

EIGHTY-SECOND YEAR,

KNICKERBOCKER
ALMANAC



FOR THE YEAR OF OUR LORD

1882

BEING THE SECOND AFTER BISSEXTILE, OR LEAP YEAR,

And (Until July 4th) the 106th Year of American Independence.

PUBLISHED AND SOLD BY

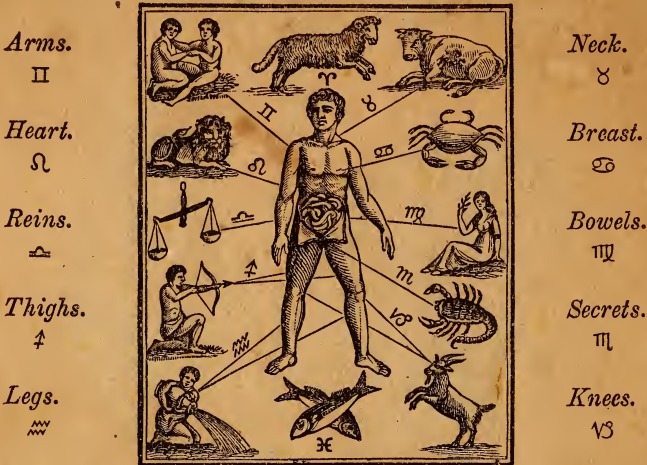
ISAAC C. CHAPMAN,
Wholesale and Retail Druggist,
111 WATER STREET,
NEWBURGH, N. Y.

THE ANATOMY OF MAN'S BODY

AS GOVERNED BY THE

TWELVE CONSTELLATIONS ACCORDING TO ANCIENT ASTROLOGY.

Head and Face. ♀



The column of *Moon Place* shows the Moon is situated at 7 A. M.; and the constellation of stars in which the Sign for the same is 30° greater.

To know where the sign is, first find the day of the month in the calendar page, and against the day in the ninth column, you have the place of the moon; then find the sign here, and it will give you the part of the body it is supposed to govern. The idea that the Moon's Place or the signs have any effect on the human body, ought not to be believed.

THE TWELVE SIGNS OF THE ZODIAC.

SPRING SIGNS.

1. ♀ *Aries*, or Ram.
2. ♈ *Taurus*, or Bull.
3. ♊ *Gemini*, or Twins.

SUMMER SIGNS.

4. ♋ *Cancer*, or Crab Fish.
5. ♌ *Leo*, or Lion.
6. ♍ *Virgo*, or Virgin.

AUTUMN SIGNS.

7. ♎ *Libra*, or Balance.
8. ♏ *Scorpio*, or Scorpion.
9. ♏ *Sagittarius*, or Bowman.

WINTER SIGNS.

10. ♐ *Capricornus*, or Goat.
11. ♑ *Aquarius*, or Waterman.
12. ♒ *Pisces*, or Fishes.

The first six are called Northern Signs, and the other six Southern Signs.

Explanation of the Signs used in this Almanac.

☾ New Moon, and Moon generally. ☽ First Quarter. ☾ Full Moon. ☽ Last Quarter.
 ♀ Moon's ascending Node, or Dragon's Head. ♂ Moon's descending Node, or Dragon's Tail.
 ● In Apogee—farthest from Earth. ● In Perigee—nearest to the Earth. ● Highest—Moon farthest North. ● Lowest—Moon farthest South. ♃ Saturn, ♀ Venus, ☽ Near together.
 ♃ Jupiter. ☿ Mercury. □ 90° apart. ☽ Opposition, or 180° apart. † Mars. ☉ Sun.
 ♃ Herschel. † Neptune.

THE WEATHER.

It is but just to state to the public, that they know as much about the weather for the coming year as we do. No Mathematician or Astronomer, however able in his profession, can possibly "cipher out" the weather. When such predictions are seen in Almanacs, they should be regarded as mere guess-work, entitled to no confidence, and as likely to fail as to be true.

Entered according to Act of Congress, in the year 1881, by Matthias Plum, in the Office of the Librarian of Congress at Washington.

Stereotyped and Printed by MATTHIAS PLUM Almanac Publisher. Newark, N. J.

ASTRONOMICAL CALCULATIONS,

Made exclusively for this Almanac, for the year of Our Lord 1882,

BY BERLIN H. WRIGHT.

Adapted to the Horizon and Meridian of New York.

CHRONOLOGICAL CYCLES, &c.

Dominical Letter.....	A.	Year of Mahomet, beginning Nov. 12... 1300
Solar Cycle.....	15	Year of World (Usher)..... 5886
Lunar Cycle, or Golden Number.....	2	Year of World (Jews)..... 5642-43
Epact, moon's age, Jan. 1.....	11	Year of World (Septuagint)..... 7390-91
Roman Indiction.....	10	Year A. U. C. (of Rome)..... 2635
Jewish Lunar Cycle.....	18	Year of Olympiad..... 2658
Dionysian Period.....	211	Year of Nabonassor..... 2620
Julian Period.....	6595	Year A. L. (Masonic)..... 5882

MOVABLE FESTIVALS, &c.

Septuagesima Sunday.....	February 5	Easter Sunday.....	April 9
Sexagesima Sunday.....	February 12	Low Sunday.....	" 10
Quinquagesima Sunday.....	" 19	Rogation Sunday.....	May 14
Ash Wednesday.....	" 22	Ascension Day.....	" 18
Quadragesima Sunday.....	" 26	Whit-sun-day.....	" 28
Mid Lent Sunday.....	March 12	Trinity Sunday.....	June 4
Palm Sunday.....	April 2	Corpus Christi.....	" 8
Good Friday.....	" 7	Advent Sunday.....	Dec. 3

ECLIPSES FOR 1882.

There will be two Eclipses this year, both of the Sun and a transit of the planet Venus over the disc of the Sun.

I. A total Eclipse of the Sun May 17, invisible on the Western Continent.

II. An Annular Eclipse of the Sun Nov. 11, visible in the Pacific Ocean only.

III. A transit of the planet Venus across the Sun's disc Dec. 6, visible throughout the United States and Europe. See table.

PLACE.	BEGINS.		Alt. Deg	ENDS.		Alt. Deg	PLACE.	BEGINS.		Alt. Deg	ENDS.		Alt. Deg
	H.	M. S.		H.	M. S.			H.	M. S.		H.	M. S.	
Albany, N. Y.,	9, 29, 51	A. M.	18	9, 51, 58	P. M.	13	Detroit, Mich.,	8, 52, 45	A. M.	14	2, 15, 25	P. M.	19
Austin, Texas,	7, 52, 36	"	11	1, 17, 42	"	32	Denver, Col.,	7, 54, 55	"	2	0, 49, 10	"	27
Baltimore, Md.,	9, 18, 13	"	18	2, 40, 29	"	17	Galveston, Texas,	8, 5, 24	"	14	1, 29, 23	"	33
Boston, Mass.,	9, 40, 26	"	19	3, 2, 36	"	12	Houston, Texas,	8, 2, 44	"	13	1, 29, 23	"	33
Buffalo, N. Y.,	9, 9, 14	"	15	2, 31, 32	"	15	Indianapolis, Ind.,	8, 40, 35	"	13	2, 3, 20	"	22
Charleston, S. C.,	9, 4, 47	"	21	2, 27, 26	"	24	Louisville, Ky.,	8, 42, 50	"	15	2, 5, 33	"	22
Chicago, Ill.,	8, 34, 28	"	12	2, 57, 18	"	19	New York City,	9, 38, 45	"	18	2, 50, 51	"	14
Cincinnati, Ohio,	8, 46, 53	"	14	3, 9, 32	"	21	Philadelphia, Pa.,	9, 24, 7	"	18	2, 46, 16	"	15
Columbus, Ohio,	8, 32, 41	"	14	2, 15, 23	"	20	Washington, D. C.,	9, 16, 24	"	18	2, 35, 47	"	18

THE FOUR SEASONS.

	D.	H.	M.		D.	H.	M.
Winter Begins.....1881—Dec.	21	10	52	morning ☽, and lasts	90	1	10
Spring Begins.....1882—Mar.	21	0	2	evening, ♄, and lasts	91	20	4
Summer Begins.....1882—June	21	8	6	morning, ☉, and lasts	93	14	23
Autumn Begins.....1882—Sept.	22	10	29	evening, ♃, and lasts	89	18	16
Winter Begins.....1882—Dec.	21	4	45	evening, ☽, Tropical Year,	365	5	53

CUSTOMARY NOTES.

MORNING STARS.

MERCURY, until Jan. 6th, and from Feb. 22 to May 2d; June 28th to Aug. 14th; and Oct. 22nd to Dec. 16th.
 VENUS, until Feb. 20th, and after Dec. 6th.
 MARS, after Dec. 10th.
 JUPITER, from May 30th to Sept. 23d.
 SATURN, from May 6th to August 18th.
 URANUS, from Sept. 11th to Dec. 15th.
 NEPTUNE, from May 6th to Aug. 11th.

EVENING STARS.

MERCURY, from Jan. 6th to Feb. 22d; May 2d to June 28th; Aug. 14th to Oct. 22; and after Dec. 16th.
 VENUS, from Feb. 20th to Dec. 6th.
 MARS, until Dec. 10th.
 JUPITER, until May 30, and after Sept. 23d.
 SATURN, until May 6th, and after Aug. 18th.
 URANUS, until Sept. 11th, and after Dec. 15th.
 NEPTUNE, until May 6th, and after Aug. 11.

PLANETS BRIGHTEST.

Mercury, Feb. 3—6, May 28th to June 1st, and Sept. 25—28, setting after the Sun. Also March 21—24, July 19—22, and Nov. 7—10, rising before the Sun. Venus, Nov. 1. Mars not this year. Jupiter, Dec. 18. Saturn, Nov. 14. Uranus, March 6, and Neptune, Nov. 9.

NOTE.—The calculations for this Almanac have been made exclusively for it. The Sun's rising and setting are adapted to *mean time*, this being most in use. All the other tables are in *mean time also*.

CHURCH DAYS.

JANUARY.

- 1.—Circumcision.
- 1.—1st Sunday after Christmas.
- 6.—Epiphany.
- 8.—1st Sunday after Epiphany.
- 15.—2d Sunday after Epiphany.
- 22.—3d Sunday after Epiphany.
- 25.—Conversion of S. Paul.
- 29.—4th Sunday after Epiphany

FEBRUARY.

- 2.—Purification of the B. V. M.
- 5.—Septuagesima Sunday.
- 12.—Sexagesima Sunday.
- 19.—Quinquagesima Sunday.
- 22.—Ash Wednesday.
- 24.—S. Matthias.
- 26.—Quadragesima Sunday.

MARCH.

- 1.—
- 3.—} Spring Ember Days.
- 4.—
- 5.—2d Sunday in Lent.
- 12.—Mid Lent Sunday.
- 19.—4th Sunday in Lent.
- 25.—Annunciation of B. V. M.
- 26.—5th Sunday in Lent.

APRIL.

- 2.—Palm Sunday.
- 7.—Good Friday.
- 9.—EASTER DAY.
- 16.—Low Sunday.
- 23.—2d Sunday after Easter.
- 25.—S. Mark.
- 30.—3d Sunday after Easter.

MAY.

- 1.—SS. Philip and James.
- 7.—4th Sunday after Easter.

MAY.

- 14.—Rogation Sunday.
- 15.—Rogation Monday.
- 16.—Rogation Tuesday.
- 17.—Rogation Wednesday.
- 18.—ASCENSION DAY.
- 21.—Sunday after Ascension.
- 28.—WHITSUN-DAY.
- 31.—Ember Day.

JUNE.

- 2.—} Summer Ember Days.
- 3.—
- 4.—TRINITY SUNDAY.
- 8.—Corpus Christi.
- 11.—S. Barnabas.
- 11.—1st Sunday after Trinity.
- 18.—2d Sunday after Trinity.
- 24.—Nativity of S. John Baptist.
- 25.—3d Sunday after Trinity.
- 29.—S. Peter.

JULY.

- 2.—4th Sunday after Trinity.
- 9.—5th Sunday after Trinity.
- 16.—6th Sunday after Trinity.
- 23.—7th Sunday after Trinity.
- 25.—S. James.
- 30.—8th Sunday after Trinity.

AUGUST.

- 6.—9th Sunday after Trinity.
- 13.—10th Sunday after Trinity.
- 20.—11th Sunday after Trinity.
- 24.—S. Bartholomew.
- 27.—12th Sunday after Trinity.

SEPTEMBER.

- 3.—13th Sunday after Trinity.
- 10.—14th Sunday after Trinity.
- 17.—15th Sunday after Trinity.

SEPTEMBER.

- 20.—
- 22.—} Autumnal Ember Days.
- 23.—
- 23.—
- 21.—S. Matthew.
- 24.—16th Sunday after Trinity.
- 29.—S. Michael and all Angels.

OCTOBER.

- 1.—17th Sunday after Trinity.
- 8.—18th Sunday after Trinity.
- 15.—19th Sunday after Trinity.
- 18.—S. Luke.
- 22.—20th Sunday after Trinity.
- 28.—SS. Simon and Jude.
- 29.—21st Sunday after Trinity.

NOVEMBER.

- 1.—All Saints.
- 5.—22d Sunday after Trinity.
- 12.—23d Sunday after Trinity.
- 19.—24th Sunday after Trinity.
- 26.—25th Sunday after Trinity.
- 30.—S. Andrew.

DECEMBER.

- 3.—Advent Sunday.
- 10.—2d Sunday in Advent.
- 17.—3d Sunday in Advent.
- 20.—
- 22.—} Winter Ember Days.
- 23.—
- 23.—
- 21.—S. Thomas.
- 24.—4th Sunday in Advent.
- 25.—CHRISTMAS.
- 26.—S. Stephen.
- 27.—S. John Evangelist.
- 28.—Holy Innocents.
- 31.—1st Sunday after Christmas

MOONLIGHT EVENINGS.—Persons who desire to ascertain when the Moon will shine well, for the purposes of EVENING EXCURSION PARTIES, PIC-NICS, &c., may consider the evenings favorable for those purposes for *three days before Full Moon*, and for *four days after Full Moon*. The Moon's rising after the full will occur after sunset, and about 50 minutes later each evening. The time of rising will be easily seen in the pages of the Almanac. The best time, is at the time of *Full Moon*.

TIDE TABLE.

In the column next the last, in the Calendar pages, is given the time when the Moon is South. To find the time of high water at any of the following named places, add the hours and minutes opposite the place to the time of the Moon South.

The Tides given in the Calendar pages are for the Port of New York. The height of tide is the average or mean.

PLACES.	TIDE ESTAB.		PLACES.	TIDE ESTAB.		PLACES.	TIDE ESTAB.	
	H. M.	FT.		H. M.	FT.		H. M.	FT.
Albany, N. Y.	5 22	2.3	Hackensack, N. J.	10 0		Philadelphia,	1 18	6.0
Annapolis,	4 38	0.9	Hatteras Inlet,	7 4	2.0	Point Lookout,	0 32	1.4
Amboy, N. J.	8 15	5.0	Higbee's Cape May.	8 23	4.9	Poughkeepsie, N. Y.	12 34	3.2
Baltimore,	6 33	1.3	Mahon's River,	9 52	5.9	Richmond,	4 32	2.9
Beaufort, N. C.	7 26	2.8	Montauk Point,	8 20	1.9	Sands Point,	11 13	7.7
Belleville, N. J.	9 0		Passaic Lighthouse,			Sandy Hook,	7 29	4.8
Bodkin Light,	5 42	1.0	Newark (N. J.) Bay,	8 41		Stonington,	9 7	2.7
Boston,	11 27	10.0	New Bedford, (ent.)	7 57	2.8	Stuyvesant, N. Y.	3 23	3.8
Bridgeport,	11 11	6.5	New Brunswick, N. J.	9 5 5.0		Smithville,	7 19	4.5
Cape May Landing,	8 19	4.8	New Castle,	11 53	6.5	Tarrytown, N. Y.	9 57	3.5
Castleton, N. Y.	4 29	2.7	New Haven,	11 16	5.9	Tappanhook,	0 42	1.6
City Point,	2 11	2.8	New London,	5 28	2.6	Tivoli, N. Y.	1 24	4.0
Cold Spring Inlet, N. Y.	7 32	4.4	New Rochelle,	11 22	7.6	Throg's Neck,	11 20	7.3
Delaware Breakwat'r,	8 0	3.5	Newport,	7 45	3.9	Verplanck's Pt., N. Y.	10 8	3.1
Dobb's Ferry, N. Y.	9 19	3.6	New York,	8 13	4.3	Washington,	7 44	3.0
Egg Island Light,	9 4	6.0	Old Pt. Comfort,	8 17	2.5	West Point, N. Y.	11 2	2.7
Elizabeth Poth, N. J.	8 57	5.0	Oyster Bay,	11 7	7.3	Wilmington,	9 6	2.7

The actual rise of the tides depends on the strength and the direction of the wind, and it not unfrequently happens that a tide which would independently of these, have been small, is higher than another, otherwise much greater. But when a tide which arrives when the Sun and Moon are in a favorable position, for producing a great elevation, is still further increased by a very strong wind, the rise of the water will be uncommonly great, sufficient perhaps to cause damage. The time for high water in this Almanac is for New York.

Begins on



Sunday.

MOON'S PHASES.

	D.	H.	M.		D.	H.	M.
Full Moon,	4	6	2 M.	First Quarter,	26	2	49 M.
Last Quarter,	12	10	51 M.	Moon Apogee,	7	10	24 E.
New Moon,	19	11	39 M.	Moon Perigee,	20	8	0 M.

Days in Year.	Day of Year.	Day of Mon.	Day of Week.	Phenomena, Chronology, &c.	☉	☽	☾	Moon's Place.	☾	☾	High water N. Y.
					Sun rises	Sun sets	Sun's dec. S.		Moon sets.	Moon south	
365	1	1	1	1st Sun. aft. Christ.	7 25	4 43	22 59	♈	4 51	10 11	5 51
364	2	2	Mon	(1) ☉ Perigee.	7 25	4 44	22 53	♈	5 45	11 2	6 45
363	3	3	Tue	♀ in ♀. ♂ ♂ ●	7 25	4 45	22 47	♈	6 35	11 52	7 37
362	4	4	Wed	Bt. Stone Riv. 1863	7 25	4 46	22 41	♈	rises.	morn.	8 14
361	5	5	Thu	(6) ♀ ♂ ☉ sup. ½ sta	7 25	4 47	22 34	♈	6 17	40	8 56
360	6	6	Fri	Epiphany.	7 25	4 48	22 27	♈	7 16	1 26	9 36
359	7	7	Sat	(8) Bt. N. Orl's '815	7 25	4 49	22 19	♈	8 13	2 10	10 13
358	8	8	2	1st Sun aft. Epiph.	7 24	4 50	22 11	♈	9 9	2 52	10 48
357	9	9	Mon	♂ ☉ ●	7 24	4 51	22 3	♈	10 5	3 33	11 25
356	10	10	Tue	♂ stationary.	7 24	4 52	21 54	♈	11 3	4 14	ev. 6
355	11	11	Wed	(10) Stamp A't p 765	7 24	4 53	21 45	♈	morn.	4 56	49
354	12	12	Thu	Alabama sec'd '861	7 23	4 54	21 35	♈	3	5 40	1 38
353	13	13	Fri	Lexington bt., 1840	7 23	4 55	21 25	♈	1 4	6 26	2 31
352	14	14	Sat	(15) ♀ gr. Hel. Lat. S	7 23	4 56	21 14	♈	2 7	7 16	3 30
351	15	15	3	2d Sun. aft. Epiph.	7 22	4 57	21 3	♈	3 11	8 10	4 35
350	16	16	Mon	Gibbon d. 1794.	7 22	4 59	20 52	♈	4 15	9 8	5 41
349	17	17	Tue	Bat. Cowpens, 1781	7 21	5 0	20 40	♈	5 15	10 8	6 42
348	18	18	Wed	♂ ♀ ●	7 21	5 1	20 27	♈	6 10	11 9	7 36
347	19	19	Thu	Bt. Mill Spring '62	7 21	5 2	20 15	♈	sets.	ev.	9 8 28
346	20	20	Fri	♂ ♀ ●	7 20	5 3	20 2	♈	6 44	1 7	9 21
345	21	21	Sat	G'l Porter dis'd '63	7 19	5 4	19 49	♈	7 59	2 3	10 9
344	22	22	4	3d Sun. aft. Epiph.	7 18	5 5	19 35	♈	9 13	2 57	10 52
343	23	23	Mon	♀ stationary.	7 17	5 7	19 21	♈	10 25	3 49	11 41
342	24	24	Tue	Frederick G. b. 1712	7 17	5 8	19 6	♈	11 33	4 40	morn.
341	25	25	Wed	☐ ♀ ☉, Eastern.	7 16	5 9	18 51	♈	morn.	5 32	32
340	26	26	Thu	♂ ♀ ●. ♂ ♀ ●.	7 16	5 10	18 36	♈	41	6 23	1 28
339	27	27	Fri	(26) ♂ ♀ ●.	7 15	5 11	18 21	♈	1 44	7 15	2 27
338	28	28	Sat	Bt. Tunnel Hill, '64	7 14	5 13	18 5	♈	2 45	8 7	3 29
337	29	29	5	4th. Sun. aft. Epiph	7 13	5 14	17 49	♈	3 31	8 58	4 31
336	30	30	Mon	♂ ♂ ●	7 12	5 15	17 32	♈	4 31	9 49	5 30
335	31	31	Tue	Charles I beh. 1649	7 12	5 16	17 16	♈	5 17	10 37	6 24

Begins on



Wednesday.

MOON'S PHASES.

	D.	H.	M.		D.	H.	M.
Full Moon,	4	7	44 E.	First Quarter,	26	8	37 M.
Last Quarter,	12	4	32 E.	Moon Apogee,	3	6	0 M.
New Moon,	19	7	22 M.	Moon Perigee,	18	7	12 M.
				Moon Apogee,	30	4	6 E.

Days in Year.	Day of Year.	Day of Mon.	Day of Week.	Phenomena, Chronology, &c.	☉		☽	Moon's Place.	☾		High N. Y.
					rises H. M.	sets. H. M.	dec. S. °		sets. H. M.	moon H. M.	
306	60	1	Wed	♀ gr. Hel. Lat. S.	6 35	5 53	7 26	☾	4 31	10 6	5 54
305	61	2	Thu	War Algiers, 1815.	6 34	5 53	7 3	☾	5 3	10 49	6 41
304	62	3	Fri	Wesley died, 1791.	6 32	5 54	6 40	☾	5 31	11 31	7 21
303	63	4	Sat	♂ ☽	6 30	5 55	6 17	☾	rises.	morn.	7 56
302	64	5	10	2d Sund. in Lent.	6 29	5 56	5 53	☾	6 50	12	8 31
301	65	6	Mon	♂ ☽ ☉ and bright t	6 27	5 57	5 30	☾	7 47	54	9 9
300	66	7	Tue	☽ stationary.	6 25	5 58	5 7	☾	8 47	1 36	9 46
299	67	8	Wed	Bt. Pea Ridge, '862	6 24	5 59	4 44	☾	9 47	2 20	10 23
298	68	9	Thu	1st Monitor ft. 1862	6 22	6 0	4 20	☾	10 48	3 7	11 2
297	69	10	Fri	Manasses evac. '862	6 20	6 1	3 57	☾	11 48	3 56	11 48
296	70	11	Sat	Clinton died, 1828.	6 19	6 2	3 33	☾	morn.	4 47	ev. 39
295	71	12	11	Mid Lent Sunday	6 17	6 3	3 9	☾	48	5 41	1 39
294	72	13	Mon	Ft. Hudson atk, '863	6 16	6 4	2 46	☾	1 42	6 37	2 42
293	73	14	Tue	♂ in ♀	6 14	6 5	2 22	☾	2 33	7 34	3 51
292	74	15	Wed	Bt. G'd, C. H. 1781	6 12	6 6	1 59	☾	3 19	8 31	4 58
291	75	16	Thu	Bt. Averysboro, '865	6 11	6 8	1 35	☾	4 0	9 27	6 1
290	76	17	Fri	♂ ♀	6 9	6 9	1 11	☾	4 38	10 23	6 57
289	77	18	Sat	Stamp act r'p'd '766	6 7	6 10	0 47	☾	5 12	11 17	7 45
288	78	19	12	4th Sund. in Lent.	6 6	6 12	0 24	☾	sets.	ev. 12	8 31
287	79	20	Mon	19 ♂ ♀ 21 ♂ g. el. w	6 4	6 13	n. 0	☾	7 59	1 6	9 21
286	80	21	Tue	(20) Spring begins.	6 2	6 14	0 24	☾	9 10	2 1	10 7
285	81	22	Wed	♂ ♀. ♂ ♀	6 1	6 15	0 47	☾	10 18	2 57	10 52
284	82	23	Thu	♂ ♀.	5 59	6 16	1 11	☾	11 21	3 52	11 44
283	83	24	Fri	♂ Aphelion.	5 58	6 16	1 35	☾	morn.	4 46	morn.
282	84	25	Sat	☽ Perihelion.	5 56	6 17	1 58	☾	19	5 39	38
281	85	26	13	5th Sund. in Lent.	5 54	6 18	2 22	☾	1 9	6 29	1 37
280	86	27	Mon	(26) ♂ ☽	5 52	6 19	2 45	☾	1 52	7 17	2 34
279	87	28	Tue	The Essex capt. '814	5 51	6 20	3 9	☾	2 30	8 3	3 31
278	88	29	Wed	Vera Cruz sur. 1847	5 49	6 21	3 32	☾	3 4	8 46	4 26
277	89	30	Thu	(31) Calhoun d. '850	5 47	6 22	3 55	☾	3 33	9 29	5 16
276	90	31	Fri	♂ gr. Hel. Lat. N	5 46	6 23	4 19	☾	4 1	10 10	6 3

Begins on



Saturday.

MOON'S PHASES.

	D.	H.	M.		D.	H.	M.
Full Moon,	3	0	51 E.	First Quarter,	25	2	0 M.
Last Quarter,	11	1	34 M.	Moon Perigee,	15	11	54 M.
New Moon,	17	4	42 E.	Moon Apogee,	27	9	6 M.

Days in Year.	Day of Year.	Day of Mon.	Day of Week.	Phenomena, Chronology, &c.	☉	☽	☾	Moon's Place.	☾	☾	High water N. Y.
					rises	sets.	dec.N		sets.	south	
275	91	1	Sat	♂ ☽ ☉	5 44	6 24	4 42	♈	4 27	10 52	6 44
274	92	2	14	Palm Sunday	5 42	6 26	5 5	♈	4 54	11 34	7 24
273	93	3	Mon	(2) ♀ ☽ ☉, eastern	5 41	6 27	5 28	♈	rises.	morn.	7 59
272	94	4	Tue	Pres. Harrison d. '41	5 39	6 28	5 51	♈	7 39	18	8 37
271	95	5	Wed	Bt. Blk. Bayou '863	5 37	6 29	6 13	♈	8 42	1 4	9 19
270	96	6	Thu	Tyler inaug., 1841.	5 36	6 30	6 36	♈	9 42	1 53	10 0
269	97	7	Fri	Good Friday.	5 34	6 31	6 59	♈	10 41	2 44	10 41
268	98	8	Sat	Bt. Mansfield, '864	5 33	6 32	7 21	♈	11 37	3 37	11 29
267	99	9	15	Easter Sunday.	5 31	6 33	7 43	♈	morn.	4 32	ev. 24
266	100	10	Mon	U.S.B'krech'd, 1816	5 30	6 34	8 6	♈	29	5 28	1 24
265	101	11	Tue	Ft. Pulaski cap't '862	5 28	6 35	8 28	♈	1 15	6 23	2 27
264	102	12	Wed	Ft. Pillow cap't, '864	5 26	6 36	8 50	♈	1 55	7 17	3 31
263	103	13	Thu	♂ gr. Hel. Lat. S.	5 25	6 37	9 11	♈	2 31	8 11	4 36
262	104	14	Fri	Lincoln ass'd, 1865	5 24	6 38	9 33	♈	3 8	9 4	5 36
261	105	15	Sat	(16) ♂ ♀ ☉	5 22	6 39	9 54	♈	3 41	9 57	6 32
260	106	16	16	Low Sunday.	5 20	6 40	10 16	♈	4 15	10 50	7 22
259	107	17	Mon	(18) ♂ ♀ ☉	5 19	6 41	10 37	♈	4 58	11 50	8 13
258	108	18	Tue	♂ ♀ ☉. ♂ ♀ ☉	5 17	6 42	10 58	♈	sets.	ev. 40	8 56
257	109	19	Wed	♂ ♀ ♀. ♂ ♀ ☉	5 16	6 43	11 18	♈	9 2	1 37	9 47
256	110	20	Thu	Aberthny di. 1835.	5 14	6 44	11 39	♈	10 4	2 33	10 33
255	111	21	Fri	♂ ♀ ♀	5 13	6 45	11 59	♈	10 59	3 28	11 20
254	112	22	Sat	Great freshet, 1862	5 11	6 46	12 20	♈	11 46	4 20	morn.
253	113	23	17	2d Sun. aft. Easter	5 10	6 47	12 40	♈	morn.	5 10	12
252	114	24	Mon	♂ ♀ ☉	5 8	6 48	12 59	♈	27	5 57	1 5
251	115	25	Tue	N. O. cap't, 1862.	5 7	6 49	13 19	♈	1 2	6 42	1 56
250	116	26	Wed	♀ in ♀	5 6	6 50	13 38	♈	1 34	7 25	2 50
249	117	27	Thu	Cap. L. York, 1813	5 4	6 51	13 57	♈	2 2	8 7	3 42
248	118	28	Fri	♂ ☽ ☉	5 3	6 52	14 16	♈	2 29	8 48	4 30
247	119	29	Sat	Bt. Bridgeport, 1862	5 2	6 53	14 35	♈	2 54	9 30	5 18
246	120	30	18	3d Sun. aft. Easter	5 0	6 55	14 53	♈	3 23	10 14	6 4

Begins on



Monday.

MOON'S PHASES.

	D.	H.	M.		D.	H.	M.
Full Moon,	3	3	35 M.	First Quarter,	24	7	45 E.
Last Quarter,	10	7	39 M.	Moon Perigee,	12	9	18 E.
New Moon,	17	2	37 M.	Moon Apogee,	25	3	18 M.

Days in Year.	Day of Year.	Day of Mon.	Day of Week.	Phenomena, Chronology &c.	☉	☽	☾	Moon's Place.	☾	☾	High water N. Y.
					Sun rises H. M.	Sun sets. H. M.	Sun's dec. N '		Moon sets. H. M.	Moon south H. M.	
245	121	1	Mon	Bt. Ft. Gibson, '863	4 59	6 56	15 12	☾	3 51	10 59	6 48
244	122	2	Tue	♂ ♀ ☉ sup'r, ♀ in ♀	4 58	6 57	15 30	☾	4 21	11 48	7 30
243	123	3	Wed	(4) ♂ ♀ ☽	4 56	6 58	15 47	☾	rises.	morn.	8 11
242	124	4	Thu	♂ ♀ ♄. ♂ Aphelion	4 55	6 59	16 5	☾	8 34	39 9	5 5
241	125	5	Fri	♂ ♀ ♃	4 54	7 0	16 22	☾	9 32	1 32	9 42
240	126	6	Sat	♂ ☽ ☉. ♂ ♄ ☉	4 53	7 1	16 39	♄	10 25	2 27	10 27
239	127	7	19	4th Sun. af. Easter.	4 52	7 2	16 55	♄	11 12	3 23	11 16
238	128	8	Mon	(7) ♀ Perihelion.	4 51	7 3	17 12	♄	11 56	4 19	ev. 11
237	129	9	Tue	Schiller died, 1805.	4 49	7 4	17 28	☽	morn.	5 13	1 8
236	130	10	Wed	Jeff Davis c'p'd '865	4 48	7 5	17 43	☽	33	6 6	2 7
235	131	11	Thu	♂ ☽ ♄	4 47	7 6	17 59	☽	1 8	6 58	3 9
234	132	12	Fri	♂ ♀ ♃	4 46	7 7	18 14	☽	2 1	7 49	4 9
233	133	13	Sat	Jamestown set. 1607	4 45	7 8	18 29	☽	2 14	8 41	5 11
232	134	14	20	Rogation Sunday.	4 44	7 9	18 43	☽	2 48	9 33	6 7
231	135	15	Mon	(17) ♀ gr. Hel. Lat. N	4 43	7 10	18 57	☽	3 26	10 27	7 1
230	136	16	Tue	♂ ♄ ☽. ♂ ☽ ☽	4 42	7 11	19 11	☽	4 7	11 22	7 50
229	137	17	Wed	☉ ecl. invis. ♂ ♃ ☽	4 41	7 12	19 25	☽	sets.	ev. 18	8 37
228	138	18	Thu	Ascension D. ♂ ♀ ☽	4 40	7 13	19 39	☽	8 45	1 14	9 26
227	139	19	Fri	(18) ♂ in Præsepe.	4 39	7 14	19 51	☽	9 36	2 8	10 11
226	140	20	Sat	(18) ♂ ♀ ☽	4 39	7 15	20 4	☽	10 21	3 0	10 55
225	141	21	21	Sun. aft. Ascension	4 38	7 16	20 16	☽	10 55	3 49	11 41
224	142	22	Mon	☽ stationary. ♂ ♂ ☽	4 37	7 17	20 28	☽	11 33	4 36	morn.
223	143	23	Tue	Bt. Lewisburg, 1861	4 36	7 18	20 39	☽	morn.	5 20	2 15
222	144	24	Wed	Col. Ellsworth k, '61	4 36	7 19	20 50	☽	2	6 2	1 18
221	145	25	Thu	♂ ☽ ☽	4 35	7 20	21 1	☽	30	6 44	2 1
220	146	26	Fri	Sec Stanton r's'd '68	4 34	7 20	21 12	☽	57	7 25	2 52
219	147	27	Sat	Ft. George tkn 1813	4 34	7 21	21 22	☽	1 23	8 8	3 42
218	148	28	22	Whitsunday.	4 33	7 22	21 32	☽	1 50	8 52	4 33
217	149	29	Mon	Wisconsin ad. 1848	4 32	7 23	21 41	☽	2 21	9 39	5 23
216	150	30	Tue	♀ Perihelion.	4 32	7 23	21 50	☽	2 54	10 29	6 14
215	151	31	Wed	Nebraska Bill pd '54	4 31	7 24	21 58	☽	3 33	11 23	7 3

Begins on



Thursday.

MOON'S PHASES.

Full Moon,	D. 1	H. 3	M. 37 E.	First Quarter,	D. 23	H. 1	M. 5 E.
Last Quarter,	8	0	14 E.	Moon Perigee,	7	1	42 M.
New Moon,	15	1	37 E.	Moon Apogee,	21	10	24 E.

Days in Year.	Day of Year.	Day of Mon.	Day of Week.	Phenomena, Chronology, &c.	☉	☽	☿	♃	♄	♅	High water N. Y.
					Sun rises H. M.	Sun sets. H. M.	Sun's dec.N ° '	Moon's Place	Moon rises. H. M.	Moon south H. M.	
214	152	1	Thu	♃ gr. elon. E.	4 31	7 24	22 7	♏	rises.	morn.	7 50
213	153	2	Fri	Merietta.	4 30	7 25	22 14	♏	8 9	18	8 37
212	154	3	Sat	Peace w Tripoli '805	4 30	7 26	22 22	♏	9 11	1 15	9 27
211	155	4	23	Trinity Sunday.	4 30	7 26	22 29	♏	9 56	2 13	10 16
210	156	5	Mon	☐ ☽ ☉, eastern.	4 29	7 27	22 36	♏	10 36	3 9	11 3
209	157	6	Tue	Memphis sur. 1862.	4 29	7 28	22 42	♏	11 10	4 3	11 55
208	158	7	Wed	Mahomet died, 622	4 29	7 28	22 48	♏	11 36	4 55	ev. 48
207	159	8	Thu	Corpus Christi.	4 29	7 29	22 53	♏	morn.	5 46	1 44
206	160	9	Fri	Boston riot, 1768.	4 28	7 30	22 58	♏	16	6 37	2 42
205	161	10	Sat	♃ in ♃	4 28	7 30	23 3	♏	49	7 28	3 45
204	162	11	24	1st Sun. aft. Trinity	4 28	7 31	23 7	♏	1 24	8 20	4 45
203	163	12	Mon	♃ ♃ ☉	4 28	7 31	23 11	♏	2 2	9 13	5 46
202	164	13	Tue	♃ ♃ ☉	4 28	7 32	23 14	♏	2 46	10 8	6 42
201	165	14	Wed	♃ ♃ ☉	4 28	7 32	23 17	♏	3 34	11 3	7 34
200	166	15	Thu	♃ stationary.	4 28	7 32	23 20	♏	4 26	11 57	8 17
199	167	16	Fri	♃ ♃ ☉	4 28	7 33	23 22	♏	sets.	ev. 50	9 6
198	168	17	Sat	Bt. Booneville 1861	4 28	7 33	23 24	♏	8 56	1 41	9 49
197	169	18	25	2d Sun. aft. Trinity.	4 28	7 33	23 25	♏	9 32	2 29	10 29
196	170	19	Mon	(18) ♃ ♃ ☉	4 28	7 34	23 26	♏	10 4	3 14	11 8
195	171	20	Tue	♃ Aphelion. ♃ ♃ ☉	4 29	7 34	23 27	♏	10 32	3 57	11 49
194	172	21	Wed	Summer begins.	4 29	7 34	23 27	♏	10 58	4 39	morn..
193	173	22	Thu	(21) ♃ gr. Hel. Lat.N	4 29	7 34	23 27	♏	11 26	5 21	31
192	174	23	Fri	(22) ♃ ☽ ☉	4 29	7 34	23 26	♏	11 51	6 2	1 16
191	175	24	Sat	Tennessee sec. 1861	4 29	7 35	23 25	♏	morn.	6 45	2 1
190	176	25	26	3d Sun. aft. Trinity	4 30	7 35	23 24	♏	19	7 31	2 53
189	177	26	Mon	Pizarro died, 1541.	4 30	7 35	23 22	♏	53	8 19	3 48
188	178	27	Tue	♃ ♃ a Leonis.	4 30	7 35	23 19	♏	1 28	9 10	4 45
187	179	28	Wed	♃ ♃ ☉ inferior.	4 31	7 35	23 17	♏	2 10	10 5	5 43
186	180	29	Thu	Henry Clay di. 1852	4 31	7 35	23 13	♏	3 0	11 2	6 40
185	181	30	Fri	Printing inv'd 1429	4 31	7 35	23 10	♏	3 58	12 0	7 33

Begins on



Saturday.

MOON'S PHASES.

	D.	H.	M.		D.	H.	M.
Full Moon	1	1	12 M.	Full Moon,	30	9	6 M.
Last Quarter,	7	4	56 E.	Moon Perigee,	3	8	24 E.
New Moon,	15	2	5 M.	Moon Apogee,	19	3	12 E.
First Quarter,	23	5	21 M.	Moon Perigee,	31	7	36 E.

Days in Year.	Day of Year.	Day of Mon.	Day of Week.	Phenomena Chronology, &c.	☉ Sun rises H. M.	☉ Sun sets. H. M.	☉ Sun's dec.N °	☾ Moon's Place.	☾ Moon rises. H. M.	☾ Moon south H. M.	High water N. Y. H. M.
184	182	1	Sat	(2) Garfield shot '881	4 32	7 35	23 6	4	rises.	morn.	8 20
183	183	2	27	4th Sun. aft. Trinity	4 32	7 35	23 2	√3	8 33	58 9	13
182	184	3	Mon	☉ Apogee.	4 33	7 34	22 57	√3	9 12	1 55	10 1
181	185	4	Tue	Independence Day.	4 33	7 34	22 52	∞	9 47	2 50	10 47
180	186	5	Wed	Bt. Chippewa, 1814	4 34	7 34	22 46	∞	10 19	3 43	11 35
179	187	6	Thu	Dagaurre di., 1851.	4 35	7 34	22 40	×	10 53	4 34	ev. 26
178	188	7	Fri	Sheridan died, 1814	4 35	7 33	22 34	×	11 37	5 26	1 22
177	189	8	Sat	☽ stationary.	4 36	7 33	22 27	♀	morn.	6 17	2 19
176	190	9	28	5th Sun. aft. Trinity	4 37	7 33	22 20	♀	3 7	9 3	23
175	191	10	Mon	♂ ♀ ☉. ♂ ♀ ☾	4 37	7 32	22 12	♀	45 8	3 4	26
174	192	11	Tue	(10) ☽ gr. Hel. Lat. S	4 38	7 32	22 4	♂	1 30	8 57	5 29
173	193	12	Wed	♂ ♀ ☾	4 39	7 31	21 56	♂	2 20	9 51	6 26
172	194	13	Thu	♂ ☽ ☾	4 39	7 31	21 48	♂	3 14	10 43	7 15
171	195	14	Fri	♂ ♀ a Leonis.	4 40	7 30	21 38	♂	4 11	11 34	7 59
170	196	15	Sat	Cap. Stony Pt. 1779	4 41	7 30	21 29	♂	sets.	ev. 23	8 42
169	197	16	29	6th Sun. aft. Trinity	4 42	7 29	21 19	♂	8 4	1 9	9 21
168	198	17	Mon	Ft. Macinaw sur '812	4 43	7 29	21 9	♂	8 34	1 53	10 0
167	199	18	Tue	♂ ♀ ☾	4 44	7 28	20 59	♂	9 1	2 36	10 36
166	200	19	Wed	♂ ☽ ☾. ☽ gr. elon. w	4 44	7 27	20 48	♂	9 27	3 17	11 11
165	201	20	Thu	Rebel Con. met '861	4 45	7 26	20 37	♂	9 55	3 59	11 51
164	202	21	Fri	Bt. Bull Run, 1861	4 46	7 26	20 25	♂	10 23	4 41	morn.
163	203	22	Sat	Garibaldi b., 1807.	4 47	7 25	20 13	♂	10 54	5 24	33
162	204	23	30	7th Sun. aft. Trinity	4 48	7 24	20 1	♂	11 25	6 10	1 20
161	205	24	Mon	Irish insur'n, 1803.	4 48	7 23	19 48	♂	morn.	6 59	2 12
160	206	25	Tue	Bt. Lundy's la. 1814	4 49	7 23	19 36	♂	3 7	51 3	10
159	207	26	Wed	McCook def'd 1864	4 50	7 22	19 22	♂	49 8	46 4	12
158	208	27	Thu	♂ ♂ ☽	4 51	7 21	19 9	♂	1 41	9 43	5 16
157	209	28	Fri	Wilberforce di. 1833	4 52	7 20	18 55	♂	2 42	10 42	6 18
156	210	29	Sat	☽ in ♀	4 53	7 19	18 41	♂	3 50	11 40	7 14
155	211	30	31	8th Sun. aft. Trinity	4 54	7 18	18 26	√3	rises.	morn.	8 3
154	212	31	Mon	♂ ♀ ☽	4 55	7 17	18 12	√3	7 54	37	8 55

Begins on



The day.

MOON'S PHASES.

	D.	H.	M.		D.	H.	M.
Last Quarter,	5	11	17	F.	Full Moon,	28	4 23 E.
New Moon,	13	4	14	E.	Moon Apogee,	16	4 24 M.
First Quarter,	21	7	59	E.	Moon Perigee,	29	3 18 M.

Days in Year.	Day of Year.	Day of Mon.	Day of Week.	Phenomena, Chronology, &c.	☉			☾ Moon's Place.	☾		High water N. Y.
					Sun rises H. M.	Sun sets. H. M.	Sun's dec. N °		Moon rises. H. M.	Moon south H. M.	
153	213	1	Tue	Bt. of Nile, 1798.	4 56	7 16	17 57	♊	8 19	1 32	9 42
152	214	2	Wed	♂ ♀ ♂	4 57	7 14	17 41	♊	8 54	2 26	10 26
151	215	3	Thu	♀ in Perihelion	4 58	7 13	17 26	♋	9 29	3 20	11 14
150	216	4	Fri	Dr. Combs d. 1858.	4 59	7 12	17 10	♋	10 5	4 13	ev. 5
149	217	5	Sat	(6) ♂ ♀ ☉	5 0	7 11	16 53	♋	10 45	5 6	1 0
148	218	6	Sat	9th Sun. aft. Trinity	5 1	7 10	16 37	♋	11 30	5 59	1 58
147	219	7	Mon	(6) ♂ ♀ ☉	5 2	7 9	16 20	♋	morn.	6 53	3 4
146	220	8	Tue	Ft. Gaines sur. 1864	5 3	7 7	16 3	♋	18	7 47	4 7
145	221	9	Wed	♂ ♀ ☉	5 4	7 6	15 46	♋	1 10	8 40	5 10
144	222	10	Thu	Bt. Wilson's Cr 1861	5 5	7 5	15 28	♋	2 5	9 31	6 5
143	223	11	Fri	☐ ♀ ☉ Western	5 6	7 4	15 11	♋	3 13	10 20	6 54
142	224	12	Sat	(13) ♂ ♀ ☉	5 7	7 2	14 53	♋	4 0	11 6	7 36
141	225	13	Sat	10th Sun. aft. Trin.	5 8	7 1	14 34	♋	4 58	11 51	8 14
140	226	14	Mon	(13) ♀ gr. H. Lat.N.	5 9	7 0	14 16	♋	sets.	ev. 34	8 52
139	227	15	Tue	(14) ♂ ♀ ☉ Superior	5 10	6 58	13 57	♋	7 31	1 15	9 27
138	228	16	Wed	♀ in ♀. ♂ ☉ ☉	5 11	6 57	13 38	♋	7 59	1 57	10 3
137	229	17	Thu	♂ ♂ ☉. ♂ ♀ ☉	5 12	6 55	13 19	♋	8 25	2 38	10 37
136	230	18	Fri	☐ ♀ ☉ Western.	5 13	6 54	13 0	♋	8 54	3 21	11 15
135	231	19	Sat	Paulis Hk cap. 1779	5 14	6 53	12 40	♋	9 26	4 5	11 57
134	232	20	Sat	11th Sun. aft. Trin.	5 15	6 51	12 20	♋	10 1	4 52	morn.
133	233	21	Mon	Bt. Centiveras 1847	5 16	6 50	12 0	♋	10 42	5 41	44
132	234	22	Tue	♀ Stationary.	5 17	6 48	11 40	♋	11 31	6 34	1 39
131	235	23	Wed	ft. Morgan tk. 1864	5 17	6 47	11 20	♋	morn.	7 28	2 39
130	236	24	Thu	Bt. Bladensb'g 1814	5 18	6 45	10 59	♋	25	8 25	3 45
129	237	25	Fri	Herschel di. 1822	5 19	6 44	10 39	♋	1 28	9 22	4 52
128	238	26	Sat	Louis Philippe d'50	5 20	6 42	10 18	♋	2 37	10 19	5 55
127	239	27	Sat	12th Sun. aft. Trin.	5 21	6 41	9 57	♋	3 50	11 16	6 53
126	240	28	Mon	♂ ♀ ☉	5 22	6 39	9 36	♋	rises.	morn.	7 44
125	241	29	Tue	Ft. Hattaras tk.'861	5 23	6 37	9 14	♋	6 51	12	8 31
124	242	30	Wed	Webster hung 1850	5 24	6 36	8 53	♋	7 26	1 7	9 21
123	243	31	Thu	Mas. Ft. Mims 1813	5 25	6 34	8 31	♋	8 4	2 2	10 8

Begins on



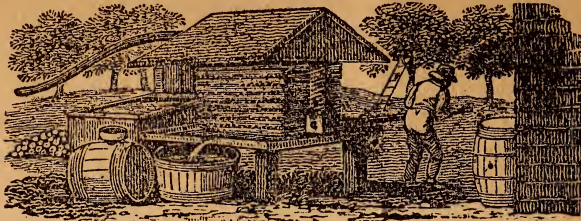
Friday.

MOON'S PHASES.

Last Quarter,	D. 4	H. 8	M. 31 M.	Full Moon,	D. 27	H. 0	M. 14 M.
New Moon,	12	8	3 M.	Moon Apogee,	12	8	18 M.
First Quarter,	20	8	32 M.	Moon Perigee,	26	1	48 E.

Days in Year.	Day of Year.	Day of Mon.	Day of Week.	Phenomena Chronology, &c.	☉	☽	☾	Moon's Place.	☾	☾	High water N. Y.
					Sun rises H. M.	Sun sets. H. M.	Sun's dec. N °		Moon rises. H. M.	Moon south H. M.	
122	244	1	Fri	Louis XIV di. 1715	5 26	6 33	8 9	♍	8 43	2 57	10 52
121	245	2	Sat	♄ ♀ ☉	5 27	6 31	7 47	♍	9 38	3 52	11 44
120	246	3	36	13th Sun. aft. Trin.	5 28	6 29	7 25	♌	10 15	4 48	ev. 40
119	247	4	Mon	(3) ♄ ♃ ☉	5 29	6 28	7 3	♌	11 7	5 42	1 40
118	248	5	Tue	♄ ♃ ☉	5 30	6 26	6 41	♌	morn.	6 36	2 41
117	249	6	Wed	♀ in ♄. ♃ stationary	5 31	6 25	6 19	♌		7 28	3 45
116	250	7	Thu	Boston settled 1630.	5 32	6 23	5 56	♌	58	8 17	4 42
115	251	8	Fri	B. Molino del Rey '47	5 33	6 21	5 34	♌	1 55	9 4	5 36
114	252	9	Sat	California adm. '850	5 34	6 20	5 11	♌	2 52	9 49	6 24
113	253	10	37	14th Sun. aft. Trin.	5 35	6 18	4 48	♌	3 48	10 32	7 6
112	254	11	Mon	♄ ☉ ☉	5 36	6 16	4 25	♌	4 47	11 15	7 43
111	255	12	Tue	♄ ☉ ☉	5 37	6 15	4 2	♌	5 42	11 56	8 16
110	256	13	Wed	Bt. Chapultepec '847	5 38	6 13	3 39	♌	sets.	ev. 38	8 55
109	257	14	Thu	♄ ♃ ☉. ♄ ♃ ☉	5 39	6 11	3 16	♌	6 58	1 20	9 32
108	258	15	Fri	(16) ♄ in Aphelion.	5 40	6 9	2 53	♌	7 27	2 4	10 10
107	259	16	Sat	♄ ♀ ☉	5 41	6 8	2 30	♌	8 2	2 49	10 46
106	260	17	38	15th Sun. aft. Trin.	5 42	6 6	2 7	♌	8 41	3 37	11 29
105	261	18	Mon	Quebec taken, 1759	5 43	6 4	1 44	♌	9 25	4 27	morn.
104	262	19	Tue	♀ in Aphelion.	5 44	6 3	1 20	♌	10 16	5 19	19
103	263	20	Wed	♄ ♃ a Virginis.	5 45	6 1	0 57	♌	11 14	6 13	1 14
102	264	21	Thu	♄ ♃ ♄	5 46	5 59	0 34	♌	morn.	7 8	2 15
101	265	22	Fri	Autumn begins.	5 47	5 58	0 10	♌	18	8 4	3 22
100	266	23	Sat	☐ ♃ ☉ Western	5 48	5 56	S. 13	♌	1 27	8 59	4 27
99	267	24	39	16th Sun. aft. Trin.	5 49	5 54	0 37	♌	2 37	9 54	5 31
98	268	25	Mon	(26) Panic com 1873	5 50	5 53	1 0	♌	3 50	10 49	6 29
97	269	26	Tue	Engl' h tk. Phila '777	5 51	5 52	1 23	♌	5 6	11 44	7 21
96	270	27	Wed	♀ gr. elon. East.	5 52	5 50	1 47	♌	rises.	morn.	8 7
95	271	28	Thu	♀ gr. elon. East.	5 53	5 48	2 10	♌	6 36	40	8 56
94	272	29	Fri	N. Y. taken, 1776.	5 54	5 46	2 34	♌	7 20	1 37	9 47
93	273	30	Sat	♄ ♀ ☉. ♄ ♃ ☉	5 54	5 44	2 57	♌	8 9	2 35	10 35

Begins on



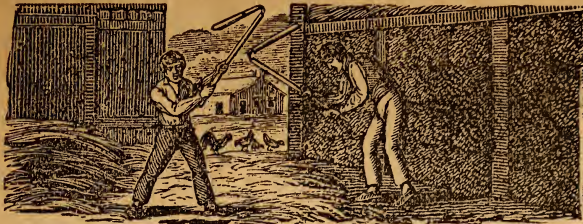
Sunday.

MOON'S PHASES.

	D.	H.	M.		D.	H.	M.
Last Quarter,	3	9	21 E.	Full Moon,	26	9	38 M.
New Moon,	12	1	5 M.	Moon Apogee,	9	0	12 E.
First Quarter,	19	6	59 E.	Moon Perigee,	24	11	48 E.

Days in Year.	Day of Year.	Day of Mon.	Day of Week.	Phenomena, Chronology, &c.	☉ Sun rises	☉ Sun sets.	☉ Sun's dec.S.	☾ Moon's Place.	☾ Moon rises.	☾ Moon south	High water N. Y.
					H. M.	H. M.	° '		H. M.	H. M.	H. M.
92	274	1	40	17th Sun. aft. Trin.	5 56	5 43	3 20	♌	9 0	3 32	11 24
91	275	2	Mon	1st R.R. in U.S. 1833	5 57	5 41	3 43	♌	9 55	4 28	ev. 20
90	276	3	Tue	♂ ♀	5 58	5 39	4 7	♌	10 52	5 22	1 17
89	277	4	Wed	Bt. Corinth, 1862.	5 59	5 38	4 30	♌	11 49	6 13	2 15
88	278	5	Thu	Bt. Thames, 1813.	6 0	5 36	4 53	♌	morn.	7 1	3 12
87	279	6	Fri	♄ gr. Hel. Lat. S.	6 1	5 35	5 16	♌	46	7 47	4 7
86	280	7	Sat	Bt. Saratoga, 1777.	6 2	5 33	5 39	♌	1 46	8 31	4 58
85	281	8	41	18th Sun. aft. Trin.	6 3	5 31	6 2	♌	2 40	9 13	5 46
84	282	9	Mon	♂ ♃	6 4	5 30	6 25	♌	3 36	9 55	6 28
83	283	10	Tue	Kosciusko apd. 1794	6 5	5 28	6 48	♌	4 32	10 36	7 10
82	284	11	Wed	♀ Stationary.	6 7	5 27	7 10	♌	5 29	11 19	7 47
81	285	12	Thu	(11) ♀ gr. Hel. Lat. S	6 8	5 25	7 33	♌	sets.	ev. 2	8 22
80	286	13	Fri	♂ ♄ ♃. ♂ ♄	6 9	5 23	7 55	♌	6 5	47	9 3
79	287	14	Sat	♂ in ♄. (13) ♂ ♂	6 10	5 22	8 18	♌	6 43	1 35	9 45
78	288	15	42	19th Sun. aft. Trin.	6 11	5 20	8 40	♌	7 24	2 24	10 24
77	289	16	Mon	(15) ♂ ♀	6 12	5 19	9 2	♌	8 14	3 16	11 18
76	290	17	Tue	(16) ♂ ♀ ♄ Scorpio	6 13	5 17	9 24	♌	9 8	4 8	morn.
75	291	18	Wed	The Frolic ca'd, '812	6 14	5 16	9 46	♌	10 10	5 2	8
74	292	19	Thu	♀ Stationary.	6 15	5 14	10 8	♌	11 12	5 55	55
73	293	20	Fri	Bt. Navarino, 1827.	6 16	5 13	10 29	♌	morn.	6 48	1 54
72	294	21	Sat	(22) ♂ ♄ ☉ inferior	6 18	5 12	10 51	♌	20	7 41	2 56
71	295	22	43	20th Sun. aft Trin.	6 19	5 10	11 12	♌	1 30	8 34	4 1
70	296	23	Mon	(22) Payson d. 1827	6 20	5 9	11 33	♌	2 41	9 28	5 1
69	297	24	Tue	Webster died, 1852	6 21	5 7	11 54	♌	3 53	10 22	6 2
68	298	25	Wed	♄ in ♄	6 22	5 6	12 15	♌	5 6	11 19	6 56
67	299	26	Thu	Bt. Clarkesville '862	6 23	5 4	12 35	♌	rises.	morn.	7 47
66	300	27	Fri	♂ ♄ ♃. ♂ ♃	6 24	5 3	12 56	♌	5 55	16	8 35
65	301	28	Sat	Bt. White Plains '776	6 26	5 2	13 16	♌	6 47	1 15	9 27
64	302	29	44	21st Sun. aft. Trin.	6 27	5 1	13 36	♌	7 42	2 13	10 16
63	303	30	Mon	♄ in Perihelion.	6 28	4 59	13 55	♌	8 41	3 10	11 4
62	304	31	Tue	(30) ♂ ♄	6 29	4 58	14 15	♌	9 40	4 4	11 56

Begins on



Wednesday.

MOON'S PHASES.

	D.	H.	M.		D.	H.	M.
Last Quarter,	2	2	2 E.	Full Moon,	24	9	7 E.
New Moon,	10	6	23 E.	Moon Apogee,	6	0	54 M.
First Quarter,	18	3	46 M.	Moon Perigee,	22	1	42 M.

Days in Year.	Day of Year.	Day of Mon.	Day of Week.	Phenomena, Chronology, &c.	☉		☽		Moon's Place.	☾		High water N. Y.
					Sun rises H. M.	Sun sets H. M.	Sun's dec.S. ° '	Moon rises H. M.		Moon south H. M.	H. M.	
61	305	1	Wed	♂ stationary.	6 30	4 57	14 34	♊	10 38	4 55	ev. 48	
60	306	2	Thu	(1) ♀ at gr.brilliancy	6 31	4 56	14 53	♊	11 45	5 42	1 40	
59	307	3	Fri	Am. army dis. 1783	6 32	4 54	15 12	♊	morn.	6 27	2 32	
58	308	4	Sat	Laura Keene di.'873	6 34	4 53	15 30	♋	32	7 10	3 24	
57	309	5	45	22nd Sun. aft. Trin.	6 35	4 52	15 49	♋	1 28	7 52	4 14	
56	310	6	Mon	♂ ☽ ●	6 36	4 51	16 7	♋	2 24	8 34	5 1	
55	311	7	Tue	♂ gr. elon. West.	6 37	4 50	16 25	♋	3 21	9 16	5 49	
54	312	8	Wed	(9) ♂ ♀ ☽ & brig'ht	6 38	4 49	16 42	♋	4 18	9 59	6 34	
53	313	9	Thu	(1) ♂ ♀ ●	6 40	4 48	16 59	♋	5 17	10 44	7 16	
52	314	10	Fri	(11) ♂ ☽ ●	6 41	4 47	17 16	♋	6 16	11 31	7 56	
51	315	11	Sat	☽ eclipsed, invisible	6 42	4 46	17 33	♋	sets.	ev. 20	8 39	
50	316	12	46	23rd Sun. aft. Trin.	6 43	4 45	17 49	♋	6 10	1 12	9 24	
49	317	13	Mon	♂ ♀ ●	6 44	4 44	18 5	♋	7 4	2 5	10 11	
48	318	14	Tue	♂ ☽ ☽ & brightest.	6 46	4 43	18 21	♋	8 2	2 58	10 53	
47	319	15	Wed	♀ stationary.	6 47	4 42	18 36	♋	9 6	3 52	11 44	
46	320	16	Thu	Ft. Wash'g'n cp.'776	6 48	4 41	18 51	♋	10 11	4 44	morn.	
45	321	17	Fri	Seige Knoxville'863	6 49	4 40	19 6	♋	11 18	5 36	36	
44	322	18	Sat	Bt. Newbern, 1862.	6 50	4 39	19 20	♋	morn.	6 27	1 32	
43	323	19	47	24th Sun. aft. Trin.	6 51	4 39	19 34	♋	14	7 18	2 32	
42	324	20	Mon	Milledgeville tk.'64	6 53	4 38	19 48	♋	1 35	8 10	3 32	
41	325	21	Tue	Bt. Gordon, Ga.'864	6 54	4 38	20 1	♋	2 46	9 4	4 35	
40	326	22	Wed	Bt. Breslau, 1757.	6 55	4 37	20 14	♋	3 56	9 59	5 36	
39	327	23	Thu	♂ ♀ ●	6 56	4 36	20 27	♋	5 6	10 57	6 34	
38	328	24	Fri	♂ ☽ ●	6 57	4 36	20 39	♋	6 13	11 55	7 28	
37	329	25	Sat	Brit. evac. N.Y. 1783	6 58	4 35	20 51	♋	rises.	morn.	8 15	
36	330	26	48	25th Sun. aft. Trin.	6 59	4 35	21 2	♋	6 24	53	9 8	
35	331	27	Mon	(26) ♂ ♀ ●	7 0	4 35	21 13	♋	7 23	1 50	9 58	
34	332	28	Tue	Ft. Kelly cap. 1864.	7 2	4 34	21 24	♋	8 23	2 43	10 40	
33	333	29	Wed	Polish Revol'n 1831	7 3	4 34	21 34	♋	9 23	3 33	11 25	
32	334	30	Thu	S. Andrew Mart. 79	7 4	4 34	21 43	♋	10 21	4 21	ev. 13	

Begins on



Friday.

MOON'S PHASES.

	D.	H.	M.	Full Moon,	D.	H.	M.
Last Quarter,	2	10	0 M.	Moon Apogee,	3	8	6 E.
New Moon,	10	10	41 M.	Moon Perigee,	18	2	54 E.
First Quarter,	17	11	43 M.	Moon Apogee,	31	5	30 E.

Days in Year.	Day of Year.	Day of Mon.	Day of Week.	Phenomena, Chronology, &c.	☉		☽		Moon's Place.	☾		High water N. Y.
					Sun rises H. M.	Sun sets H. M.	Sun's dec.S. ° '	Moon rises H. M.		Moon south H. M.	H. M.	
31	335	1	Fri	Bt. Austerlitz, 1802	7 54	34 21	53 Ω	11 18	5 5	ev. 58		
30	336	2	Sat	(3) ♀ in ♃	7 64	33 22	2 Ω	morn.	5 48	1 46		
29	337	3	49	Advent Sunday	7 74	33 22	10 Ω	15	6 30	2 35		
28	338	4	Mon	(3) ♂ ☽ ●	7 84	33 22	18 ♃	1 10	7 11	3 25		
27	339	5	Tue	♂ ♀ ♂	7 94	32 22	26 ♃	2 8	7 54	4 17		
26	340	6	Wed	♂ ♀ ☉ inf. & transit	7 104	32 22	33 ♄	3 5	8 38	5 8		
25	341	7	Thu	♀ in ♄	7 114	32 22	40 ♄	4 4	9 24	5 58		
24	342	8	Fri	(7) Ney shot, 1815.	7 124	32 22	46 ♄	5 3	10 12	6 46		
23	343	9	Sat	♂ ♀ ♀. ♂ ♀ ●	7 134	32 22	52 ♃	6 2	11 4	7 35		
22	344	10	50	2d Sun. in Advent.	7 144	32 22	58 ♃	6 59	11 57	8 17		
21	345	11	Mon	(10) ♂ ♀ ●. ♂ ♂ ●	7 154	32 23	3 ♀	sets.	ev. 52	9 7		
20	346	12	Tue	(10) ♂ ♂ ☉	7 154	32 23	7 ♀	6 58	1 47	9 55		
19	347	13	Wed	♀ in Aphelion.	7 164	33 23	11 ♃	8 2	2 40	10 37		
18	348	14	Thu	Alabama adm. 1819	7 164	33 23	15 ♃	9 10	3 33	11 25		
17	349	15	Fri	♂ ♀ ♂	7 174	33 23	18 ♃	10 20	4 25	morn.		
16	350	16	Sat	(15) ☐ ☽ ☉ Western	7 184	33 23	21 ♃	11 27	5 15	17		
15	351	17	51	3d Sun. in Advent.	7 184	33 23	23 ♃	✕	morn.	6 6	1 10	
14	352	18	Mon	(17) ♂ ♀ ☉ superior	7 194	34 23	25 ♃	36	6 58	2 5		
13	353	19	Tue	(18) ♂ ♀ ☉ & bright	7 204	34 23	26 ♃	1 44	7 51	3 9		
12	354	20	Wed	N. C. seceded 1860	7 204	35 23	27 ♃	2 52	8 45	4 11		
11	355	21	Thu	♂ ♀ ●. ♂ ♀ ●	7 214	35 23	27 ♃	3 50	9 41	5 15		
10	356	22	Fri	(21) Winter begins.	7 214	36 23	27 ♃	5 4	10 39	6 16		
9	357	23	Sat	♂ ♀ ●	7 224	37 23	26 ♃	6 7	11 35	7 11		
8	358	24	52	4th Sun. in Advent	7 224	37 23	25 ♃	ris.	morn.	8 0		
7	359	25	Mon	CHRISTMAS.	7 234	38 23	24 ♃	6 7	30	8 48		
6	360	26	Tue	Bt. Trenton, 1776.	7 234	39 23	22 ♃	7 8	1 22	9 34		
5	361	27	Wed	♀ Stationary.	7 234	39 23	19 ♃	8 8	2 12	10 15		
4	362	28	Thu	☽ Stationary.	7 234	40 23	16 ♃	9 6	2 58	10 53		
3	363	29	Fri	Texas adm. 1845.	7 244	40 23	13 Ω	10 8	3 42	11 34		
2	364	30	Sat	(31) ♂ ☽ ●	7 244	41 23	9 Ω	10 59	4 24	ev. 16		
1	365	31	53	☉ Perigee.	7 244	42 23	5 ♃	11 55	5 6	1 0		

RATES OF POSTAGE.

All Postage Matter for delivery within the U. S. must be Pre-paid by stamps, and all letters deposited in the office not so pre-paid should be sent to the Dead Letter Office. If by inadvertence a wholly unpaid letter reaches its destination, then double rates are charged.

It is only necessary that one full rate should be pre-paid on a letter to insure its being forwarded in the mails, but postage will be charged and collected at delivery office for any additional weight. For instance, a letter to be forwarded in the mail, weighing one and a half ounce, pre-paid by a three-cent stamp, if forwarded, will be charged six cents additional on delivery. Postmasters finding that persons or firms are in the habit of mailing their matter "short paid," are authorized to request them to pay in full before sending.

All mail matter not sent at letter rates, must be so enveloped that the contents can be readily examined, otherwise it will be charged as letter postage.

No package will be forwarded through the mail which weighs over four pounds, except *single books* exceeding that weight.

To enclose or conceal a letter in a newspaper, magazine, or other printed matter after its publication, subjects the entire package of which it is a part, to letter postage, and if the same is done in order that the letter may be carried free of letter postage, it subjects the offender to fine.

Letter Postage.—Letters (that is, anything so sealed that the Postmaster cannot discover its contents without destroying the wrappers), to any part of the United States, 3 cents for each $\frac{1}{2}$ ounce or part thereof. Drop letters, where delivered by carriers, 2 cents per each $\frac{1}{2}$ ounce; 1 cent at offices where not so delivered.

Letters can be forwarded from one post office to another (as in case of removal, etc.), at the request of the party addressed, without extra charge. "Return letters" are also sent back to the writers free, on expiration of days named in request.

Letters not claimed in 1 month from receipt or returned to writer, are sent to Dead Letter Office.

Letters to Canada and other British North American Provinces, each $\frac{1}{2}$ ounce, pre-paid 3 cents.

Registered Letters.—Letters for the United States may be REGISTERED at the office of mailing on payment of a registration fee of 10 cents, in addition to the postage: no registered letter will be delivered until the person to whom it is sent has signed receipt therefor.

Postal Cards 1 cent each: where uncalled for are not sent to the Dead Letter Office, but burned at the expiration of thirty days; they cannot be used a second time, nor returned to the writer. Ordinary cards can be transmitted through the mails by affixing a one-cent stamp, provided the entire message is printed; the address only written. DO NOT PASTE ANYTHING ON POSTAL CARDS,—except a printed mailing slip for address.

Postal cards to Canada, go the same as in the United States, without any additional stamp.

Printed Mail Matter.—(THIRD CLASS.)—The following articles are mailable at the rate of one cent for every two ounces or fractional part thereof, and must be *fully* pre-paid by stamps: books, transient NEWSPAPERS and PERIODICALS, (one or more newspapers may be enclosed in the same package and sent at the same rate), circulars, and other matter wholly in print, proof sheets, corrected proof sheets and manuscript copy accompanying the same, insurance policies, *not completed*, though partly filled up in writing. The term "circular" is defined to be a printed letter, which, according to internal evidence, is being sent in identical terms to several persons. A circular does not lose its character as such, when the date and the name of the addressed and of the sender are written therein, nor by the correction of mere typographical errors, in writing. "Printed matter" within the intendment of the act is defined to be the reproduction upon paper by any process except that of handwriting, of any words, letters, characters, figures, or images, or of any combination thereof, not having the character of an actual and personal correspondence.

Miscellaneous Mail Matter.—(FOURTH CLASS.)—Subject to examination.—Postage at the rate of one cent an ounce or fraction thereof: embraces all matter not embraced in the first, second, or third class, which is not in its form or nature liable to destroy, deface, or otherwise damage the contents of the mail bag, or harm the person of any one engaged in the postal service, and is not above the weight of four pounds for each package, except single books weighing in excess of that amount. The sender may write his or her name or address on the outside, with the word "from" above or preceding the same, or may write briefly or print on any package the number and names of the articles enclosed.

Forwarding.—Any article or letter may be forwarded at request of person addressed, without extra charge, provided that the article has not left the custody of the Department.

Money Orders, U. S.—POST OFFICE MONEY ORDERS for U. S., of sums not exceeding \$50 each order, can be obtained at the principal post offices at the following rates, in addition to the postage: On orders not exceeding \$15, 10 cents; over \$15 and not exceeding \$30, 15 cents; over \$30 and not exceeding \$40, 20 cents; over \$40 and not exceeding \$50, 25 cents.

Foreign Mails.—Letters at 5 cents per $\frac{1}{2}$ ounce, Postal Cards 2 cents each, Newspapers (4 ounces) 2 cents each, to the following places: Austria—Hungary; Argentine Republic; Belgium; Bermudas; Brazil; British Colonies on West Coast of Africa; British Guiana; British Honduras; British India; Ceylon; Danish Colonies; Denmark; Egypt; Falkland Islands; France; Germany; Great Britain and Ireland; Greece; Greenland; Honduras; Hong Kong; Italy; Jamaica; Japan; Labuan; Leeward Islands; Liberia; Luxemburg; Mauritius; Mexico; Montenegro; Netherlands; Newfoundland; Norway; Persia; Peru; Portugal; Roumania; Russia; Salvador; Servia; Spain; Straights Settlements; Sweden; Switzerland. Registration fee for any place above named, 10 cents.

Letters to other foreign countries vary in rate according to the route they are sent.

Money Orders for Great Britain and Ireland, Switzerland, Germany and Italy, can be had at the Principal offices of the U. S. at the following rates, in addition to postage: less than \$10, 25 cents; \$10, and less than \$20, 50 cents; \$20, and less than \$30, 75 cents; \$30, and less than \$40, \$1; \$40, and not exceeding \$50, \$1.25. MONEY ORDERS TO GERMANY, not exceeding \$5, are charged only 15 cents in addition to postage.

MATHEMATICAL DEPARTMENT.

:o:

Solutions should be received by June 1, 1882, in order to be acknowledged in the Almanac for 1883. Address all communications to BERLIN H. WRIGHT, Penn Yan, N. Y.

PROB. 1. (Proposed by Edw. B. Kinsilla, Port Jervis, N. Y.) A gentleman left an estate of \$65,000 to an absent son and daughter whom he feared dead, upon the following conditions: "In case the son returns and not the daughter my wife shall receive $\frac{1}{2}$ of my estate, and in case my daughter should return and not my son, my wife shall receive $\frac{1}{2}$ of my estate." They both returned and the estate was divided according to the will. How much did each receive?

PROB. 2. (Proposed by S. G. Cagwin, New London, N. Y.) Divide a given number (a) so that the continued product of all its parts may be a maximum ($b=100$.)

PROB. 3. (Proposed by S. G. Cagwin.) A stick 20 ft. long is hinged at one end to a level floor, where and in what position must a prop 6 ft. long be placed which will support the stick with a minimum pressure?

PROB. 4. (Proposed by S. G. Cagwin.) In Lat. 42° N. and 10 h. after sunrise the shadow of a vertical pole pointed to the sunrise point. What was the Sun's dec. and time of year?

PROB. 5. (Proposed by S. G. Cagwin.) What will be the Sun's altitude when equal, and the time in Latitudes 40° and 60° north, on same meridian when the Sun's disc is 20° north?

PROB. 6. (Proposed by S. G. Cagwin.) A weight of 80 lbs. is drawn up an incline plane 12 ft. high by means of another weight of 100 lbs. connected to it with a rope running over a pulley at the upper end of the plane. What must be the tension on the rope and the inclination and length of the plane in order that the time of the ascent may be the least possible?

PROB. 7. (Proposed by S. G. Cagwin.) Divide an angle of 60° into two parts so that the product of the third and fifth powers of their sines may be a maximum.

PROB. 8. The whole number of votes offered at an election was 5,219, and the number for the first candidate exceeded those for the second, third and fourth by 22, 73 and 130 respectively. How many had each?

PROB. 9. What will be the loss in weight of two Troy pounds by being carried to the height of 7 miles?

PROB. 10. If a ship sail from Lat. 51° N. and shape a N. W. course, where will she ultimately arrive and how far will she have sailed, supposing the earth to be a true sphere?

Answers to the Problems for 1881.

PROB. 1. 20,922,789,888,000.	PROB. 6. 187.48 ft.
“ 2. 7 miles per second.	“ 7. 600.
“ 3. 165,580,140.	“ 8. 183 or 36,219, &c.
“ 4. 4 A. 1 R. $38\frac{1}{2}$ P.	“ 9. $\frac{1}{12}$.
“ 5. 18 acres.	“ 10. $x=1, y=2, z=3$.

ACKNOWLEDGMENTS.

Solutions have been received as follows: MR. GEORGE ELCOCK, of Boonton, N. J., and MR. WALTER S. NICHOLS of Newark, N. J., both sent good solutions of all except 2 and 9. MR. JAMES S. LOWERY, Plattskill, Ulster Co., N. Y., sent very elegant solutions of 1, 3, 4, 5, 6, 7 and 8, as also MR. CORNELIUS J. BERGEN, of Jamaica L. I., of 3, 4, 5, 6, 7, 8 and 10. ALLEN BOICE, Port Jervis, N. Y., 4, 7, 10. ALVA SEYBOLT, Westtown, N. Y., 1, 3, 6, 7 and 10. CHARLES S. GRIFFIN, Newburgh, N. Y., 1, 3, 4, 5 and 7. JOHN W. HOGAN, Pine Brook, N. J., 1, 6, 7 and 10. EDWARD M. YOUNG, Dover, N. J., 1, 3, 6 and 7. SUSIE L. TILTON, Queens, L. I., 6, 7 and 10. SELWYN CONDIT, Hanover, N. J., 1, 3, 8. C. H. HARFORD, Ridgebury, N. Y., 1 and 7. JOSEPH HEADLEY, Union, N. J., 1 and 8. No. 7 was solved by ISAAC L. GUE, Creek Locks, N. Y., EMMA L. VANDERHOVEN, Metuchen, N. J., JOHN G. HOPPER, Paterson, N. J., and MINNIE BRECKEN, West Livingston, N. J.

NOTE.—Parties who wish solutions to difficult problems, may send them to the ED. of this department for publication.

HOUSEKEEPERS' RECIPES.

TO WASH FLANNELS WITHOUT SHRINKING.—First have soft water for the whole process, made so artificially if necessary, and next have good soap, or that which does not contain rosin. Our best soaps are safe for this purpose. You may wash and rinse entirely in cold water if you choose, but if you wash in warm water you must not rinse in cold. It is decidedly best to use only warm water all through, the rinsing water warmer than the suds, if there is any difference. It is best to make a good, strong, *clean* suds (that is, don't wash the nice white flannels in a dirty suds with other clothes that are to be boiled), and put the flannels in it, instead of rubbing soap into the cloth. Hand rubbing tends to full and shrink flannel, as it mats and interlaces the delicate fibres.

CREAMED EGGS.—Boil six eggs twenty minutes. Make a pint of nice cream gravy (boiling cream thickened with flour and seasoned with salt, or milk and butter thickened, if cream cannot be had.) Put a layer of this cream gravy over six slices of toast, laid on a hot platter. Cut the whites of the eggs in thin slices and lay over this, and rub half of the yolks through a sieve over the layer of the whites. Add another layer of whites, and another of sifted yolks, and lastly the remainder of the cream gravy. Set in the oven for a few minutes and serve.

POTATO SALAD.—Some salads are dependent upon the season, but potato salad may be had the year around. The foundation is cold boiled potatoes sliced, the thinner the better. In the season use chives with parsley; when chives can not be had, onions chopped fine are a good substitute. There is no rule for making this salad. Having the potatoes, add chopped chives (or onions) and parsley, salt and pepper, and then vinegar, allowing those who like oil to add it at pleasure.

BROIL meat or any kind of food long enough, and it will change to charcoal. After meat is heated through, every further addition of heat advances its condition toward the charcoal state. But charcoal is entirely indigestible. Rare cooked, fresh meats are far more easily digested, and furnish much more real nutriment than those "well done." Habit will make one enjoy the rare cooked steak as more juicy and palatable, and it is certainly better as food.

LAYER CAKE.—Beat together $1\frac{1}{2}$ tea-cupful of white sugar and 3 table-spoonfuls of butter, and add 3 well-beaten eggs, 1 cup sweet milk, 3 cups of flour, and 3 teaspoonfuls of baking powder. Beat the whole well, and bake in 3 or 4 layers, in jelly-pans or pie-tins. Spread each layer with the above "cooked frosting," or with any jelly that one may have prepared, and place the layers together, after which dry or bake slightly in the oven.

STEWED SALSIFY.—Cut the root into convenient bits and throw them at once into water enough to cover them. Add salt and stew gently until quite tender, pour off the water, add sufficient milk to cover, a good lump of butter, into which enough flour to thicken has been rubbed, season with pepper. When the butter has melted, and the milk boils, and is sufficiently thickened, serve.

CORN FRITTERS.—Twelve ears green corn, grated from the cob, two eggs, salt and pepper, half tea-cupful flour. Drop in hot butter, and fry brown.

JUMBLES.—One cup butter, one cup sugar, one egg, four tablespoonfuls buttermilk, one spoonful soda.

ICING FOR CAKE.—Two pounds double refined sugar, one spoonful of fine starch, one pennyworth of gum arabic in powder, five eggs, one spoon rose-water, the juice of one lemon. Make the sugar fine, and sift it through a hair sieve, rub the starch fine, sift, and the gum arabic sift also; beat or stir all well together. Take the whites of the eggs, whisk them well, put one spoonful of rose-water, one spoon of the juice of lemon, beat well together; then put to the sugar by degrees, till you wet it, then beat it until the cake is baked; lay in on with a knife, and the ornaments, if you have any; and if it does not harden sufficiently from the warmth of the cake, return it to the oven. Be careful not to discolor.

LEMON MERINGUE.—Put into a quart of milk, $\frac{1}{2}$ tea-cupful melted butter, 1 cup sugar, 1 cup of bread crumbs, yolks of 3 eggs beaten, the juice and half rind of one lemon grated fine. Stir together well, and bake in a pudding dish to a light brown. Then beat the white of the 3 eggs to a foam and stir into it a cup of pulverized sugar. Spread it over the top of the pudding and sprinkle a little sugar on. Then bake slightly, to a light yellow.

TO PRESERVE HERBS.—All kinds of herbs should be gathered on a dry day, just before, or while in blossom. Tie them in bundles, and suspend them in a dry, airy place, with the blossoms downwards. When perfectly dry, wrap the medicinal ones in paper, and keep them from the air. Pick off the leaves of those which are to be used in cooking, pound and sift them fine, and keep the powder in bottles, corked up tight.

A COOKED ICING.—Put in a saucepan one cup of pulverized or granulated sugar, and half a cup of water, and stir until it boils. Then add the white of one egg, beaten to a stiff froth; heat to scalding; remove from the fire and continue the stirring until it is nearly cold. (The cooling can be hastened by putting the saucepan into cold water.) Spread it over the cake while it is still warm, and it will form a nice coating.

TO REMOVE STAINS FROM BROADCLOTH.—Take an ounce of pipe clay that has been ground fine, and mix it with twelve drops of alcohol, and the same quantity of spirits of turpentine. Whenever you wish to remove any stains from cloth, moisten a little of this mixture with alcohol, and rub it on the spot. Let it remain till dry, then rub it off with a woollen cloth, and the spots will disappear.

COTTAGE PUDDING.—One pint flour, one tea-cup milk, two eggs, half cup sugar, one teaspoonful soda dissolved in the milk, two teaspoonfuls cream tartar rubbed in the flour, two tablespoonfuls butter. Bake half an hour in the oven, and eat with sauce.

OMELET WITH COLD MEAT.—Almost any cold meat—beef, mutton, chicken, may be chopped fine, seasoned a little, spread upon the omelet before it is doubled together, making an excellent dish and affording variety.

A SPEEDY AND GOOD REMEDY FOR CROUP IN CHILDREN.—Mix one teaspoonful of fresh Lard with one teaspoonful of Sugar. Give half, and if the child is not relieved in fifteen minutes, give the other half.

TELEGRAPH CAKE.—Four eggs, two cups of sugar, two of flour, four tablespoonfuls of water, one teaspoonful soda, two of cream tartar, one lemon, a little salt. Beat the eggs separately.

CHAT BY THE WAY.

THE WIFE.—How sweet to the soul of a man (says Hierocles) is the society of a beloved wife. When wearied and broken down by the labors of the day, her endearments can soothe, her tender care restore him. The solicitude and the anxieties, and the heaviest misfortunes of life are hardly to be borne by him who has the weight of business and domestic cares at the same time to contend with. But how much lighter do they seem, when after his necessary vocations are over he returns home, and there finds a partner of all his griefs and troubles, who takes for his sake her share of labors upon her and soothes the anguish of his anticipation. A wife is not as she is falsely represented and esteemed by some, a burden or a sorrow to man. No! she shares his burdens and she alleviates his sorrows; for there is no difficulty so heavy or insupportable in life, but it may be surmounted by the mutual labors and the affectionate concord of that holy partnership.

A PASSENGER.—If every person would consider that he is in this life nothing more than a passenger, and that he is not to set up his rest here, but keep an attentive eye upon that state of being to which he approaches every moment, and which will be forever fixed and permanent—this single consideration would be sufficient to extinguish the bitterness of hatred, the thirst of avarice, and the cruelty of ambition.

REFLECTION.—"There is a God." The plants of the valley, and the cedars of the mountain proclaim him; the insect hums his praise, and the elephant salutes him with the rising day; the bird warbles his praise among the foliage; the lightning announces his power, and the ocean declares his immensity. Man alone has said "There is no God."

PATRICK HENRY.—This devout man left in his will the following testimony in favor of the Christian religion: "I have now disposed of all my property to my family; there is one thing more I wish I could give them, and that is the Christian Religion. If they had that, and I had not given them a shilling, they would be rich; and if they had not that, and I had given them all the world, they would be poor."

DEATH.—It is doubtless hard to die, but it is agreeable to hope we shall not live here forever, and that a better life will put an end to the troubles of this. If we were offered immortality on earth, who is there would accept so melancholy a gift? What resource, what hope, what consolation would then be left us against the rigor of fortune and the injustice of man?

Religion is like the natural heat that is irradiated in the hearts of living creatures, which hath the dominion of the whole body, and sends forth the warm blood and spirits into every part and member; it regulates and orders the motions of it in a due and even manner.

PRACTICAL WISDOM.—Tasso being told that he had a fair opportunity of taking advantage of a very bitter enemy: "I wish not to plunder him," said he, "but there are things I wish to take away from him—not his honor, his wealth, or his life—but his ill will."

BAXTER AND JEFFRIES.—When Baxter on one occasion was brought before Judge Jeffries, "Richard," said the brutal Chief Justice, "I see a rogue in thy face." "I had not known before," quoth Baxter, "that my face was a mirror."

EQUALITY.—Many people talk a great deal about equality; but while they would be glad to have those above them leveled down, they would spurn the idea of having those below them leveled up.

GUILT.—Guilt is generally afraid of light; it considers darkness as a natural shelter, and makes night the confidant of those actions which cannot be trusted to the tell-tale day.

He that hath a trade hath an estate; and he that hath a calling hath a place of profit and honor; a plowman on his legs is higher than a gentleman on his knees.

Youth is the proper season for laying the foundation of future happiness. Omit the seed time, and there will certainly be no harvest.

Remember always the presence of God—rejoice always in the will of God—and direct all to the glory of God.

The way to competency is by the way of industry and frugality.

AGRICULTURAL.

ENSILAGE.—This subject is now exciting much interest among American farmers, especially in the Eastern States. There is no question that green corn stalks, and other fodders, can be kept in silos, and that they are eaten with avidity by farm stock, when removed in the green state in mid-winter. It is established that the ensilaging of fodder is practicable when it is desirable to get the greatest number of tons of food from the smallest area of land. Stock feeding in a system of intensive farming calls for some such method of preserving fodder. Many important points in ensilaging remain to be settled, and we caution one and all to not adopt the method largely until the whole ground has been thoroughly canvassed. Those who have built silos and are now feeding their contents are enthusiastic, but many of their statements are unintentionally colored by their ardor. The item of cost is frequently distorted, and the statement of tons produced per acre is faulty. The superior value of the green fodder over the dry, of the same kind, is not so thoroughly established by exact experiments as is desirable. One great need at present is a cheap form of silo for a few tons of fodder, easy of access, and suited to keep one cow.—*American Agriculturist*.

CALVES.—As a rule, it is best never to let a calf suck. Let the cow lick it dry, and then remove it to an adjacent stall or box. She will see that it gets no harm, and will make no fuss about it, unless it is moved or roughly handled. The calf will soon learn to drink from a pail, and when the cows are turned to grass, such calves may be safely trusted with them—though it is well to put on a muzzle, with nails in it, for a few days, lest the cow may coax her calf to suck. The calf should have the warm milk of its dam pure, for a week, then half-skimmed milk for a week or less, always warmed; after this, skimmed milk, thickened with fine Indian meal or wheat middlings. Boiled milk, with fine flour, will check scours, and a little castor oil will cure constipation.

ENSILAGE FOR LATE CROPS.—Ensilage is only applicable to crops which can be harvested late in the season. The reason for this is clear, from the fact that we must depend upon cold weather to check fermentation, or it will go on until all the sugar is turned to alcohol. Sorghum will no doubt be a favorite crop for preserving in this way, and Southern Cow Peas seem to be another crop well adapted to ensilaging. Should we mix Corn Fodder, Sorghum, or Cow Peas with Hungarian Grass or Golden Millet, especially with the latter, the quality of the feed would be greatly improved. No fodder equals Millet in its effect on the butter. It certainly not only increases the quantity, but improves the texture, and no doubt benefits the flavor.

HORSE LINIMENT FOR GENERAL USE.—Best Alcohol, one pint; Spirits Turpentine, one-quarter pint; Aqua Ammonia, two ounces; Camphor Gum, two ounces; mix together and keep closely corked. If it is desired to remove a callous or spavin, add two ounces of Tincture Iodine to the above mixture.

CURE FOR COLIC IN HORSES.—3 ounces spirits of turpentine, 1 ounce tincture of opium. If relief is not obtained in one hour, repeat the dose with one ounce of best powdered aloes well dissolved together.

TO KEEP POULTRY FREE FROM LICE.—Make a wash of boiling cedar boughs, and apply it like whitewash to the poultry house.

A VALUABLE WHITEWASH for fences, stone and brick walls. First prepare a twelve or fifteen gallon kettle, have it clean and dry; take eighteen pounds of quicklime, that is, unslaked—fresh burned; put it in the kettle, pour boiling water on it, and it will commence to slake immediately; but keep it covered with boiling water, or it will burn. While the lime is going through the slaking process, it will absorb considerable water; but put in water so fast that when the lime is done slaking, the kettle will be full. Put in one and a half pounds of sulphate of zinc and one pound of alum; keep it well stirred until it is entirely slaked, and it will be about the consistency of cream. It is then ready for using. It will mix with any kind of paint as well as oil paint. For painting brick walls use lampblack or yellow ochre and red lead. It forms a perfect cement, so that water will not penetrate it after it gets perfectly dry. Freezing will not scale it a particle.

ASHES AND PLASTER.—The works on gardening of the last generation said nothing about guano and other fertilizers, as these were unknown to them. They very generally advised the use of "ash compost," made of equal parts of sifted, unleached Wood Ashes and Gypsum or Land Plaster. Old fashioned as this may be, it is a capital thing to have on hand. It, of course, should be kept under cover and perfectly dry. When squashes, melons, or any others of the family first break ground, give them a dusting of this mixture of ash-compost. This will protect the young plants from the "striped bug," and its use may be continued with advantage until the vines get so strong as not to care for this enemy. As a top-dressing to almost any garden crop, it will be found beneficial.

POTATOES UNDER STRAW.—Several years ago there was much said about growing potatoes under straw. The method is very simple; the land is prepared in the usual manner and the rows marked off; the sets are dropped along the rows and very slightly, or not at all, covered with soil. The whole field, or bed, is then covered with 8 or 10 inches thickness of old straw. Nothing more is required until digging time unless some strong weeds should make their way through the straw, and these may be pulled. It is claimed that the yield is larger and the potatoes are much handsomer than those treated in the usual manner.

ONIONS.—Harvest as soon as the majority of the tops fall over, and after being thoroughly dried store them in a cool, dry place. Store onion sets in an airy loft, with their tops on, taking care not to have them so thick that they will decay.

"The sooner weeds are assailed, the easier it is to conquer them. They may be killed before they appear above ground. Harrowing a potato field, or raking a garden bed, just as the army of weeds is about to appear is an immense gain. This kills them before they are born."

TO DESTROY VERMIN ON ANIMALS.—Linseed oil will destroy lice or fleas on all cattle. It must be thoroughly rubbed in, leaving no part of the animal untouched.

PARSNIPS left in the ground are improved in sweetness by freezing. They can be dug during a thaw.

NEAT'S-FOOT OIL is best for greasing harness, but lard oil will answer nearly or quite as well.

SKATING INTO LOVE.

"Make up your mind, old fellow, that a woman who understands the art of cutting pigeon-wings on skates, understands also the art of flirting. Confound it, man! whether married or single, she is a heartless coquette; and that's the English of it. More men have made shipwreck of their lives by falling in love with a pretty foot and ankle, a graceful carriage, and a bewitching manner, which the hussies pick up, most of 'em, before they are out of short clothes, than you can shake a sick at. Don't be a fool, now—don't be a fool."

The gentleman thus addressed was a decidedly good-looking individual. His features were regular—expressive, manly and earnest.

"Ah, father," replied the young man, after a short pause, "you are a splendid talker—that fact is indisputable; but, do you know, I am half inclined to believe that you have forgotten all about how it feels to be in love. This is my first experience, and, if it goes a trifle hard with me, to call a fellow a fool doesn't mend matters. You don't think well of her, and I do; but the chances are that she wouldn't incline her pretty head to such a plain, unattractive, comparatively poor nobody. So, if you please, we will let the subject drop."

Chauncey Belknap, Sr., surveyed for a moment the vexed countenance of his son, and then laughed heartily at his discomfiture.

"He jests at scars, who never felt a wound," muttered Chauncey, Jr.; but here he made a mistake, for Chauncey, Sr., had undergone more than one tussle with Cupid, and had on two occasions, to the knowledge of his friends, been ignominiously beaten. It would not be strange if such an experience had blunted the finer feelings of his soul, causing him to keep his eyes forever turned away from the contemplation of a cicatrix which reflected no credit upon his personal charms or spiritual fascination.

"Just bear in mind," said Chauncey, a little nettled at his father's manner, "that I intend seeking an introduction to this beautiful girl, and that one appreciative smile, one little word from her, will bring me on my metaphorical knees before you can say 'Jack Robinson,' and 'that's the English of that.'" Chauncey took his departure, and the elder laughed a good half hour after the door had closed upon his son.

"Zounds, this is a rich joke! Confound the young dog! He'll get over it. What if he knew the girl he raves so about is my affianced bride—eh, what then?"

"If there was only some way that I could manage an introduction to that young lady, I should be the happiest young man in the country," muttered Chauncey, as Miss Preston emerged from the dressing-room, skates on, ready for fun.

"That's what I call poetry of motion," continued Chauncey, appreciatively. A bright thought struck him. "I'll dash out after her, and, if she has the grit I give her credit for, she'll enjoy the fun."

In a moment more Chauncey struck out. The acknowledged champions of the season, all stood back to give them room and watch the chase. Miss Preston took the cue in a twinkling. Like the steed who afar off scents the battle, the lady, with head erect and nostrils dilated, waited until she had discovered there was no possibility of mistake, then darted off, in a straight line, with the fleetness of the wind. Such a chase as she led him! But he kept steadily on, his face lighted up with a rare

smile, as he considered how eagerly his challenge had been accepted. Up and down, around in circles, curly cues, and every imaginable figure, he followed the lovely skater. All eyes were upon them. The music from the band—a bright, sparkling gallop—lent wings to both pursuer and pursued. Cheer after cheer greeted them from the delighted spectators. Without the slightest diminution of strength or fleetness, Chauncey kept steadily on. For full ten minutes the race continued. At the expiration of that time Miss Preston, tired and dizzy, waved her handkerchief as a flag of truce, and attempted to reach her friends. Chauncey, with a true lover's instincts, discovered the state of the case, and, gracefully throwing his arm around her waist, escorted her to a seat.

"Oh, I am so sorry!" panted the little lady. "I did so long to win this game; but I am no match for you in hold-out-ativeness."

"Please allow me to introduce myself," replied her companion. "Chauncey Belknap, at your service. Now who are you? Please tell me," as the young lady almost gasped for breath.

"A relative of Chauncey Belknap, of W—Square?"

"His son, my dear young lady. But why are you so excited. You are not acquainted with my father?"

"Yes—oh, yes!" she murmured. "I am Charlotte Preston, and engaged to be married to your father. Order my carriage, please, or your carriage, or somebody's, and take me home. I will then tell you all about it."

Chauncey was staggered, but immediately did as he was bid; and, in a few moments, had the pleasure of listening to the strange particulars.

"My father is on the verge of financial ruin, and I did it to save him. What shall I do? For the love of mercy, tell me!" and Miss Preston burst into tears.

"You do not love him?"

"No, and I told him so."

"Don't marry him then. Do you suppose,"—and here Chauncey stopped, and raised the uplifted face wet with tears—"do you suppose you would ever learn to love Chauncey Belknap, Jr.?" and the young man again halted.

"Well, what if I could?" and a mischievous smile chased away every sign of weeping.

"Oh, only I have loved you ever since the first moment I laid my eyes on your face, and determined to win you, if possible. I have money enough to fix things, I reckon, and I know, my dear little girl, I can make you happy."

"And I know you can, too. Will you tell your father about it?" and Miss Charlotte Preston hid her head on her lover's shoulder.

"Yes, my darling; but you must accompany me. My wife must not be a coward. We will go now."

An hour later, and Chauncey Preston, Jr., stood before his paternal parent, with the promised bride of both on his arm. The old gentleman's consternation we will leave to the imagination of our readers, assuring them it was immense.

"I do not love you, Mr. Belknap; but I do love your son, and he loves me. That is all I can say. I trust you will forgive me for having, because of poverty, held out to you a promise love could never fulfill."

"All right, replied Chauncey, Sr. "Don't say any more about it. The young dog meant business, and has cut me out. That's the English of that."

SCIENTIFIC NOTES.

SOUND is the effect produced upon the ear when air is set in motion within certain limits of rapidity. Audible sound begins when about thirty-two vibrations per second are made, and ceases when about 8000 vibrations per second are reached.

The number of vibrations corresponding with the middle C of a musical instrument is 522 per second. An octave below, half the number; an octave above, twice the number.

Sound travels at the rate of 1100 feet per second in a still atmosphere. The distance in feet between an observer and the point where a stroke of lightning falls, may be known by multiplying 1100 by the number of seconds that elapse after the flash is seen until the sound is heard.

HORSE-POWER.—When Watt began to introduce his steam-engines he wished to be able to state their power as compared with that of horses, which were then generally employed for driving mills. He accordingly made a series of experiments, which led him to the conclusion that the average power of a horse was sufficient to raise about 33,000 lbs. one foot in vertical height per minute, and this has been adopted in England and this country as the general measure of power.

The power of a steam-engine is calculated by multiplying together the area of the piston in inches, the mean pressure in pounds per square inch, the length of the stroke in feet, and the number of strokes per minute; and dividing by 33,000.

LIMITS OF VEGETATION IN THE TEMPERATE ZONE.—The vine ceases to grow at 2,300 feet above the level of the sea; Indian corn, at 2,800; oak, at 3,350; walnut, at 3,600; ash, at 4,800; yellow pine, at 6,200, and fir, at 6,700.

Perpetual Snow—Under the equator, at 15,800 feet above the level of the sea; in latitude 45 deg., at 8,400, and in latitude 65 deg., at 5,000.

PROOFS OF SPIRITOUS LIQUORS.—A cubic inch of proof spirits weighs 234 grains; then, if an inch cube of any heavy body weigh 234 grains less in spirits than in air, it shows that the spirit in which it was weighed is proof. If it lose less of its weight, the spirit is above proof; and if it lose more, it is below proof.

STRENGTH OF ICE.—Ice 2 inches thick will bear infantry, 4 inches thick will bear cavalry or light guns, 6 inches thick will bear heavy field guns, 8 inches thick will bear 24-pounder guns on sledges, weight not over 1,000 lbs. to a square foot.

A GALVANIC battery that produces an electrical current capable of heating one pound of water 1 deg. Fah., will yield magnetic force sufficient to raise a weight of 772 lbs. one foot high.

TO FIND the area of a circle, multiply the square of the diameter by the decimal .7854. Or multiply the circumference by the radius, and divide the product by 2.

The speed of an electric spark traveling over a copper wire has been ascertained by Wheatstone to be two hundred and eighty-eight thousand miles in a second.

THERE is iron enough in the blood of forty-two men to make a plow-share of twenty-four pounds.

The reflection of the sun's rays in a mirror has been distinguished at a distance of twelve miles.

GUNPOWDER.—The heat developed at the moment of explosion is 4664° Fahr., and the resulting gas pressure, if the powder closely fills the chamber, is 40 tons or 80,000 lbs. to the square inch.

Careful experiment by De Saint Robert with rifled cannon of 3½ inches bore, 8½ lbs. shell, 1½ lbs. powder, gives 1300 ft. velocity per second, or a little over 900 miles per hour, for the shell when it leaves the mouth of the cannon, which is equal to a force of 219,000 foot-pounds, or a little less than seven horse-power. But the heat actually developed by the above amount of powder corresponds to almost thirty-two horse-power of work; seventy-nine per cent. of the power of the powder is therefore lost.

A CIRCLE is the most capacious of all plain figures, or contains the greatest area within the same outline or perimeter. To find the circumference of a circle, multiply the diameter by 3.1416, and the product will be the circumference. To find the diameter of a circle, divide the circumference by 3.1416, and the quotient will be the diameter.

A MOVING load has a much greater effect on a beam than a load at rest. For example, if the breaking weight of a beam is 4,150 pounds, the load being at rest, a load of 1,778 pounds, moved at 30 miles per hour, will break the same beam. The deflection of girders increases with the velocity of the load.

WEIGHTS OF A CUBIC FOOT OF VARIOUS SUBSTANCES IN ORDINARY USE.—Loose earth or sand, 95 lbs.; common soil, 124 lbs.; strong soil, 127 lbs.; clay, 135 lbs.; clay and stones, 160 lbs.; cork, 15 lbs.; tallow, 59 lbs.; brick, 125 lbs.

The force of expansion of solids by heat is enormous. Thus iron, if heated from 32° F. to 212°, expands .0012 of its length, to produce which change of length by mechanical means would require a force of 15 tons.

HEAT CONDUCTING POWER OF DIFFERENT BODIES.—Gold, 1,000; Platinum, 981; Silver, 973; Copper, 898; Iron, 374; Zinc, 363; Tin, 304; Lead, 180; Marble, 24; Porcelain, 12; Fire Clay, 11; Fire Brick, 11.

A ROUND tube, whose external and internal diameters are to each other as ten to seven, has twice the lateral strength of a solid cylinder containing the same amount of material.

PLATINUM has been drawn into wires only one thirty thousandth (1-30000) part of an inch, invisible to the eye and one mile's length weighing only one grain.

TO FREEZE WATER ON A HOT SUMMER DAY. —Five parts of muriate of ammonia, 5 of nitrate of potassa, 8 of sulphate of soda, and 16 of water.

STEEL is hardened and made elastic by being suddenly cooled. It is rendered soft and loses elasticity by being slowly cooled.

THE SUN weighs seven hundred and forty times the combined weight of all the planets which circle around him.

COPPER, if suddenly cooled, becomes soft and malleable; if slowly cooled it hardens and becomes brittle.

TO FIND the area of an ellipsis, multiply the long diameter by the short diameter and by .7854; the product will be the area.

WITTICISMS.

THE WIDTH OF THE DOOR. — "I want a piece av a board sawed off, planed on the outside," said Mr. Donlevy, "we'd a few friends in at the house last night to a christenin', and the lower panel of the dure got kicked out in the merriment."

"How wide do you want the piece cut?" asked the carpenter.

"The width av the dure, av course," replied Mr. Donlevy.

"And how wide is the door?"

"Well, it's as wide as a chair is long, jist. Ye kin jist lay a chair across it to kape the childer in an' the pigs out, an' it fits as though it wur matched fur it."

"But all chairs are not of the same size," said the carpenter.

"Aw, thundher an' turf! yer thicker headed than a railroad spike; the chair comes up jist even wid the edge av the window sill."

"But how high is the window sill?" asked Mr. Chips.

"Both the badgerin' tongue o' ye," growled Mr. Donlevy, "it's only the widness av me hand barrin' the thumb higher than the rain wather that stands outside, an' if ye can't make it from that ye lave the job, and I'll take it to some carpinther that understhands his business and knows the measure of a dure in his head widout making a chatychism av himself. Say, can ye cut me the pace aff the size av that, ye leather-headed wood-butcher, ye, or will I go find a man av your craft that has half the sinse he wur born wid?"

And he had to go find one.

A man who had thoughts of buying a few hens for his table was consulting a colored man as to what breed he had better purchase: "Well, sah, dat depends. If you am gwine to have your hen-house on de roof of your residence, wid about fo' men to guard it, white Legnorn hens am de breed to buy, but if you am gwine to have it in de back yard and run your chances you'd better buy cast iron roosters an' fill each one with gunpowder an' grape shot! Ize bin in de hen business myself, an' I knows dat nuffin will ooze away quicker in a dark night dan good fat pullets."

A party of lynchers down South postponed the hanging five minutes to allow the victim to finish smoking a cigar. This proves that the use of tobacco prolongs life.

"SUMFIN BURNIN'!"—Aunt Anarky, on her return from town, one cold day, took off her shoes, and seated herself flat on the hearth, to have "a real good warm," as she expressed it. She soon fell to dozing, and enjoyed the warmth of the glowing coals in the old-fashioned fire-place as nothing in the wide world but a darkey—or a salamandar—can. Presently she roused and commenced snuffing the air, and examined the fire with the tongs, muttering: "Whew! I smell sumfin' burnin'! I's fedders—no, taint" (snuffing again), "it must be the juice o' ledder (leather), but I don't see no ledder in the fish. Wonder what it can be? Whew! Chillum, is you all burning' any fedders, or ledder, or injun rubber out dah? Y'aint? Den what kin it be scotcnin' so? Whew! Lur' bless my soul! yi, yi, if it aint my heel a burnin'! Great Abascer! What good thing I had took off my new pattern ledder gaiter shoes? they'd a bin clean spiled, sho!" And Aunt Anarky quietly and deliberately pulled out a large coal that was imbedded in her heel, and gently resumed her nodding.

NOT ALLOWED AT THE PARTY.—Yesterday, as we were passing a street beyond the Atlanta Medical College, and on which a number of negroes reside, we heard an old negro calling out to his wife:

"Manda! Is you got dem chickens corraled in de smoke house like I tole yer?"

"No! an' I like to know what's de matter with you, dat you so tickler about dem chickens all at once," she replied.

"Nebber you mind! I knows what's de matter, and dat's nuff till dem chickens is housed. When I hears dat dem niggers ober dar in de next yard is gwine to hab a party to morrow night, I wants to be shore my chickens doesn't tend it, you hear me?"

The chickens were at once locked up.—*Atlanta Constitutionalist.*

When a man's wife comes in and sees him, razor in hand, and with his face all lather, and asks him, "Are you shaving?" it's a provoking thing in him to answer, "No, I'm blacking the stove," but it is in human nature to so reply.

WIT AND HUMOR.

"Is there a letter here in a scented envelope for my wife?" he asked the postmaster, while the green fires from his eyes made the office look like a leafy forest. "Yes, sir," answered the postmaster, as he handed it out. The jealous man tore it open at once, when, lo and behold! it was the milliner's bill for fifty dollars. No succeeding chapters.

"Any letter for me?" asked a young lady of the female postmaster, in a country town. "No," was the reply. "Strange," said the young lady aloud to herself, as she turned away. "Nothing strange about it," cried the female postmaster through the delivery window, "you ain't answered the last letter he writ ye."

A Pennsylvania politician, who had suddenly become very wealthy, recently attended a dinner party at which there was the usual fillet of beef with mushrooms. While engaged upon the beef, he whispered to his neighbor, "Do you eat the clothes-pin heads, too?"

"Why did General Washington cross the Delaware on the ice during the storm of an awful night?" asked a teacher of her young class in history. "I reckon," piped a small voice in answer, "it was because he wanted to get on the other side."

Deacon Jelly remarked to a penurious companion that the kingdom of Satan was to be destroyed, and asked him if he wasn't glad of it. "Yes," he replied, "I suppose so, but it seems a pity to have anything wasted!"

An old bachelor, who particularly hated literary women, asked an authoress if she could throw any light on kissing. "I could," said she, looking archly at him; "but I think it's better in the dark."

A Galveston man, who had a mule for sale, hearing that a friend in Houston wanted to buy a mule, telegraphed him: "Dear Friend—If you are looking for a No. 1 mule don't forget me."

"Never borrow trouble," said a husband to his wife. "Oh, let her borrow it if she can," exclaimed the next door neighbor; "she never returns anything, you know."

"What were the worst results of the civil war?" cried an orator. "Widows," shouted Jones, who had married one.

A couple of peasants discuss the fertility of their respective provinces. "At Bordeaux," said one, "if you let a match fall to the ground, the next year there will grow up a forest." "At Marseilles," cried the other, triumphantly, "you let a suspender-button fall, and in eight days you will have a pair of pantaloons ready made."

"Is this my train?" asked a traveler at the Kansas Pacific depot of a lounger. "I don't know, but I guess not," was the doubtful reply. "I see it's got the name of the railroad company on the side, and I expect it belongs to them. Have you lost a train anywhere?"

"Ella, is your father at home?" said a bashful lover to his sweetheart. "I want to propose something very important to him." "No, Clarence, papa is not at home, but I am. Couldn't you propose to me just as well?" And he did with perfect success.

A Paris Bohemian is telling his mode of life to a friend from the provincial districts. "In the morning I awake," says he, "and ring for my *valet de chambre*." "How! you keep a *valet de chambre*?" "Well, no; but I keep a bell."

"The grass is turning green," was the observant remark of a young man escorting a pretty damsel across the Common, and the saucy miss replied that he had got ahead of the grass by a number of days.

A little Sunday School miss was asked by her teacher, "What must people do in order to go to heaven?" "Die, I suppose," replied the little one. The teacher did not question her any further.

A lad who had borrowed a dictionary to read, returned it after he got through, with the remark that "it was werry nice reading, but it somehow changed the subject werry often."

An Irishman who had on a very ragged coat was asked of what stuff it was made. "Bedad, I don't know; I think the most of it is made of fresh air."

"Do you keep any Hamburg edging?" asked a timid miss. "Not if we can sell it," was the pert reply of the clerk. He kept some that day.

What law has been the greatest terror to evil-doers since the world began? The mother-in-law.

MISCELLANY.

HEALTHFULNESS OF MILK.—If any one wishes to grow fleshy, a pint of milk taken on retiring at night will soon cover the scrawniest bones. Although we see a good many fleshy persons now-a-days, there are a great many lean and lank ones, who sigh for the fashionable measure of plumpness, and who would be vastly improved in health and appearance could their flesh be rounded with good solid flesh. Nothing is more coveted by a thin woman than a full figure, and nothing will so rise the ire and provoke the scandal of the "clipper-build" as the consciousness of plumpness in a rival. In case of fever and summer complaint, milk is now given with excellent results. The idea that milk is feverish has exploded, and it is now the physician's great reliance in bringing through typhoid patients, or those in too low a state to be nourished by solid food. It is a mistake to scrimp the milk pitcher. Take more milk and buy less meat. Look to your milkman; have large-sized, well-filled milk pitchers on the table each meal, and you will have sound flesh and save doctors' bills.

A LUXURIOUS MONARCH.—The Sultan's lot is surely a happy one. He has ten servants whose special duty is to unfold the carpets for him when he is going to pray, ten to take care of his pipes and cigarettes, two to dress his royal hair, and twenty to attend to his most noble clean shirts. There is a multitude of other attendants about the palace; indeed, it is stated that eight hundred families and about four thousand persons live at his majesty's expense. He is an extravagant house-keeper; the expenditures of the palace are mentioned as nearly fourteen million dollars.

MERE food and clothing are not enough for an intellectual being. The man who is satisfied with the bare necessities of life is but little better off than a well fed donkey.

SOFT words may appease an angry man—bitter words never will. Would you throw fuel on a house in flames in order to extinguish the fire?"

How much more people might accomplish, if they would but make it a point to carry out whatever they undertake.

THE WONDERFUL ADAPTABILITY OF PAPER.—The adaptability of paper to numerous important and widely-varied uses is wonderful. What other substance can be satisfactorily substituted for wood, iron, and such common materials, to the extent that paper can be? It is impossible to find anything else which, like paper, may be so differently and dexterously prepared, as regards flexibility, thinness, durability, strength, imperviousness to fire and water, etc., that it can be readily made into pails, wash-bowls, dishes, bricks, napkins, blankets, barrels, houses, stoves, wearing apparel, curtains, bonnets, newspaper and writing sheets, wrappers, carpets, coating for iron ships, flower-pots, parchment slates, coverings for the leads of pencils, jewelry, lanterns, car-wheels, dies for stamping, uppers of shoes, roofing, and many other things. It is this tendency on the part of paper to take the place of everything else, to become a universal substitute, so to speak, which leads to the conclusion that the future has a grand development in store for it, and that in the years to come its manufacture will hold a magnificent position amongst the great industrial interests of the world.

A PUNGENT EPITAPH.—Col. Blank, who fabricated the splendid fireworks which had been sent off in St. James's Square, in celebration of the Peace of Ryswick, was escorting a party of ladies through the Abbey, and they stopped to admire the beautiful monument which had just been set up in memory of Mr. Purcell, the celebrated musical composer.

"Ah," said the Colonel, "if I felt that I could have such an epitaph as that upon my monument when I was gone, I should be content."

One of the ladies—a beautiful, bright-eyed widow—read the epitaph aloud: "He is gone to that place where alone his harmony can be excelled." So she slowly and clearly read, and then added, with one of the most charming smiles imaginable:

"Well, my dear Colonel, I do not see why you should sorrow. That very epitaph may be made to answer for your monument by simply changing a single word. Put *fireworks* for *harmony*, and you have it, all complete."

RUNNING WILD.

The train drew up at the station with a rattle and jar and the hissing of steam. It was the pay-train.

Workmen came pouring out of the shops and depots, and laborers from the track hurried up to the car, all eager for their monthly wages.

Aleck Carson, the engineer, stepped down from the cab, oil-can in hand, and went forward to oil his engine. He glanced casually up the street, but immediately took a second look at the trim, graceful figure of a young lady who was coming toward him.

"Carrie Davis!" he exclaimed, in pleased surprise. "I wonder why she is here alone! I hope she does not want to go back with us, for—"

He did not utter the reason, but, after casting an uneasy look at the car, as if the danger might be there, he went on with his oiling. He did not forget Carrie, however, and when she came tripping across the street, her face all smiles at the thought of the surprise she would give that great, brave, cool-headed engineer, Aleck Carson, he looked up in the quietest way, and said:

"Good morning, Carrie."

"Now, that is too bad!" exclaimed Carrie. "I was going to surprise you, and you meet me as if you knew all the time that I was coming."

"So I did," replied Aleck. "I saw you when I first got out of the cab. When did you come up?"

"On the morning train; and I want to go back with you. I have been hurrying so, to get ready. How soon do you start?"

Aleck pulled out his watch.

"We cannot leave here until the freight comes in, Carrie. She is due in twenty minutes. But hadn't you better wait for the express? We are running wild, you know, and you will not gain over two hours' time."

"Oh, I can't wait two whole hours!" said Carrie. "I am going back on this train—that is, if I can."

"I don't suppose there will be any objections; yet I do wish you would stop over for the express," Aleck replied.

Just then Tom Emmons, the conductor, came out of the car.

"Good morning, Mr. Emmons," said Carrie.

"Can I go back with you?"

"Certainly, Miss Davis," said Emmons; "let me help you in the car."

Aleck finished his oiling, and went back to the cab.

"Ten minutes, Johnny," he said to the fireman, as he handed up the oil-can to him. "I'll step back into the coach."

Emmons was chatting gaily with Carrie, but when Aleck entered he said, rather brusquely: "All ready, Carson. Go ahead!"

Aleck looked at his watch, to make sure that he was right.

"Do you mean go ahead?" he asked, in some surprise.

"Yes, go ahead," said Emmons, quite sharply.

There were several of the head men of the road in the car, and Aleck looked toward them for instructions. They took no notice of him.

"Of course you know that we are running wild?" he said to Emmons, loud enough for all to hear.

"I know my business," replied Emmons.

"Go ahead, I say!"

Again Aleck looked back to the other end of the car, but more particularly to Mr. Harvey, the manager of the road. That gentleman said nothing, and once more Aleck turned to Emmons.

"Emmons, are you *sure* you know your business?"

"Go ahead!" screamed Emmons, white with rage. "If you are too much of a coward—"

"Stop!" said Aleck, his face pale but determined. "If you say go ahead, I will go, but it is the last time you ever run the train that I am coupled to."

Aleck now turned to Carrie.

"You must not go on this train," said he. "Come."

And before Carrie had time to exercise a will of her own, she bent to his stronger one, and went out of the car with him.

"Good-bye, Carrie, if I never see you again," said Aleck, as he hurried away to his engine.

He sprang into the cab, opened the throttle, and the engine started.

"I'm afraid there's death to some of us, Johnny," said he. "The freight is due in four minutes, and we shall meet it. But Emmons ordered us out, and we must go."

"Help me keep a lookout, Johnny," he said to his fireman. "If we are cautious, it may amount to nothing more than a run back to the station. If we can pass the curve, we can see miles—God have mercy!"

This exclamation was caused by the sight of the approaching freight train.

There was a short, sharp whistle from each engine, an instantaneous closing of two throttles; then followed a grinding crash, and a shock which made the very ground tremble. Then, for one brief moment, an awful stillness, broken at last by the sound of rushing steam—by the cries and shouts of men, as they crawled from beneath the *debris* of the wrecked trains, and by the groans of others, less fortunate.

Carrie Davis watched the train out of sight, and then went into the waiting-room, to remain until the express arrived. After half an hour of waiting, she saw a man running toward the depot. She recognized Aleck's fireman, Johnny. She threw up the window just in time to speak to him. "Aleck—what of Aleck?" she cried.

"I can't tell—I don't know!" said Johnny.

Down dropped the window, and down dropped Carrie into a seat.

Another hour of the most terrible suspense, and the relief train came back.

One by one the men filed out of the two coaches; but Aleck was not among them.

"Was any one killed?" she timidly asked.

"No one, thank God!" was the answer. "But one man was *very* seriously hurt."

"His name?" she asked, breathlessly.

"I cannot say," the man replied. "He was the engineer or—mercy! she has fainted!"

Carrie lay in the swoon a long time; but she awoke to happiness, for Aleck stood over her.

"Oh, Aleck! are you safe!" she exclaimed.

"They told me you were seriously injured."

"It was Emmons," replied Aleck. "He will lose an arm, poor fellow!"

"Worse than that," said Mr. Harvey, the manager, who stood near. "He will lose a situation and a reputation. And I must beg your pardon, Aleck, for not heeding your silent appeal to me. I put implicit trust in Emmons, or I should have consulted the time-card. I exonerate you from all blame."

At the wedding of Aleck and Carrie, Mr. Harvey, the manager, in behalf of the employes of the road, presented to Aleck the deed of a cottage, furnished throughout, prefacing the gift with a short speech, in which he expressed the hope that every "wild run" would terminate as happily as the last.

WIT AND HUMOR.

A TALL, green-looking youth stepped into a village grocery, where they kept something to drink as well as to eat, and, after peering around a little, spied some ginger cakes. "What's the least you'll take for one of 'em?" "Ten cents," replied the grocer. "Well, I believe I'll take one, if you'll wrap it up right good." The grocer wrapped up the cake, and handed it to him. He looked thoughtfully at it awhile, and said: "I don't believe I want this cake, after all. Won't you swap me a drink for it?" "Yes," said the grocer, as he took back the cake and handed him a glass of something. The young man swallowed the liquor and started off. "Hold on!" cried the grocer; "you haven't paid me for my drink." "I swapped you the cake for the drink." "But you haven't paid me for the cake." "You've got your cake." This last retort so nonplussed the grocer that he stood and scratched his puzzled head, while the young man made good his retreat.

LENDING MONEY.—Artemus Ward once lent money. He thus recounts the transaction: "A gentleman friend of mine came to me with tears in his eyes. I said, 'Why these weeps?' He said he had a mortgage on his farm, and wanted to borrow two hundred dollars. I lent him the money and he went away. Some time after he returned with more tears. He said he must leave me for ever. I ventured to remind him of the two hundred dollars he had borrowed. He was much cut up. I thought I would not be hard on him, so I told him I would throw off one hundred dollars. He brightened, shook my hand, and said, 'Old friend, I won't allow you to outdo me in liberality; I'll throw off the other hundred.'"

AN irascible old gentleman, who held the position of justice of the peace, was one day accosted in the street by a youth in a manner that did not come up to his honor's idea of the respect due to him. "Young man, said he, 'I fine you five dollars for contempt of court.'" "Why, judge," said the offender, "you are not in session." "This court," replied the judge, "thoroughly irritated, 'is always in session, and consequently always an object of contempt.'"

THE rage for the "ie" termination to girls' names has come to a disastrous conclusion in an Oregon family. A farmer named Ake christened his eldest girl Belle. She had some cards printed in the "ie" fashion, and—well, after looking at the result, she concluded Belle was pretty enough for her, and burned them.

A QUARRELSOME couple were discussing the subject of epitaphs and tombstones, and the husband said: "My dear, what kind of a stone do you suppose they will give me when I die?" "Brimstone, my love!" was the affectionate reply."

THE following notice, issued by the local authorities, appears on a bridge in the country: "No vehicle drawn by more than one animal is allowed to cross this bridge in opposite directions at the same time."

A LADIES' magazine, in its Housekeepers' Department," informs its readers that "Virginia housewives make the best of pickles." This is a horrible suggestion.

AN Irishman tells of a fight in which there was only one whole nose left in the crowd, "and that belonged to the tay kettle."

A KING's fool, who was condemned to die, was allowed to choose the form of death, and he chose old age.

AN old negro stretched upon a board, and slumbering with his feet pointing to a glimmering fire, opens one eye and gets a glimpse of them as they stand in the obscurity. Mistakes them for two little niggers, and cries, "Git fum 'fore me!" and relapses into sleep. After a while he opens the other eye, and still seeing the intruders, says, "Git fum fore me, I say! I kick you in the fire if you don't—I will, shuah!" and again he snores. His dreams not being pleasant, he soon opens his eyes, and still seeing the little pests, he draws up one foot for the threatened kick, but is alarmed to see the enemy advance upon him. "Wha' war you comin' to now? Humph! my own feet, by golly!"

AN Irish gentleman whose morning dram had been a little too much for him, in saddling his horse, got the saddle wrong end foremost. Just as he was about to mount, a Scotch friend came up, and called his attention to the mistake. The horseman gazed for a moment at the intruder, as if in deep thought, and then said: "You let that saddle alone. How do you know which way I was going?" The gentleman from Scotland passed on.

"A FRIEND of mine," said Erskine, "was suffering from continual wakefulness, and various methods were tried to bring him sleep. At last his physicians resorted to an expedient which succeeded admirably. They dressed him in a watchman's coat, put a lantern in his hand, placed him in a sentry-box, and he was asleep in ten minutes."

JOADKINS says he first met his wife in a storm, took her to the first party in a storm, popped the question in a storm, married her in a storm, and has lived in a storm ever since, but thinks the day of the funeral will be a pleasant one.

AN irreverent young woman, on being questioned as to her opinion of a fresh male acquaintance, said he would be very presentable if the Lord hadn't turned up so much of his legs to make feet of.

"JOHNNY, what do you expect to do for a living when you get to be a man?" "Well, I reckon I'll get married, and board with my wife's mother."

AN Iowa school teacher has been dismissed for kissing the big girls. The girls say the School Board had no right to interfere with their studies.

AN old lady was inclined to think that a compass would be the best sewing machine, because she heard it had a needle with thirty-two points.

EXCUSE me, madam, but I would like to ask why you look at me so very savagely?" "Oh, beg your pardon, sir; I took you for my husband."

AN Irish lover remarked that "it's a very great pleasure to be alone, especially when your sweetheart is wid ye."

WHEN are your eyes not eyes? When the wind makes them water.

WANTED—A needle to sew a patch on] the pants of a dog.

WHEN is a fire like a bad husband? When it goes out at night.

WHEN is a sailor like a garret? When he is aloft.

THE coming man—A boy.

BUSINESS HABITS OF FARMERS.

Were the business habits of merchants and manufacturers as bad as those of most farmers, a large portion of them would fail within a year. As a rule, farmers have no system in conducting their business operations. They contract obligations without specifying any exact time when they are to meet them. Many of them give notes in a very reckless sort of manner, and make no memorandum of the time they become due. When presented for collection, they affect considerable surprise and resort to various subterfuges to obtain an extension of the time of payment. They generally object to giving a new note, though they are well aware, that it is very difficult to raise money on the old one, as few persons wish to invest in an overdue obligation to pay money. Most farmers are offended if a person holding their note sells it. They think such an act implies a sort of disrespect, or furnishes evidence that the seller does not presume that it will be paid at maturity. Some are angry if the holder of these notes negotiates them, for the reason, as they affirm, that they do not want their neighbors to know that they have outstanding obligations.

In making contracts for labor it is very unusual for them to specify any definite time for payment. It is for this reason that women dislike to work in farm-houses, and men prefer to work elsewhere than on farms. In a city or large town a woman who does cooking or housework expects her wages at the end of every week, and generally receives them. In shops, manufactories, printing offices, commercial establishments, and in most other places where men work in cities and large towns they receive their wages in cash on completing a week's labor. Some railroads and other corporations pay at the end of a month, instead of at the end of a week, but they have a definite time for paying for the services of employes. Farmers are loses in consequence of their method of dealing with their employes. They would get work done much cheaper if they paid for it at regular periods. They would also get better work. Any person will labor more faithfully, more energetically, and more contentedly if he is sure of his pay at the end of a day, week or month. Pay day is a great stimulus to exertion.

The hired help of farmers is sometimes "accommodated," as the expression is, with an order on the store where the employer has a running account. This order is, however, no equivalent for cash. It allows the holder of it to "trade it out" at a place he might never patronize if he had the cash wherewith to purchase goods. The holder of an order on a country trader is virtually obliged to take what he can find in the store at the price demanded for it. The article may not be what the person wants, either in style or quality, but they are the only ones to be obtained by means of the order. Even if they suit the purchaser, the price demanded for them will ordinarily exceed the cash price, for the time when they are to be paid for is very indefinite.

The system of dealing with traders and mechanics pursued by most farmers is very objectionable and unbusinesslike. It consists in having a running account kept by the former of all the articles sold, made or repaired. A duplicate is rarely kept by the latter, who is generally astonished at the amount of every bill that is presented for payment. Accounts grow very rapidly, especially when different members of a family are allowed to add to them.

If a farmer has not the capital to bridge over the time before crops or stock are ready for the market, he will be obliged to hire money or obtain necessary supplies on credit. Undoubtedly the best course is to hire the money if it can be obtained at a reasonable rate. This will enable him to purchase goods at the lowest price they can be obtained. It will also keep him from asking any favors, as obtaining money from a capitalist is in the line of regular business. If he cannot procure money at a reasonable rate of interest, he will be obliged to obtain goods on credit. But in doing so he should conform to business principles. He should inform the persons with whom he trades of the probable time when he can pay the bills against him. If he trades with a grocer, butcher, or dry goods merchant, he should keep a pass-book and have the amount and price of every purchase entered in it, with the date, at the same time it is charged in the books of the seller. This arrangement, which requires but little trouble or expense, will obviate all misunderstandings and enable the purchaser at any time to see exactly how his accounts stand.

Uncertainty in the time of meeting obligations is one of the leading characteristics of the ordinary farmer's method of doing business. A farmer of considerable wealth always wants it understood that he is "good for the money." And he does not seem to think that it should make any very great difference if an obligation is not met in time. If he is pressed to fix a time for making a payment he will name the very uncertain one—"Just after harvest."

One of the leading causes of failures among country merchants is the unreliability of their patrons, who are chiefly farmers, to pay their bills at different times. This the merchant obligates himself to do. But if his customers fail to pay him he is at the mercy of his city creditors. Many farmers construe the words "Just after harvest" to mean almost anything they like. They mean after grain is harvested and threshed, after corn is gathered, husked, and shelled, or after the prices offered for these articles meet their views. They will insist that they should not be obliged to sell their crops, which they have worked so hard to raise, at a sacrifice, and they seemingly care little about the sacrifices others are obliged to make on their account.

Correct business habits are as important to farmers, in proportion to the magnitude of their operations, as they are to merchants, manufacturers and contractors. Not only their success, but the success of the persons with whom they have dealings, depend on them. Every person who has business transactions of any kind should meet obligations with great promptness. Unless this is done, infinite trouble is caused all parties concerned. Good business habits are elements of success to the farmer, and as many fail for the want of them as from any cause. Prompt payments on the part of farmers tend to keep business moving in the neighborhood where they live, and assist in the business prosperity of the entire country. The high prices farmers pay, not only for family supplies, but for everything they require on their places, from lightning-rods to drain-tile, are largely due to the various iniquities connected with the credit system, and to the failure, on one pretence or another, to meet obligations when they are due. Selling goods without security, to parties who propose to pay for them at their convenience, calls for high prices.

ITEMS FOR REFLECTION.

ONE CAUSE OF HIGH TAXES.—Our courts continue to license men, upon the payment of a paltry sum, to sell intoxicating drinks, and we are called upon to pay, by taxation, a hundred times more than the amount received, for murder trials, cases of assault and pauperism, caused by the licensed vending thereof; to which add the untold woe and misery produced thereby, and we can readily see that the small amount received is but as dust in the scale in comparison to the ponderous weight of sorrow produced, saying nothing of the burden of taxation which is levied upon us in consequence of this practice of granting license. Fathers, does it pay? Mothers, do you feel safe in sending your sons out in the world with this licensed evil on the corner of almost every street, so arrayed as to entice the young and unwary, and ruin both soul and body. Wives, use your influence to remove this growing evil from your husbands. Mothers, do all you can to remove the temptation from your sons. Taxpayers, look to your interest, and determine that rum and money shall cease to control our elections, and use the heaven-born privilege of the ballot to destroy this great enemy of God and mankind.

LIVE FOR SOMETHING.—Thousands of men breathe, move, and live—pass off the stage of life, and are heard of no more. Why? They do not a particle of good in the world, and none were blessed by them; none could point to them as the instruments of their redemption; not a line that they wrote, not a word that they spoke, could be recalled, and so they perished; their light went out in darkness, and they were not remembered more than the insects of yesterday! Will you thus live and die? O man immortal! Live for something. Do good, and leave behind a monument of virtue that the storms of time can never destroy. Write your name of kindness, love, and mercy, on the hearts of the thousands you come in contact with year by year, and you will never be forgotten. No! your name, your deeds, will be as legible on the hearts you leave behind as the stars on the brow of evening. Good deeds will shine as brightly on the earth as the stars of heaven.

ANTICIPATIONS.—Life is going fast; each day we are more surely leaving youth behind us. Yet men spend their lives in anticipations, or determining to be vastly happy at some period when they have time. The present has an advantage over every other—it is our own. Past opportunities are gone, future ones are not yet come. We may lay in a stock of pleasures as we would a stock of luxuries, but if we defer the tasting of them too long we shall find that both are soured by age. Let us enjoy to-day, for to-morrow may never dawn.

A COLORED preacher describes the man who sits down to his table with his family to eat, without thanking the Great Giver of all things, as being like a hog eating acorns from under the tree without once looking up to see where they come from.

BE NEITHER lavish nor niggardly; of the two, avoid the latter. A mean man is universally despised, but public favor is a stepping stone to preferment; therefore, generous feelings should be cultivated.

YOUNG MAN, improve your time. When we consider that one moment of time cannot be recalled or re-spent, how important that we improve our time wisely.

DEAR OLD MOTHER.—Honor the dear old mother. Time has scattered the snow-flakes on her brow, pillowed deep furrows on her cheeks, but is she not sweet and beautiful now? The lips are thin and sunken, but those are lips that have kissed many a hot tear from childish cheeks, and they are the sweetest lips in the world. The eye is dim, yet it ever glows with the soft radiance of holy love which can never fade. Ah, she is a dear old mother. The sands of life are nearly run out, but feeble as she is she will go further and reach down lower for you than any other upon the earth. You cannot walk into midnight where she cannot see you; you cannot enter a prison whose bars will keep her out; you cannot mount a scaffold too high for her to reach, that she may kiss and bless you in evidence of her undying love. When the world shall despise and forsake, when it leaves you by the wayside to die unnoticed, the dear old mother will gather you in her feeble arms and carry you home and tell you all your virtues until you almost forget your soul is disgraced by vices. Love her tenderly, and cheer her declining years with holy devotion.

LOST TIME.—If you would make the best use of your time, look after the minutes. Keep a strict account of every hour of your time for a single week, setting down the exact manner in which every hour is spent, and see whether, when you come to review the record, you do not find it full of admonition and instruction. In this simple way one can readily understand the secret of his want of time. He will discover that he has given hours to idle talk, to indolence and to inconsiderable trifles, which have yielded him neither profit nor pleasure. What is the remedy? Arrange your work in the order of its comparative importance. Attend first to the things which are essential to be done, and let the unessentials take their chance afterward. The difference in the amount of work accomplished will be astonishing.

HAVE A PURPOSE.—Carlyle once asked an Edinburgh student what he was studying for. The youth replied that he had not quite made up his mind. In a moment there was a sudden flash of the old Scotchman's eye, a sudden pulling down of the shaggy eyebrows, and the stern face grew sterner as he said: "The man without a purpose in life is like a ship without a rudder; a waif, a mere nothing, a no man. Have a purpose in life, if it is only to kill and divide and sell oxen well; but have a purpose; and having it, throw such strength of mind and muscle into your work as God has given you."

A man cannot be a prosperous Christian without settled seasons of prayer. Opportunities to pray will be found when the heart is intent on the exercise.

HE who tells a lie is not sensible how great a task he undertakes, for he must be forced to invent twenty more to maintain that one.

NEVER, under any circumstances, assume a responsibility you can avoid consistently with your duty to yourself and others.

Too many men are like the woman who, when asked if she had religion, replied that she had slight touches of it occasionally.

HARSH counsels have no effect; they are like hammers, which are always repulsed by the anvil.

WHEN a man is wrong, and won't admit it, he always gets angry.

ODDS AND ENDS.

Never vex quarrelsome or obstinate children, particularly do not at length yield to them and let them have their own way; never desire such children to do what is unjust; make every demand on them quietly, but never yield.

Beauty, as the flowering blossom, soon fades; but the divine excellence of the mind, like the medicinal virtues of the plant, remains in it when all those charms are withered.

Much misconstruction and bitterness are spared to him who thinks naturally upon what he owes to others, rather than what he ought to expect from them.

When a person has made up his mind to do a thing, however wrong it may be, the least trouble he has is to find a good excuse for it.

A man is seldom more mistaken than when he thinks nobody sees him. He is generally found out to be what he really is.

The best victories are those that are least bloody—those that, though achieved by the hand, are managed by the head.

There is no better reward than the approval of our own conscience. It is worth more than all others together.

There is no such thing as perfect happiness in this world, but there is such a thing as coming very near it.

Keep the horrors at arm's length. Never turn a blessing round to see whether it has a dark side to it.

If a man could only look at himself with a sober eye when he is drunk, he would never drink again.

All that distinction can do for a very weak man is to make his weakness more prominent.

Beauty and brains rule the world, and most of all when they sit on the same throne.

We owe to nature what we are capable of being, and to ourselves what we are.

He who envies me, makes my virtue his vice, and my happiness his torment.

To be truly generous is never to make a boast of the actions you have done.

Let us not burden our remembrances with a heaviness that's gone.

Many an event in life, when viewed in the future, looks impossible.

A wise man will desire no more than what he may get justly, use soberly, distribute cheerfully, and live upon contentedly.

The more honesty a man has the less he affects the air of a saint; the affectation of sanctity is a blotch on the face of piety.

There are some persons from whose conversation we retire with the thorough conviction of the existence of a vacuum.

Reflection is a flower of the mind, giving out wholesome fragrance; reverie is the same flower, when running to seed.

Labor, honest labor, is right and beautiful. Activity is the ruling element of life, and its highest relish.

There is no greater evidence of a shallow mind than to court attention by a display of eccentricity.

If you wish that your own merits should be recognized, recognize the merits of others.

Hang the sweetest grass round a pig's neck, it will still go and wallow in the mire.

Silence is the best cure for anger. If you say nothing you will have nothing to unsay.

We always overrate the happiness of others, and underrate the means of our own.

Whatever multiplies the ties that bind man to man makes him better and happier.

It costs us more to be miserable than would make us perfectly happy.

It is safer to be humble with one talent than to be proud with ten.

Example moves more than homily, though it is less clamorous.

The nearer equal woman can become to man the better for both.

If thou hast wit and learning, add to it wisdom and modesty.

Individual improvement is the only remedy for social evils.

How short life would be if hope did not give it extent.

Increase of knowledge is a victory over idleness.

He who acts naturally seldom acts ridiculously.

MISCELLANY.

GREAT WORKS IN OLDEN TIMES.—Wendell Phillips thinks the ancients attained perfection in some arts, the knowledge of which has been lost in our time. It is certain that those most familiar with steam power and modern machinery are puzzled to explain how the grand structures of the ancient world were erected. Builders say that no modern contractor could erect the great pyramid in Egypt, and lift the gigantic stones at the summit to the height of four hundred and fifty feet. A recent visitor to Baalbec, and the ruins of the great temple of Baal, doubts if any modern architect could rebuild the temple in its ancient grandeur. Three huge stones, sixty-four feet long, thirteen high and thirteen wide, stand in the wall at the height of twenty feet. Nine other stones, thirty feet long, ten high, and ten wide, are joined together with such nicety that a trained eye cannot discover the line of structure. A column still stands in the quarry, a mile distant, which is completed, with the exception that it is not detached at the bottom. It is sixty-nine feet long, seventeen high, and fourteen broad, and one cannot understand how it can be separated at the bottom from the quarry without breaking. The ruins of this vast temple inspire respect for the genius of former years.

ENVELOPES.—Years ago an enterprising English stationer tastefully dressed his show-window with piles of writing paper, rising gradually from the largest to the smallest size in use; and, to finish his pyramids off nicely, he cut cards to bring them to a point. Taking these cards for diminutive note-paper, lady customers were continually wanting some of "that lovely little paper," and the stationer found it advantageous to cut paper to the desired pattern. As there was no space for addressing the notelets after they were folded, he, after much thought, invented the envelope, which he cut by the aid of metal plates made for the purpose. The sale increased so rapidly that he was unable to produce the envelopes fast enough, so he commissioned a dozen houses to make them for him, and thus set going an important branch of the manufacturing stationery trade.

THE world has never yet deserted that man who stood by himself.

TREATMENT OF WOMEN.—From the fall of the Roman empire in the West to the fourteenth or fifteenth century, women spent most of their time alone, almost entirely strangers to the joys of social life; they seldom went abroad, but to be spectators of such public diversions and amusements as the fashions of the time countenanced. Francis I. was the first who introduced women on public days to court; before his time nothing was to be seen in any of the courts in Europe but gray-bearded politicians, plotting the destruction of the rights and liberties of mankind, and warriors clad in complete armor, all ready to put their plots into execution. In the thirteenth and fourteenth centuries elegance had scarcely any existence, and even cleanliness was hardly considered as laudable. The use of linen was not known, and the most delicate of the fair sex wore woolen underclothing. In Paris they had meat only three times a week; and ten pounds was a large "portion" for a young lady. The better sort of citizens used splinters of wood and rags dipped in oil instead of candles, which in those days were a luxury rarely to be met with. Wine was only to be had at the shops of the apothecaries, where it was sold as a cordial; and to ride in a two-wheeled car, along the dirty streets, was reckoned a grandeur so enviable that Philip the Fair prohibited the wives of citizens from enjoying it. In the time of Henry VIII. of England, the peers of the realm carried their wives behind them on horseback when they went to London, and in the same manner took them back to their country-seats, with hoods of waxed linen over their heads, and wrapped in mantles of cloth to secure them from the cold.

AN IRON SPRING.—An Englishman says that no other people in the world, so far as he knows, can equal the Arkansians in off-hand exaggerations.

"Do you see that spring over there, stranger?" said one of them to him.

"Yes," said he.

Whereupon the settler added—

"Well, that's an iron spring, that is, and it's so mighty powerful that the farmers' horses about here that drink the water of it never have to be shod. The shoes just grow on their feet nat'rally."

MISS FLINT'S BOTTLE.

Poor Miss Flint! Some one had prescribed whisky as a lotion for some little ailment to which she had confessed, and she had felt, as she said, that it was "just the thing;" but as for buying it, that was out of the question.

Gulliver village was such a place for questions. And what a dreadful thing it would be if she, Miss Tabitha Flint, were to be suspected of whisky drinking at her time of life, and after being one of the praying band.

"As for saying it was to bathe with, you know, my dear, the druggist would never believe that," said Miss Flint. "It's the regular excuse of people who have taken to the bottle. And I couldn't get brother Absalom to buy it because he has sworn to touch not, taste not, handle not; and he wouldn't buy lemon flavoring for the *blanc mange* because he said the basis was probably alcohol. And yet I should like to try it for those rheumatic pains in my elbow."

"I'll tell you what to do, my dear," responded the friend to whom Miss Flint confided her trouble. "Come down to New York and spend the day with me next Monday, and I'll give you a flat bottle full that you can put into your reticule and no one ever be the wiser. Now, I've fixed things, haven't I?"

"Oh, yes. How kind of you to think of it!" said Miss Flint. "But you don't know what a place Gulliver is. Indeed you don't."

"Oh, I do," replied the friend. "Well, good-by. I'll expect you Monday," and away she went, hurrying out of the depot to catch the train that had just stopped there on its way cityward.

And the end of this invitation was that Miss Flint paid the visit and received from her friend a nice little black bottle full of whisky, which she was to heat and apply to her shoulder with flannel every night. Thus furnished, and holding her large black reticule very carefully in both hands, Miss Flint proceeded to take a car which would convey her, as nearly as possible, to the depot.

Now the car she entered was a little "bob-tailed" one, with a box at the end in which passengers might deposit their fare, since there was no conductor. Miss Flint being aware of this proceeding, at once dropped her five-cent piece into its proper receptacle, and then deposited herself in a seat near by. The car was rather full of passengers, and amongst them, next to Miss Flint, sat an individual who was fast asleep. Not so fast, however, but that Miss Flint's entrance aroused him. As she seated herself beside him he looked up, straightened himself, gaped, and, fixing his eyes full upon the pale blue orbs of Miss Flint, remarked:

"I say, old lady, gimme something to drink."

Now, it is rather embarrassing for a lady who fondly believes that her nut-brown invisible quite conceals the ravages of time, to be addressed as "old lady" before strangers, but at any other time the request for "a drink" would only have proved to Miss Flint the stranger's evil habits. Now, conscious of the bottle in her reticule, she suddenly blushed scarlet and clutched her bag still tighter.

The tipsy man continued: "Something to drink—hear me. Gimme something to drink; I know you've got it about you."

"Please to go away, sir," said Miss Flint; "I don't know you—I don't want you to talk to me."

"Don't know me?" squealed the tipsy man. "Don't know me? You're my grandmother. You've got your bottle in your bag. Take it out and give me a drink."

"Let me get out," Miss Flint cried, pulling frantically at the wrong strap, and rushing toward the door. The car did not stop. Its driver had received no signal, and as Miss Flint stood trembling on the platform, the tipsy man, stumbling to his feet, reeled after her. Miss Flint jerked the strap again—this time the right one—and before the car had quite stopped, tried to step off. The result was that the next moment Miss Flint and the tipsy man tumbled into the road together, each clutching at a handle of the brown reticule in which the bottle was concealed. There, with her bonnet on one side, her mantilla hanging down her back by a pin, and half the lower flounce torn off her dress, Miss Flint still tugged at the handle of the reticule, caring for nothing save to conceal from the public that she was carrying about with her a well filled whisky bottle.

"Give me my bag, if you please, sir," she kept repeating at intervals. "Give me my bag. You ought to be ashamed of yourself."

Meanwhile a crowd collected.

"What's the matter, ma'am?" asked a matron with a basket.

"He won't—give me—my bag," gasped Miss Flint, between the jerks.

"It's my grandmother," declared the tipsy man, "and I want my bottle out of her bag."

"Give it to him and stop the row," advised a butcher's boy.

"Howld on to it, ma'am. He's had quite enough. You're in the right," advised another female bystander.

"I aint—his—grand—mother," panted Miss Flint. "Owl owl owl!" for at this moment the bag parted in twain. The tipsy man fell on one side, Miss Flint on the other, and the bottle crashing down on the pavement between them, shivered to pieces, drenching Miss Flint's whole person with whisky.

The next moment a big hand caught Miss Flint's arm, and she found herself dragged along the street by a policeman, followed by a mob of idlers and vagrants.

Poor Miss Flint was dragged into the station house, in company with her tipsy assailant, and there charged with being drunk and disorderly. How it was that she didn't die, Miss Flint never knew, but the fact is that she lived through it and contrived to tell her tale to a magistrate not too stupid to believe it, although he did inquire:

"And how, ma'am, did this fellow know that you had whisky in your bottle?"

"He didn't know it," sobbed poor Miss Flint. "It was just a dreadful coincidence; but, oh, believe me, Mr. Judge and jury, I had no more intention of drinking it than you would have. I'm no more given to it than you are, Mr. Judge and jury. I had it given me to bathe my shoulder with, hot with a flannel. Oh, no more than you would I taste it, sir."

The magistrate, a very portly man with a very red nose, looked as hopefully temperate as possible, and gallantly declared the arrest of this excellent and worthy lady a shameful mistake, reprimanded the policeman, committed the tipsy man, and sent Miss Flint to the depot in a cab with a policeman in plain clothes, by way of escort and protector.

Things might have been worse, for Miss Flint was neither clubbed nor locked up for the night, "which has often occurred" to persons quite as innocent. But never while she lives will the memory of that awful time vanish from Miss Flint's mind, and she is still engaged in taking tea with her friends for the purpose of explaining how it was she came to have a bottle of whisky in her reticule.

VALUABLE RECIPES.

LIQUID GLUES.—Take of gum shellac three parts, caoutchouc (india-rubber) one part, by weight. Dissolve the caoutchouc and shellac in separate vessels, in either free from alcohol, applying a gentle heat. When thoroughly dissolved, mix the two solutions, and keep in a bottle tightly stoppered. This glue is called marine glue, and resists the action of water both hot and cold, and most of the acids and alkalis. Pieces of wood, leather, or other substances, joined together by it, will part at any other point than the joint thus made. If the glue be thinned by the admixture of either, and applied as a varnish to leather, along the seams where it is sewed together, it renders the joint or seam water-tight, and almost impossible to separate.

DIAMOND CEMENT.—For joining broken glass, china, &c. Dissolve 1 ounce pulv. mastic in a little alcohol, and 1 ounce of isinglass that has been steeped in water until soft, also in alcohol, then mix the two alcoholic solutions, and add 2 drachms of very finely powdered gum ammoniac. Put it in a gentle heat by a water bath until they become amalgamated, then pour into long half ounce phials and cork well. When it is to be used, place a phial of it in warm water, and warm the fragments, apply the cement, and press the pieces closely together and set aside for 12 hours.

TO PREPARE WATER-PROOF BOOTS.—Boots and shoes may be rendered impervious to water by the following composition: Take 3 ounces of spermaceti, and melt in an earthen vessel over a slow fire; add thereto 6 drachms of India rubber, cut in slices, and these will presently dissolve. Then add tallow, 8 ounces; hog's lard, 2 ounces, amber varnish, 4 ounces. Mix, and it will be fit for use immediately. The boots, or other materials to be treated, are to receive two or three coats with a common blacking brush, and a fine polish is the result.

TO KILL COCKROACHES.—An infallible means of destroying cockroaches and beetles, is to strew the roots of black hellebore on the floor at night. Next morning vast quantities will be found dead or dying, for they never fail to eat the poisonous plant when they can get at it. Black hellebore can be had at any herb shop, and care should be taken while it is used, as it is a deadly poison.

COPYING-INK.—Take two gallons of rain-water, and put into it $\frac{1}{2}$ pound of gum arabic, $\frac{1}{4}$ pound brown sugar, $\frac{1}{4}$ pound clean coppers, $\frac{3}{4}$ pound powdered nut-galls. Mix and shake occasionally for ten days, and strain. If needed sooner, let it steep in an iron kettle until the strength is obtained.

BOILS.—The best remedy for boils is water of a temperature agreeable to the feeling of the patient. Apply wet linen to the part affected, and frequently renew or moisten it. It is said to be the most effectual remedy known.

HOW TO TREAT FROST-BITES.—If any part of the body gets frozen, the very worst thing to do is to apply heat directly. Keep away from the fire. Use snow if you can get it; if not, use the coldest possible water.

LIP SALVE.—Melt 1 ounce White Wax, 1 ounce Sweet Oil, 1 drachm Spermaceti, and throw in a piece of Alkanet Root to color it, and, when cooling, perfume it with Oil Rose.

CREAM OF LILIES.—Best White Castor Oil, pour in a little strong solution of Sal Tartar in water, and shake it until it looks thick and white. Perfume with Lavender.

A VALUABLE TABLE.—A box 24 inches by 16 inches square and 22 inches deep, will contain a barrel.

A box 24 inches by 16 inches square and 11 inches deep, will contain half a barrel.

A box 16 inches by 16.8 inches square and 8 inches deep, will contain one bushel.

A box 12 inches by 11.2 inches square and 8 inches deep, will contain half a bushel.

A box 8 inches by 8.4 inches square and 5 inches deep, will contain one peck.

A box 8 inches by 8 inches square and 4.2 inches deep, will contain one half peck.

A box 7 inches by 4 inches square and 4.8 inches deep, will contain half a gallon.

A box 4 inches by 4 inches square and 4.2 inches deep, will contain one quart.

WINDSOR AND CASTILE SOAP.—To make the celebrated Windsor soap, nothing more is necessary than to slice the best white soap as thin as possible, and melt it over a slow fire. Take it from the fire when melted, and when it is just lukewarm, add enough of the oil of caraway to scent it. If any other fragrant oil is liked better, it may be substituted. Turn it into moulds, and let it remain in a dry situation for five or six days. To make Castile soap, boil common soft soap in lamp oil three hours and a half.

A KIND OF TRACING PAPER, which is transparent only temporarily, is made by dissolving castor-oil in absolute alcohol and applying the liquid to the paper with a sponge. The alcohol speedily evaporates, leaving the paper dry. After the tracing is made, the paper is immersed in absolute alcohol, which removes the oil, restoring the sheet to its original opacity.

INDELIBLE INK.—With the preparation. Dissolve 1 drachm lunar caustic (nitrate of silver) in 5 drachms of water, and add 1 drachm of mucilage gum Arabic—for the ink. Put in the large bottle for the preparation a solution of gum Arabic and 5 grains of soda, dissolved in each bottle of it.

ROSE WATER.—Preferable to the distilled for a perfume, or for culinary purposes.—Otto of Rose, 12 drops, rub it up with half an ounce of White Sugar and 2 drachms Carbonate Magnesia, then add gradually 1 quart of water, and 2 ounces of Proof Spirit, and filter through paper.

OX MARROW POMATUM.—Melt 4 ounces Ox Marrow, 1 ounce White Wax, and 6 ounces of Lard. Perfume when cooling with Oil Bergamot.

COLOGNE WATERS.—Oil Garden Lavender, 2 drachms, Oil Rosemary, $1\frac{1}{2}$ drachms, Orange, Lemon and Bergamot, each 1 drachm, Essence Musk, 2 drachms, Proof Spirit, 1 pint.

LAVENDER WATER.—Oil of English Garden Lavender, 6 drachms, Bergamot and Essence Musk, each 1 drachm, Cinnamon, 2 drops, Otto Rose, 8 drops, Proof Spirit, $1\frac{1}{2}$ pints.

TOOTH POWDER.—Pulv. Pmnic Stone, Pulv. Orris, each 1 ounce, Pulv. Myrrh and Armenian Bole, each half ounce, Prepared Chalk, 4 ounces, Oil Cinnamon, 5 drops.

FLORIDA WATER.—Oils Rosemary, 2 drachms, Lemon, half drachm, Proof Spirit, half pint. Color it a light yellow with a Tincture of Safron.

TRACING PAPER.—By weight, Spirits of Turpentine, 6, Resin, 1, Boiled nut-oil, 1. Use with a soft brush or sponge.

ESTABLISHED 1833.

ISAAC C. CHAPMAN,

Wholesale and Retail

DRUGGIST,

AND DEALER IN

Garden, Field and Flower Seeds.

Proprietor of

Chapman's Grecian Hair Restorer,

Chapman's Scotch Cough Mixture,

Chapman's Honey & Tar Cough Mixture,

Chapman's Bronchial Troches,

Chapman's Worm Confections,

Chapman's Horse & Cattle Powder,

III WATER STREET,

NEWBURGH, N. Y.