

M 1665



**LINCOLN**  
**FARM ALMANAC**  
**1909**

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## FOREWORD.

Next year, 1909, will be the 100th Anniversary of the birth of Abraham Lincoln, one of America's greatest men; in fact, one of the greatest men the world has ever known. His memory is revered north, south, east and west. Had Lincoln lived, he would in a few years after the war have united the country in one bond of fellowship and good will.

Abraham Lincoln was born in Kentucky February 12th, 1809. He was a farmer's boy. He was raised at the plow handles and his hardy frame and good constitution were inheritances of a long line of farmer ancestors. Lincoln loved farmers; he regarded them as the backbone of the nation; to him they were the "plain" people on whom the destiny of the nation rests. As he wittily said: "God must have loved the 'plain people,' he made so many of them." In no hearts is the memory of Abraham Lincoln more revered than in the hearts of the farmers of America. He has always seemed one of themselves, and was loved accordingly. While his later professional life took him from the farm and into other fields, still his heart was always near the soil. He knew about farming as one who had served an apprenticeship and many of his stories used to illustrate some points in his legal arguments were taken from the experiences of his early days.

As the motto for this Almanac and as a guidance for the people of America, we suggest this immortal quotation from Lincoln's Second Inaugural address:

"With malice toward none, with charity for all, with firmness in the right, as God gives us to see the right."

WILMER ATKINSON CO.

1st Month

JANUARY, 1909

31 Days

DAYS, Month and Week.		SUN.		SUN.		MOON.		
		Latitude of Middle States.		Latitude of Southern States.		Latitude of Middle States.		
		Rises h. m.	Sets h. m.	Rises h. m.	Sets h. m.	Sets h. m.	Souths h. m.	
1	Fri.	Emancipation proclamation by	7 23	4 44	7 01	5 08	2 16	8 18
2	Sat.	Lincoln 1863.	7 23	4 45	7 01	5 09	3 23	9 8
<b>2d SUNDAY AFTER CHRISTMAS.</b>								
3	Sun.	Cicero b. 107 B. C.	7 23	4 46	7 01	5 09	4 30	10 0
4	Mon.	Rachel, tragedienne d. 1778.	7 23	4 47	7 01	5 10	5 35	10 53
5	Tues.	Edward the Confessor d. 1066.	7 23	4 48	7 01	5 11	6 38	11 47
6	Wed.	Richard II b. 1367.	7 23	4 49	7 01	5 12	rises	morn
7	Thu.	British Orders in Council issued	7 23	4 50	7 01	5 13	5 52	0 40
8	Fri.	1807.	7 23	4 51	7 01	5 13	6 51	1 30
9	Sat.	Connecticut ratified Constitution	7 22	4 52	7 01	5 14	7 52	2 18
1788.								
<b>1st SUNDAY AFTFR EPIPHANY.</b>								
10	Sun.	Linnaeus d. 1778.	7 22	4 53	7 01	5 15	8 51	3 4
11	Mon.	Parmigiano, painter d. 1503.	7 22	4 54	7 01	5 16	9 49	3 46
12	Tues.	August Comte, philosopher b. 1798	7 22	4 55	7 01	5 16	10 48	4 28
13	Wed.	Charles James Fox b. 1748.	7 21	4 56	7 01	5 17	11 46	5 8
14	Thu.	Resumption of specie payments	7 21	4 57	7 00	5 18	morn	5 49
15	Fri.	approved 1875.	7 20	4 58	7 00	5 19	0 46	6 31
16	Sat	Liliuokalani dethroned 1893.	7 20	4 59	7 00	5 20	1 47	7 16
<b>2d SUNDAY AFTER EPIPHANY.</b>								
17	Sun.	Franklin b. 1706.	7 20	5 0	7 00	5 21	2 52	8 4
18	Mon.	Daniel Webster b. 1782.	7 19	5 1	7 00	5 22	3 58	8 56
19	Tues.	Robt. E. Lee b. 1807.	7 19	5 3	6 59	5 23	5 5	9 53
20	Wed.	Australia colonized 1788.	7 18	5 4	6 59	5 24	6 11	10 54
21	Thu.	Louis XVI beheaded 1793.	7 18	5 5	6 59	5 25	sets	11 57
22	Fri.	Lord Bacon d. 1561.	7 17	5 6	6 59	5 26	5 56	ev. 59
23	Sat.	Wm. Pitt d. 1806.	7 17	5 7	6 58	5 26	7 15	1 58
<b>3d SUNDAY AFTER EPIPHANY.</b>								
24	Sun.	Swedenborg b. 1688.	7 16	5 9	6 58	5 27	8 32	2 54
25	Mon.	Edward II of England deposed	7 16	5 10	6 58	5 28	9 46	3 46
26	Tues.	1327.	7 15	5 11	6 57	5 29	10 57	4 37
27	Wed.	German Emperor b. 1859.	7 14	5 12	6 57	5 30	morn	5 26
28	Thu.	Francis Drake d. 1761.	7 13	5 13	6 56	5 31	0. 7	6 15
29	Fri.	Electoral Commission Act ap-	7 12	5 15	6 56	5 32	1 16	7 5
30	Sat.	proved 1877.	7 11	5 16	6 55	5 33	2 23	7 56
<b>4th SUNDAY AFTER EPIPHANY.</b>								
31	Sun.	XIII Amendment adopted 1865.	7 10	5 17	6 54	5 34	3 28	8 49

## MOON'S PHASES.—Eastern Standard Time.

Full Moon, . . . 6d, 9h, 13m. A.M. New Moon, . . 21d, 7h, 12m. P.M.  
 Last Quarter, 14d, 1h, 11m. P.M. First Quarter, 28d, 10h, 7m. A.M.

For points in the longitude of Portland, Me., subtract 17m. 18s.; of Pittsburg, add 11m. 49s.; of Chicago, add 42m. 11s.; of Kansas City, Mo., add 1h. 10m. 5s.; of Denver add 1h. 51m. 42s.; of San Francisco, add 3h. 1m. 27s.

DAYS, Month and Week.	SUN.		SUN.		MOON.	
	Latitude of Middle States.		Latitude of Southern States.		Latitude of Middle States.	
	Rises h. m.	Sets h. m.	Rises h. m.	Sets h. m.	Sets h. m.	Souths h. m.
1 Mon. George Cruikshank d. 1878.	7 9	5 18	6 54	5 34	4 29	9 41
2 Tues. Treaty of Guadalupe Hidalgo 1848.	7 8	5 19	6 53	5 35	5 26	10 34
3 Wed. Mendelssohn b. 1809.	7 7	5 21	6 53	5 36	6 16	11 25
4 Thu. Peace Conference convened at	7 6	5 22	6 52	5 37	rises morn	
5 Fri. Washington 1861.	7 5	5 23	6 51	5 38	5 42	0 13
6 Sat. Mass. ratified Constitution 1788.	7 4	5 24	6 50	5 39	6 41	0 59
<b>SEPTUAGESIMA SUNDAY.</b>						
7 Sun. Chas. Dickens b. 1812.	7 3	5 25	6 49	5 40	7 41	1 43
8 Mon. Mary Queen of Scots beheaded 1587	7 2	5 27	6 48	5 41	8 39	2 25
9 Tues. Bishop Hooper burned at Gloucester Eng. 1555.	7 1	5 28	6 47	5 42	9 37	3 6
10 Wed. Thos. A. Edison b. 1847.	7 0	5 29	6 46	5 43	10 35	3 46
11 Thu. Abraham Lincoln b. 1809.	6 59	5 30	6 46	5 44	11 35	4 27
12 Fri. Judiciary Act pas'd Congress 1801	6 58	5 31	6 45	5 44	morn 5 10	
13 Sat.	6 56	5 33	6 44	5 45	0 36	5 55
<b>SEXAGESIMA SUNDAY.</b>						
14 Sun. St. Valentines Day.	6 55	5 34	6 43	5 46	1 40	6 44
15 Mon. Battleship Maine blown up 1898.	6 54	5 35	6 42	5 47	2 45	7 37
16 Tues. Fort Donelson, Tenn. surrendered to Grant 1862.	6 53	5 36	6 42	5 47	3 50	8 35
17 Wed. Charleston captured 1865.	6 51	5 37	6 41	5 48	4 52	9 35
18 Thu. Patti b. 1843	6 50	5 39	6 40	5 49	5 48	10 37
19 Fri. David Garrick b. 1716	6 48	5 40	6 39	5 50	sets 11 38	
20 Sat.	6 47	5 41	6 38	5 51	6 4	ev. 37
<b>QUINQUAGESIMA—SHROVE SUNDAY.</b>						
21 Sun. Spinoza d. 1677.	6 46	5 42	6 37	5 52	7 21	1 33
22 Mon. George Washington b. 1732.	6 44	5 43	6 36	5 53	8 37	2 26
23 Tues. Sir Joshua Reynolds d. 1792.	6 43	5 45	6 35	5 54	9 51	3 18
24 Wed. Handel b. 1684.	6 41	5 46	6 34	5 55	11 3	4 9
25 Thu. Sir Chris. Wren d. 1723.	6 40	5 47	6 32	5 55	morn 5 0	
26 Fri. Victor Hugo b. 1802.	6 39	5 48	6 31	5 56	0 14	5 52
27 Sat. Longfellow b. 1807.	6 37	5 49	6 29	5 57	1 21	6 45
<b>1st SUNDAY IN LENT.</b>						
28 Sun. Yellowstone Nat'l Park, Act of Congress 1871.	6 36	5 50	6 28	5 58	2 25	7 38

**MOON'S PHASES.—Eastern Standard Time.**

Full Moon, . . . .5d, 3h, 25m. A.M.    New Moon, . . .20d, 5h, 52m. A.M.  
 Last Quarter, 13d, 7h, 47m. A.M.    First Quarter, 26d, 9h, 49m. P.M.

For points in the longitude of Portland, Me., subtract 17m. 18s.; of Pittsburg, add 11m. 49s.; of Chicago, add 42m. 11s.; of Kansas City, Mo., add 1h. 10m. 5s.; of Denver add 1h. 51m. 42s.; of San Francisco, add 3h. 1m. 27s.

3d Month

MARCH, 1909

31 Days

DAYS, Month and Week.		SUN.		SUN.		MOON.	
		Latitude of Middle States.		Latitude of Southern States.		Latitude of Middle States.	
		Rises h. m.	Sets h. m.	Rises h. m.	Sets h. m.	Sets h. m.	Souths h. m.
1	Mon. Dred Scott decision published 1857.	6 34	5 51	6 27	5 59	3 24	8 30
2	Tues. Bureau of Education estb. 1867.	6 33	5 52	6 26	5 59	4 15	9 22
3	Wed. Florida admitted 1845.	6 31	5 53	6 25	6 00	4 58	10 11
4	Thu. Saladin d. 1193.	6 30	5 54	6 24	6 01	5 36	10 57
5	Fri. Boston Massacre 1770.	6 28	5 56	6 23	6 02	6 10	11 41
6	Sat. Battle of Pea Ridge 1862.	6 27	5 57	6 22	6 03	rises	morn
<b>2d SUNDAY IN LENT.</b>							
7	Sun. First Prayer Bk. of Edward VI 1549.	6 25	5 58	6 20	6 03	6 32	0 24
8	Mon. Fight bet. Merrimac & Monitor 1862	6 23	5 59	6 19	6 04	7 30	1 5
9	Tues. Benjamin West d. 1820.	6 22	6 1	6 18	6 05	8 29	1 45
10	Wed. First dy. paper issued London 1702	6 20	6 1	6 17	6 05	9 28	2 26
11	Thu. Caesar Borgia killed 1508.	6 19	6 2	6 16	6 06	10 29	3 7
12	Fri. Uranus discovered 1781.	6 17	6 3	6 14	6 06	11 31	3 51
13	Sat. Uranus discovered 1781.	6 15	6 4	6 13	6 07	morn	4 38
<b>3d SUNDAY IN LENT.</b>							
14	Sun. Kloptock, German poet, d. 1803.	6 14	6 5	6 11	6 08	0 34	5 28
15	Mon. Andrew Jackson b. 1767.	6 12	6 6	6 10	6 09	1 37	6 22
16	Tues. West Point fd. by Congress 1802.	6 11	6 7	6 09	6 10	2 39	7 20
17	Wed. St. Patrick's Day.	6 9	6 8	6 07	6 10	3 35	8 19
18	Thu. Grover Cleveland b. 1837.	6 7	6 9	6 06	6 11	4 24	9 19
19	Fri. Livingstone b. 1813.	6 6	6 10	6 9	6 12	5 7	10 17
20	Sat. Sir Isaac Newton d. 1727.	6 4	6 12	6 04	6 12	5 44	11 14
<b>4th SUNDAY IN LENT.</b>							
21	Sun. Robert Southey d. 1843.	6 3	6 13	6 02	6 13	sets	ev. 9
22	Mon. Stamp Act enacted 1765.	6 1	6 14	6 01	6 14	7 26	1 2
23	Tues. Laplace b. 1749.	5 59	6 15	6 00	6 15	8 40	1 55
24	Wed. Longfellow d. 1882.	5 58	6 16	5 58	6 15	9 55	2 48
25	Thu. Joachim Murat, King of Naples b. 1771.	5 56	6 17	5 57	6 16	11 8	3 42
26	Fri. Pope Clement III d. 1191.	5 55	6 18	5 56	6 17	morn	4 36
27	Sat. Pope Clement III d. 1191.	5 53	6 19	5 54	6 17	0 15	5 31
<b>5th SUNDAY IN LENT (Passion Sunday, Cath.)</b>							
28	Sun. Pope Martin IV d. 1285.	5 51	6 20	5 53	6 18	1 18	6 25
29	Mon. Vesta discovered 1807.	5 50	6 21	5 51	6 19	2 13	7 18
30	Tues. Treaty of Paris closing of Crimean War 1856.	5 48	6 22	5 50	6 19	2 59	8 8
31	Wed. War 1856.	5 47	6 23	5 49	6 20	3 38	8 55

## MOON'S PHASES.—Eastern Standard Time.

Full Moon, . . . 6d, 9h, 56m. P.M.    New Moon, . . . 21d, 3h, 11m. P.M.  
 Last Quarter, 14d, 10h, 42m. P.M.    First Quarter, 28d, 11h, 49m. A.M.

For points in the longitude of Portland, Me., subtract 17m. 18s.; of Pittsburg, add 11m. 49s.; of Chicago, add 42m. 11s.; of Kansas City, Mo., add 1h. 10m. 5s.; of Denver add 1h. 51m. 42s.; of San Francisco, add 3h. 1m. 27s.

DAYS, Month and Week.		SUN.		SUN.		MOON.	
		Latitude of Middle States.		Latitude of Southern States.		Latitude of Middle States.	
		Rises h. m.	Sets h. m.	Rises h. m.	Sets h. m.	Sets h. m.	Souths h. m.
1	Thu. Bismark b. 1815.	5 45	6 24	5 48	6 20	4 12	9 40
2	Fri. Fleet prison for debtors abolished.	5 43	6 25	5 47	6 21	4 42	10 22
3	Sat. London 1844.	5 42	6 26	5 46	6 22	5 7	11 4
<b>PALM SUNDAY.</b>							
4	Sun. Oliver Goldsmith d. 1774.	5 40	6 27	5 45	6 23	5 30	11 14
5	Mon. Cecil J. Rhodes b. 1853.	5 39	6 28	5 43	6 24	rises	morn
6	Tues. Richard I d. 1199.	5 37	6 29	5 42	6 24	7 22	0 25
7	Wed. P. T. Barnum d. 1891	5 35	6 30	5 40	6 25	8 22	1 6
8	Thu. Lorenzo de Medicis d. 1492.	5 34	6 31	5 39	6 25	9 25	1 50
9	Fri. Lee Surren'd at Appomattox, 1865	5 32	6 32	5 37	6 26	10 28	2 36
10	Sat. "Gen." Wm. Booth, S. Army, b. 1829	5 31	6 33	5 36	6 27	11 32	3 25
<b>EASTER SUNDAY.</b>							
11	Sun. Treaty of Utrecht 1713.	5 29	6 34	5 35	6 27	morn	4 17
12	Mon. Fort Sumter fired on 1861.	5 27	6 35	5 34	6 28	0 33	5 12
13	Tues. Thos. Jefferson b. 1743.	5 26	6 36	5 33	6 28	1 29	6 10
14	Wed. Lincoln assassinated 1865..	5 24	6 37	5 32	6 29	2 19	7 7
15	Thu. Johnson's dictionary pub. 1755.	5 23	6 38	5 31	6 29	3 3	8 4
16	Fri. John Law b. 1671.	5 21	6 39	5 30	6 30	3 40	9 0
17	Sat. Benj. Franklin d. 1790.	5 20	6 40	5 29	6 30	4 14	9 54
<b>LOW SUNDAY.</b>							
18	Sun. John Foxe (Book of Martyrs) d. 1587.	5 18	6 41	5 28	6 31	4 45	10 46
19	Mon. Napoleon III b, 1808.	5 17	6 42	5 27	6 32	sets	11 39
20	Tues. Alexander the Great d. 323 B. C.	5 15	6 43	5 26	6 33	7 28	ev. 32
21	Wed. Accession of Henry VIII 1500.	5 14	6 44	5 24	6 34	8 44	1 26
22	Thu. Shakespeare b. 1564.	5 13	6 45	5 23	6 34	9 57	2 22
23	Fri. Russo-Turkish War com. 1877.	5 11	6 46	5 22	6 35	11 4	3 18
24	Sat. Washington inaugurated First President of U. S. A. 1789.	5 10	6 47	5 20	6 36	morn	4 15
<b>2d SUNDAY AFTER EASTER.</b>							
25	Sun. Oliver Cromwell b. 1599.	5 8	6 48	5 19	6 37	0 3	5 9
26	Mon. R. W. Emerson d. 1882.	5 7	6 49	5 18	6 37	0 55	6 2
27	Tues. Gen. U. S. Grant b. 1822.	5 6	6 50	5 17	6 38	1 38	6 51
28	Wed. Maryland ratified Constitution 1788	5 5	6 51	5 16	6 39	2 15	7 37
29	Thu. Crimean War ended 1856.	5 3	6 51	5 15	6 40	2 45	8 20
30	Fri. Washington inaugurated First President of U. S. A. 1789.	5 2	6 52	5 14	6 40	3 11	9 2

**MOON'S PHASES.—Eastern Standard Time.**

Full Moon, . . . 5d, 3h, 28m. P.M.    New Moon, . . 19d, 11h, 51m. P.M.  
 Last Quarter, 13d, 9h, 30m. A.M.    First Quarter, 27d, 3h, 36m. A.M.

For points in the longitude of Portland, Me., subtract 17m. 18s.; of Pittsburg, add 11m. 49s.; of Chicago, add 42m. 11s.; of Kansas City, Mo., add 1h. 10m. 5s.; of Denver add 1h. 51m. 42s.; of San Francisco, add 3h. 1m. 27s.

DAYS, Month and Week.		SUN.		SUN.		MOON.							
		Latitude of Middle States.		Latitude of Southern States.		Latitude of Middle States.							
		Rises h. m.	Sets h. m.	Rises h. m.	Sets h. m.	Sets h. m.	Souths h. m.						
1	Sat. Dewey destroyed Spanish fleet at Manila 1898.	5	16	53	5	13	6	41	3	35	9	42	
<b>3d SUNDAY AFTER EASTER.</b>													
2	Sun. Rhode Island ratified Cons. 1790.	5	0	54	5	12	6	41	3	58	10	23	
3	Mon. Thos. Hood d. 1845.	4	59	6	55	5	11	6	42	4	22	11	4
4	Tues. Horace Mann b. 1796.	4	57	6	56	5	10	6	42	4	45	11	47
5	Wed. Napoleon Bonaparte d. 1821.	4	56	6	57	5	09	6	43	rises morn			
6	Thu. Riots in Philadelphia 1844.	4	55	6	58	5	09	6	44	8	20	0	33
7	Fri. Emperor Otto the Great d. 973.	4	54	6	59	5	08	6	45	9	25	1	21
8	Sat. John Stuart Mill d. 1873.	4	53	7	0	5	07	6	45	10	28	2	13
<b>4th SUNDAY AFTER EASTER.</b>													
9	Sun. Schiller d. 1805.	4	51	7	1	5	07	6	46	11	26	3	8
10	Mon. Indian Mutiny commenced at Meerut 1857.	4	50	7	2	5	06	6	47	morn 4 5			
11	Tues. J. von Liebig b. 1808.	4	49	7	3	5	05	6	48	0	19	5	2
12	Wed. First English settlement in America, Jamestown 1607.	4	48	7	4	5	05	6	48	1	3	5	58
13	Thu. Maximilian surrendered 1867.	4	47	7	5	5	04	6	49	1	42	6	53
14	Fri. Schiller d. 1805.	4	46	7	6	5	03	6	50	2	15	7	45
15	Sat. Indian Mutiny commenced at Meerut 1857.	4	45	7	7	5	02	6	51	2	45	8	37
<b>ROGATION SUNDAY.</b>													
16	Sun. Mrs. F. D. Hemans d. 1835.	4	44	7	8	5	01	6	51	3	13	9	27
17	Mon. Dr. Jenner b. 1749.	4	43	7	9	5	00	6	52	3	42	10	18
18	Tues. The Czar of Russia b. 1868.	4	42	7	10	4	59	6	53	4	15	11	11
19	Wed. Revolution begun 1775.	4	42	7	11	4	59	6	54	sets ev. 6			
20	Thu. Christopher Columbus d. 1506.	4	41	7	12	4	58	6	54	8	44	1	2
21	Fri. Alexander the Great d. 323 B. C.	4	40	7	13	4	57	6	55	9	49	2	0
22	Sat. Alexander Pope b. 1688.	4	39	7	14	4	57	6	56	10	45	2	57
<b>SUNDAY AFTER ASCENSION.</b>													
23	Sun. South Carolina ratified Cons. 1788.	4	39	7	15	4	56	6	57	11	33	3	51
24	Mon. Queen Victoria b. 1819.	4	38	7	15	4	56	6	57	morn 4 43			
25	Tues. R. W. Emerson b. 1803.	4	38	7	16	4	56	6	58	0	13	5	31
26	Wed. Samuel Pepys d. 1703.	4	37	7	17	4	55	6	58	0	46	6	16
27	Thu. First telegraph message in America 1844.	4	36	7	18	4	55	6	59	1	14	6	59
28	Fri. Marshal Grouchy d. 1847.	4	36	7	19	4	55	6	59	1	39	7	39
29	Sat. Alfred Austin b. 1835.	4	35	7	19	4	54	7	00	2	3	8	20
<b>PENTECOST—WHIT SUNDAY.</b>													
30	Sun. Alfred Austin b. 1835.	4	35	7	20	4	54	7	00	2	25	9	0
31	Mon. Charlotte Bronte d. 1855.	4	34	7	21	4	54	7	01	2	48	9	42

**MOON'S PHASES.—Eastern Standard Time.**

Full Moon, . . . 5d, 7h, 8m. A.M. New Moon, . . . 19d, 8h, 42m. A.M.  
 Last Quarter, 12d, 4h, 45m. P.M. First Quarter, 26d, 8h, 28m. P.M.

For points in the longitude of Portland, Me., subtract 17m. 18s.; of Pittsburg, add 11m. 49s.; of Chicago, add 42m. 11s.; of Kansas City, Mo., add 1h. 10m. 5s.; of Denver add 1h. 51m. 42s.; of San Francisco, add 3h. 1m. 27s.

DAYS, Month and Week.	SUN.		SUN.		MOON.	
	Latitude of Middle States.		Latitude of Southern States.		Latitude of Middle States.	
	Rises h. m.	Sets h. m.	Rises h. m.	Sets h. m.	Sets h. m.	Souths h. m.
1 Tues. Christopher Marlowe d. 1593.	4 34	7 22	4 54	7 02	3 13	10 27
2 Wed. King Ethelbert baptized 597.	4 33	7 22	4 53	7 02	3 42	11 15
3 Thu. Harvey d. 1657.	4 33	7 23	4 53	7 03	rises	morn
4 Fri. George III b. 1738.	4 32	7 23	4 53	7 03	8 19	0 6
5 Sat. Adam Smith b. 1723.	4 32	7 24	4 53	7 04	9 19	1 1
<b>TRINITY SUNDAY.</b>						
6 Sun. Gen. Nathaniel Green b. 1742.	4 32	7 25	4 53	7 04	10 15	1 59
7 Mon. Robert Bruce d. 1329.	4 32	7 25	4 53	7 04	11 3	2 57
8 Tues. Thomas Paine d. 1809.	4 31	7 26	4 53	7 05	11 43	3 54
9 Wed. John Howard Payne (Home, Sweet Home) d. 1809.	4 31	7 26	4 53	7 05	morn	4 49
10 Thu. Queen Draga assassinated 1903.	4 31	7 27	4 53	7 05	0 18	5 42
11 Fri. Chas. Kingsley b. 1819.	4 31	7 28	4 53	7 06	1 17	7 22
<b>1st SUNDAY AFTER TRINITY (2d after Pentecost) Cath.</b>						
13 Sun. Berlin Congress opened 1878.	4 31	7 28	4 53	7 07	1 45	8 12
14 Mon. Flag Day in the United States.	4 31	7 29	4 53	7 07	2 14	9 2
15 Tues. King John granted Magna Charta at Runnymede, 1215.	4 31	7 29	4 53	7 08	2 46	9 54
16 Wed. Battle of Bunker Hill 1775.	4 31	7 29	4 53	7 08	3 21	10 49
17 Thu. Battle of Waterloo 1815.	4 31	7 30	4 54	7 08	sets	11 45
18 Fri. War of 1812 declared by proclamation 1812.	4 31	7 30	4 54	7 08	8 32	ev. 43
19 Sat. Emperor Julian killed 363.	4 31	7 31	4 54	7 08	9 25	1 39
<b>2d SUNDAY AFTER TRINITY (3d after Pentecost) Cath.</b>						
20 Sun. Alaska ceded by Russia 1867.	4 31	7 31	4 54	7 09	10 9	2 33
21 Mon. New Hampshire ratified Con. 1788.	4 31	7 31	4 54	7 09	10 45	3 23
22 Tues. Napoleon abdicated after Waterloo 1815.	4 31	7 31	4 55	7 09	11 15	4 10
23 Wed. Newfoundland discovered 1497.	4 32	7 32	4 55	7 09	11 42	4 54
24 Thu. Virginia ratified Constitution 1788.	4 32	7 32	4 55	7 10	morn	5 35
25 Fri. Emperor Julian killed 363.	4 32	7 32	4 55	7 10	0 6	6 16
26 Sat. Pillory abl'd in Great Britain 1837.	4 32	7 32	4 55	7 10	0 29	6 56
<b>3d SUNDAY AFTER TRINITY (4th after Pentecost) Cath.</b>						
27 Sun. Q. Victoria's 60th Annive'ary 1897.	4 33	7 32	4 55	7 10	0 51	7 37
28 Mon. Battle of Fort Moultrie, Charleston, S. C. 1776.	4 33	7 32	4 56	7 10	1 15	8 20
29 Tues. Pillory abl'd in Great Britain 1837.	4 34	7 32	4 56	7 10	1 40	9 6
30 Wed. Pillory abl'd in Great Britain 1837.	4 34	7 32	4 56	7 10	2 11	9 56

**MOON'S PHASES.—Eastern Standard Time.**

Full Moon, . . . 3d, 8h, 25m. P.M.    New Moon, . . . 17d, 6h, 28m. P.M.  
 Last Quarter, 10d, 9h, 42m. P.M.    First Quarter, 25d, 1h, 43m. P.M.

For points in the longitude of Portland, Me., subtract 17m. 18s.; of Pittsburg, add 11m. 49s.; of Chicago, add 42m. 11s.; of Kansas City, Mo., add 1h. 10m. 5s.; of Denver add 1h. 51m. 42s.; of San Francisco, add 3h. 1m. 27s.



DAYS, Month and Week.		SUN.		SUN.		MOON.	
		Latitude of Middle States.		Latitude of Southern States.		Latitude of Middle States.	
		Rises h. m.	Sets h. m.	Rises h. m.	Sets h. m.	Sets h. m.	Souths h. m.
1	Thu. Dominion Day in Canada.	4 35	7 32	4 57	7 10	2 47	10 50
2	Fri. Martin Koszta taken from Austrian vessel by Capt. Ingraham 1853.	4 35	7 32	4 57	7 10	3 30	11 47
3	Sat.	4 36	7 31	4 58	7 10	rises	morn
<b>4th SUNDAY AFTER TRINITY (5th after Pentecost) Cath.</b>							
4	Sun. Declaration of Independence 1776.	4 36	7 31	4 58	7 10	8 58	0 47
5	Mon. Mrs. Siddons b. 1755.	4 37	7 31	4 59	7 10	9 43	1 46
6	Tues. Edward VI of England d. 1553.	4 38	7 31	4 59	7 09	10 20	2 43
7	Wed. John Huss burned 1415.	4 38	7 31	4 59	7 09	10 52	3 38
8	Thu. Edmund Burke d. 1797.	4 39	7 30	5 00	7 09	11 21	4 30
9	Fri. Braddock's defeat at Monongahela 1755.	4 39	7 30	5 00	7 09	11 50	5 20
10	Sat.	4 40	7 30	5 01	7 09	morn	6 09
<b>5th SUNDAY AFTER TRINITY (6th after Pentecost) Cath.</b>							
11	Sun. Repulse at Fort Wagner 1863.	4 41	7 30	5 01	7 08	0 17	6 58
12	Mon. Orangemen's Day.	4 41	7 29	5 02	7 08	0 47	7 49
13	Tues. Greytown, Nicaragua, bombarded by Com. Hollins, 1854.	4 42	7 29	5 02	7 08	1 21	8 42
14	Wed.	4 42	7 28	5 03	7 08	1 59	9 36
15	Thu. Napoleon I surrendered 1815.	4 43	7 28	5 04	7 07	2 44	10 32
16	Fri. Santiago surrendered 1898.	4 44	7 27	5 04	7 07	3 38	11 28
17	Sat. Dr. Watts b. 1674.	4 45	7 27	5 05	7 07	sets	ev. 23
<b>6th SUNDAY AFTER TRINITY (7th after Pentecost) Cath.</b>							
18	Sun. Jane Austen d. 1817.	4 45	7 26	5 05	7 06	8 42	1 15
19	Mon. Prof. John Playfair, Edinburgh d. 1819.	4 46	7 26	5 06	7 06	9 16	2 03
20	Tues.	4 47	7 25	5 07	7 05	9 43	2 48
21	Wed. Battle of Bull Run 1861.	4 48	7 24	5 07	7 05	10 08	3 31
22	Thu. Cassius M. Clay d. 1903.	4 49	7 23	5 08	7 04	10 31	4 11
23	Fri. Bloomer costume first worn 1851.	4 50	7 23	5 08	7 04	10 54	4 51
24	Sat. Mormons arrived at Salt Lake Valley, Utah, 1847.	4 51	7 22	5 09	7 03	11 17	5 32
<b>7th SUNDAY AFTER TRINITY (8th after Pentecost) Cath.</b>							
25	Sun. Wyoming Territory organized 1868	4 52	7 21	5 10	7 02	11 42	6 13
26	Mon. New York ratified Cons. 1788.	4 53	7 20	5 10	7 02	morn	6 57
27	Tues. State Depart. established 1789.	4 54	7 19	5 11	7 01	0 9	7 45
28	Wed. Dumas fils b. 1824.	4 54	7 18	5 11	7 00	0 42	8 36
29	Thu. Assassination of King Humbert 1900.	4 55	7 17	5 12	6 59	1 22	9 32
30	Fri.	4 56	7 16	5 13	6 59	2 11	10 31
31	Sat. Ignatius Loyola founder of Jesuits d. 1556.	4 57	7 15	5 13	6 58	3 09	11 31

## MOON'S PHASES.—Eastern Standard Time.

Full Moon, . . . 3d, 7h, 17m. A.M.    New Moon, . . 17d, 5h. 44m. A.M.  
 Last Quarter, 10d, 1h, 58m. A.M.    First Quarter, 25d, 6h. 45m. A.M.

For points in the longitude of Portland, Me., subtract 17m. 18s.; of Pittsburg, add 11m. 49s.; of Chicago, add 42m. 11s.; of Kansas City, Mo., add 1h. 10m. 5s.; of Denver add 1h. 51m. 42s.; of San Francisco, add 3h. 1m. 27s.

DAYS, Month and Week.		SUN.		SUN.		MOON.	
		Latitude of Middle States.		Latitude of Southern States.		Latitude of Middle States.	
		Rises h. m.	Sets h. m.	Rises h. m.	Sets h. m.	Sets h. m.	Souths h. m.
<b>8th SUNDAY AFTER TRINITY (9th after Pentecost) Cath.</b>							
1	Sun.	Battle of the Nile 1798.	4 58	7 14	5 14	6 57	rises morn
2	Mon.	Fire at Portland 1873.	4 58	7 13	5 14	6 56	8 17 0 31
3	Tues.	Crown Point taken 1750.	4 59	7 12	5 15	6 55	8 51 1 28
4	Wed.	Shelley b. 1792.	5 07	11 5	17 6	6 54	9 22 2 23
5	Thu.	Henry I crowned 1100.	5 17	10 5	17 6	6 54	9 51 3 15
6	Fri.	Anne Shakespeare d. 1623.	5 27	9 5	17 6	6 53	10 20 4 5
7	Sat	Leonidas slain at Thermopylae 480 B. C.	5 37	8 5	18 6	6 52	10 50 4 56
<b>9th SUNDAY AFTER TRINITY (10th after Pentecost) Cath.</b>							
8	Sun.	George Canning d. 1827.	5 47	7 5	19 6	6 51	11 21 5 46
9	Mon.	First national convention of Free Soil Party 1848.	5 57	6 5	20 6	6 50	11 58 6 38
10	Tues.	Gen. Moreau d. 1763.	5 67	3 5	21 6	6 49	morn 7 32
11	Wed.	Robert Southey b. 1774.	5 77	2 5	21 6	6 48	0 41 8 27
12	Thu.	Manila surrendered to the Ameri- cans 1898.	5 87	2 5	21 6	6 47	1 31 9 22
13	Fri.		5 97	0 5	22 6	6 46	2 26 10 17
14	Sat.		5 106	59	5 23	6 45	3 27 11 9
<b>10th SUNDAY AFTER TRINITY (11th after Pentecost) Cath.</b>							
15	Sun.	Napoleon I b. 1769.	5 116	58	5 23	6 44	sets 11 58
16	Mon.	Battle of Bennington, Vt., 1777.	5 126	56	5 24	6 43	7 45 ev. 44
17	Tues.	Thos. de Quincey b. 1785.	5 136	55	5 24	6 42	8 11 1 27
18	Wed.	Pope Paul IV d. 1559.	5 146	53	5 25	6 41	8 34 2 8
19	Thu.	Honore de Balzac d. 1850.	5 156	52	5 26	6 40	8 56 2 49
20	Fri.	Duke of Buckingham b. 1592.	5 166	51	5 27	6 39	9 19 3 28
21	Sat.	Lady M. W. Montagu d. 1762.	5 176	49	5 28	6 38	9 42 4 9
<b>11th SUNDAY AFTER TRINITY (12th after Pentecost) Cath.</b>							
22	Sun.	Salisbury d. 1903.	5 186	48	5 28	6 37	10 9 4 52
23	Mon.	Duke of Buckingham assassinated 1623.	5 196	46	5 29	6 35	10 38 5 37
24	Tues.	Faraday d. 1867.	5 206	45	5 30	6 34	11 13 6 25
25	Wed.	Lope da Vega d. 1635.	5 216	44	5 30	6 33	11 57 7 18
26	Thu.	Last battle of Revolutionary War 1782.	5 226	42	5 31	6 33	morn 8 14
27	Fri.		5 226	41	5 32	6 32	0 51 9 13
28	Sat.		5 236	39	5 32	6 30	1 53 10 13
<b>12th SUNDAY AFTER TRINITY (13th after Pentecost) Cath.</b>							
29	Sun	John Locke b. 1632.	5 246	38	5 33	6 28	3 3 11 12
30	Mon.	Alexandria taken 1814.	5 256	36	5 33	6 27	rises morn
31	Tues.	Mrs. John Drew d. 1897.	5 266	35	5 34	6 25	7 19 0 8

**MOON'S PHASES.—Eastern Standard Time.**

Full Moon, . . . 1d, 4h, 14m. P.M.    New Moon, . . 15d, 6h, 55m. P.M.  
 Last Quarter, 8d, 7h, 10m. A.M.    First Quarter, 23d, 10h, 55m. P.M.

For points in the longitude of Portland, Me., subtract 17m. 18s.; of Pittsburg, add 11m. 49s.; of Chicago, add 42m. 11s.; of Kansas City, Mo., add 1h. 10m. 5s.; of Denver add 1h. 51m. 42s.; of San Francisco, add 3h. 1m. 27s.

DAYS, Month and Week.		SUN.		SUN.		MOON.	
		Latitude of Middle States.		Latitude of Southern States.		Latitude of Middle States.	
		Rises h. m.	Sets h. m.	Rises h. m.	Sets h. m.	Sets h. m.	Souths h. m.
1	Wed. Capitulation of Sedan 1870.	5 27	6 33	5 34	6 24	7 50	1 3
2	Thu. Great Fire of London 1666.	5 28	6 32	5 35	6 23	8 20	1 56
3	Fri. Cromwell d. 1658.	5 29	6 30	5 36	6 22	8 50	2 48
4	Sat. Napoleon III deposed and Republic proclaimed 1870.	5 30	6 28	5 36	6 20	9 22	3 40
<b>13th SUNDAY AFTER TRINITY (14th after Pentecost) Cath.</b>							
5	Sun. Cardinal Richelieu b. 1585.	5 31	6 27	5 37	6 19	9 58	4 33
6	Mon. President McKinley shot at Buffalo 1901.	5 32	6 25	5 37	6 18	10 40	5 27
7	Tues. 1901.	5 33	6 24	5 38	6 17	11 27	6 23
8	Wed. Montreal capitulated 1750.	5 34	6 22	5 39	6 15	morn	7 18
9	Thu. Utah Territory organized 1850.	5 35	6 20	5 39	6 14	0 21	8 13
10	Fri. Battle of Lake Erie, Perry's Victory 1813.	5 36	6 19	5 40	6 13	1 19	9 5
11	Sat.	5 36	6 17	5 41	6 11	2 21	9 55
<b>14th SUNDAY AFTER TRINITY (15th after Pentecost) Cath.</b>							
12	Sun. Fugitive Slave Law passed Congress 1850.	5 37	6 16	5 41	6 10	3 23	10 41
13	Mon.	5 38	6 14	5 42	6 09	4 24	11 25
14	Tues. City of Mexico taken by the U. S. troops 1847.	5 39	6 12	5 42	6 08	sets	ev. 7
15	Wed.	5 40	6 11	5 43	6 06	7 1	0 47
16	Thu. George I landed in England 1714.	5 41	6 9	5 43	6 05	7 23	1 27
17	Fri. Battle of Antietam 1862.	5 42	6 8	5 44	6 04	7 46	2 7
18	Sat. Roman Emperor Trajan b. 56 A. D.	5 43	6 6	5 45	6 02	8 10	2 49
<b>15th SUNDAY AFTER TRINITY (16th after Pentecost) Cath.</b>							
19	Sun. Battle of Chickamauga 1863.	5 44	6 4	5 45	6 01	8 39	3 32
20	Mon. Italians occupied Rome 1870.	5 45	6 2	5 46	6 00	9 11	4 19
21	Tues. MacAdam, road builder, b. 1756.	5 46	6 1	5 46	5 58	9 50	5 9
22	Wed. Emancipation proclamation 1862.	5 47	5 59	5 47	5 57	10 38	6 2
23	Thu. Wellington's first victory 1803.	5 48	5 57	5 48	5 56	11 35	6 58
24	Fri. Pope Innocent II d. 1143.	5 49	5 55	5 49	5 54	morn	7 56
25	Sat. First American newspaper, Boston 1690.	5 50	5 54	5 50	5 53	0 40	8 54
<b>16th SUNDAY AFTER TRINITY (17th after Pentecost) Cath.</b>							
26	Sun. Relief of Lucknow 1857.	5 51	5 52	5 51	5 52	1 53	9 51
27	Mon. Emancipation in Brazil 1871.	5 52	5 51	5 51	5 50	3 9	10 46
28	Tues. Spanish Revolution 1823.	5 53	5 49	5 52	5 49	4 25	11 40
29	Wed. Richard III abdicated 1399.	5 54	5 47	5 53	5 48	rises	morn
30	Thu. Field Marshall Earl Roberts V. C. b. 1832.	5 55	5 46	5 54	5 47	6 45	0 33

## MOON'S PHASES.—Eastern Standard Time.

Last Quarter, 6d, 2h, 44m. P.M. First Quarter, 22d, 1h, 31m. P.M.  
 New Moon, . . 14d, 10h, 9m. A.M. Full Moon, . . 29d, 8h, 5m. A.M.

For points in the longitude of Portland, Me., subtract 17m. 18s.; of Pittsburg, add 11m. 49s.; of Chicago, add 42m. 11s.; of Kansas City, Mo., add 1h. 10m. 5s.; of Denver add 1h. 51m. 42s.; of San Francisco, add 3h. 1m. 27s.

DAYS, Month and Week.		SUN.		SUN.		MOON.					
		Latitude of Middle States.		Latitude of Southern States.		Latitude of Middle States.					
		Rises h. m.	Sets h. m.	Rises h. m.	Sets h. m.	Sets h. m.	Souths h. m.				
1	Fri.	Deposits removed from U. S. Bank by Jackson 1833.				5 56	5 44	5 54	5 44	7 17	1 27
2	Sat.					5 57	5 43	5 55	5 42	7 53	2 21
<b>17th SUNDAY AFTER TRINITY (18th after Pentecost) Cath.</b>											
3	Sun.	Elias Howe, inventor of sewing machine d. 1867.				5 58	5 41	5 55	5 43	8 33	3 17
4	Mon.					5 59	5 39	5 56	5 41	9 20	4 14
5	Tues.	Jacques Offenbach, composer d. 1880.				6 0	5 38	5 56	5 40	10 14	5 12
6	Wed.					6 1	5 36	5 57	5 39	11 12	6 8
7	Thu.	Edgar Allen Poe d. 1849.				6 2	5 35	5 57	5 37	morn	7 2
8	Fri.	Nicolo di Rienzi assassinated 1354.				6 3	5 33	5 58	5 36	0 14	7 53
9	Sat.	Italian union established 1870.				6 4	5 31	5 58	5 34	1 16	8 40
<b>18th SUNDAY AFTER TRINITY (19th after Pentecost) Cath.</b>											
10	Sun.	Naval Academy, Annapolis opened 1840.				6 5	5 30	5 59	5 33	2 17	9 24
11	Mon.					6 6	5 28	6 00	5 32	3 16	10 6
12	Tues.	Columbus discovered America 1492.				6 7	5 27	6 01	5 31	4 16	10 47
13	Wed.	Elizabeth Fry d. 1845.				6 8	5 25	6 02	5 30	5 15	11 27
14	Thu.	Battles of Jena and Auerstadt 1806.				6 9	5 23	6 03	5 28	sets	ev. 7
15	Fri.	Thaddeus Kosciusco, Polish patriot d. 1817.				6 10	5 22	6 04	5 27	6 15	0 48
16	Sat.					6 11	5 20	6 05	5 26	6 40	1 31
<b>19th SUNDAY AFTER TRINITY (20th after Pentecost) Cath.</b>											
17	Sun.	Burgoyne surr'd at Saratoga 1777.				6 12	5 19	6 05	5 25	7 12	2 16
18	Mon.	Reaumur d. 1757.				6 13	5 17	6 06	5 24	7 49	3 5
19	Tues.	Cornwallis surrendered 1781.				6 14	5 16	6 07	5 23	8 33	3 57
20	Wed.	Christopher Wren b. 1632.				9 15	5 14	6 07	5 22	9 24	4 51
21	Thu.	Ostend Manifesto as to Cuba 1854.				6 17	5 13	6 08	5 21	10 24	5 46
22	Fri.	W. E. H. Leckey d. 1903.				6 18	5 11	6 09	5 20	11 32	6 42
23	Sat.	Boetius beheaded 524.				6 19	5 10	6 09	5 19	morn	7 37
<b>20th SUNDAY AFTER TRINITY (21st after Pentecost) Cath.</b>											
24	Sun.	Los Angeles massacre 1873.				6 20	5 9	6 10	5 18	0 44	8 31
25	Mon.	Battle of Agincourt 1415.				6 21	5 8	6 11	5 17	1 58	9 24
26	Tues.	Von Moltke b. 1800.				6 22	5 6	6 12	5 16	3 14	10 16
27	Wed.	Theodore Roosevelt b. 1858.				6 23	5 5	6 12	5 15	4 31	11 9
28	Thu.	Erasmus b. 1467.				6 24	5 4	6 13	5 14	rises	morn
29	Fri.	Sir Walter Raleigh beheaded 1618.				6 25	5 3	6 14	5 13	5 45	0 3
30	Sat.	Richard Brinsley Sheridan b. 1751.				6 26	5 1	6 15	5 12	6 24	1 0
<b>21st SUNDAY AFTER TRINITY (22d after Pentecost) Cath.</b>											
31	Sun.	Gen. Hooker d. 1831.				6 28	5 0	3 15	5 11	7 9	1 58

**MOON'S PHASES.—Eastern Standard Time.**

Last Quarter, 6d, 1h, 44m. A.M.      First Quarter, 22d, 2h, 3m. A.M.  
 New Moon, . . 14d, 3h, 13m. A.M.      Full Moon, . . 28d, 5h, 7m. P.M.

For points in the longitude of Portland, Me., subtract 17m. 18s.; of Pittsburg, add 11m. 49s.; of Chicago, add 42m. 11s.; of Kansas City, Mo., add 1h. 10m. 5s.; of Denver add 1h. 51m. 42s.; of San Francisco, add 3h. 1m. 27s.

DAYS, Month and Week.	SUN.		SUN.		MOON.	
	Latitude of Middle States.		Latitude of Southern States.		Latitude of Middle States.	
	Rises h. m.	Sets h. m.	Rises h. m.	Sets h. m.	Sets h. m.	Souths h. m.
1 Mon. Senator Chandler d. 1879.	6 29	4 58	6 16	5 10	8 2	2 58
2 Tues. Jenny Lind d. 1887.	6 30	4 57	6 17	5 10	9 1	3 57
3 Wed. Emperor Constantius d. 361.	6 31	4 56	6 18	5 09	10 3	4 54
4 Thu. Mendelssohn d. 1847.	6 32	4 55	6 19	5 08	11 6	5 47
5 Fri. Guy Fawkes Day in England.	6 34	4 54	6 20	5 07	morn	6 36
6 Sat. Emperor Julian b. 331.	6 35	4 53	6 21	5 06	0 8	7 22
<b>22d SUNDAY AFTER TRINITY (23d after Pentecost) Cath.</b>						
7 Sun. Sir Martin Frobisher d. 1594.	6 36	4 52	6 22	5 06	1 9	8 5
8 Mon. John Milton d. 1674.	6 37	4 51	6 23	5 05	2 8	8 46
9 Tues. King Edward VII b. 1841.	6 38	4 50	6 24	5 04	3 8	9 26
10 Wed. Martin Luther b. 1483.	6 40	4 49	6 25	5 04	4 6	10 6
11 Thu. King Canute d. 1035.	6 41	4 48	6 26	5 03	5 5	10 46
12 Fri. Chas. Kemble d. 1854.	6 42	4 47	6 26	5 02	6 6	11 29
13 Sat. R. L. Stevenson b. 1850.	6 43	4 46	6 27	5 02	sets	ev. 14
<b>23d SUNDAY AFTER TRINITY (24th after Pentecost) Cath.</b>						
14 Sun. Leibnitz d. 1716.	6 44	4 45	6 28	5 01	5 48	1. 2
15 Mon. First English Parliament 1213.	6 45	4 44	6 29	5 01	6 30	1 53
16 Tues. Inauguration of Suez Canal 1869.	6 46	4 43	6 29	5 00	7 19	2 47
17 Wed. Queen Elizabeth crowned 1558.	6 47	4 42	6 30	5 00	8 17	3 42
18 Thu. Sir David Wilkie, painter b. 1785.	6 48	4 41	6 31	5 00	9 22	4 37
19 Fri. W. J. Florence d. 1891.	6 49	4 41	6 32	4 59	10 30	5 31
20 Sat. Edward I crowned 1272.	6 51	4 40	6 33	4 59	11 42	6 24
<b>24th SUNDAY AFTER TRINITY (25th after Pentecost) Cath.</b>						
21 Sun. North Carolina ratified the Consti- tution 1789.	6 52	4 40	6 34	4 59	morn	7 15
22 Mon. Louis, Duke of Orleans ass'd 1407.	6 53	4 39	6 35	4 58	0 54	8 5
23 Tues. Lawrence Sterne b. 1713.	6 54	4 38	6 35	4 58	2 7	8 55
24 Wed. British evacuated New York 1783.	6 55	4 38	6 36	4 58	3 22	9 47
25 Thu. Queen Maud of Norway b. 1869.	6 57	4 37	6 37	4 57	4 38	10 41
26 Fri. Dumas fils. d. 1895.	6 58	4 37	6 38	4 57	5 55	11 38
27 Sat. The London Times first printed by steam 1814	6 59	4 36	6 39	4 56	rises	morn
<b>1st SUNDAY IN ADVENT.</b>						
28 Sun. Swift b. 1667.	7 0	4 36	6 40	4 56	5 47	0 38
29 Mon.	7 1	4 36	6 41	4 56	6 42	1 39
30 Tues.	7 2	4 35	6 41	4 56	7 45	2 39

**MOON'S PHASES.—Eastern Standard Time.**

Last Quarter, 4d, 4h, 38m. P.M. First Quarter, 20d, 0h, 29m. P.M.  
New Moon, . . 12d, 9h, 18m. P.M. Full Moon, . . 27d, 3h, 52m. A.M.

For points in the longitude of Portland, Me., subtract 17m. 18s.; of Pittsburg, add 11m. 49s.; of Chicago, add 42m. 11s.; of Kansas City, Mo., add 1h. 10m. 5s.; of Denver add 1h. 51m. 42s.; of San Francisco, add 3h. 1m. 27s.

DAYS, Month and Week.	SUN.		SUN.		MOON.	
	Latitude of Middle States.		Latitude of Southern States.		Latitude of Middle States.	
	Rises h. m.	Sets h. m.	Rises h. m.	Sets h. m.	Sets h. m.	Souths h. m.
1 Wed. Queen Alexandra of Eng. b. 1844.	7 34	35 6	42 4	56 5	8 51	3 35
2 Thu. Battle of Austerlitz 1805.	7 44	35 6	43 4	56 5	9 56	4 28
3 Fri. R. L. Stevenson d. 1894.	7 54	35 6	44 4	56 5	10 58	5 17
4 Sat. Thos. Carlyle b. 1795.	7 64	35 6	44 4	56 5	11 59	6 1
<b>2d SUNDAY IN ADVENT.</b>						
5 Sun. Hayti discovered 1492.	7 74	34 6	45 4	56 5	morn	6 43
6 Mon. Anti Slavery Society organized at Phila. 1833.	7 84	34 6	46 4	56 5	0 58	7 23
7 Tues. Herbert Spencer d. 1903.	7 94	34 6	47 4	56 5	1 57	8 3
8 Wed. Sumpter bombarded 1863.	7 104	34 6	47 4	57 5	2 55	8 43
9 Thu. Napoleon III elected President of France 1848.	7 114	34 6	48 4	57 5	3 54	9 25
10 Fri. Napoleon III elected President of France 1848.	7 114	34 6	49 4	57 5	4 56	10 9
11 Sat. France 1848.	7 124	34 6	50 4	57 5	5 58	10 56
<b>3d SUNDAY IN ADVENT.</b>						
12 Sun. Pennsylvania ratified Cons. 1787.	7 134	34 6	51 4	57 5	sets	11 47
13 Mon. Drake sailed from Falmouth 1577.	7 144	34 6	52 4	58 5	5 15	ev. 41
14 Tues. Washington d. 1799.	7 144	35 6	52 4	58 5	6 11	1 36
15 Wed. Prince Albert d. 1861.	7 154	35 6	53 4	58 5	7 14	2 33
16 Thu. Boston Tea Party 1773.	7 154	36 6	54 4	58 5	8 22	3 28
17 Fri. Cuban reciprocity 1903.	7 164	36 6	54 4	59 5	9 32	4 21
18 Sat. Ten Amendments to Constitution adopted 1791.	7 174	36 6	55 4	59 5	10 44	5 12
<b>4th SUNDAY IN ADVENT.</b>						
19 Sun. Battle of Niagara 1813.	7 174	37 6	55 5	00 0	11 55	6 1
20 Mon. Ignatius, Bishop of Antioch, martyred 107.	7 184	37 6	55 5	00 0	morn	6 49
21 Tues. Mayflower pilgrims landed at Plymouth Rock 1620.	7 184	38 6	56 5	00 0	1 7	7 39
22 Wed. Oakey Hall acquitted 1873.	7 194	38 6	57 5	01 0	2 19	8 30
23 Thu. Battle of Trenton, N. J. 1776.	7 194	39 6	57 5	01 0	3 33	9 23
24 Fri. Oakey Hall acquitted 1873.	7 204	39 6	57 5	02 0	4 48	10 20
25 Sat. Battle of Trenton, N. J. 1776.	7 204	40 6	57 5	02 0	6 2	11 20
<b>1st SUNDAY AFTER CHRISTMAS.</b>						
26 Sun. Stephen Girard d. 1831.	7 214	40 6	58 5	03 0	rises	morn
27 Mon. Charles Lamb d. 1834.	7 214	41 6	58 5	04 0	5 26	0 20
28 Tues. Lord Macaulay d. 1859.	7 214	42 6	58 5	04 0	6 31	1 19
29 Wed. William Ewart Gladstone b. 1809.	7 214	42 6	59 5	05 0	7 37	2 15
30 Thu. Cession of Gadsden purchase to U. S. 1853.	7 224	43 6	59 5	06 0	8 42	3 7
31 Fri. U. S. 1853.	7 224	43 7	00 5	07 0	9 46	3 54

**MOON'S PHASES.—Eastern Standard Time.**

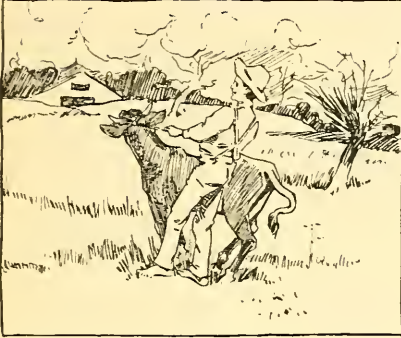
Last Quarter, 4d, 11h, 12m. A.M.    First Quarter, 19d, 9h, 18m. P.M.  
 New Moon, . . 12d, 2h, 59m. P.M.    Full Moon, . . 26d, 4h, 30m. P.M.

For points in the longitude of Portland, Me., subtract 17m. 18s.; of Pittsburg, add 11m. 49s.; of Chicago, add 42m. 11s.; of Kansas City, Mo., add 1h. 10m. 5s.; of Denver add 1h. 51m. 42s.; of San Francisco, add 3h. 1m. 27s.

# ABRAHAM LINCOLN

1809—1909

Abraham Lincoln's parents moved from Kentucky to Indiana when he was seven years old. But he had already learned to do a boy's work on the farm. After he became President, Lincoln told a friend of one of his experiences as a farmer's boy in the following words:



*Lincoln the farmer's boy.*

"I remember our Kentucky home very well. Our farm was composed of three fields. It lay in a valley surrounded by high hills and deep gorges. Sometimes when there came a big rain on the hills the water would come down through the gorges and spread all over the farm. The last thing I remember doing there was one Saturday afternoon; the other boys planted the corn in what we called the big field—it contained seven acres—and I dropped two pumpkin seeds in every other hill and every other row. The next Sunday morning there came a big rain in the hills, it did not rain a drop in the valley, but the water coming through the gorges washed ground, corn, pumpkin seeds and all clear off the field."

**Pulling Fodder for the "Life of Washington."**

In Indiana the lad could not be spared to go to school more

than a few months—not more than a year altogether. He "worked out" for the neighboring farmers as chore boy and hired man, doing anything he could. At seventeen he was nearly six feet four in height and earned, at most, thirty cents a day.

He read every book he could borrow. He pored over Weems's "Life of Washington," devouring that strange and stilted story with hungry avidity. He put it away one night on the only shelf he had in the poor cabin in which he lived—that was a chink between logs. A heavy rain-storm came up in the night and washed the mud mortar out, soaking and spoiling the borrowed "Life of Washington."

With deep regret he went to the owner of the book and asked how he might pay for the precious volume.

The farmer said, "Well, Abe, seein' as it's you, I won't be too hard on you."



*Lincoln reading the Life of Washington.*

The book was accounted worth seventy-five cents, so Abe worked for twenty-five cents a day and was greatly relieved to be able to make restitution so easily.

President-elect Lincoln, on his way to Washington to take the

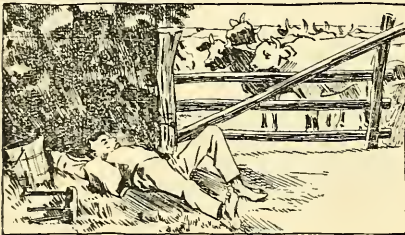
reins of government, stopped a few hours in Trenton, New Jersey, and addressing the State Legislature there, referred to Washington's crossing the Delaware and to the great truths he had gained from the book for which he had "pulled fodder" for three whole days.

### Lincoln as a Farm-hand.

A farmer neighbor for whom Lincoln used to work, mistook the lad's absent-mindedness and fondness for reading as a sign of laziness. He once said of Abe:

"He worked for me, but he was always reading and thinking. I used to get mad at him for it, and say he was awful lazy. He would laugh and talk—crack jokes and tell stories all the time. He didn't love work half so much as his pay. He said to me one day that his father taught him to work but never taught him to love it."

He worked as a farm-hand for Josiah Crawford (once owner of Weems's "Life of Washington"). Crawford was about the only man young Abe did not like. He was considered "mean" and was nicknamed "Old Blue Nose" by the neighborhood. But Abe liked Mrs.



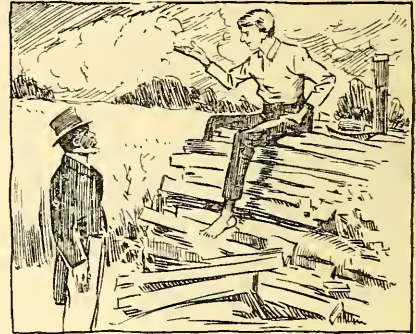
*The neighbors used to think Lincoln was lazy.*

Crawford, and his sister was also living there as hired girl. Mrs. Crawford has told a number of good stories of Lincoln at this period of his life.

He used to be polite to the fair sex in his uncouth way, lifting his hat when he spoke

to one of them. He was kind and handy about the house—making fires, splitting kindling, and even rocking the cradle when necessary.

Mrs. Crawford said: "Abe was no hand to pitch into farm work like killing snakes," but that taking him for an all-round hired man he always did



*Lincoln was always a ready speaker. He began early.*

a good deal more than he was paid for. Mrs. Crawford said that even then Abe used to say he was going to be President some day, and she would rally him with: "A pretty President you would make, with all your tricks and monkey-shines." But the great boy would say:

"Well, I'm going to study and get ready and the chance will come!"

### Lincoln at a "Raising," Thrashing and Felling Trees.

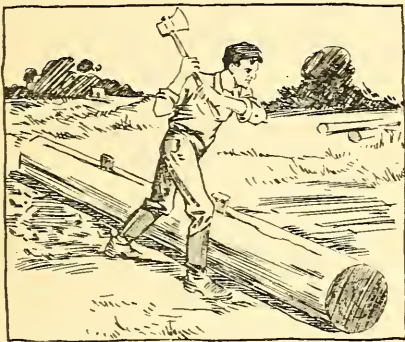
It must have been annoying to have a hired man who was always mounting a convenient stump to deliver a political harangue or a take-off on some backwoods preacher, while all the other men dropped their scythes or cradles and gathered round to listen and laugh. Abe's father, who received his wages until he was twenty-one, used to scold him for "fooling" so much and hindering the other help. Abe was always ready with an answer and enjoyed nothing better than an argu-



ment. Dennis Hanks, Lincoln's cousin and playmate, told how Thomas Lincoln, Abraham's father, once knocked Abe off the fence for being so forward in answering a question asked by a man who was going by on horseback.

Many are the tales told of young Lincoln's great strength and endurance. At the "raising" of a corn-crib, several men were calling for another to help them carry several small logs or sticks of timber. Abe promptly shouldered them all and marched off with them while the men looked sheepishly on. Another time he took up a hen-house weighing at least six hundred pounds and moved it alone.

He was a great "hand" at thrashing and butchering as well



*An employer said of Lincoln: "He could sink an axe deeper into wood than any man I ever saw."*

as famous at chopping. Dennis Hanks said when Abe was felling trees in the woods "you could hear the trees fall so fast that you would think there were three or four men at work there."

#### **Splitting the Rails that Elected Him President.**

When Lincoln was twenty-one his father moved from Indiana to Illinois. Abe drove the ox team. The little dog fell behind at one place and it was not missed until they had crossed an ice-crustured stream.

The rest were vexed and inclined to go on without the dog—but Abraham could see him jumping about on the other side in great distress. To drive that ponderous "turn-out" back was out of the question. So he took off his boots and socks and waded twice through the icy water to rescue the grateful little beast.

Abraham had a "pack" of small wares, which he peddled with success on the way. When they reached the chosen location in Illinois, he helped to build the log cabin and clear fifteen acres which he and John Hanks fenced in with black walnut rails which they split for that purpose, little thinking then that some of those rails were to become historical and exert a wide influence in the "Rail-Splitter Campaign" which would make him President of the United States.

As soon as Abe saw his father, stepmother and her children comfortably established in their Illinois home, he "struck out" for himself.

He had no money nor decent clothes, nor had he an education or even a trade. He worked out for the farmers in the new neighborhood. The first thing he did was to split three thousand rails for walnut-dyed jeans enough to make him a suit of clothes.

#### **"Stealing Hens Not Respectable."**

When Lincoln was a young lawyer he prosecuted a man for stealing poultry and secured his conviction. After the trial the foreman of the jury overtook him, on horseback, on their way to the next town. The juryman complimented the young attorney on the zeal and skill with which he conducted the case against the hen thief. He said:

"When I was a young fellow myself, and the country was new, I didn't mind carrying off

a sheep, now and then, myself; but I never got down so low as *stealing hens—O Jerusalem!*"

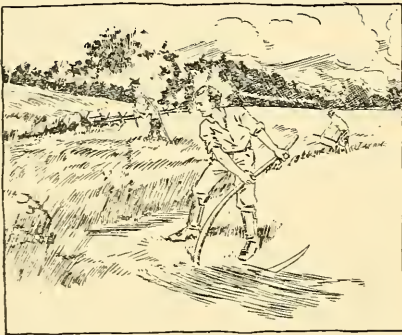
### "Lawyer Lincoln Beaten in a Horse Trade."

While Lincoln was a lawyer traveling the Eighth Circuit of Illinois, he and a certain Judge got to bantering each other about their success in trading horses. It was finally agreed that they were to trade horses with each other the next morning at nine o'clock. If either backed out he would have to pay the other a penalty of twenty-five dollars.

Promptly at nine next day Lincoln appeared with a saw-horse on his shoulder, but when he saw the Judge's horse—the boniest, spavinedest, stringhaltedest old nag he ever beheld—he set down his saw-horse and sat on it. Finally he gasped out: "Well, boys, this is the first time I was ever beaten in a horse trade." The bystanders cheered and shouted themselves hoarse while Abe led the flea-bitten old "crowbait" away.

### Electioneering in Harvesting and Milking Time.

When Lincoln was a candidate for the Illinois Legislature, he called on a prosperous farmer in his district, in harvesting time. The men banteringly told him they would vote for him if



*Lincoln's physical prowess was respected everywhere. He had an immense reach of arm.*

he could "hold his own" in the wheat field.

Lincoln accepted the challenge, took a cradle, and, with his long, sinewy arms, cut a much wider swath than any of the others, and left them far behind. They all promised to vote for him.

On another occasion he and his rival called at the same time on a certain farmer who was away from home. Each candidate tried to outdo the other in his attentions to the farmer's wife who was just going out to milk. Lincoln's rival seized the pail and insisted on doing the milking. But he found that his remarks received little attention, for Lincoln and their hostess were chatting in the most friendly way at the bars. When he finished milking, the woman thanked him for giving her "such a nice chance to talk with Mr. Lincoln."

### Trusted Providence Till the Breaching Broke.

Stephen A. Douglas, "The Little Giant" of Illinois, made a speech, in the campaign of 1854, in which he called on his hearers to "trust in Providence," etc.

Lincoln, in his reply, remarked on Douglas's appeal, as follows:

"Let us stand by our candidate (General Scott) as faithfully as he has always stood by our country, and I much doubt if we do not perceive a slight abatement of Judge Douglas's confidence in Providence as well as in the people. I suspect that confidence is not more firmly fixed with the Judge than it was with the old woman whose horse ran away with her in a buggy. She said that 'she trusted in Providence till the 'britchin' broke and then she didn't know what on airth to do!'"

### "Short Horns to the Vicious Ox."

Lincoln had occasion to refer to the petty, mean, annoy-

ing conduct of certain Congressmen. In talking with some friends, he added:

"I have great sympathy for these men, because of their temper and their weakness; but I am thankful that the good Lord has given to the vicious ox short horns, for if their physical courage were equal to their vicious disposition, some of us in this neck of the woods would get hurt."

"Minneboohoo."

Governor Saunders, of Nebraska, referred one day to a little settlement in his State, located on a stream called Weeping Water.

"Weeping Water?" asked Mr. Lincoln, with a twinkle in his eye. "If 'Minnehaha' means 'Laughing Water,' the Indian name for 'Weeping Water' must be 'Minneboohoo.'"

"More Light and Less Noise."

Early in his term the newspapers criticised and ridiculed everything the President did or left undone, accusing him of all sorts of selfishness, meanness and even trickery. Editors and correspondents called upon him and offered what they considered most valuable advice. At last he said to the Washington reporter for a great daily:

"You New York papers remind me of a little story. Some years ago there was a gentleman traveling through Kansas on horseback. There were few settlements and no roads, so he lost his way. To make matters worse, as night came on, a terrific thunderstorm came up, and peal after peal of thunder followed the vivid flashes of lightning which illuminated the scene for only a moment at a time. The terrified traveler then dismounted and led his horse, trying to guide it as well as he could by the fitful flashes of lightning. Suddenly a tremendous crash of thunder

brought the frightened wayfarer to his knees, and he cried out, in his agony:

'O Lord! If it's all the same to you, give us a little more light and a little less noise!'"



*Lincoln was extremely conscientious. He walked several miles one night to return six and a quarter cents which he had overcharged a customer when he was clerk in a country store.*

"Tell Me the Horse's Points."

A Congressional Committee once came to make a special report to the President. This report was in writing, went into unimportant details, and was as "exhaustive" as possible. At last Lincoln, losing his customary patience, exclaimed: "Why can't an investigating committee exhibit a grain of common sense? I should need a new lease of life to read that thing through. If I send a man to buy a horse for me, I expect to have him tell me that horse's points, and not *how many hairs there are in its tail!*"

"How Many Legs Would a Sheep Have?"

A deputation of ministers called on the President, one day in 1862, to urge him to free the slaves without delay. He had already written his great Emancipation Proclamation, but was not ready to announce it. He said to the ministers:

"If I issue a proclamation now, as you suggest, it would be as ineffectual as the Pope's bull against the comet. It cannot be enforced. Now, by way of illustration, how many legs would a sheep have if you called his tail a leg?"

They all answered, "Five."

"No, you are wrong there. Calling a tail a leg does not make it one."

**"That'll Bring the Chickens  
Every Time."**

"Every man has his own particular way of getting at and doing things," said President Lincoln one day.

"It reminds me of a fellow out in Illinois who had better luck in getting prairie chickens than any one in the neighborhood. He had a rusty old gun no other man dared to handle; he never seemed to exert himself, being listless and indifferent when out after game, but he always brought home all the chickens he could carry.

"How is it, Jake," inquired one sportsman, who, although a good shot, was often unfortunate, "that you never come home without a lot of birds?"

Jake grinned, half closed his eyes, and replied, "Oh, I don't know that there's anything queer about it, I jes' go ahead an' git 'em."

"Yes, I know you do, but how do you do it?"

"You'll tell."

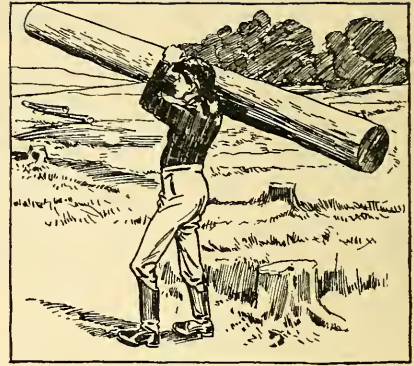
"Honest, Jake, I won't say a word. Hope to drop dead this minute."

"Never say nothing if I tell you?"

"Cross my heart three times."

This reassured Jake, who put his mouth close to the ear of his eager questioner, and said in a whisper:

"All you've got to do is jest to hide in a fence corner an' make a noise like a turnip. That'll bring the chickens every time."



*Lincoln attained his full growth when nineteen and was a remarkably powerful man at that age.*

**"Ploughing Around" Governor  
Blank.**

A certain Governor called at one of the departments to complain about various matters. He was dissatisfied with this and that. In fact, nothing suited that Governor, and the officials could do nothing with him, so he went off in high dudgeon to see President Lincoln.

After several hours the Governor returned to the Department, with a pleased and self-satisfied expression on his face, to say farewell, and then took a train for home.

The officials asked the President, next time they met, what concessions he had made to put the apparently implacable Governor in such a good humor.

"I didn't concede a thing," said Lincoln, laughing. "You know how the Illinois farmer managed the big log that lay in the middle of his field. He announced to his neighbors, one Sunday, that he had got rid of it. As it was too big to haul out, too knotty to split, and too wet and soggy to burn, they were much surprised, and exclaimed, 'How did you get rid of it!' 'Well now, boys, if you'll never tell I'll explain how I did it—I ploughed around it.'

And that's the way I got rid

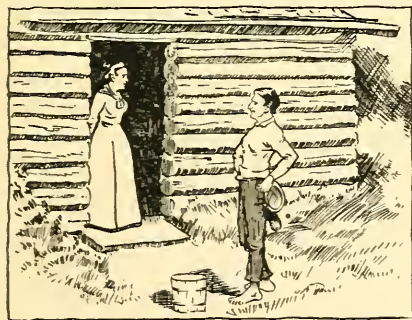
of that Governor. I ploughed around him, but it took me three mortal hours to do it."

**"Come Down and Help Me Let This Hog Go."**

"Out in Illinois," said the President one day, "there was an old farmer who had two mischievous boys, and a prize hog he had imported from Europe. He cautioned the boys to keep away from that hog, but James, one of them, managed to let that porker out next day. The brute went straight for the boys and John climbed a tree and sat on a safe limb, while the hog was chasing James around the tree beneath him. The pig got Jim by the seat of his trousers and Jim seized the hog by the tail. While they circled thus around the tree, neither losing his hold, Jim called up to his brother:

"Say, John, come down *quick* and help me let this hog go!"

"And that," said the President, "is the way with us about the war. I wish some one would come and help me let the hog go."



*Lincoln was always considerate and helpful about the house.*

**"Mules Cost \$200 Apiece."**

Lincoln was always amused with any joke or story affecting the dignity of a high official.

On one occasion, when the President was notified that some raiders had captured a detachment of soldiers, one Major-

General and ten mules, he exclaimed:

"Too bad! Too bad about the mules! I can make a general any day, but those mules cost us \$200 apiece!"

**"The Presidential 'Bee' and the Chin-Fly."**

Secretary Chase, a member of Lincoln's Cabinet, had the Presidential "bee in his bonnet," and was working with great zeal for the nomination for that high office. Some of Lincoln's friends insisted that the Secretary ought to be dismissed from the Cabinet, but Lincoln disagreed with them and told his reasons in the following story:

"My brother and I were plowing corn once, I driving the horse while he held the plow. The horse was lazy, but on one occasion he rushed across the field so that I with my long legs could scarcely keep pace with him. On reaching the end of the furrow I found an enormous chin-fly fastened upon him, and knocked it off. My brother asked me what I did that for. I told him I didn't want the old horse bitten in that way.

"Why," said my brother, "that's all that made him go."

"Now," continued the President, "if Mr. Chase has a Presidential chin-fly biting him, I'm not going to knock it off, if it will only make his department go."

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"You may fool all of the people some of the time, and some of the people all of the time, but you cannot fool all of the people all of the time."

—Abraham Lincoln.

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"Nobody has ever expected me to be President. In my poor, lean, lank face, nobody has ever seen that any cab-bages were sprouting out."

—Abraham Lincoln.

## ASSASSINATION OF PRESIDENT LINCOLN.

The President and Mrs. Lincoln arrived late at Ford's Theatre, Good Friday night, April 14, 1865. With them were Major Rathbone and Miss Harris, friends recently betrothed, who had consented at the last moment to accompany them in place of General and Mrs. Grant, who had been announced to attend, but had gone North to see their children who were then in school.



*Lincoln and Grant on the streets of Washington.*

The President was given an ovation on arriving in the private box made ready for him. The play was *Our American Cousin*, in which "Lord Dundreary" is a conspicuous role. It was a "benefit" to the star, Miss Laura Keane. In the midst of the third act a pistol-shot rang through the theatre, and a handsome young man was seen in the President's box. As he was swinging himself to the stage, Major Rathbone clutched his arm in a frantic attempt to stop him. But the fleeing man cut the Major with a stiletto which he held in his right hand.

In leaping to the stage the

stranger's spur caught in a flag which formed part of the drapery of the box, so that he fell on all fours. He rose, brandished his dagger with a dramatic flourish and limped quickly off at the back of the stage.

There were cries from the President's box, "The President has been shot!" and pandemonium reigned in the auditorium.

The assassin, who was recognized as John Wilkes Booth, an actor, had shot the President behind his left ear, had thrown away the pistol, and though he had broken one of the bones in his leg below the knee, made his escape during the stupor and confusion that followed his bold act.

Before he could be pursued or orders could be given to prevent his leaving the city, Booth had escaped on horseback across the Potomac. He was shot about ten days afterward in a burning barn.

The unconscious President was borne across the street to a house which had been hastily made ready, and he died there at twenty minutes after seven next morning. Two hours afterward his body was removed to the White House and placed in the East Room, where simple funeral services were held on Wednesday, April 19th, at which time twenty millions of grief-stricken people all around the globe assembled in their own places to do honor to the memory of Abraham Lincoln.

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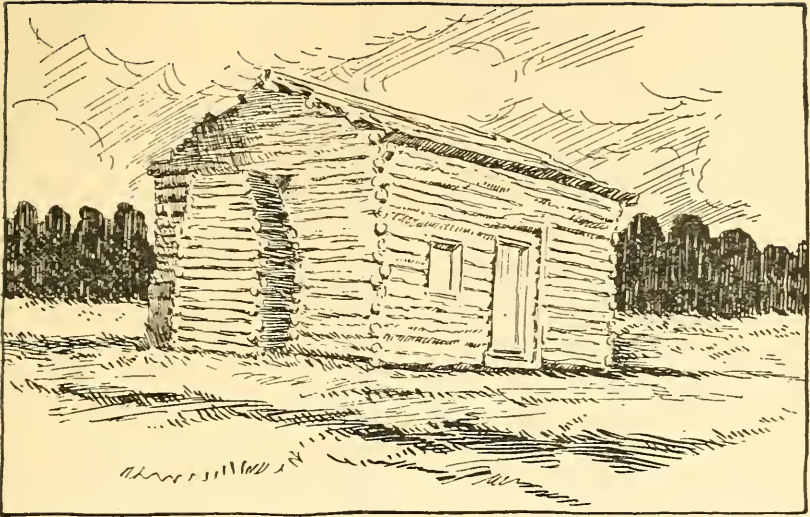
"Better give your path to a dog—even killing the dog would not cure the bite."

—Abraham Lincoln.

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"God bless my mother! All I am or hope to be I owe to her."

—Abraham Lincoln.



*Birthplace of Lincoln. This house was taken down and moved to Long Island, N. Y. It is now to be returned to Kentucky.*

#### LINCOLN'S OWN LIFE-STORY.

"I was born February 12, 1809, in Hardin County, Kentucky. My parents were both born in Virginia, of undistinguished families—second families, perhaps I should say. My mother, who died in my tenth year, was of a family of the name of Hanks, some of whom now reside in Adams, some others in Macon Counties, Illinois. My paternal grandfather, Abraham Lincoln, emigrated from Rockingham County, Virginia, to Kentucky, about 1781 or 2, where, a year or two later, he was killed by Indians,—not in battle, but by stealth, when he was laboring to open a farm in the forest. His ancestors, who were Quakers, went to Virginia from Berks County, Pennsylvania. An effort to identify them with the New England family of the same name ended in nothing more definite than a similarity of Christian names in both families, such as Enoch, Levi, Mordecai, Solomon, Abraham, and the like.

My father, at the death of his father, was but six years of

age; and he grew up literally without education. He removed from Kentucky to what is now Spencer County, Indiana, in my eighth year. We reached our new home about the time the State came into the Union. It was a wild region, with many bears and other wild animals still in the woods. There I grew up. There were some schools, so called; but no qualification was ever required of a teacher beyond "readin', writin' and cipherin'" to the Rule of Three. If a straggler supposed to understand Latin happened to sojourn in the neighborhood, he was looked upon as a wizard. There was absolutely nothing to excite ambition for education. Of course, when I came of age I did not know much. Still, somehow, I could read, write and cipher to the Rule of Three; but that was all. I have not been to school since. The little advance I now have upon this store of education, I have picked up from time to time under the pressure of necessity.

I was raised to farm work, which I continued till I was

twenty-two. At twenty-one I came to Illinois, and passed the first year in Macon County. Then I got to New Salem, at that time in Sangamon, now in Menard County, where I remained a year as a sort of clerk in a store. Then came the Black Hawk War; and I was elected a captain of Volunteers—a success which gave me more pleasure than any I have had since. I went through the campaign, was elated, ran for the Legislature the same year (1832) and was beaten—the only time I have ever been beaten by the people. The next and three succeeding biennial elections I was elected to the Legislature. I was not a candidate afterwards. During this legislative period I had studied law, and removed to Springfield to practise it. In 1846 I was elected once to the lower House of Congress. Was not a candidate for re-election. From 1849 to 1854, both inclusive, practised law more assiduously than ever before. Always a Whig in politics; and generally on the Whig electoral tickets, making active canvasses. I was losing interest in politics, when the repeal of the Missouri Compromise aroused me again. What I have done since then is pretty well known.

If any personal description of me is thought desirable, it may be said, I am, in height, six feet four inches nearly; lean in flesh, weighing, on an average, one hundred and eighty pounds; dark complexion, with coarse black hair and gray eyes. No other marks or brands recollected.

Yours very truly,

A. LINCOLN."

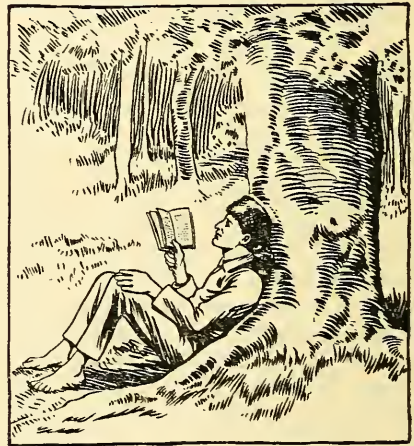
J. W. FELL, ESQ.

#### LINCOLN AS A SON.

Thomas Lincoln, Abraham's father, married a second time when the future President was

a boy of ten. Stepmothers sometimes do not get along with the children of their husbands, but between Lincoln and his stepmother was a bond of affection and mutual regard which continued during their lives, and she in the end survived him. Here is her testimony given out after his death:

"I can say, what scarcely one mother in a thousand can say, Abe never gave me a cross word or look, and never refused in fact or appearance to do anything I asked him. His mind and mine—what little I had—seemed to run together....I had a son John, who was raised with Abe. Both were good boys, but I must say, both now being dead, that Abe was the best boy I ever saw or expect to see."



*Lincoln reading in the woods. He knew almost by heart the Bible, Life of Washington, Aesop's Fables, Robinson Crusoe, Pilgrim's Progress and the history of the United States.*

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"We are indeed the treasury of the world."

---

"Do not swap horses in crossing a stream."

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"We might just as well take the people in our confidence."



# INFORMATION FOR FARMERS AND THEIR WIVES.

## NUMBER OF PLANTS OR TREES TO THE ACRE AT GIVEN DISTANCES.

Distance Apart.	No. of Plants.
$\frac{1}{2}$ ft.....	174,240
1 " .....	43,560
$1\frac{1}{2}$ " .....	19,360
2 " by 1 ft.....	21,780
2 " .....	10,890
$2\frac{1}{2}$ " .....	6,969
3 " by 1 ft.....	14,520
3 " " 2 " .....	7,260
3 " .....	4,840
4 " .....	2,722
5 " .....	1,742
6 " .....	1,210
8 " .....	680
9 " .....	537
10 " .....	435
12 " .....	302
15 " .....	193
18 " .....	134
20 " .....	108
25 " .....	70
30 " .....	48

Allow 5 lbs. of nails for 1000 shingles.

To find the board feet in joists, etc., multiply length, width and thickness together, divide result by 12.

## TO FIND THE CAPACITY OF WAGON BEDS.

Multiply together the length, breadth and depth in inches, and divide by 2150 (number of cubic inches in a bushel); the quotient is the number of bushels of shelled grain.

## MEASURING CORN IN THE CRIB.

Multiply the length, breadth and height together in feet to obtain the cubic feet; multiply this product by 4, and strike off the right-hand figure; the result will give very nearly the number of bushels of shelled corn.

## ESTIMATING THE BOARD FEET IN ANY SAW LOG.

Find the diameter of the log in inches, from which deduct 4 as an allowance for the slabs. Then the remainder should be multiplied by half of itself. Next multiply this by the foot-length of the log. Last, divide by 8. Result: Number of board feet that can be sawed from the log.

(Note: A board "foot" means a section of board a foot square and one inch thick.)

## BUILDERS' RULES.

One thousand shingles, laid  $4\frac{1}{2}$  inches exposed to the weather, should cover 100 square feet (a space 10 feet square).

Sixteen laths should cover about one square yard.

When laid, about  $22\frac{1}{2}$  ordinary bricks will make a cubic foot of wall.

## TO ASCERTAIN THE DRESSED WEIGHT OF CATTLE.

Measure the girt close behind the shoulders, then measure the length from the fore-part of the shoulder-blade along the back to the bone at the tail, in a vertical line with the buttocks. Now multiply the girt, in feet, by itself, that product by the length, in feet, and this last product multiplied by 10 and divided by 3 will give the dressed weight of the quarters.

*Example.*—The girt of a beef is 6 feet, and the length 5 feet.  
 $6 \times 6 = 36$ .  $36 \times 5 = 180$ .  $180 \times 10 = 1800$ .  $1800 \div 3 = 600$ .

Note.—The quarters of a beef weigh a little more than half as much as the living animal. The hide weighs about the eighteenth part, and the tallow about the twelfth part.

## SPRAYING CALENDAR.

PLANT.	FIRST APPLICATION.	SECOND APPLICATION.
APPLE ..... ( <i>Scab, rot, rust, codling moth, bud moth, tent caterpillar, canker worm, curculio, etc.</i> )	When buds are swelling, but before they open, Bordeaux.	If canker worms are abundant just before blossoms open, Bordeaux-arsenical mixture.
ASPARAGUS ..... ( <i>Rust, beetles</i> )	Cut off all shoots below surface regularly until about July 1st.	After cutting ceases, let the shoots grow and spray them with Bordeaux-arsenical mixture. 10 days later, Bordeaux.
BEAN ..... ( <i>Anthracnose, leaf blight, weevil, etc.</i> )	Treat the seed before planting with bisulphide of carbon. (See Remarks.) When third leaf expands, Bordeaux. Pyrethrum or insect powder.	7-10 days later, repeat.
CABBAGE ..... ( <i>Worms, lice, maggots, etc.</i> )	Half-strength Bordeaux on young plants in hotbed or seedbed.	Bordeaux after plants are transplanted to field. (Pyrethrum for caterpillars if necessary.) When blossoms drop, Bordeaux - arsenical mixture. 10 days later hellebore. Bordeaux if leaf-blight is feared. Just before flowers unfold, Bordeaux-arsenical mixture.
CELERY ..... ( <i>Blight, rot, leaf-spot, rust, caterpillars.</i> )	As buds are breaking, Bordeaux; when aphid appear, tobacco solution or kerosene emulsion. At first appearance of worms, hellebore.	
CHERRY ..... ( <i>Rot, aphid, slug, curculio, black knot, leaf-blight or spot, etc.</i> )	In spring when buds swell, Bordeaux.	
CURRANT GOOSEBERRY ( <i>Worms, leaf-blight.</i> )		
GRAPE ..... ( <i>Fungous diseases. Rose bugs, lice, flea beetle, leaf hopper, etc.</i> )	Bordeaux, when vines begin to run.	10-14 days, repeat. (Note: Always use half strength Bordeaux on watermelon vines.)
MELONS ..... CUCUMBERS ..... ( <i>Mildew, rot, blight, striped bugs, lice, flea beetle, etc.</i> )	As the buds swell, Bordeaux.	When fruit has set, repeat. Jar trees for curculio.
PEACH ..... ( <i>Rot, mildew, leaf-curl, curculio, etc.</i> )....	As buds are swelling, Bordeaux.	Just before blossoms open, Bordeaux. Kerosene emulsion when leaves open for psylla, if needed. When blossoms have fallen, Bordeaux-arsenical mixture. Begin to jar trees for curculio. Repeat before insects become numerous.
PEAR AND QUINCE.. ( <i>Leaf blight, scab, psylla, codling moth, blister mite, slugs, etc.</i> )	When buds are swelling, Bordeaux.	Repeat before insects become numerous.
PLUM ..... ( <i>Curculio, black knot, leaf blight, brown rot, etc.</i> )	Spray with Paris green and Bordeaux when about 4 in. high. When plants are 6 in. high, Bordeaux.	Repeat in 10-14 days. (Fruit can be wiped if disfigured by Bordeaux.)
POTATO ..... ( <i>Flea beetle, Colorado beetle, blight, rot.</i> )		
TOMATO ..... ( <i>Rot, blight, etc.</i> )		

NOTE—For San Jose scale on trees and shrubs, spray with the lime-sul before buds start. The lime-sulphur mixture is a fungicide as well as a scale

## SPRAYING CALENDAR.

THIRD APPLICATION.	FOURTH APPLICATION.	REMARKS.
When blossoms have fallen, Bordeaux-arsenical mixture.	8-12 days later, Bordeaux-arsenical mixture.	For aphid (lice) use one of the lice remedies mentioned elsewhere. Dig out borers from tree trunks with knife and wire. For oyster-shell scale, use whale-oil soap spray in June.
2-3 weeks later, Bordeaux-arsenical mixture.	Repeat in 2-3 weeks.	Mow vines close to ground when they are killed by frost, burn them, and apply a mulch of stable manure.
14 days later, Bordeaux.	14 days later, Bordeaux.	For weevils: Put seed in tight box, put a cloth over seed, pour bisulphide of carbon on it, put lid on and keep closed for 48 hours. Use 1 oz. to 4 bus. of seed.
7-10 days later, repeat.	Repeat every 10-14 days until crop is gathered.	Root maggots: Pour carbolic acid emulsion around stem of plants. Club root: Rotate crops; apply lime to soil: burn refuse; treat seed with formalin before planting.
14 days later, repeat.	14 days later, repeat.	Rot or rust is often caused by hilling up with earth in hot weather. Use boards for summer crop. Pithy stalks are due to poor seed; or lack of moisture.
10-14 days, Bordeaux.	Hellebore, if a second brood of slugs appear.	Black knot: Dark fungous-looking bunches or knots on limbs. Cut off and burn whenever seen.
10-14 days, repeat, if necessary.	2 to 4 weeks later, repeat.	Cane-borers may be kept in check by cutting out and burning infested canes.
When fruit has set, Bordeaux-arsenical mixture.	2 to 4 weeks later, Bordeaux.	For lice, use any of the lice remedies. For rose bugs, use 10 pounds of arsenate of lead and one gallon of molasses in 50 gallons of water, as a spray. Or knock the bugs into pans of kerosene every day.
10-14 days repeat.	10-14 days, repeat.	Use lice remedies for lice. For striped bugs, protect young plants with a cover of mosquito netting over each hill. Or keep vines well dusted with a mixture of air-slaked lime, tobacco dust and a little Paris green.
When fruit is one-half grown, Bordeaux.	Note: It is safer always to use half-strength Bordeaux on peach foliage.	Dig out borers. Cut down and burn trees affected with "yellows."
After blossoms have fallen, Bordeaux-arsenical mixture.	8-12 days later, repeat.	Look out for "fire blight." Cut out and burn blighted branches whenever seen.
10-14 days later, repeat.	10-20 days later, Bordeaux.	Cut out black knot whenever seen.
Repeat for blight, rot and insects.	Repeat.	To prevent scabby tubers, treat the seed with formalin before planting.
Repeat in 10-14 days		Hand-pick tomato worms.

phur mixture in autumn after leaves fall, or (preferably) in early spring, cure, and if it is used the *first* early Bordeaux spray may be omitted.

## SPRAYING FORMULAS AND HINTS.

These, Together With the Two Preceding Pages, Should Enable Everybody to Conquer the Principal Insect and Fungous Pests.

**FUNGICIDES.** — Bordeaux mixture is made by taking four pounds of sulphate of copper, four pounds of quicklime, fifty gallons of water. First, dissolve the copper sulphate. The easiest, quickest way to do this, is to put it into a coarse cloth bag and suspend the bag in a receptacle partly filled with water. Next, slake the lime in a tub, and strain the milk of lime thus obtained into another receptacle. Now get someone to help you, and, with buckets, *simultaneously* pour the two liquids into the spraying barrel or tank (see picture). Lastly, add sufficient water to make fifty gallons. It is safe to use this full-strength Bordeaux on almost all foliage,—except, perhaps, on extra-tender things such as watermelon vines, peach trees, etc. For these it is wiser to use the following half-strength mixture: Two pounds of copper sulphate, two pounds of quicklime, fifty gallons of water.

**FORMALIN.**—This is also called formaldehyde, and may be purchased at drug stores. Its principal use is to treat seed potatoes to prevent "scab." Soak the whole seed for two hours in a mixture of one-half pint formalin and fifteen gallons of cold water; dry the seed, cut, and plant in ground that has not recently grown potatoes.

**POWDERED SULPHUR.** — For mildew on rose leaves, gooseberry bushes, etc. Dust or blow it on when the plants are wet.

**BORDEAUX COMBINED WITH INSECT POISON.**—By adding one-quarter pound of Paris green to each fifty gallons of either of the Bordeaux formulas, the mixture becomes a combined fungicide and insecticide. Or, instead of Paris green, add about two pounds of arsenate of lead. The advantages of arsenate of lead over Paris green, are, first, it is not apt to burn foliage even if used in rather excessive quantities; and, second, it "sticks" to the foliage, etc., better and longer.



**INSECTICIDES.** — Sometimes it is desirable to apply a treatment for insects alone, without the bother of making the regulation Bordeaux. Here are a few standard formulas suited for chewing insects:

**PARIS GREEN.**—Two pounds of quicklime, one-quarter pound of Paris green, fifty gallons of water. The lime helps to neutralize the caustic action of Paris green on tender foliage; potato vines are so tough, however, that in their case the lime may be omitted if desired. Keep mixture well agitated while spraying. (Not so safe as arsenate of lead on peach or very tender foliage.)

**ARSENATE OF LEAD.**—This can be made at home, as follows: Take twelve ounces of acetate of lead, four ounces of arsenate of soda, and fifty gallons of water. Put the acetate of lead into a gallon of water in a wooden pail; in another wooden pail put the arsenate of soda in two quarts of water. When both are dissolved, pour them together into the spray tank containing the required amount of water. A white precipitate of

lead arsenate immediately forms in the tank and the mixture is ready to be applied. This remains in suspension longer than Paris green. The ready-prepared commercial form simply needs dissolving in water,—about two pounds to fifty gallons of water for ordinary use.

**WHITE HELLEBORE.**—This, if fresh, may be used instead of Paris green in some cases,—worms on currant and gooseberry bushes, for instance. (It is not such a powerful poison as the arsenites, and would not do so well for tough insects such as potato bugs.) Dissolve one ounce in three gallons of water, and use as a spray.

**FOR SUCKING INSECTS.**  
—Now we come to another class of insecticides, suited to insects which suck a plant's juices but do not chew. Arsenic will not kill such pests; therefore we must resort to solutions which kill by *contact*:

**KEROSENE EMULSION.**—One-half pound of hard or one quart of soft soap; kerosene, two gallons; boiling soft water, one gallon. If hard soap is used, slice it fine and dissolve it in water by boiling; add the boiling solution (away from the fire) to the kerosene, and stir or violently churn for from five to eight minutes, until the mixture assumes a creamy consistency. If a spray pump is at hand, pump the mixture back upon itself with considerable force for about five minutes. Keep this as a stock. *It must be further diluted with water before using.* One part of emulsion to fifteen parts of water, is about right for lice.

**CARBOLIC ACID EMULSION.**—This is made by dissolving one pound of hard soap or one quart of soft soap in a gallon of boiling water, to which one pint of *crude* carbolic acid is added, the whole being stirred into an emulsion. One part of this is

added to about thirty-five parts of water and poured around the bases of the plants, about four ounces per plant at each application, beginning when the plants are set out and repeated every week or ten days until the last of May. Used to fight maggots.

**WHALE-OIL SOAP SOLUTION.**—Dissolve one pound of whale-oil soap in a gallon of hot water, and dilute with about six gallons of cold water. This is a good application for aphid (lice) on trees or plants. For oyster-shell or scurfy scale use this spray in June or when the tiny scale lice are moving about on the bark.

**TOBACCO TEA.**—This solution may be prepared by placing five pounds of tobacco stems in a water-tight vessel, and then covering them with three gallons of hot water. Allow to stand several hours; dilute the liquor by adding about seven gallons of water. Strain and apply. Good for lice.

**LIME-SULPHUR MIXTURE.**—Mix forty pounds of fresh, unslaked lime in sixty gallons of water, and after stirring in twenty pounds of sulphur, boil the mixture one and one-half hours. Strain through wire sieve or netting, and apply while mixture is still warm. A good, high-pressure pump is essential to satisfactory work. Coat every particle of the tree. Salt is sometimes added, but it does not seem to do much good and it renders the mixture harder to manage. This is the standard San Jose scale remedy.

**BUHACH.**—This is also known as pyrethrum, or Persian insect powder. The best is called California buhach; the imported powder is not so fresh as a rule, and therefore not so strong. It may be used as a dry powder dusted on with a powder bellows when the plants are wet; or one ounce of it may

be dissolved in three gallons of water, and sprayed on the plants at any time. It is often used on flowers, in greenhouses, on vegetables, etc.

**BISULPHIDE OF CARBON.**—This is used to kill weevils in beans and peas, etc. It comes in liquid form and may be had of druggists. When exposed to the air it quickly vaporizes into a poisonous and explosive gas which is heavier than air and which will destroy all insect life. Caution: Do not inhale much of the vapor, and allow no lights near.

Tobacco stems, tobacco dust, kaint, soot, freshly-slaked lime dust, etc., are often used as insect *preventives*,—in the soil around plants to keep away grubs, worms and maggots, or dusted on to discourage the visits of cucumber bugs, etc. (Note.—The first four are excellent fertilizers as well as insect preventives.)

Crows and blackbirds frequently pull up planted corn. The best preventive is to tar the seed, as follows: Put the seed into a pail and pour on enough warm water to cover it. Add a teaspoonful of coal tar to a peck, and stir well. Throw the seed out on a sieve or in a basket to drain, and then stir in a few handfuls of land plaster (gypsum), or air-slaked lime.

## GRAFTING.

### When and How to Do It.

The wood for scions should be taken while in a dormant condition. The time usually considered best is *after the leaves have fallen, but before severe freezing begins*. The scions should be cut in about six-inch lengths from matured new wood from bearing trees of known variety; then tied in

bunches and placed in moist sand in a cool cellar.

**HOW TO CLEFT GRAFT.**—When in the spring the sap begins to move in the stock, be ready; this occurs early in the plum and cherry, and later in the pear and apple. Do the grafting, if possible, on a mild day during showery weather. The necessary tools are a chisel or a thick-bladed knife or a grafting iron (with which to split open the stock after it is sawed off smoothly with a fine-tooth saw), a hammer or a mallet to aid the splitting process, a very sharp knife to trim the scions, and a supply of good grafting wax. Saw off a branch at the desired point, split the stock a



SPLITTING THE STOCK.



TRIMMED SCION.



SCIONS INSERTED.



SECTIONAL TOP VIEW OF SCIONS IN PLACE.



GRAFTING WAX APPLIED.

little way down, and insert a scion at each outer edge—taking care that the inner bark of the scion fits snugly and exactly against the inner bark of the stock. This—together with the exclusion of air and moisture until a union results—constitutes the *secret of success*. Trim the scions wedge-shaped, as shown in the picture; insert them accurately; the wedge should be a trifle thicker on the side which comes in contact

with the stock's bark. Lastly, apply grafting wax. Each scion should be long enough to have two or three buds, with the lower one placed as shown. The "spring" of the cleft holds the scion securely in place, and therefore tying should be unnecessary. If both scions in a

cleft grow, one may later be cut away, leaving one to grow.

GRAFTING WAX.—One pound of resin, one-half pound of bees-wax and one-quarter pound of tallow, melted together and applied with a brush. Keep in an iron pot; heat for use when wanted.

### INTEREST TABLE.

4%	\$	1\$	2\$	3\$	4\$	5\$	6\$	7\$	8\$	9\$	10\$	\$100	\$1000
4 Days	0	0	0	0	0	0	0	0	0	0	0	5	45
8 "	0	0	0	0	0	0	0	0	0	1	1	8	99
12 "	0	0	0	0	0	0	1	1	1	1	2	14	1 34
16 "	0	0	0	0	1	1	1	1	2	2	2	18	1 78
20 "	0	0	0	1	1	2	2	2	2	2	2	22	2 22
24 "	0	0	1	1	2	2	2	2	2	3	3	27	2 67
28 "	0	0	1	1	2	2	2	3	3	3	3	30	3 11
1 Month	0	0	1	2	2	2	3	3	3	4	4	34	3 34
2 "	0	2	2	3	4	4	5	6	6	7	7	67	6 67
3 "	1	2	3	4	5	6	7	8	9	10	10	1 00	10 00
6 "	2	5	6	8	10	12	14	16	18	20	20	2 00	20 00
1 Year	4	8	11	16	20	24	28	32	36	40	40	4 00	40 00
5%	\$	1\$	2\$	3\$	4\$	5\$	6\$	7\$	8\$	9\$	10\$	\$100	\$1000
4 Days	0	0	0	0	0	0	0	0	0	0	0	6	56
8 "	0	0	0	0	0	0	0	1	1	1	1	11	1 11
12 "	0	0	0	0	1	1	1	1	2	2	2	17	1 67
16 "	0	0	0	1	1	2	2	2	2	2	2	22	2 22
20 "	0	0	1	1	2	2	2	2	2	3	3	28	2 28
24 "	0	0	1	2	2	2	3	3	3	4	4	34	3 34
28 "	0	1	1	2	2	3	3	4	4	4	4	39	3 39
1 Month	0	1	2	2	2	3	3	4	4	4	4	42	4 17
2 "	1	2	3	4	4	5	6	7	8	9	9	84	8 34
3 "	2	3	4	5	6	7	8	10	11	13	13	1 25	12 50
6 "	3	5	8	10	13	15	18	20	23	25	25	2 50	25 00
1 Year	5	10	15	20	25	30	35	40	45	50	50	5 00	50 00
6%	\$	1\$	2\$	3\$	4\$	5\$	6\$	7\$	8\$	9\$	10\$	\$100	\$1000
4 Days	0	0	0	0	0	0	0	0	1	1	1	7	67
8 "	0	0	0	1	1	1	1	1	1	1	1	13	1 33
12 "	0	0	1	1	1	1	1	1	2	2	2	20	2 00
16 "	0	1	1	1	1	1	2	2	2	2	3	27	2 67
20 "	1	1	1	2	2	2	2	3	3	4	4	33	3 33
1 Month	1	1	2	2	3	3	4	4	5	5	5	50	5 00
2 "	1	2	3	4	5	6	7	8	9	10	10	1 00	10 00
3 "	2	3	5	6	8	9	11	12	14	15	15	1 50	15 00
6 "	3	6	9	12	15	18	21	24	27	30	30	3 00	30 00
1 Year	6	12	18	24	30	36	42	48	54	60	60	6 00	60 00

## ESTIMATING HAY.

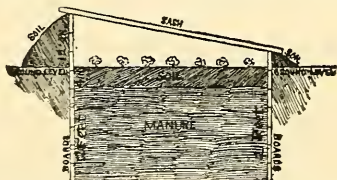
To find the tons of hay in a mow or stack, divide the cubic contents by about 510 if the hay is not well settled, or by about 460 if the hay is well packed.

## BUSHEL OF POTATOES OR APPLES IN A BIN.

To find the number of bushels of potatoes, apples, etc., in a bin, multiply the cubic contents by 8, and point off one figure in the product.

## MAKING HOTBEDS.

A manure hotbed is practically nothing more than a boarded pit, in which there is fermenting manure covered with several inches of soil. The top of the hotbed is roofed with sashes, which usually measure about 3x6 feet each. At night a straw or other mat is laid over the glass to keep out the cold. The space between the soil and the glass must nowhere measure less than about six inches in the start; the soil will sink as the manure ferments. Manure hotbeds are usually made of inch boards. If the boards on the back of the frame are twelve inches above ground, those in front should be several inches lower, thus giving a slant to the sashes. Frames may be made for one or more sashes. Straw horse manure



is best for hotbeds. Collect it under shelter and let it heat for about a week before using, turning it often. The pit for the hotbed may be one to three feet deep. Good drainage is essential.

## TO DESTROY WOODCHUCKS.

Saturate a roll of rags about the size of a hen's egg with bisulphide of carbon, put it into the woodchuck's burrow, and stop the hole quickly. The bisulphide may be obtained at most drug stores, and should be handled with care. (See hints on page 28.)

## HOW TO KILL POISON IVY.

Concentrated sulphuric acid will kill poison ivy. Dose each plant with a half teaspoonful to each stem, making the applications in the spring, during the growing season, every three weeks. If a large area is covered by the plants, spraying with arsenate of soda (one pound to twenty gallons of water) will kill all vegetation. One application, if the plants are young and tender, will do this. In the middle of summer, however, they should be cut down first, and more than one application given, says *Garden Magazine*. [Here's another way: A friend of ours puts straw along the stone fences, etc., infested with poison ivy, and then sets fire to the straw, repeating the operation at intervals until the plants give up trying to grow.—Editor *Farm Journal*.]

## TO PROTECT COWS FROM FLIES AND MOSQUITOES.

A good formula to be used with the ordinary hand-sprayer, night and morning, is the following:

To one quart of kerosene add a tablespoonful each of oil of tar, fish oil, carbolic acid and oil of pennyroyal. This mixture, thrown in a fine spray on a cow, is death to flies and mosquitoes.

Get a laugh out of life or life will get a laugh out of you.



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## HOME-MADE STICKY FLY-PAPER.

Boil together a pint of molasses, half a pint of linseed oil and a pound of resin. Cook for thirty-five minutes and stir the mixture often. Spread it thinly on common brown paper and spread another sheet on the first one. Continue laying these double sheets until all the mixture is used. When you want to use any of it cut off a piece and pull the sheets apart.

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## GOVERNMENT BUILDING WHITEWASH.

Slake one-half bushel fresh lime with boiling water, covering it to keep in the steam. Strain liquid through a fine sieve and add seven pounds of fine salt, previously dissolved in warm water. Three pounds of ground rice, boiled to a thin paste and stirred in boiling hot; one-half pound bolted gilders' whiting; one pound of white glue, which first soak in cold water until swollen up, then melt over a fire, avoiding burning it. Add five gallons of hot water to the mixture, stir it well, and let it stand a few days covered up. When ready to use the wash, make it boiling hot, which can be done by having a portable furnace. A pint of this mixture will cover nearly a square yard. It is very white and durable for outside work.

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## RECIPES FOR CURING WARTS.

Remedy for warts on a horse's nose, or anywhere: Wash the warts with strong soda water; or pick the wart a little till the blood starts, then apply dry soda. After a few applications, the wart disappears.

For warts upon cows' teats take of fresh butter two parts

by weight; finely pulverized table salt one part by weight. Mix by rubbing together thoroughly; keep in a tight wooden box; apply enough to cover the surface of the warts after milking. The warts will dry up and come off.

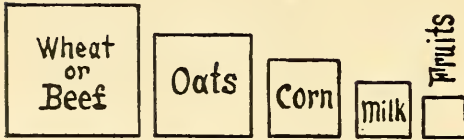
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## TANNING RECIPES.

Skins usually are tanned without removing the hair, or more properly tawed, as follows: Salt and alum in equal quantity are made into a thick paste, and after the flesh is carefully scraped off the pelt by using a dull knife, spread the paste over the flesh side, double it together and let it soak thus for four days. Rinse, scrape and cover with powdered chalk removed and returned until the pelt is nearly dry. Then rub and work with the hands until dry and soft.

To make a sheepskin rug: Take a fresh skin, pick out the dirt and wash the wool in slightly warm soapsuds to which you have added a tablespoonful of kerosene oil. Wash in another suds or until the wool looks white and clean. Put it in cold water to cover it, and dissolve half a pound each of salt and alum in three pints of boiling water. Pour this over the skin side and rinse it up and down. Let it soak in this for twelve hours, then hang up to drain. When nearly dry, tack it, wool side in, on the side of the barn to dry. Rub into the skin an ounce each of pulverized alum and saltpeter, or double this if the skin is large. Rub for an hour or two. Fold the skin sides together and hang away for three days, rubbing every day, or until perfectly dry. Then with a blunt knife clear the skin of impurities, rub it with pumice or rotten stone, trim into shape, and you have a warm rug that should last a lifetime.

## A LITTLE LESSON IN FERTILITY.



The size of these blocks shows the comparative quantities of soil fertility (nitrogen, potash, and phosphoric acid) removed from the farm by the selling of various home-grown products. The growing of wheat or beef draws heaviest on the soil; butter or fruits, lightest. Remember, too, that most of the fertility removed by fruits is contained in the seeds or the pit,—the fruits themselves are largely water.

## RECIPE FOR MAKING HARNNESS OIL.

Take two quarts of fish oil, two pounds of mutton tallow, one pint of castor oil, one quarter pound of ivory black, one-half pound of beeswax, four ounces of resin, one ounce of Burgundy pitch. Put these ingredients into an iron kettle, place over a slow fire; boil and stir for half an hour. Let settle for fifteen minutes, and then pour off all but the sediment into another vessel. Use cold. After oiling the harness, wipe it off with a dry rag. Neat's-foot oil will answer if fish oil is not obtainable.

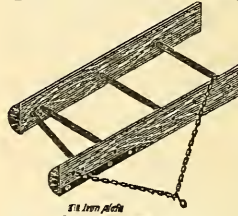
## TO AVOID SMUT IN OATS.

To kill the spores of smut on the oat seed, add an ounce of formalin to a gallon of water for every six bushels of seed. Sprinkle the mixture over the seed and work over well so that each oat shall be covered with the solution; put in a pile, cover and let stand for forty-eight hours. Shovel over again the day before sowing. As the seed will swell some, allowance must be made for this.

## HOW TO HAVE GOOD ROADS.

The King Road-Drag System is Practical, Inexpensive and Satisfactory, and Here are All the Facts About It.

The key-note, or basis, of Mr. King's system is a simply-made road drag fashioned from a split log about eight feet long, with the two parts about two and one-half feet apart. Any farmer can make one of these drags for himself, at a cost of a dollar or so—or less. (See picture.)



Speaking of this system, the Iowa Highway Commission says in a bulletin issued by the engineering department of Iowa State College:

"Water is the foe to good earth roads, and the whole object of earth road construction and maintenance is to get rid of the water and its bad effects. Three systems of drainage are needed:

First, Tile or Sub-drainage. Wherever the soil is naturally wet from ground water, a line of four-inch tile should be laid to a regular grade longitudinally along the uphill side of the road, under the side ditch, at a depth of three to four feet.

Second, Side Ditches. A good, big side ditch, built to a continuous grade.

Third, Surface Drainage. Proper surface drainage, to shed the water promptly into the side ditches, should be provided by properly crowning the road, and by then keeping it hard and smooth with a King road drag. This drag is the cheapest instrument we have found for this purpose.

We advise the farmers to start using the drag without waiting for the road officers to

take it up. They will be well repaid for their trouble by the saving of time and expense in using the roads, and the increase in value of their land due to a good road in front of it.

We also advise the road officers to adopt the road drag, and to provide farmers with free materials to make them, and to hire the roads dragged where the farmers do not themselves undertake the work.

Gravel roads, when cut up an inch or two deep in continued wet weather, should be gone over at such times with a King drag, the same as an earth road."

The correct method of using this drag is about as follows:

Begin operations at once, and do not entirely abandon the work except when ground is solidly frozen. A few minutes' or hours' work, now and then, is better than a week's work all at once.

After each rain or wet spell drive up one wheel track and back on the other at least once, with the drag in position to throw the earth to the center. Ride on the drag. Haul at an angle of 45°. Lay boards on the drag to stand on. Gradually widen the strip dragged as the road improves. To round up the road better, plow a shallow furrow occasionally each side the dragged strip, and spread the loose dirt toward the center.

Thus the road gradually becomes smooth, hard, and almost impervious to water. Rains run off the rounded roadbed, like water from a duck's back. By using the drag when the road is muddy (as advised) the earth packs and cements itself into a hard and nearly water-proof surface. And that is the idea, in a nutshell. It is plain to see that if water can find no place to stand, no chuck-holes or ruts can develop.

## SHORT SAYINGS.

Short settlements make long friends.

No man should grunt who does not lift.

It's a poor mule that won't work both ways.

A spur in the head is worth two in the heels.

No house is dark in which a woman smiles.

The dairyman may not be boastful of his ancestry or family tree, but there is no denying the fact that he furnishes the cream of society.

A just man can run up his own business without running his neighbor's business down.

It is a great deal more advantageous to seize Opportunity by the foretop than by the fetlock.

It is a great mistake for any man to believe that he can keep his spirits up by pouring spirits down.

The fellow who raises blisters is generally the one who raises the mortgage.

Sweet cellars make sweet lives.

He who broods over troubles is sure to hatch out many new ones.

Never break a second plow-point on the same stone, nor lift a second sheep out of the same mud-hole.

When the "blues" call at your house, do not answer the doorbell.

In the spring stick to your flannels till they stick to you.

Don't be a croaker,—leave that to the frogs.

How can a man keep cheerful if he makes a habit of reading the sun-dial with an umbrella over it?

Spring and fall come together when the bed slats break.

Many a man who strongly objects to pumping water for a half-dozen cows, thinks nothing of sitting around for half a day pumping his neighbors.

PLANTING TABLE FOR VEGETABLES AND BERRIES.

Variety	For horse cultivation have rows	For hoe or wheel-hoe cultivation have rows	Distance apart in the row	Depth to cover	Time to plant in the north, outdoors (See foot-note)
ASPARAGUS, Seed....	2½ ft. apart	1 ft. apart	3 in. transplant in 1 year.	1 in.	Mch.-Apr.
ASPARAGUS, Plants..	4 ft. apart	3 ft. apart	2 ft.	5 or 6 in.	Mch.-Apr. Or in the fall.
BEAN, String.....	2½ ft. apart	2 ft. apart	Thin to 4 in.	2 in.	May 10-15.
BEAN, Lima.....	Pole, 4x4 ft. apart	4x3 ft. apart	Thin to 3 plants to a pole.	1 in.	May 20-25.
BEEF .....	Bush, 2½x1½ ft. apart	2x1½ ft. apart			
BEEF .....	2½ ft. apart	1 ft. apart	Thin to 5 in.	1 in.	Mch.-Apr.
BLACKBERRY, Plants	8 ft. apart	6 ft. apart	2 ft.		Apr. or in the fall.
CABBAGE and CAULI-FLOWER, Plants...	2½ ft. apart	2 ft. apart	16-24 in.		Early kinds, April; late kinds, June.
CARROT .....	2½ ft. apart	1 ft. apart	Thin to 5 in.	½ in.	Mch.-Apr.
CELERY, Plants.....	3-4 ft. apart	2-3 ft. apart	6 in.		Early crop, May; late crop, early July.
CORN, Sweet.....	4 ft. apart	Same	8-12 in.	2 in.	Early May.
CUCUMBER .....	5x5 or 6x4 ft. apart	Same	Scatter 15 seeds in hill; thin out later.	½ in.	May 15.
CURRANT and GOOSEBERRY, Plants	5x5 ft. apart	5x4 ft. apart			Apr. Or in the fall.
EGGPLANT, Plants...	2½x2½ ft. apart	2x2 ft. apart			June 1.
LETTUCE .....	2½ ft. apart	1½-2 ft. apart	Thin to 6-10 in.	½ in.	Mch.-Apr.
MELON, Musk.....	6x4 ft. apart	Same	Scatter 15 seeds in hill; thin out later.	½ in.	May 15.
MELON, Water.....	8x8 ft. apart	Same		½ in.	May 15-20.

PLANTING TABLE FOR VEGETABLES AND BERRIES.

Variety	For horse cultivation have rows	For hoc or wheel-hoc cultivation have rows	Distance apart in the row	Depth to cover	Time to plant in the north, outdoors (See foot-note)
ONION, Seed.....	2½ ft. apart	12-15 in. apart	Thin to 4 in.	½ in.	Mch.-Apr.
PARSLEY .....	2½ ft. apart	1 ft. apart	Thin to 6 in.	½ in.	Early Apr.
PARSNIP .....	2½ ft. apart	1 ft. apart	Thin to 5 in.	½ in.	Mch.-Apr.
PEPPER, Plants.....	2½ ft. apart	2 ft. apart	20 in.		June 1.
PEAS .....	3-4 ft. apart	2½-3 ft. apart	Continuous row.	3-5 in.	Mch.-Apr.
POTATO .....	3 ft. apart	2 2½ ft. apart	12-18 in.	4 in.	Early, Mch.-Apr.; late, May-June.
RADISH .....	2½ ft. apart	1 ft. apart	Thin to 3 in.	½ in.	Mch.-Apr.
RHUBARB, Plants.....	4 ft. apart	3 ft. apart	3 ft.	2 or 3 in.	Mch.-Apr.
RASPBERRY, Plants..	6 ft. apart	5 ft. apart	Red, 2 ft. Black, 2½ ft.		Early spring.
SPINACH .....	2½ ft. apart.	1 ft. apart	Thin to 5 in.	1 in.	Mch.-Apr.
SQUASH-PUMPKIN ..	8x8 ft. (Bush 4x4)	Same		½ in.	May 15-20.
STRAWBERRY, Plants	4 ft. apart	3 ft. apart	15-20 in.	Have crown level with ground	Apr. (Pot-grown plants in Aug.-Sept).
TOMATO, Plants.....	4x4 ft. apart	4x3 ft. apart			May 25-June 1.

NOTE—Planting time varies according to season and locality; dates given above are only approximate, and are based on latitude of Pennsylvania; allow about 5 days difference for each 100 miles north or south of this State. Do not work soil in spring while it is very wet and soggy; wait. Plants set in autumn must be well mulched with strawy manure, leaves, etc., during first winter. Successional sowings of corn, peas, etc., may be made later than the dates given.

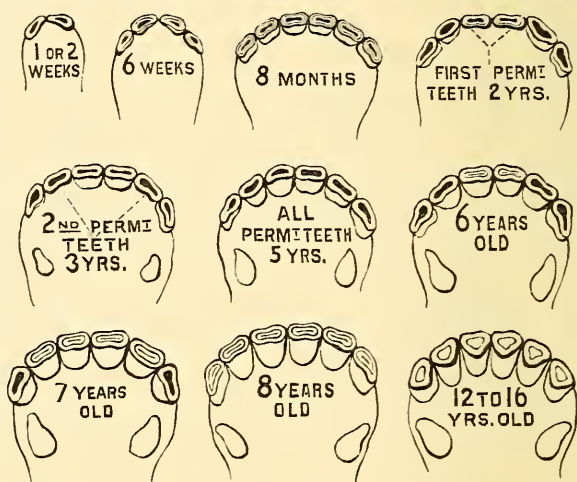
## HOW TO TELL THE AGE OF A HORSE BY HIS TEETH.

Soon after birth two central nippers show. When a year old the colt has cut his twelve front teeth and sixteen grinders. When two years old, the mark on the grinding surface of the nippers (the two central teeth in the set of six), is much worn out and is hardly perceptible; it is not so faint in the middle teeth (teeth next to the nippers), and the corner teeth are flat and show the mark clearly. During the third year the second set of teeth begins to show. Between three and three and one-half years the

"baby" teeth or first nippers fall out and are replaced by permanent ones, giving the basis for after-judgment as to the animal's age. At four years the nippers begin to lose their sharp edge and have grown noticeably, the adjoining or "middle" teeth have also grown, but not fully, and are still sharp, with the deep mark plain. The corner teeth remain until the age is four and one-half years. After five years the age is learned by the shape and appearance of the teeth.

Then, the lower jaw shows nippers worn so the marking in the center is almost obliterated, middle teeth with the outer edge only worn, and corner teeth grown to an even

height, but not worn much, and hooks grown, but not worn. At six, the nippers on the lower jaw are worn even and the middle teeth have still a cavity. At seven, the same jaw shows that the middle teeth have become even, and both edges of corner teeth rub, but still retain a slight cavity. At eight, a mere trace of the mark is visible in the lower corner teeth. At nine, the upper nippers have almost lost their mark, the middle ones show a faint mark, and the corner teeth have a deeper mark than the middle ones. At nine, also, the upper corner teeth begin



to show a curve in the surface. This curve gradually deepens as age increases. At ten, the mark in the middle upper teeth has changed from oblong to nearly circular, and at eleven, the same change is noticed in the corner teeth.

Cool judgment doesn't come from a hot head.

Be accurate in all you undertake, remembering that slipshod feet will surely produce blistered heels.

Always buy thermometers in cold weather,—while they are down.

Praise your wife when she gets you an extra good dinner, and you will get many more of them.

Take things easy if you want to have a hard time.

Even the man who is truthful in the daytime may lie awake at night.



## CURING MEAT.

Choice Recipes that are Favorites Among Farmers Who Want the Best and Who Know What is Best.

For your dried beef get a piece of the "show meat" fattened for Washington's birthday, for it will be tender and well-mixed through with fat. Use the tender side of the round, trimming it into good shape. For every twenty pounds of beef, take one pint of salt, one teaspoonful of saltpeter, and a quarter of a pound of brown sugar. Divide this into three equal parts, and rub them well into the beef for three successive days. Put some extra salt in the hole made for the string. Turn the meat each day and let it lie in the small amount of liquor that oozes from it. Hang it in a dry place till it stops dripping, when it may be wrapped in paper, tied up tightly in a bag and hung away. It may mold on the outside but can be scrubbed or scraped clean.

**BEEF'S TONGUE.**—Beef tongues for curing should be well mixed with fat. Trim them neatly and to every twenty pounds of tongue use a mixture of a pint of salt, a teaspoonful of saltpeter and a quarter of a pound of brown sugar. Drop the tongues into boiling water for three minutes; when cool rub them well with the mixture and sprinkle with it as you pack them closely in an earthen vessel; put a weight on top and turn them every other day, putting top ones in the bottom. If they do not make enough pickle to quite cover them sprinkle lightly with salt and let them lie ten days. Hang up till dry, then bag away from the flies like the beef. We think beef better without smoking, but smoke from green

hickory chips is best if any is used.

**SMITHFIELD HAMS.**—First be sure to obtain corn-fed pork. After the same has become perfectly cold, put on one tablespoonful of saltpeter, then salt well with fine salt; resalt on the third day; then let it lie in salt fifteen days if the weather is moderately warm, or twenty days if the weather is cold. Then wash thoroughly, pepper with black pepper, hang it up and smoke it gently until brown. Have fire smothered with oak or hickory chips that have been saturated in water. The ham should be ten to fifteen feet above the smoke, to prevent as little heat as possible from striking it. After the ham has been duly smoked, put it into a bag to keep out the worm.

**CORNED BEEF.**—To corn beef for present use wipe it and rub hot salt into it till it all disappears; add more salt and rub again until the meat will imbibe no more; lay in a crock and stand in a cool place for a week, turning every day, when it will be ready for use. To cook it, wash well, put it to boil in cold water, bring slowly to a boil and simmer half an hour to every pound. If it is to be eaten cold allow it to cool in the liquor in which it was boiled, or it may be pressed by placing while hot between two plates, with weight on top, leaving over night.

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Agriculture is the art which supports all the rest.

Forecasting the weather is prophetale business.

Whoso cuts a straight path to his own living by the help of God, in the sun and rain and sprouting grain, is a universal working man. He solves the problem of life, not for one but for all men of sound body.

## TIME-TESTED HOUSEHOLD RECIPES.

### Helpful Hints That Every Housewife Should Treasure.

**COLD CREAM.**—Refined white wax, one-half ounce; spermaceti, one-half ounce; oil sweet almonds, one ounce; lanolin, one ounce; coconut oil, one ounce; tincture benzoin, twelve minims; orange flower water, one ounce. Melt the first five ingredients in a porcelain pan, then take off and add the orange flower water and tincture of benzoin. Beat thoroughly with an egg-beater, or other proper instrument, until cold. It would be better to have a pharmacist prepare this, as its preparation is somewhat difficult. However, it is well worth the trouble. For chapped hands, wrinkles, cracked lips, etc., the cream is as good as anything, no matter what the price.

**CEMENT FOR RUBBER GOODS.**—Fill a bottle one-tenth full of gutta-percha cut into fine shreds; pour in benzole until the bottle is three-quarters full; shake it every few days, or until the mixture is as thick as honey. It dries quickly. It is useful to mend rubber shoes or any other rubber goods, and is water and air-tight. Three coats of this will unite leather straps, patches and rubber soles with firmness. Shave the edges of the leather quite thin.

**DRIED CORN.**—Pick while young; cut from the cob and scrape out the sweet inner kernels. Put one-layer deep in shallow plates and keep in a rather hot oven till dried, but do not let it scorch. Keep in cheese-cloth bags (salt bags answer well) in a dry, warm place, away from the dust. To cook, just simmer slowly until tender.

**DRIED PEAS.**—Select the very young ones; put a thin

layer on brown paper in the bottom of baking pans or pie plates. Stand them in very hot sun, or else in a moderate oven, leaving the door open. Shake or stir them several times, while drying. Keep them in tin boxes in a dry place. When you use them, rinse off, then soak in a little water and cook slowly in the same water until done, when there should be but little water left. Season with salt, pepper and butter, as you do fresh ones; or use a little cream.

**HOME-MADE YEAST.**—Boil one pint of hops in two gallons of water for half an hour, then strain into a jar. When cool, add two level teaspoonfuls of salt and one-half pint of brown sugar. Mix one-half pint of flour smooth with some of the liquor, and stir all in together and let it stand two days. Then stir in three pounds of boiled and mashed potatoes, letting it stand a day again. Next day strain and put in stone jugs with a cloth tied over the top; don't rock. Keep in a warm place while making, but after it is done put in a cool place. It will keep a long time, improving with age.

**DRIED STRING-BEANS.**—Use young, tender ones, string and break, put in a kettle of cold water and bring to the boiling point. Take out, drain, spread on plates and dry in a cool oven with the door open, or out-of-doors if it is very dry and a hot sun is shining. Put away in bags in a dry place. To use, soak in cold water over night. They are nice boiled with a piece of salt pork till tender.

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When you have done a really good thing do not stop to talk about it, but do another.

Doing the little things has caused many a man to get big. Sometimes a minute of think is better than an hour of hustle.

## PRESERVING AND CANNING RECIPES.

**HOW TO CAN PEAS.**—Have jars, tops and rubbers clean and freshly scalded and a support made of slats for the bottom of the washboiler. Shell the peas, pack in the jars, fill with cold water, adjust rubbers, put on tops loosely, surround with cold water in the washboiler and boil for three hours. Fill to overflowing with boiling water, tighten the tops and boil a few minutes longer. Take out and turn upside down on the table. If not a drop of water oozes out they should keep if put in a cool, dark place. Tighten the tops after they cool.

**TOMATOES CANNED WHOLE.**—Select perfect fruit; not the least overripe, and small enough to be put, without cutting, into the jars,—which should have been sterilized, tops and all, by putting in water and bringing it to the boiling point, and keeping them hot until filled. Drop each tomato for an instant into boiling water, remove the skin, and closely pack in the jars; put on the rubbers, then fill to overflowing with boiling water. Screw on the top and place the jar in a kettle of boiling water that will reach to the top of the jar. Cover the kettle and set aside until cold, then screw the tops tighter, if possible. Keep in a cool, dark place, or put the jar in a paper bag, to exclude the light.

**ASPARAGUS** is a difficult vegetable to can, but this is the way to do it successfully: Have clean jars with well-fitting rubbers and tops. To test this, half fill the jars with water, screw on the tops and invert on a dry table. If any water oozes out they are not air-tight and must be refitted with rubbers. Wash freshly-cut asparagus, cut even at the bottom, and fit it in the jars, head up. Add a

teaspoonful of salt to each quart of cold water and fill the jars. Put the lids on loosely and set the jars in a boiler that has a perforated board in the bottom. Cover two-thirds of the jars with cold water and place them over a moderate fire. Boil slowly but continuously for three or four hours, then screw tops on tightly, first filling the jars to the brim, if necessary, with boiling water.

**PICKLED PEACHES** to serve with meat: Cut peaches in two, remove the stones and fill the cavity with grated horseradish mixed with vinegar. Tie together again, pack in jars and cover with a syrup in this proportion: To a pint of vinegar add two pounds of sugar, and some whole cloves, bits of ginger root, cinnamon, allspice and nutmeg tied in a thin bit of muslin. When the syrup tastes strong enough of these, remove them. Pour hot over the peaches. For two more successive days reheat the syrup and pour over; then seal the jars.

**SPICED GRAPES** are convenient to call upon now and then as a relish with meats. Concord, or the late Isabellas, not very well ripened, are best. Put the skins to cook in one granite kettle, the pulp in another, each with just enough water to keep from scorching. As soon as the seeds loosen from the pulp, rub through a colander and add the pulp to the skins. For five pounds of grapes, weighed before picking from the stems, allow four pounds of brown sugar, a pint of vinegar, a tablespoonful each of cloves and cinnamon and a teaspoonful of allspice. Cook slowly for three or four hours until quite thick. It will keep without sealing.

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Those are rich who have true friends and a clean heart.

## CAUSTIC FOR DEHORNING CALVES.

Use caustic potassa in sticks, wrapped in tough paper to protect the hands. Moisten the end of stick with sponge, and apply to space about the size of a silver quarter-dollar, taking point of young horn for center. Avoid touching other parts. Have some vinegar on hand to apply at once if caustic touches other parts. Best time for use is when first young horn can be felt,—when animal is about two weeks old.

## HOW TO BUILD AN ICE HOUSE.

The main secrets of successful ice-keeping are: Thorough underdrainage, top ventilation, double walls lined with building paper, a sun-proof roof, and a plentiful supply of sawdust beneath, around and on top of the ice. A house 10x10 or 12x12 ought to be large enough for the average farm family.

## POISONS AND THEIR ANTIDOTES.

If it is unknown what poison has been swallowed, the best treatment is to induce repeated vomiting. This may be accomplished by large quantities of luke-warm water. A teaspoonful of ground mustard added to the water is useful. After the vomiting has been repeated several times, soothing liquids should be given, such as oil, milk or raw eggs.

**ACID POISONS.**—In case it is known that an acid poison, such as oil of vitriol, oxalic acid or carbolic acid, has been taken, before vomiting is provoked, soda, magnesia, chalk, tooth-powder or even plaster or whitening should be given to neutralize the acid. Vomiting should be induced, followed by raw egg.

**PARIS GREEN**, which is an arsenical preparation, usually

causes vomiting; if it should not, vomiting should be provoked as in other poisons, followed by milk, white of egg or oil and lime water in large quantities. To neutralize the poisoning effect of the arsenic give equal parts of green vitriol (sulphate of iron) and carbonate of soda, dissolved in separate cups of hot water, and then mixed together.

**CORROSIVE SUBLIMATE** calls for administration of large amounts of tea, followed by the treatment described for other poisons.

A strong solution of common salt is the antidote for **LUNAR CAUSTIC**. If the **TINCTURE OF IODINE** has been taken, give starch and water.

**POISON IVY.**—When you are likely to be exposed to poison ivy, wash face and hands in strong brine to prevent poisoning. But if already poisoned, apply hot water frequently to allay the inflammation and keep it from spreading. A cloth wet with a saturated solution of baking soda relieves the itching. Sugar of lead is sometimes recommended, but the majority of physicians do not advise its use.

**MORPHINE, LAUDANUM AND PAREGORIC** are all **OPIUM** preparations, and when taken internally in excess cause deep sleep.

The treatment consists in provoking repeated vomiting, followed by large doses of strong coffee. The important matter is to keep up the breathing. This is best done by laying the patient down and slapping the skin. The sufferer should not be exhausted by walking up and down or dashing with cold water. So long as the breathing does not fall below ten a minute, there is little danger of death. If it should fall below this, artificial respiration should be employed.

## WEIGHTS AND MEASURES.

### A VOIRDUPOIS WEIGHT.

16 drams	= 1 ounce.
16 ounces	= 1 pound.
25 pounds	= 1 quarter.
4 quarters	= 1 cwt.
20 cwt.	= 1 ton.

### CUBIC MEASURE.

1728 cubic inches	= 1 cubic foot.
27 cubic feet	= 1 cubic yard.
128 cubic feet	= 1 cord wood.

### DRY MEASURE.

2 pints	= 1 quart.
8 quarts	= 1 peck.
4 pecks	= 1 bushel.

### LIQUID MEASURE.

4 gills	= 1 pint.
2 pints	= 1 quart.

4 quarts	= 1 gallon.
31½ gallons	= 1 barrel.
2 barrels	= 1 hogshead.

### LONG MEASURE.

12 inches	= 1 foot.
3 feet	= 1 yard.
5½ yards	= 1 rod or pole.
40 rods or perches	= 1 furlong.
8 furlongs	= 1 statute mile.
3 miles	= 1 league.

### SQUARE MEASURE.

144 square inches	= 1 square foot.
9 square feet	= 1 square yard.
30¼ square yards	= 1 sq. rd. or pole
40 square rods	= 1 rood.
4 roods	= 1 acre.
640 acres	= 1 square mile.
36 square miles	= 1 township.

A mile is 5280 feet or 1760 yards in length.

A hand (horse measure) is 4 inches.

A barrel of flour weighs 196 pounds.

A barrel of pork weighs 200 pounds.

A barrel of salt weighs 280 pounds.

One acre contains 160 square rods, 4840 square yards, or 43,560 square feet.

## TREE-PLANTING TABLE.

Almonds	.....should	stand	16 to 20 feet	apart	each	way.
Apples	.....should	stand	35 to 40 feet	apart	each	way.
Apricots	.....should	stand	18 to 20 feet	apart	each	way.
Cherries, sweet	.....should	stand	20 to 25 feet	apart	each	way.
Cherries, sour	.....should	stand	16 to 18 feet	apart	each	way.
Chestnuts, Paragon	.....should	stand	about 30 feet	apart	each	way.
Oranges	.....should	stand	25 to 35 feet	apart	each	way.
						(dwarf kinds less.)
Peaches	.....should	stand	18 to 20 feet	apart	each	way.
Pears, standard	.....should	stand	20 to 25 feet	apart	each	way.
Pears, dwarf	.....should	stand	12 feet to 1 rod	apart	each	way.
Pecans	.....should	stand	35 to 40 feet	apart	each	way.
Plums	.....should	stand	18 to 20 feet	apart	each	way.
Quinces	.....should	stand	12 feet	apart	each	way.

## GESTATION AND INCUBATION TABLE.

Cows, 285 days from time of service.

Ewes, 150 " " " " "

Mares, 340 " " " " "

Sows, 112 " " " " "

Hen eggs hatch in 21 days.

Turkey, goose, duck and guinea eggs, 28-30 days.

Pigeon eggs, 17 days.

## APPROXIMATE VALUE OF HOUSEHOLD MEASURES.

1 teaspoonful equals 1 dram.

1 dessertspoonful equals 2 teaspoonfuls, or 2 drams.

1 tablespoonful equals 2 dessertspoonfuls, or 4 teaspoonfuls.

2 tablespoonfuls equal 8 teaspoonfuls, or 1 ounce.

1 common sized wineglassful equals 2 ounces, or ½ gill.

A tea cup is estimated to hold 4 fluid ounces, or 1 gill.

1 pound of soft butter is equal to about 1 pint.

1 pound of sugar is equal to about 1 pint.

## FROG FARMING.

### A New Industry With a Promising Future.

The best soil on which to plant frogs is low, boggy land, with mud bottom, covered with shallow water. It should be so wet as never to dry up in drougthy times. A long stretch of low land or a series of small pools is better than a wide spread of marsh, for the reason that in the former the crop can be more easily protected from enemies and caught for market. Those who have carp ponds are well fixed for raising frogs, providing they can first dispose of the carp.

Water snakes, pickerel and carp are enemies of the frog. Both domestic and wild water-fowls are also destructive to the crop. When it is practicable to drain ponds to free them from fish and snakes, it should be done before stocking up. To exclude ducks and geese and the night prowlers, like weasels, a fence of wire netting should surround small ponds, the wire being fastened close to the ground and two or three feet from the edge of the water.

The ponds are more desirable for their purpose if dotted with bushes and hummocks, logs and water plants, and the margins covered with rushes and grasses. These attract insect life on which frogs feed, and furnish at the same time favorable breeding and hiding places. Decayed vegetation and mud in the bottom furnish a safe winter resort.

The small boy can be induced by the sport and a few pennies to catch a few bucketfuls from the neighboring marshes to stock the preserves. If they must be sent from a distance, they may be transported in boxes lined with damp moss. If caught in the tadpole state,

they must, of course, be transported in water.

The healthy female will lay 1,200 eggs in a season, and if all hatched and survived, it would not require a large breeding stock to provide an Egyptian plague in one year! The spawn is deposited very early in the spring. The croaking we hear after a few mild days, is mostly done by the male (it is often so in higher life), and is a well-meant effort at musical courtship. The eggs hatch in April and May, and by fall the pond should be alive with its lively inhabitants.

In ponds where their natural food abounds, feeding is not necessary; but in France, where a business is made of breeding them, and the preserves are heavily stocked, feeding is practiced and has been found profitable. By this means, much more and better flesh is produced. Insects that live in air or in water are their natural food, but they will eat bread crumbs and meat.

The frog crop, like wheat, should be harvested when ripe. This time occurs as soon as there are any large enough to market. Some of the breeding stock will be ready the first autumn after the first breeding season.

To catch them, one must have a long rubber suit, a scoop net with a long handle, and the quickness and agility of the creatures themselves.

It is a good plan, where several ponds are owned, to leave one untouched in the fall, so that its inhabitants may be used for supplying the spring crop of tadpoles for restocking the other ponds. The price of meat rises as the cold weather comes in. The frogs go down into the mud. The owner of a frog preserve can then rake the bottom of his ponds for the fat fellows.

The edible parts of a frog are its hind legs, for which there is a demand in the larger cities.

## POST-OFFICE REGULATIONS—DOMESTIC.

In addition to the States and Territories, domestic rates apply to the Island Possessions, the Panama Canal Zone, and Shanghai, China.

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<i>Letters</i> or other matter wholly or partly in writing or typewriting, and all matter sealed or closed against inspection, must be prepaid, and article must not weigh over four pounds— <i>each ounce or fraction</i> .....	.02
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### Miscellaneous Printed Matter, etc.—Third Class.

<i>Pamphlets</i> , circulars, occasional publications, photographs, proof-sheets or corrected proofs, and manuscript copy accompanying the same, and all matter on paper or cardboard wholly in print not issued regularly, <i>in which the printing forms the principal use</i> , and not exceeding four pounds in weight, <i>for each two ounces or fraction</i> ..	.01
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<i>Letters</i> , 5 cents for the first ounce, and 3 cents for each additional ounce or fraction thereof. No limit of weight.
<i>Printed Matter</i> , 1 cent for each two ounces or fraction. Limit of weight 4 pounds 6 ounces.

LEGAL WEIGHTS PER BUSHEL.

State or Territory	Barley	Ear Corn	Shelled Corn	Oats	Potatoes	Rye	Wheat
Alabama	47 lbs.	70 lbs.	56 lbs.	32 lbs.	60 lbs.	56 lbs.	
Arizona	45 "		54 "	32 "		56 "	
Arkansas	48 "	70 "	56 "	32 "	60 "	56 "	
California	50 "		52 "	32 "		54 "	
Colorado	48 "	70 "	56 "	32 "	60 "	56 "	
Connecticut	48 "		56 "	32 "	60 "	56 "	
Delaware			56 "	32 "			
Florida	48 "	70 "	56 "	32 "	60 "	56 "	
Georgia	47 "	70 "	56 "	32 "	60 "	56 "	
Idaho	48 "		56 "	36 "	60 "	56 "	
Illinois	48 "	70 "	56 "	32 "	60 "	56 "	
Indiana	48 "	68-70	56 "	32 "	60 "	56 "	
Iowa	48 "	70 "	56 "	32 "	60 "	56 "	
Kansas	48 "	70 "	56 "	32 "	60 "	56 "	
Kentucky	47 "	68-70	56 "	32 "	60 "	56 "	
Louisiana	48 "		56 "	32 "		56 "	
Maine	48 "		56 "	32 "	60 "	50 "	
Maryland				26 "	56 "		
Massachusetts	48 "		56 "	32 "	60 "	56 "	
Michigan	48 "	70 "	56 "	32 "	60 "	56 "	
Minnesota	48 "	70 "	56 "	32 "	60 "	56 "	
Mississippi	48 "	72 "	56 "	32 "	60 "	56 "	
Missouri	48 "	70 "	56 "	32 "	60 "	56 "	
Montana	48 "	70 "	56 "	32 "	60 "	56 "	
Nebraska	48 "	70 "	56 "	32 "	60 "	56 "	
New Hampshire			56 "	32 "	60 "	56 "	
New Jersey	48 "		56 "	30 "	60 "	56 "	
New York	48 "		56 "	32 "	60 "	56 "	
North Carolina	48 "		56 "	52 "		56 "	
North Dakota	48 "	70 "	56 "	32 "	60 "	56 "	
Ohio	48 "	68 "	56 "	32 "	60 "	56 "	
Oklahoma	48 "	70 "	56 "	32 "	60 "	56 "	
Oregon	46 "		56 "	32 "	60 "	56 "	
Pennsylvania	47 "		56 "	32 "	56 "	56 "	
Rhode Island	48 "	70 "	56 "	32 "	60 "	56 "	
South Carolina					60 "	56 "	
South Dakota	48 "	70 "	56 "	32 "	60 "	56 "	
Tennessee	48 "	70 "	56 "	32 "	60 "	56 "	
Texas	48 "	70 "	56 "	32 "	60 "	56 "	
Vermont	48 "		56 "	32 "	60 "	56 "	
Virginia	48 "	70 "	56 "	30 "	56 "	56 "	
Washington	48 "		56 "	32 "	60 "	56 "	
West Virginia	48 "		56 "	32 "	60 "	56 "	
Wisconsin	48 "		56 "	32 "	60 "	56 "	

The legal weight of Wheat is fixed at 60 lbs. in all states except Maryland.

NOTE.—The legal weights of some commodities have not been fixed in some states. The above figures are furnished by the Bureau of Standards, Department of Commerce and Labor, Washington, D. C.



## LIST OF STATE EXPERIMENT STATIONS.

(Post-office address in italics, followed by name of director in charge. Bulletins are free to residents of a State.)

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- ARIZONA—*Tucson*; R. H. Forbes.
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- CALIFORNIA—*Berkeley*; E. J. Wickson.
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- CONNECTICUT—  
 State Station: *New Haven*; E. H. Jenkins.  
 Storrs Station: *Storrs*; L. A. Clinton.
- DELAWARE—*Newark*; H. Hayward.
- FLORIDA—*Gainesville*; P. H. Rolfs.
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- HAWAII—  
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ABRAHAM LINCOLN.

November 19, 1863.