P.M. ☽ in ☽					
234	22	Mo.	14	50	17	48	19	46	25 6	8 21	37	0 42	0 47	57	23d, 11 A.M. ☽ ☽ ☽ +0°41'					
235	23	Tu.	15	49	18	46	20	44	26 6	9 14	1 29	1 34	1 40	1 50	23d, 8 P.M. ☽ ☽ ☽ -0°4'					
236	24	Wd.	16	47	19	45	21	43	27 6	10 9	2 28	2 33	2 38	2 48	24th, 2 P.M. ☽ ☽ ☽ -1°9'					
237	25	Th.	17	46	20	43	22	41	28 6	11 3	sets.	sets.	sets.	3 51						
238	26	Fri.	18	44	21	42	23	40	29 6	11 58	7 2	6 59	6 56	sets.	26th, 3 P.M. ☽ stationary.					
239	27	Sat.	19	43	22	40	24	38	0 20	P.M. 51	7 35	7 33	7 31	7 36						
240	28	S.	20	41	23	38	25	37	1 20	1 43	8 7	8 6	8 6	8 12	28th, 8 A.M. ☽ ☽ ☽ -6°13'					
241	29	Mo.	21	40	24	37	25	35	2 20	2 35	8 36	8 37	8 38	8 45	29th, 5 P.M. ☽'s Perigee.					
242	30	Tu.	22	38	25	35	26	34	3 20	3 27	9 8	9 10	9 12	9 18						
243	31	Wd.	23	36	26	34	27	32	4 20	4 20	9 41	9 44	9 47	9 54	31st, 11 A.M. ☽ ☽ ☽ +0°24'					



Day of Year.	Day of Month.	Day of Week.	THE SUN.						THE MOON.						PHENOMENA.						SUNDAYS, HOLY DAYS, and ANNIVERSARIES.
			Latitude of Boston.		Latitude of New York.		Latitude of Wash.Ton.		Washington.		Bos- ton.	New York.	WASH- ING- TON.	SAN- FRAN.	Moon's Phases.		d. h. m.				
			Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	Age at Noon.	South.	Sets.	Sets.	Sets.	Sets.	☾ FIRST QUARTER . . .	2 10 50 A.M.					
			h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	d. h.	h. m.	h. m.	h. m.	h. m.	h. m.	☾ FULL MOON . . .	9 5 3 P.M.					
244	1	Th.	5 24	6 34	5 26	6 32	5 25	6 31	5 20	5 14	10 16	10 20	10 24	10 33	1st, 0 A.M. ♀ in Aphelion.	Giles.					
245	2	Fri.	26	33	28	30	29	29	6 20	6 10	10 59	11 4	11 9	11 15							
246	3	Sat.	27	31	29	29	30	28	7 20	7 7	11 46	11 54	12 0	mor.	3d, 6 A.M. ♂ h. d. - 1° 11'						
247	4	S.	28	29	30	27	31	26	8 20	8 4	mor.	mor.	mor.	10		12th Sun. after Trin.					
248	5	Mo.	29	27	31	26	32	25	9 20	9 0	46	51	57	1 7							
249	6	Tu.	30	26	32	24	33	23	10 20	9 53	1 48	1 53	1 58	2 8							
250	7	Wd.	31	24	33	22	34	21	11 20	10 44	2 52	2 56	3 0	3 10							
251	8	Th.	32	22	34	20	34	20	12 20	11 32	3 57	4 0	4 4	4 13	8th, 6 A.M. ♀ gr. elon. E. 26° 55'	Enuschns.					
252	9	Fri.	33	20	35	19	35	18	13 20	A.M. rises.	rises.	rises.	rises.		Nativity of Mary.						
253	10	Sat.	34	19	36	17	36	16	14 20	17	7 4	7 3	7 2	7 9		Battle of Lake Erie.					
254	11	S.	35	17	37	16	37	15	15 20	1 0	7 29	7 29	7 29	7 36		13th Sun. after Trin.					
255	12	Mo.	36	15	37	14	38	13	16 20	1 42	7 52	7 54	7 55	8 3	12th, 9 A.M. ♂ ♀ d. . ♀ + 3° 35'						
256	13	Tu.	37	14	38	13	39	12	17 20	2 24	8 18	8 20	8 22	8 30							
257	14	Wd.	38	12	39	11	40	10	18 20	3 6	8 45	8 48	8 51	9 0	14th, 2 P.M. d's Apogee.	Holy-Cross Day.					
258	15	Th.	39	10	40	9	41	9	19 20	3 50	9 15	9 19	9 23	9 32	15th, 2 A.M. ☐ h. d.						
259	16	Fri.	40	8	41	7	42	7	20 20	4 35	9 49	9 54	9 58	10 8							
260	17	Sat.	41	7	42	6	43	6	21 20	5 22	10 29	10 34	10 39	10 49	17th, 9 P.M. ♂ ♀ d. ♀ + 1° 17'	Lambert.					
261	18	S.	42	5	43	4	43	4	22 20	6 11	11 16	11 21	11 27	11 37	18th, 6 A.M. ☐ ♀ d.	14th Sun. after Trin.					
262	19	Mo.	43	3	44	3	44	3	23 20	7 2	mor.	mor.	mor.	mor.							
263	20	Tu.	44	1	45	1	45	1	24 20	7 55	11	16	21	31	20th, 8 A.M. ♂ ♂ d. . ♂ - 0° 20'						
264	21	Wd.	45	59	46	59	46	59	25 20	8 49	1 13	1 18	1 22	1 32	20th, 1 P.M. ♀ in Perihelion.	Matthew.					
265	22	Th.	46	58	47	58	47	58	26 20	9 43	2 20	2 24	2 28	2 37	21st, 5 A.M. ♂ ♂ d. . ♂ - 0° 44'						
266	23	Fri.	48	56	48	56	48	56	27 20	10 37	3 31	3 34	3 37	3 46	21st, 7 A.M. ♀ stationary.						
267	24	Sat.	49	54	49	54	49	54	28 20	11 30	4 40	4 48	4 49	4 57	21st, 10 A.M. ♀ gr. hel. Lat. S.						
268	25	S.	50	52	50	52	50	53	0 11	P.M. 23 sets.	sets.	sets.	sets.	sets.	22d, ☉ enters ♌ Autumn com.	15th Sun. after Trin.					
269	26	Mo.	51	50	51	50	51	51	1 11	1 16	7 4	7 5	7 7	7 15	23d, 2 P.M. ♂ ♀ d. . ♀ - 2° 59'	Cyprian.					
270	27	Tu.	52	49	52	49	52	49	2 11	2 10	7 36	7 39	7 41	7 50	25th, 10 P.M. ♂ ♀ d. . ♀ - 9° 28'						
271	28	Wd.	53	47	53	47	53	47	3 11	3 6	8 13	8 17	8 20	8 30	26th, 3 P.M. d's Perigee.	Michael.					
272	29	Th.	54	45	54	46	54	46	4 11	4 3	8 56	9 1	9 5	9 15		Jerom.					
273	30	Fri.	55	43	55	44	55	44	5 11	5 1	9 45	9 50	9 55	10 5	30th, 1 P.M. ♂ h. d. . h - 0° 56'						



Day of Year.	Day of Month.	Day of Week.	THE SUN.									THE MOON.					PHENOMENA.	SUNDAYS, HOLY DAYS, and ANNIVERSARIES.	
			Latitude of Bos-ton.			Latitude of New York.			Latitude of Wash-ton.			WASHINGTON.	BOS- TON.	NEW YORK.	WASH- ING- TON.	SAN FRAN.			
			Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	Rises.	Sets.	Rises.	Sets.			
			h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.			
			Age at noon.	Souths.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.	Sets.			
274	1	Sat.	5 57	5 41	5 56	5 42	5 56	5 42	6 11	5 59	10 40	10 45	10 51	11 1	Moon's Phases. d. h. m. ☉ FIRST QUARTER . . . 1 4 11 P.M. ☉ FULL MOON . . . 8 8 35 A.M. ☉ LAST QUARTER . . . 17 1 3 P.M. ☉ NEW MOON . . . 24 10 27 A.M. ☉ FIRST QUARTER . . . 31 2 53 A.M. WASHINGTON. 3d, 11 P.M. ☉ ♀ ☉ Inf.	Remigius. 16th Sun. after Trinity			
275	2	S.	58	40	57	41	57	41	7 11	6 56	11 40	11 45	11 50	12 0			Faith.		
276	3	Mo.	59	38	58	39	58	40	8 11	7 50	mor.	mor.	mor.	mor.				17th Sun. after Trinity	
277	4	Tu.	6 0	36	59	38	59	38	9 11	8 41	44	49	53	1 3					Discovery of America.
278	5	Wd.	1	35	6 0	36	6 0	37	10 11	9 29	1 48	1 52	1 55	2 5					
279	6	Th.	2	33	1	34	0	35	11 11	10 14	2 51	2 54	2 56	3 5	Etheldred. Luke.				
280	7	Fri.	3	31	2	33	1	34	12 11	10 58	3 54	3 56	3 58	4 6		Surrender of Cornwall			
281	8	Sat.	4	29	3	31	2	32	13 11	11 40	4 56	4 57	4 57	5 5			19th Sun. after Trinity		
282	9	S.	5	28	4	29	3	31	14 11	A.M. rises.	rises.	rises.	rises.	rises.				19th Sun. after Trinity	
283	10	Mo.	7	26	5	28	4	29	15 11	22	6 20	6 22	6 24	6 32					Crispin.
284	11	Tu.	8	25	6	27	5	28	16 11	1 3	6 46	6 49	6 51	7 0	Simon and Jude.				
285	12	Wd.	9	23	7	25	6	26	17 11	1 46	7 15	7 19	7 22	7 31		20th Sun. after Trinity			
286	13	Th.	10	22	8	24	7	25	18 11	2 30	7 47	7 51	7 56	8 5					
287	14	Fri.	11	20	10	22	8	23	19 11	3 16	8 24	8 29	8 34	8 44					
288	15	Sat.	13	18	11	21	9	22	20 11	4 4	9 8	9 13	9 19	9 29					
289	16	S.	14	17	12	19	10	20	21 11	4 54	9 59	10 4	10 10	10 20					
290	17	Mo.	15	15	13	18	11	19	22 11	5 46	10 57	11 2	11 7	11 17					
291	18	Tu.	16	13	14	16	12	17	23 11	6 38	12 0	mor.	mor.	mor.					
292	19	Wd.	17	12	15	15	13	16	24 11	7 30	mor.	4	9	18					
293	20	Th.	18	10	16	13	14	15	25 11	8 22	1 8	1 11	1 15	1 24					
294	21	Fri.	19	9	17	12	15	13	26 11	9 15	2 19	2 21	2 24	2 32					
295	22	Sat.	21	8	18	10	16	12	27 11	10 7	3 33	3 34	3 35	3 43					
296	23	S.	22	6	19	9	17	11	28 11	11 0	4 47	4 47	4 47	4 54					
297	24	Mo.	23	5	21	7	19	10	0 2	11 54	sets.	sets.	sets.	sets.					
298	25	Tu.	24	3	22	6	20	8	1 2	P.M. 51	6 7	6 10	6 14	6 22					
299	26	Wd.	26	2	23	5	21	7	2 2	1 49	6 47	6 51	6 56	7 5					
300	27	Th.	27	0	24	3	22	6	3 2	2 49	7 35	7 40	7 45	7 55					
301	28	Fri.	28	4	25	2	23	4	4 2	3 50	8 30	8 35	8 41	8 51					
302	29	Sat.	29	57	26	1	24	3	5 2	4 49	9 30	9 35	9 41	9 51					
303	30	S.	31	56	27	4	25	2	6 2	5 45	10 33	10 38	10 43	10 52					
304	31	Mo.	6 32	4 55	6 28	4 58	6 26	5 1	7 2	6 38	11 38	11 42	11 46	11 55					

DECEMBER.

A small inset illustration of a goat's head is located at the bottom center of the page.