THE REVOLUTIONS, DISTANCES, \&c., OF THE PLANETS.


## THE MOON.

Every object on the surface of the Moon of the height of one hundred feet has been distinctly
seen through Lord Rosse's telescope. On its surface are craters of extinct volcanoes, rocks, and masses of stone innumerable. But there are no signs of habitations; no vestige of architectural remains, to show that the Moon is inhabited by a race of mortals similar to ourselves. No water is visible, no sea, no river.
The beautiful art of photography seems likely to be of much utility in conducting us to a more accurate knowledge of the physical constitution of the Moon. There is to be seen at the Royal Observatory, Greenwich, a photographic image of the Moon in her first quarter, which was taken with the great refracting telescope of the Uambridge Observatory, Massachusetts, U.S. At a late meeting of the British Association, Professor Phillips exhibited several intefesting specimens of the same kind, taken with a telescope of eleven foot focal length. With the magnificent reflecting telescope of Lord Rosse, it will be possibl to obtain a photographic flagge of the Moon, which, under a magnifying eye-glass, will exhibit the surface of that body as if it were viewed with the naked eye at the distance of twenty-four miles ! Under such a condition, an object of the size of an ordinary house would be distinctly visible.

## NETS.

Discoverer

Hind.
Hind. Hind. Ollers Hind. Graham. Heneke. De Gasparis. Hind. M.Chacornae, Luther. Hencke.
De Gasparis. Hind. Goldemicht. De Gasparis, Harding. Hind.
Piazzi.
Olbers.
De Gasparis.
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De Gasparis, De Gasparis. M.Chacornae. Luther.
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## THE PEOPLE'S

## A L M A N A C K

FOR

## 1855 :

CONTAINING MATTERS NECESSARY TO BE KNOWN BY ALL CLASSES OF PERSONS THROUGHOUT THE YEAR.


MONTREAL:
J. MILNE, AT THE DEPOSITORY OF THE RELIGIOUS TRACT SOCIETY.


## THE BRITISH EMPIRE.

Extent.-The dominions subject to the Crown of England rival the mightiest empires in ancient history.

In Europe, there are England, Wales, Ireland, Scotland, and the adjacent islands ; Heligoland, Gibraltar, Malta, and the Ionian Islands.

In Asia, Aden on the coast of Arabia; the three Presidencies of Bengal, Madras, and Bombay, in the East Indies; the island of Ceylon; Penang and Singapore ; Tavoy and other aistricts in Burmah ; and Hong-Kong in China.

In Africa, Sierra Leone, Cape Coast Castle; Gambia, Cape Colony, Natal, St. Helena, Mauritius, $A$ scension Island, and the Seychelles.

In America, Canada, New Brunswick, Nova Scotia, Cape Breton, the Hudson Bay Settlements, Prince Edward's Island, Newfoundland, Bermudas, the West India Islands, British Guiana, Belize, and Falkland Islands.

In Oceania, Sarawak and Labuan, Australia, Van Diemen's Land, New Zealand, and the Auckland Islands.

The population of Great Britain and Ireland is $27,019,578$. The whole population of the British Empire is estimated at $130,000,000$.


WINDSOR CASTLE AND PARK.
Royal Family.-Queen Victoria, born May 24, 1819; married Feb. 10, 1840, to her cousin, Prince Albert of Saxe Coburg, born August 26, 1819; and has issue:Victoria Adelaide Mary, b. Nov. 21, 1840. Albert Edward, Prince of Wales, b. Nov. 9, 1841. Alice Maud Mary, b. April 25, 1843. Alfred Ernest, b. Aug. 6, 1844. Helena Augusta, b. May 25, 1846. Louisa Carolina, b. March 18, 1848. Arthur William Patrick, b. May 1, 1850. Leopold George, b. April 7, 1853.
Royal Princes and Princesses.-George, King of Hanover, b. May 27, 1819; George, Duke of Cambridge, b. Mar. 26, 1819 ; Princess Augusta of Cambridge,b. July 19, 1822 ; Princess Mary, b. Nov. 27, 1833; Mary, Duchess of Gloucester, b. April 25, 1776. Her Majesty's Mother.-Victoria Maria, Dow. Duch. of Kent, b. Aug. 17,1786.


| D. |
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## .

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| 2 | $\underset{\mathrm{~F}}{\mathrm{~F}}$ | Candlemas Day |
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| 3 |  |  |

3 S
$4 \underset{5}{3}$
5 M
6 Tu Richard Lander, African traveller, d. 1834
7 W
8 TH Half Quarter
9 F Bishop Hooper, martyr, burned, 1555
10 S Marriage of Q. Victoria and P. Albert, 1840
$11 \mathfrak{D}$ Sexagesima S. There is none righteous, no, not one,
12 M Lady J. Grey beheaded, 1554
[Rom, iii. 10
13 Tv
14 W Captain Cook, navigator, killed, 1779
15 Th Dr. Gillies d. 1836
16 F Melancthon b. 1497
17 S Michael Angelo, architect and painter, d. 1564
$18 \mathscr{\mathcal { D }}$ Quinquagesima, or Shrove S. He is gracious and
19 M
[merciful, Joel ii. 13
20 Tv Shrove Tuesday
21 W Ash Wednesday. Robert Hall d. 1831
22 Tr George Washington, American President, b, 1732 23 F
24 S St. Matthias. Fulton d. 1815
25 s 1 S. in Lent. He that glorieth, let him glory in
26 M
[the Lord, 1 Cor. i. 31

| Frbruary | SUN RISES. |  |  |  |  | SUN SEETS. |  |  |  |  | MOON. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 7 | 13 | 19 | 25 | 1 | 7 | 13 | 19 | 25 | Full. | Last Qr. | New. | First Qr. |
|  | $\frac{\mathrm{hm}}{7}$ | hm | hm | h m |  |  | hm |  |  |  | Feb. hm | $\overline{\text { Feb. } \mathrm{h} ~ \mathrm{~m}}$ | Peb. h m | Feb, h |
| Greenwleh Edintrurgto | 741 759 | 780 746 | 720 733 | ${ }_{7} 79$ | ${ }^{6}{ }^{656}$ | 4 <br> 4 <br> 4 <br> 48 <br> 2 | 457 441 | 3 <br> 8 <br> 45 <br> 4 | (1200 | 3  <br> 3  <br> 5 31 <br> 20  |  | $\begin{array}{llll}10 & 3 & 0 \mathrm{~m} \\ 10 & 247\end{array}$ |  |  |
|  | ${ }_{5}^{7} 54$ | ${ }^{7} 896$ | ${ }_{535}^{733}$ | 7 7 3 40 | ${ }_{5}^{7} 46$ | ${ }_{7}{ }^{2} 4$ | ${ }_{6} 59$ | ${ }_{6}^{453}$ | 5 <br> 68 <br> 648 | S 6.40 | 2 <br> 2 <br> 8 | 10 10.47 | ${ }_{17}^{16}{ }^{17} 838 \wedge$ |  |
| Melbourne | 515 | ${ }^{3} 22$ | ${ }_{5} 88$ | 335 | 542 | 7 15 | ${ }^{7} 6$ | 70 | ${ }_{6}^{6} 43$ | 644 | ${ }_{2}^{2} 18180 \hat{A}$ | $10{ }^{0} 30{ }^{\text {A }}$ | 1729 m | 24313 |
| Mentreal. | 724 | 716 711 | 77 | 638 653 | 648 645 | 54 | 312 517 | 5 | 530 533 | 538 541 | ${ }^{1} 1047 \mathrm{~A}$ | 910 6A | (16 11154 mm | \%38 |

Dates of Political Events, Discoveries, Inventions, etc.

1, First vessel with settlers reached New Zealand, 1840. -3 , Union of the Canadas, 1841.-4, French war declared, 1793. Great Frost and Fair on the Thames, 1814.-5, First London Gazette published, 1666.Cession of New Zealand to Great Britain, 1840.-6, Printing discovered, 1436.-13, First trading expedition to India, 1601.-15, National Debt com. 1697. Trial of Warren Hastings began, 1788.-17, Battle of Scinde, 1843. - 20, All grain admitted into British ports duty-free, 1846.-21, sikhs defeated, 1849.-23, Catostreet conspiracy discovered, 1820.-24, Louis Philippe abdicated, 1848. 25, Great eclipse of sun, total darkness, 1598.
Fbbruary reseived its name from Februalia, a feast of purifications held by the Romans in this month, by which the people were supposed to be cleansed from the sins of the whole year. It corresponds to ADAR, (Ezra vi. 15,) the sixth civil, and twelfth sacred, month of the Jews.

23 W Ember Week

## THE COLONIES.-EMIGRATION.

The number of emigants to the North American Colonies in 1853 was $34,522$.

## Canada.

Demand for Labour.-The Chief Agent for Immigration at Quebec, under date of January 14, 1854, reports that Canada never offered greater encouragement to emigrants of all classes than at this time; and that all those of the labouring class disposed to emigrate are certain of finding steady and profitable employment.

Wages.-Labourers, not less than from $3 s .6 d$. to $4 s$. sterling per day. Masons and carpenters from $6 s$, to $8 s$. sterling per day; bricklayers $4 s$, to $6 s$. Tailors and shoemakers about 4s. In Upper Canada the wages are about 10 per cent. higher.

Price of Provisions.-Fresh beef and mutton, $3 d$. to $4 d$. per lb ; salt beef $2 \frac{1}{2} d$. to $3 \frac{1}{2} d_{.}$; cheese, $6 \frac{1}{2} d_{\text {. }}$; eggs, $8 d$. per dozen; potatoes, 2 s . 6 d . per bushel ; best wheaten bread, $8 d$. for a four-pound loaf; tea, $2 s$. per 1 lb .; sugar, $5 d$. per 1 lb .; mill, $3 d$. per quart. Provisions are rather cheaper in Upper Canada.

Sale of Lands.-Crown lands range from 1s. to 7s. 6d. per acre. Emigrants desirous of purchasing these lands in Upper or Lower Canada, may obtain the fullest information as to the price and quality of the lands for sale by applying to the Government land agents appointed for the several municipal districts.

Cost of Passage.-To Quebec, including provisions, cabin, 12l. to 201.; intermediate, 77 . to $10 l$. ; steerage, $5 l$. to $6 l$. Children under 14 , half the price of adults. Infants under 12 months, no charge. Length of passage, 40 days. May is the best time to arrive in the colony.

## Australia.

The number of emigrants to the Australian colonies in 1853 was 61,401 .
Demand for Labour.-Steady men thoroughly acquainted with the various work required on a farm, are sure of finding employment at good wages. Good blackamiths, wheelwrights, and carpenters, can hardly fail to do well. Female domestic servants arè also much wanted. Young men of no particular business, and without capital, are almost certain to fail in procuring suitable employment. hose accustomed to live in towns, such as weavers, etc., are ill adapted for the colonies. Those who emigrate in quest of salaried situations in public or private employment are usually disappointed.

Wages.-Agricultural labourers at New South Wales and Western Australia, 25l. to 30l. per annum, with board and lodging; Victoria, 50l. ; South Australia, 45l. to 70l. Bricklayers, 20s. a-day; carpenters, 14s. to 26 s . ; tailors, 9 s . to 12 s .; shoemakers, 12 s . Domestic servants $15 l$. to 400 . per year.

Sale of Lands.-Land is divided into town, suburban, and country lots, and may be bought or held on lease, at rates which vary exceedingly.

Gold Fields and Licenses.-By law all mines of gold and all gold in its natural place of deposit, whether on the lands of the Crown or of private individuals, belong by prerogative to the Crown. Whoever takes away gold metal, or ore containing gold, is liable to punishment. In New South Wales, all persons digging for gold, pay a monthly license-fee of 30 s., which entitles a gold digger to work a "claim" comprising from 15 to 60 feet of the bed or frontage of a stream. or on a flat 20 feet square. In Victoria the fee is reduced to 40 s . a quarter.

D. D.

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SUNDAYS, PARTICULAR DAYS, AND BIOGRAPHICAL DATES.

Dates of Political Events, Discoveries, Inventions, etc.
1 TH St. David.
2 F John Wesley, theological writer, d. 1791
3 S
$4 \approx 2 \mathrm{~S}$. in Lent. Let us walk in the light of the Lord, 5 M
6 Tu
[Isa. ii. 5
7 W
8 TH
9 F
10 S
11 or BSi is paint 1820
12 M
13 Tu
14 W
15 TH
16 F
17 S St. Patrick. Dr. Chalmers, theologian, b. 1780
$18 \mathfrak{F} 4$ S. in Lent. Prs. Louisa b. 1848. The Lord
19 M
20 Tu Sir Isaac Newton, philosopher, d. 1727
21 W Cranmer burned 1556. Abp. Usher d. 1656.
22 Th Goethe, German poet, d. 1832 'Southey d. 1843
23 F Weber, musical composer, d. 1829
24 S Queen Elizabeth d. 1603
$25 \mathcal{B} 5$ S. in Lent. Lady Day. By grace ye are saved,
26 M Duke of Cambridge b. 1819
27 Tu James I. d. 1625
28 W General Abercromby d. 1801
29 Th Charles Wesley, poet and divine, d. 1788
30 F Dr. Hunter, physician, d. 1783
31 Seethoven, musical composer, d. 1827
[Eph. ii. 5


## EMIGRATION - continued.

Cost of Passage to Australia.-Varies from 35l. to 50l., according to accommodation required. Length of passage about four months.
*** Persons who contemplate emigrating should obtain the "Colonization Circular" issued by Her Majesty's Colonial Land and Emigration Commissioners, who forward it on the receipt of five postage stamps; or it may be had of the booksellers, price $3 d$.


SYDNEY.
Government Emigration Officers.-Officers of great experience are appointed to give gratuitously information as to the sailing of ships and means of accommodation, and to see that all agreements between ship-owners and emigrants are duly performed. They also see that passenger vessels are sea-worthy, that they have on board a sufficient supply of provisions, etc.

They attend at their offices (London, 70, Lower Thames Stret ${ }^{2}$; Liverpool, Stanley Buildings), on every week day, and afford all the assistance in their power to protect emigrants against imposition, and to obtain redress where oppression has been practised on them. There are also officers at the chief seaports in Great Britain. Government Immigration agents are in the colonies to render every assistance in their power to emigrants on their arrival.

Outfit, etc.-Plenty of linen and warm clothing for the voyage; as little heavy baggage, and as much meney as possible, No goods on speculative investments. There are plenty of mercantile firms with whom a stranger cannot compete. A workman should take his tools. No wooden furniture. A family may take linen, plated goods, and knives and forks, if they have them.

Letters of Credit, payable in the colony, may be obtained from the Bank of Australasia, 8, Austin Friars; Union Bank of Australia, 38, Old Broad Street; South Australian Bank, 54, Old Broad Street.

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## WONDERS OF THE HEAVEN.

Solar System.-The Sun is the source of light and heat to the planets which form our solar system. Its diameter, or measure through the centre, is 833,000 miles ; its bulk is $1,384,000$ times greater than the earth--Mercury is the nearest planet to the sun, and yet it is about $37,000,000$ miles from it. Its year consists of about 87 days, which is the length of time the planet takes to revolve round the sun. It is only one-sixteenth part of the bulk of the earth.-Venus is the most brilliant of all the planets. The light and heat it receives from the sun are nearly twice as great as that received by the earth.-Mars is about half the size of the earth, and its year consists of about 686 days.-Vesta, Juno, Ceres, and Pallas, are small planets, discovered within the last half century.-Jupiter has four moons which revolve with it around the sun.-Georgium Sidus has six satellites or moons, it performs its revolution in about 84 years, and receives from the sun only 1-3000th part of the quantity of light and heat enjoyed by our world.-Saturn is, in bulk, 995 times that of the earth; it has seveu moons, and is also surrounded with a double or treble ring. About 24 other planets have been discovered as belonging to our system, the most remote of which, Neptune, is $3,600,000,000$ miles from the sun, and is 60,128 days or 164 years 227 days in performing its revolution round the sun.

The Fixed Stars.-The fixed stars are suns, having numerous planets revolving round them. They are computed by millions. The nearest of these fixed stars to our system is called Sirius, and is distant from our sun about twentytwo billions of miles.

The Nebule.-These are whitish spots, like thin clouds or vapours, which appear larger and brighter when seen through a telescope. They are found to be combined light from a great number of stars clustered together, as they appear to us, but, without doubt, many millions of miles apart from one another. Fifty thousand stars or suns have been noticed to pass before the glass of a telescope in one hour, and that only embraced a very small portion of the single cloud of wonders called the " milky way." It has been supposed that eighteen millions of stars might be seen with a forty-feet reflector-telescope in the milky way alone. Sir John Herschel observed numerous forms of nebulæ, some looking like bunches of grapes, others like bees swarming, others again like wisps or tails, whilst one was the shape of an hour-glass. Some of the stars were of a bright blue, and others of a green, red, and yellow colour.
If we could wing our way to the highest star within the range of our telescopes, we should, it is believed, see other skies spread out to our view, other suns shedding the beams of day, other stars sparkling at night, and other systems cast in abundant profusion through boundless space.

In the view of the glories of the heavens, let us be humble whilst we are filled with wonder, and adore the great Creator. We may be ready to cry, "Lord, what is man that thou art mindful of him?" Yet we know that He who "stretches out the heavens as a curtain, and spreadeth them out as a tent to dwell in," has looked in mercy upon a world which has become a scene of guilt and rebellion. To restore and save it he has sent his only begotten Son into it, "that whosoever believeth on him might not perish, but have everlasting life." "Herein is love!"


## THE FARM.

The Use of Lime.-The value of Dr. Liebig's great discovery of dissolving bones in sulphuric acid for the purposes of manure, has been clearly established by experiments of various kinds. Crops of wheat, turnips, clover, etc., have been increased by its use from 50 to 100 per cent.

Feeding of Catile.-The following table gives the relative quantity of sustenance in a few oi the principal articles of provender.
One hundred pounds of hay are equal to the following quantities of other provender :- 275 lbs . of green Indian corn, 442 lbs . of rye straw, 164 lbs . of oat straw, 153 lbs . of pea straw, 201 lbs . of raw potatoes, 175 lbs . of boiled potatoes, 239 lbs . of mangel-wurzei, 504 lbs . of turnips, 54 lbs . of rye, 46 lbs . of wheat, 59 lbs . of oats, 45 lbs . of beans, 64 lbs . of buckwheat, 57 lbs . of Indian corn, 68 lbs . of acorns, 105 lbs . of wheat bran, 109 lbs . of rye bran.


Hay-Ricks.-Ricks may be protected from the depredations of birds by sticking into them spars smeared with coal-tar, and haybands also rubbed with it, over the sides and tops of the stacks.

Horse-radish.-Horse-radish should be grown for cattle. It is as good a condiment for them as it is for man. Give it to any animal to cure loss of appetite. If they will not eat it, chop it up fine, and mix it with chopped potatoes or turnips, or with meal.

The Soil.-It is believed by observers of nature, that plants do no injury to the soil while they are producing their stems and leaves, but that it is only when the blossom and seed require more nutriment that the plants exhaust the soil.


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## THE GARDEN.

The Cottager'd Hot-bed Light.-Make a slight frame of two or three inches width to the size of a box, and tie across it strings dividing it into squares of about fifteen inches; paste together sheets of cartridge paper or newspaper sufficient to cover the whole, then paste and afterwards tack this to the outside of the light frame, letting it rest upon the strings. When perfectly dry, take a brush or sponge, and saturate the paper with linseed oil, which, when dry, will afford a congenial light to cucumbers, or even melons; retain the heat of the bed, draw the sun, and yet throw off the rays, and resist the weather for at least one season. Melons grown under such a light have carried the first prize for flavour and precocity at horticultural shows. Its economy is obvious.

Peas and Beans.-The peas which will best suit the purposes of the cottager are the Charlton, Blue Prussian, Dwarf Marrowfat, and Knight's Dwarf Marrow. Dig the ground well, draw drills about four inches wide, the same depth, and three feet apart. Sow the peas moderately thick, and cover them neatly. The best sort of beans are the Maragon, Windsor, and Long-pod. They should be planted, like peas, in drills, and dropped at three inches distance from one another.

To Destroy Deep-rooted Weeds.-Cut off the top of the root with the corner of a hoe, and sprinkle thereon a few grains of common salt; and, such is the effect of the saline partieles upon that part of the root remaining in the ground, that it decays in a short time, and is no longer troublesome.
Planting of Potatoes.-Seed potatoes should be selected from the largest kinds, especially if the soil be deficient in richness, for this reason-because then the bud will be provided with a stock of nutriment while germinating from its own set. If the sets be cut a fortnight or three weeks before planting, and laid in a warm, dry place, they will undergo a change that is favourable to the vigour of their early growth.
Apple Trees.-In the month of June, little patches of a downy white may be observed on the branches of the apple tree: here is the American bug. To destroy it, mix clay with water, so that it may be put on the affected parts of the tree with a mason's trowel, or a large brush.

Soap-suds.-This liquid, so commonly thrown down the drain, if applied occasionally to the roots of vines, fruit-trees, etc., greatly increases their vigour.
Sparrows do more good than harm in a fruit-garden, and the shots that are intended for their destruction much more harm than good; as any man of observation may see in the mutilated bark of fruit-trees on the one hand, and the insectivorous propensities of the sparrow on the other.

To Destroy Insects on Fruit-Trees.-Make a strong decoction of tobacco and the tender shoots of elder, by pouring boiling water on them, then sprinkle your trees with the same (cold) twice a week, for two or three weeks, with a small hearth-brush, which will effectually destroy the insects, and the leaves will retain their verdure until the fall of the year.

D.
D. M. .

SƯNDAYS, PARTICULAR DAYS, AND BIOGRAPHICAL DATES.

Dates of Political Events, Discoveries, Inventions, etc.

1, Battle of the Boyne, 1690.
$1 \underset{\sim}{*}$ S. after Trin. God giveth grace unto the humble, 2 M Sir Robert Peel d. 1850
3 Tv
4 W Fryth burned, 1533. Neander d. 1850
5 Th Cranmer, martyr, b. 1489
6 F Huss burned, 1415. Sir Thomas More beh. 1535
7 S Fire Insurance due. Sheridan d. 1816
8 \& 5 S . aft. Trin. He [Christ] was rich, yet for your
9/M
10 Tu Daguerre, inventor of daguerreotypes, d. 1851
11 W
12 Th R. Stephenson, engineer, d. 1850. Charlotte Eliza-
13 F
D. of Orleans killed, 1842. [beth, author, d. 1846

14 S
$15 \mathcal{D} 6 \mathrm{~S}$. aft. Trin.-St. Swithin. The redemption of
16 M
[their soul is precious, Ps. xlix. 8
17 Tu Earl Grey, politician, d. 1845. Dr. Watts, poet
18 W Hampden, politician, d. 1643. [\& divine, b. 1674
19 Th Princess Augusta, b. 1822
20 F
21 S Lord W. Russell executed, 1683
22 ㄱ S. aft. Trin. It shall be well with them that fear
23 M
24 Tu
25 W St. James. Duchess of Cambridge b. 1797
26 Th W. Romaine, divine, d. 1795
27 F
28 S Robespierre guillotined, 1794
$29 \approx 8$ S. aft. Trin. In God is my salvation, Ps. Ixii. 7 30 M Charles x. dethroned 1830. Wm. Wilberforce d.
31 Tv W. Penn d. 1718.
[1833
$\overline{M o n}^{3}$, Battle of Marston Moor, 1644.-4, American declaration of Independence, 1776.-5, Gold sovereigns first issued, 1817,-6, California annexed to the United States, 1846.-9, Passage to India discovered by Vasco de Gama, 1497; Bourbons restored, 1815; First Bible printed in Scotland, 1517.-10, Smyrna destroyed by earthquake, 1688. - 13, Sunday-school Union estab. 1803. - 14, French Revolution; Bastile destroyed, 1789 . - Robespierre's reign of Terror, 1793.-15, Royal Society estab. 1662.-21-8, Defeat of the Spanish Armada, 1588.-23, First English newspaper published, 1588. -24, Gibraltar taken, 1704. -26, Copper penny picces first issued, 1797.-27, Bank of England chartered, 1694; Canton opened to the British, 1843.

JuLy (Latin, Julius), called in honour of Julius Cæsar, who was born in it. It answers to $\mathrm{A}_{\mathrm{B}}$, the eleventh month of the Jewish civil year, and the fifth of their sacred year.

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| Ssinders, | 712 | ${ }^{3}$ | ${ }^{7}$ | ${ }_{7}^{73}$ |  | - |  | 近 |  |  |  |  |  |  |
| Mostreal |  |  | ${ }_{4}^{45}$ | - 4 | ${ }_{4}^{43}$ | ${ }_{7}^{73}$ | ( | ¢ | 31 | - |  |  |  |  |

$A$ Boil to herbs,

## THE HOUSEHOLD.

A Nice and Cheap Dish.-Cut a sheep's head into four pieces ; cut up the liver, lights, heart, and tongue into pieces ; put them into a pipkin, with about two quarts of water, some pepper and salt, a bunch of herbs, and stew for about three hours in a cool oven, on baking days. If you wish it not to be so rich, let it get cold, and take offt the fat when it can be warmed up, but not boiled.

Sago Pudding.-Boil a quart of new milk with five or six spoonfuls of sago, with lemon-peel, cinnamon, nutmeg, and sugar. Mix with four eggs, put a paste round the dish, and bake in a slow oven.
Brown Bread Pudding.-Half a pound of stale brown bread, grated, half a pound of currants, about the same quantity of chopped suet, sugar and nutmeg; mix with four eggs. Boil in a cloth, or basin that exactly holds it, for threo or four hours.


A Cheap Soup.-One gallon of water, three-quarters of a pound of pearl-barley. Boil to the consistency of a thick jelly; season with salt, pepper, vinegar, sweet herbs, and one red herring, pounded in a mortar.
Beet-Root Pickle.-Wash the beet well, but be careful not to cut off the shoots, boil it till quite tender, then peel and cut it into very thin slices; add cold vinegar, cayenne, and white pepper to your taste. This is a cheap and useful pickle.

Rice.-Great benefit, both national and individual, may be derived from the general use of rice. There is hardly any way in which it can be stewed down, either with bacon and seasoning, or with meat, or with cheese, in which it will not make a cheap, pleasant, and nutritious dish ; and it is particularly proper for, and palatable to the aged, the infirm, and the young. If rice be soaked in milk or water four or five hours before it is used, it will require but a short time to boil, which will save fire and pans.

D. D.
M. W. $\qquad$ SUNDAYS, PARTICULAR DAYS, AND BIOGRAPHICAL DATES.

## 1W Lammas Day <br> 2 TH

3F Sir R. Arkwright, engineer and manufac., d. 1792
4 S
5 S 9 S. aft. Trin. All we like sheep have gone astray, 6 M Pr. Alfred b. 1844
7 Tu Queen Caroline d. 1821
8 W Canning, politician, d. 1827
9 TH
10 F Toplady, divinity writer, d. 1778
11 S Half Quarter
$12 \mathcal{S} 10 \mathrm{~S}$. aft. Trin. Be ye holy in all manner of con-
13 M Bp. Taylor d. 1667 [versation, 1 Pet. i. 15
14 Tu Captain Cook sails on his first voyage of discovery,
15 W
16 Th Andrew Marvell, poet, d. 1678
17 F Duchess of Kent b. 1786
18 S Dr. Beattie, poet, d. 1803
19 ㄱ 11 S. aft. Trin. Gather not my soul with sinners,
20 M
${ }_{21}^{21} \mathrm{TV}$ Lady Montague, author, d. 1762
22 W
23 TH
24 F St. Bartholomew
25 S Jas. Watt d. 1819. Sir W. Hersohell d. 1822.
$26 \underset{\mathrm{M}}{\stackrel{\mathrm{H}}{2}} 12 \mathrm{~S}$. aft. Trin. Pr. Albert b. 1819. Wait on thy
27 M Thomson d. 1748 [God continually, Hos. xii. 6
${ }^{28} \mathrm{Tu}$ Goethe, German poet, b. 1749
29 W
30 TH
31 F John Bunyan, theological writer, d. 1688

Dates of Political Events, Discoveries, Inventions, etc.

1, American continent discovered, 1498; Battle of the Nile, 1798; Regent's Canal opened, 1820 ; London Bridge opened, 1831 ; Slavery abolished, 1837.-2, Victory of Blenheim, 1704; Mail first conv. by stage coaches, 1784, when the first mail left London for Bristol ; Barrow's Straits discov., 1819; Thames Tunnel opened, 1843.-3, Bk. of England estab. 1732.-4, Columbus' first voyage, 1492 . -10 , Abolition of imprison. for debt below 20l., 1827; Greenwich Obser, founded, 1675 ; Irish Rebel. 1848. 11, Austrian empire found., 1804.-12, First stone of Plymouth Breakw. laid, 1812; Napoleon exld, to St. Helena, 1815.-13, Board of Control inst. 1784; New Poor Law, 1834.-14, First book printed by Faust, 1457; Honduras discov. 1502.-19, R. George sunk, 1782.-20, Cæsar first invad. Britain, 55 в. c.-24, Mas. of Huguenots, 1572.
August, so called by the Romans in honour of the Emperor Augustus. It corresponds to the Jewish Elul (Neh. vi. 15), their twelfth civil, and sixth sacred month.

| Avoost | SUN RİEs. |  |  |  |  | SUN SETs. |  |  |  |  | moon. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 7 | 13 | 19 | 25 | 1 | 7 | 13 | 19 | 25 | Last Qr. | New. | First Qr. | II. |
| Conemich | ¢ ${ }_{\text {h m }}^{4}$ | ${ }_{\text {k }}^{\substack{\text { m } \\ 4 \\ 417}}$ |  |  |  |  |  |  | ${ }^{4}$ |  |  |  |  |  |
| Sydatey | ${ }^{6}$ | ${ }^{6350}$ | ${ }^{6} 85$ | - 63 | 83 | ${ }^{31}$ | 15 | 边 |  |  |  |  |  |  |
|  |  |  | 0 |  | S 314 | ${ }^{18}$ | 19 | ${ }_{7} 10$ | ${ }_{7}{ }^{2}$ |  |  |  |  |  |

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## USEFUL RECIPES.

Moths.-A small piece of paper or linen just moistened with turpentine, and put into the wardrobe or drawers for a single day, two or three times a year, is a sufficient preservative against moths.

To Clean Oil Paint.-The best thing for cleaning oil paint is a sponge, dipped in ammonia, which has been copiously diluted with water. Soap dissolves the turpentine as well as the linseed oil, and not only destroys the smooth and shiny surface, but exposes also the white lead to the influence of the water and air.
To Purify Water.-Pounded alum possesses the property of purifying water. A large tablespoonful of powdered alum sprinkled in a hogshead of water (the water stirred round at the time), will, after the lapse of a few hours, by precipitating to the bottom the impure particles, so purify it, that it will be found to possess nearly all the freshness and clearness of the finest spring water. A pailful, containing four gallons, may be purified by a single teaspoonful.
Blacking.-Four ounces of ivory black, three ounces of coarse sugar, a tablespoonful of sweet oil, and a pint of small beer; mix them gradually, cold.
To Take out Ironmould.-Wet the ironmould with water, and then lay the linen on a hot water-plate, and put on the part a little essential salt of lemons. When it becomes dry, wet it again, and renew the process, being particular that the plate is boiling hot. Dip the linen into a good deal of water, and wash it as soon as the stain is removed to prevent any damage from the acid.
Test for Mushrooms.-In cooking mushrooms for the taile, always boil them with an onion stripped of its entire skin. If in the process the onion becomes black or blue, do not use the mushrooms; if they are harmless, the onion will remain white.
Joining Glass.-Melt a little isinglass in spirits of wine, and add a small quantity of water. Warm the mixture gently over a moderate fire. When mixed by thoroughly melting, it will form glue perfectly transparent, and which will reunite broken glass so nicely and firmly that the joining will scarcely be perceptible to the most critical eye.
To Remove Grease from Cloth.-Spots of grease may be removed by a diluted solution of potash, but this must be cautiously applied, to prevent injury to the cloth. Stains of white wax, which sometimes fall upon clothes from waxcandles, are removed by spirits of turpentine, or sulphuric ether. The marks of white paint may also be discharged by the above-mentioned agents.

To Remove Offensive Smelis.-Pound a few well-dried raw coffee beans in a mortar, or between stones, and strew the powder over a moderately-heated iron plate. Walk about the room or the house with this for a minute or two, and it will effectually clear away offensive smells. Coffee taken hot from a roaster will answer nearly the same purpose.

A Cheap Vinegar.-To a gallon of water, put two pounds of coarse sugar ; boil and skim it for about half-an-hour. Put it in a tub, and when almost cold add to it a slice of bread soaked in fresh yeast. In a week it may be put into stone bottles or a cask, and kept uncorked either in the heat of the sun or near the fire, for six months. To keep out insects, paste a bit of crape or gauze over the bunghole.


## HINTS ON HEALTH.

Health.-Sir Astley Cooper said, that the methods he employed for preserving his own health were-temperance, early rising, and sponging the body with cold water every morning as soon as he arose. These habits, he stated, he had adopted for thirty years, and though exposed to all weathers at all hours, he scarcely ever had a cold.

Ardent Spirits.-Spirits, of every description, are in their nature and ordinary effects extremely unfriendly to the human constitution; and the art of distillation is, beyond all doubt, the most fatal discovery, in respect to the health of the community, which the ingenuity of man ever devised.-Dr. Graham.

Water is the most natural and wholesome of all drinks, quickens the appetite, and strengthens the digestion most.

Plain-dressed food is easier of digestion, than that which is pickled, salted, baked, smoked, or in any way high seasoned.

Cure for Indigestion.-Rise early and walk a mile or two before breakfast, then drink a cupful of cold spring-water-half a pint will not be too much if the stomach is strong enough-and walk another mile. Continue this treatment regularly for a month or six weeks.


John Howard was a gentleman of fortune who gave much attention to the poor of his own country, in relieving their wants and promoting their health and comfort ; and who afterwards travelled through the principal parts of Europe to visit the prisons. After encountering the greatest dangers, he fell a sacrifice to his benevolent efforts in 1790 .


## CHRISTIAN TREASURY.

## Questions for Daili Use.

1. Do I feel that I am a sinner utterly unable to save myself ?
2. Do I trust in Christ alone to pardon my sins and save my soul ?
3. Do I seek the influences of the Holy Spirit to sanctify me in body and soul ?
4. Am I striving after holiness of heart and life, through the knowledge of my Lord and Saviour Jesus Christ?
5. Do I make it my constant endeavour to do good to the bodies and souls of men?
6. Am I looking for the pure, perfect, and lasting enjoyments of heaven?

Repentance.-Repentance is not a mere temporary emotion-no merely external reformation, but that great moral change whereby the sinner, from a true sense of his sins, and apprehension of the mercy of God in Christ Jesus, doth, with grief and hatred of his sin, turn from it, and endeavour after new obedience.
The SAviour.-The Lord Jesus Christ is such a Saviour as became the grace, mercy, love, wisdom, holiness, righteousness, justice, and power of God to provide ; and on the other hand, such a Saviour as became sinners' needs and desires, and therefore deserves their acceptance as fit, suitable, sufficient to save all that come to God through Him, and that even to the uttermost; his blood being able to cleanse from all sin, his power being able to subdue all things to himself, and his Spirit sufficient to lead into all truth. Psa. lxxxix. 19; John xvi. 13.-Halyburton.

Life.- Every day is a life, and our whole is but a day repeated; whence is it that old Jacob numbers his life by days, and Moses desires to be taught this point of holy arithmetic, to number not his years but his days? Those, therefore, who dare lose a day, are dangerously prodigal : those that dare mis-spend it, desperate. All days are His, who gave time a beginning and a continuance ; yet some he hath made ours, not wo command, but to use.-Bp. Hall.
"I have no Time."-He who cannot find time to consult his Bible, will one day find that he has time to be sick. He who has no time to pray, must find time to die. He who can find no time to reflect, is most likely to find time to sin. He who cannot find time for repentance, will find an etornity, in which repentance will be of no avail. $-H$. More.

Sin.-We must ever remember that $\sin$ is the abominable thing which God hates, and against which the whole of his word is directed, and though penitent sinners are so gladly received by him that there is joy in heaven over their conversion, presumptuous sin is a great gulf, out of which few who fall into it are re-stored.-Archbishop Sumner.

Sanctification.-There is no way for men to discern their names written in the book of life, but by reading the work of sanctification in their hearts, Rom. x. 8. I desire no miraculous voice from heaven, no extraordinary signs nor unscriptural notices and informations in this matter. Lord, let me but find my heart complying with thy calls, my will obediently submitting to thy commands, sin my burden, and Christ my desire; I never crave a fairer evidence of thine electing love to my soul.-Flavel.


## PROVINCE OF CANADA.

Governor-General-His Excellency the Right Hon. James, Earl of Tlain and Kincardine, K.T., Governor-in-Chief of the Provinces of Canada, Nova Scotia, New Brunswick, and Prince Edward's Island.
Secretary to Governor-General-Lieut.-Colonel the Hon. Robert Bruce.
Commander of the Forces-Lieut.-General Wm. Rowan, C.B.
Militia Department-Lieut.-Colonel D. G. MacDonell, Deputy Adj.-General, West ; Lieut.-Colonel A. de Salaberry, Deputy Adj.-General, East.
Bishop of Quebec-Right Rev. G.J. Mountain, D.D. Bishop of Montreal-Right Rev. Francis Fulford, D.D. Bishop of Toronto-Hon, and Right Rev. John Strachan, D.D.
Chief Superintendent of Public Instruction-Rev. Egerton Ryerson, D.D.


## LOWER CANADA.

Queen's Bench :-Chief Justice-Hon. L. H. Fontaine ; Judges-Hons. J. R. Rolland, P. Panet, T. C. Aylwin. Superior Court:-Chief Justice-Hon. E. Bowen; Judges-Hons. John H. Duval, Wm. C. Meredith, and R. E. Caron, Quebec:Hons. C. D. Day, James Smith, C. Mondelet, and Geo. Vanfelson, Montreal:Hon. D. Mondelet, Three Rivers :-Hon. E. Short, Sherbrooke.

## UPPER CANADA.

Court of Appeal:-Judges-The Judges of the Superior Courts of Law and Equity, Court of Queen's Bench:-Chief Justice-Hon. J. B. Robinson; Judges-Hons. W. H. Draper and R. E. Burns. Court of Chancery:-Chancellor-Hon. W. H. Blake; Vice-Chancellors-Hons. J. C. P. Esten and J. G. Spragge. Court of Common Pleas:-Chief Justice-Hon. J. B. Macaulay ; Judges-Hons. A. McLean and W. B. Richards.


Sundays and Particuiar Days.
1 S Emperor Alexander of Russia d. 1825
2 \& Advent Sunday. Behold, I stand at the door, and 3 M
4 Tu Cardinal Richelieu, politician, d. 1642
5 W Mozart, musical composer, d. 1792
6 TH
7 F Sidney, politician, beheaded, 1683
8 S Richard Baxter, theological writer, d. 1691
$9 \mathfrak{F} 2 \mathrm{~S}$. in Advent. God is angry with the wicked
10 M
[every day, Ps. vii. 11
11 TU
12 W
13 Th Dr. Johnson, critic, d. 1784
14 F General Washington, President of America, d.
15 S Vanderkemp, missionary, d. 1811
[1799
$16 \approx 3 \mathrm{~S}$. in Advent. I am not ashamed of the gospel of
17 M SirH. Davy, philosr., b. 1778 [Christ, Rom. i. 16
18 Tu Philpot, martyr, burned, 1555
19 W Ember Week
20 TH John Newton, poet and theological writer, d. 1807
21 F St. Thomas
22 S
23 ©
24 M
25 Tu Christraas Day. The Word was made flesh,
26 W St. Stephen
27 TH St. John
28 F Innocents
29 S 1 S. aft. Christmas. Thou crownest the year with
30 §
31 M We all do fade as a leaf, Isa. lxiv. 6

Dates of Political Events, etc, 1, Colony of Botany Bay settled, $1787-2$, Ferdinand of Austria abdicated, 1848. French empire restored, 1852.-5, Hayti discovered, 1492. Postage reduced, 1833.-11, Pilgrim Fathers landed in America, 1620.13, New Zealand discovered December, 1642.16, Breakwater beacon completed at Plymouth, 1845.20 , Louis Napoleon, President, 1848.-21, First attempt at steam navigation made, 1736.-23, Religious Tract and Book Society for Ireland established 1818.24, Peace with America, 1814.-25, Royal Academy founded, 1768.-27, Post Office, as at present constituted, founded, 1660.31, East India Company first chartered, 1600.

December, from the Latin decem, ten, as it was the tenth month in the Roman year. It answers to the Jewish TeBETH (Est. ii. 16), which signifies miry, and is the fourth of their civil and tenth of their sacred year. By the Saxons it was named AerraGeola, or Before-Christmas.

| Degember | SUN RISES. |  |  |  |  | SUN SETS. |  |  |  |  | MOON. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 7 | 13 | 19 | 25 | 1 | 7 | 13 | 19 | 25 | Last Qr. | New. | First Qr. | Full. |
| Greenwich | h m | h m | h m | h m | h m | b m | h m | h m | h m | h m | Dec. h m | Dec.h m | Dec.h | Dec.h m |
|  | 746 | 753 | 80 | 85 | 87 | 352 | 350 | 349 | 350 | 353 | $\left\{\begin{array}{cccc}1 & 2 & 11 & A \\ 81 & 0 & 4 & A\end{array}\right\}$ | 91018 m | 16.657 m | 231039 m |
| Edinburgh | 818 | 820 | 888 | 834 | 836 | 326 | 393 | 321 | 321 | 324 | $\left\{\begin{array}{lllll}1 & 1 & 58 & \mathrm{~A} \\ 31 & 11 & 51 & \mathrm{~m}\end{array}\right\}$ | 9105 m | 16.644 m | 231026 m |
| Sydney . | 4.44 | 444 | 445 | 447 | 450 | 654 | 70 | 73 | 77 | 710 | $\left\{\begin{array}{ccccc}2 & 0 & 16 \mathrm{~A} \\ 31 & 10 & 9 & \mathrm{~A}\end{array}\right\}$ | 9823 A | 1652 A | 23844 A |
| Melbourne | 433 | 433 | 432 | 435 | 438 | 75 | 711 | 716 | 719 | 722 | $\left\{\begin{array}{rrrrr}1 & 11 & 50 & A \\ 31 & 9 & 43 & A\end{array}\right\}$ | 9757 A | $16 \quad 436$ A | 238184 |
| Montreal . | 722 | 729 | 734 | 738 | 741 | 416 | 415 | 414 | 416 | 419 | $\left\{\begin{array}{cccc}1 & 9 & 17 \mathrm{M} \\ 30 & 7 & 10 & \mathrm{M}\end{array}\right\}$ | 9524 | 623 m | 23.545 m |
| Toronto . | 715 | 722 | 727 | 730 | 734 | 423 | 422 | 421 | 424 | 426 | $\left\{\begin{array}{lllll}1 & 8 & 54 & M \\ 30 & 6 & 47 & M\end{array}\right\}$ | 95 lm | 16140 m | $23.528 \times$ |
|  | 24 |  |  |  |  |  |  |  |  |  |  |  |  |  |

## SAYINGS OF THE WISE AND GOOD.

Misery and Mercy.-The depths of misery are never beyond the depths of
ivine mercy.-Sibbs.
Christ our Hope and Example.-We cannot build too confidently on the merits of Christ, as our only hope ; nor can we think too much of the mind that was in Christ, as our great example.-Cecil.

A Holy Habit of Mind.-We should live in such a holy habit and frame of mind as to be at all times in a fit state for prayer, and that we can be looking up to God in frequent prayer while we are at our daily labour.-Rev. R. Hill.

Our Hope.--God's mercy and Christ's merit should bear up our faith and hope, when a sense of our sins is ready to cast us down.-Cradoch.

Heaven.-Those who would go to heaven when they die, must begin their heaven while they live.-M. Henry.

Hope of Heaven.-We must ground our hopes of heaven upon the fulness of Christ's merit, for the pardon of sin ; upon the power of His Spirit, for the sanctification of our nature; and upon the prevalence of His intercession, for the supply of all needed grace.

The Heart.-In the worst of times there is still more cause to complain of an evil heart, than of an evil or corrupt world.-Fleming.

Contentment.-To work our own contentment, we should not labour so much to increase our substance as to moderate our desires.-Bishop Sanderson.

Prayer.-He who prays as he ought, will endeavour to live as he prays. He who can live in sin, and abide in the ordinary duties of prayer, does not pray aright.-Owen.
An Impossibility.-We may as well attempt to bring pleasure out of pain, as to unite indulgence in sin with the enjoyment of happiness.-Hodye.
A Solemn Truth.-Death pays respect neither to youth nor usefulness, but mows down together the tender herb, the fragrant flower, and the noxious weed. -J. A. James.
Three Wishes.-The apostle Paul had three wishes, and they were all about Christ-that he might be found in Christ, that he might be with Christ, and that he might magnify Christ.-Luther.

Two Wonders. -Two things are matter of daily astonishment to me-the readiness of Christ to come from heaven to earth for me; and my backwardness to rise from earth to heaven for him.-S. Pearse.
Repentance,-Repentance has a sort of double aspect, looking upon things past with a weeping eye, and upon the future with a watchful eye.-South.

Comport.--Extract the sweets from the comforts you have, before you complain of the want of other comforts.
Names of Christians.-The Scripture gives our names to Christians, taken from the four cardinal graces so essential to man's salvation: saints, for their holiness ; believers, for their faith; brethren, for their love ; disciples, for their knowledge.-Fuller.

## TOTAL ECLIPSES OF THE MOON.

| PHASES OF THE ECLIPSE. | Greenwich. | Edinburgh. | Sydney. | Melbourne. | Montreal. | Toronto. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | May h m | May h m | May h m | May h m | May h m | May h m |
| Beginning of the Eclipse . . - | 2214 m | $\begin{array}{lll}2 & 2 & 1 \mathrm{~m}\end{array}$ | $2{ }^{2} 019 \mathrm{a}$ | 21153 m | 1920 a | 1857 a |
| Total disappearance of the Moon | $2 \quad 317 \mathrm{~m}$ | $\begin{array}{llll}2 & 3 & 4 \mathrm{~m}\end{array}$ | ${ }_{2}^{2} 1122 \mathrm{a}$ | ${ }_{2}^{2}-056 \mathrm{a}$ | 11023 a | 1100 a |
| Middle of the Eclipse . . . | $\begin{array}{llll}2 & 4 & 5 & 5\end{array}$ | $2{ }_{2} 352 \mathrm{~m}$ | $\begin{array}{lll}2 & 2 & 10 \\ \\ 2 & \\ \text { a }\end{array}$ | $2{ }^{2} 144 \mathrm{a}$ | 11111 a | 11048 a |
| First appearance of the Moon. | 2453 m | 2440 m | 2258 a | 2232 a | 11159 a | 11136 a |
| End of the Eclipse. | 2556 m | 2543 m | 241 a | 2335 a | $\begin{array}{llll}2 & 1 & 2 \mathrm{~m}\end{array}$ | 2039 m |

The beginning of this eclipse will be visible from the greater part of Europe, throughout Africa, and the western part of Arabia ; the end will be visible almost throughout America.

Beginning of the Eclipse
Total disappearance of the Moon Middle of the Eclípse . . . . . First appearance of the Moon. . End of the Eclipse.

| Oct. h m | Oct. h m | Oct. h m | Oct. h m | Oct. h m | $0 \mathrm{t} . \mathrm{hm}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 25.44 m | 25.531 m | $25 \quad 3 \quad 49 \mathrm{a}$ | $25 \quad 3 \quad 23$ a | $25 \quad 050 \mathrm{~m}$ | 25027 m |
| 25645 m | 25632 m | $25 \quad 450 \mathrm{a}$ | $25 \quad 424 \mathrm{a}$ | $25 \quad 151 \mathrm{~m}$ | $25 \quad 128 \mathrm{~m}$ |
| 25729 m | $25 \quad 716 \mathrm{~m}$ | $25 \quad 534 \mathrm{a}$ | $25 \quad 5 \quad 8 \mathrm{a}$ | $25 \quad 235 \mathrm{~m}$ | $25 \quad 212 \mathrm{~m}$ |
| 25813 m | 2580 m | 25618 a | $25 \quad 552 \mathrm{a}$ | 25319 m | 25.56 m |
| 25915 m | $25 \quad 9 \quad 2 \mathrm{~m}$ | $25 \quad 720 \mathrm{a}$ | $25 \quad 654 \mathrm{a}$ | 25421 m | $25 \quad 358 \mathrm{~m}$ |

The beginning of this eclipse will be visible in the western portion of Europe and Africa: and the end will be visible in Australia and the eastern portion of Asia.

## PARTIAL ECLIPSES OF THE SUN.

| PHASES OF THE ECLIPSE. | Greenwich. | Edinburgh. | Sydney. | Melbourne. | Montreal. | Toronto. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | May h m | May h m | May h m | May h m | May h m | May h m |
| Beginning of the Eclipse. . . . | $\begin{array}{llll}16 & 0 & 3 \mathrm{~m}\end{array}$ | 151150 a | 16108 m | 16942 m | 1579 a | 15646 a |
| Greatest obscuration of the Sur. | $\begin{array}{llll}16 & 2 & 1 \mathrm{~m} \\ 16 & 4 & 0\end{array}$ | 16148 m | $\begin{array}{ccc}16 & 0 & 6 \\ 16\end{array}$ | 161140 m | $\begin{array}{lll}15 & 9 & 7 a\end{array}$ | $15 \quad 844 \mathrm{a}$ |
| End of the Eclipse . . . . . . | 1640 m | 16247 m | 1625 a | 16139 a | 15116 | 151043 a |

This eclipse begins on the earth generally in longitude $78^{\circ} 56^{\prime} \mathrm{E}$. of Greenwich, and latitude $25^{\circ} 30^{\prime} \mathrm{N}$.; the greatest obscuration in longitude $16^{\circ} 27^{\prime} \mathrm{E}$, and latitude $63^{\circ} 7^{\prime} \mathrm{N}$. , when nearly three-fourths of the Sun's disk will be eclipsed; and the end in longitude $114^{\circ} 25^{\prime} \mathrm{W}$. of Greenwich and latitude $60^{\circ} 9^{\prime} \mathrm{N}$.

|  | Nov. h m | Nov. h m | Nov. hm | Nov. h m | Nov. hm | Nov. h m |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Beginning of the Eclipse. | 9535 a | 9522 a | 10340 m | 10.314 m | 9041 a | 9018 |
| Greatest obscuration of the Sun. | 9717 a | 74 a | 10522 m | 10456 m | 9223 a | 920 |
| End of the Eclipse. . | $9 \quad 859 \mathrm{a}$ | 846 a | 1074 m | 10638 m | 945 a | 242 |

This eclipse begins on the earth generally in longitude $171 \circ 38^{\prime} \mathrm{E}$. of Greenwich, and latitude $31^{\circ} 21, \mathrm{~S}$; the greatest obscuration in longitude $121^{\circ} 5^{\prime}$ E., and latitude $62^{\circ} 37^{\prime} \mathrm{S}$., when nearly one-half of the Sun's disk will be eclipsed; and the end in longitude $2^{\circ} 34^{\prime} \mathrm{E}$. of Greenwich and latitud9 $68054^{\prime} \mathrm{S}$.

Sun and Moon.-A haziness in the air which fades the sun's light, and makes the orb appear whitish, or ill-defined; or at night, if the moon and stars grow dim, and a ring encircle the former, rain will follow. If the moon looks pale and dim, we expect rain; if red, wind ; and if her natural colour, with a clear sky, fair weather. If the moon is rainy throughout, it will cle at the change, and perhaps the rain return.

Mists.-A white mist in the evening, over a meadow with a river, will be drawn up by the sun next morning, and the day will be bright.

## TEMPERANCE AND INDUSTRY.

Annual Cost of Intoxicating Liquors.-In France, 52,777,777l.; Great Britain, 39,692,407l. ; Sweden, 13,500,000l.; Prussia, 9,000,000l. ; United States, $8,062,4167$. This calculation, however, shows only a partial result. It does not give the expense incurred in upholding prisons, police, asylums, workhouses, etc., which are chiefly rendered necessary by habits of drunkenness. Taking these into account, the annual cost of intoxication in the United Kingdom is carefully estimated at one hundred millions annually-a sum large enough to relieve the distresses of the poor and unemployed, and double the government revenue!
Intemperance.-Intemperance weakens the understanding, stupifies the conscience, hardens the heart, produces and aggravates disease, is a great cause of poverty and crime, destroys domestic happiness, corrupts public morals, shortens human life, and ruins the soul, 1 Cor. vi. $9,10$.

Savings' Banks.-There are about five hundred and eighty savings' banks in Great Britain and Ireland, in which are deposits under twenty pounds from about six hundred thousand depositors; and under fifty pounds from nearly three hundred thousand depositors.

## Modern Discovery.



The above sculpture of a winged-lion, with the face of a man, was brought from ancient Nineveh by Mr. Layard. Its height is nine feet, and its length the same. It is supposed to have been placed at the entrance to the palace of the kings of Assyria: its face of a man represents intelligence, its lion's body denotes strength, and its great wings express swiftness.

## HINTS FOR EMEERGENCIES.

Fire in Hodses.-Should a fire break out in the kitchen or any other chimney, a blanket wetted should be nailed to the upper ends of the mantel-piece so as to cover the opening entirely; the fire will then commonly go out of itself. A solution of pearl-ash in water thrown upon a fire extinguishes it instantly: the proportion is a quarter of a pound dissolved in hot water, and then poured upon a bucket of common water.

Escape from Fire.-In case of a person's clothes being set on fire, instead of throwing open the door and running into the road-as is too often done by the sufferer in extreme terror, or by those around him, who, instead of rendering aid, run out to seek it-let the person (particularly if a female, whose dress ignites so rapidly) fall on the ground, and roll in a carpet, blanket, curtain, cloak, coat, or whatever thick woollen article may be at hand. If any other persons are present they should assist in doing this, and be particularly careful to keep all doors and windows shut, as every draught of air stimulates the flames, which it is the object to depress.

To Extricate Persons from Broken Ice.-Let a rope or ropes, or handkerchiefs tied in knots, be held by two or more persons at each end ; and let this be stretched over the broken ice, that the drowning person may catch hold of it.

To bring the Drowned to Life.-Immediately as the body is removed from the water, press the chest suddenly and forcibly downward and backward, and instantly discontinue the pressure. Repeat this violent interruption until a pair of bellows can be procured. When obtained, introduce the muzzle well upon the base of the tongue. Surround the mouth with a towel or handkerchief, and close it. Direct a bystander to press firmly upon the projecting part of the neck (Adam's apple), and use the bellows actively. Then press upon the chest to expel the air from the lungs, to imitate the natural breathing. Continue this at least an hour, or until signs of natural breathing comes on. Wrap the body in blankets, place it near a fire, and do everything to preserve the natural warmth, as well as to impart an artificial heat, if possible. Apply a mustard poultice over the heart. Everything, however, is secondary to inflating the lungs. Avoid all frictions until respiration shall be in some degree restored. Send for a medical man immediately.

Remedy for Cholera.-The following prescription for the effective cure of the cholera has been given by J. Booker, Esq., late Vice-Consul at Cronstadt, Russia:- "The principal point is to attack the disease the instant it is suspected; take a stimulating dram with peppermint, and a few drops of laudanum; cover yourself up as warm as possible, to promote perspiration, apply hot substances, such as water, bran, salt, and even sand, to the limbs, and put a mustard poultice over the whole stomach. As soon as perspiration breaks out, and the beating of the pulse is restored, the complaint may be looked upon as conquered; if it is neglected till its last stage, recovery cannot be expected." Medical aid should be sought as quickly as possible.

The Bite of Vipers.-The bite of a viper, when left to take its course, is death; but by the speedy application of a little olive oil, the bite is rendered almost as harmless as the sting from a wasp.

USEFUL TABLES.
Weather Table,-Suggesting what kind of weather will most probably, follow the Moon's entrance into any of her quarters.

| If the Moon changes between | Weather likely to follow during the Quarter. |  |
| :---: | :---: | :---: |
|  | In Summer. | In Winter. |
| 12 at Noon to 2 Afternoon. | Very Rainy |  |
| 2 Afternoon " 4 " | Changeable . . | Fair and Mild. |
| 4 " " 6 " | Fair $\cdot$. ${ }^{\text {a }}$ | Fair. |
| 6 " $\quad 10$ | \{ Fair, if Wind N.W. . | Fair, Frosty, if N. or N.E. |
| 10 ", "12 Midnight . | Rainy, if S. or S.W. . | Rain or Snow, if S. or S.W. |
| 12 Midnight " 2 Morning . | Fair . . . | Fair and Frosty. Hard Frost, unless S, or W |
| 2 Morning ", 4 , . | Cold, with Showers . | Hard Frost, unless S. or W |
| $\begin{array}{lllll}4 & \# & \# & 6 & \\ 6 & " & 8 & \end{array}$ | Rain • • . | Ditto. |
| 6 " " 8 " | Wind and Rain . | Stormy. |
| 8 " , 10 | Changeable | Cold Rain, if Wind W. |
| 10 " 12 Noon. | Frequent Showers | Snow, if E. Cold, with high wind. |

The Sky.-A red evening portends fine weather; but if the red spreads too far upwards from the horizon in the evening, and especially morning, it foretells wind or rain, or both.

Marketing Table.

| No. | At $\frac{1}{4} d$. | At $1 \frac{1}{2} d$. | At $2 \frac{1}{2} d$. | At 3d. | At $3 \frac{1}{2} d$. | At 4 d . | At 4 $\frac{1}{2} d$. | At 10d. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3 | $\begin{array}{ll} s . & d . \\ 0 & 0 \frac{3}{4} \end{array}$ | $\begin{array}{ccc}\text { f. } & s . & d . \\ 0 & 0 & 4 \frac{1}{2}\end{array}$ | $\begin{array}{ccc}\text { £. } & s . & d . \\ 0 & 0 & 7 \frac{1}{4}\end{array}$ | £. s. $d$. <br> 0 0  | $\begin{array}{ccc} £ . & s, d . \\ 0 & 0 & 10 \frac{1}{2} \end{array}$ | $\begin{array}{cccc} \pm . & s & d . \\ 0 & 1 & 0\end{array}$ | $\begin{array}{llll}£ & s . & d_{0}\end{array}$ | £. s. ${ }_{\text {d, }}$ |
| 4 | $0 \quad 1$ | $00^{0} 006$ | $0 \quad 0 \quad 10 \frac{1}{2}$ | $\begin{array}{llll}0 & 1 & 0\end{array}$ | $\begin{array}{llll}0 & 1 & 2\end{array}$ | $\begin{array}{lll}0 & 1 & 4\end{array}$ |  | $\begin{array}{lll}0 & 2 & 6 \\ 0 & 3 & 4\end{array}$ |
| 5 | 0 0 14 | $\begin{array}{lll}9 & 0 & 7 \frac{1}{2}\end{array}$ | $\begin{array}{llll}0 & 1 & 0\end{array}$ | $\begin{array}{llll}0 & 1 & 3\end{array}$ | $\begin{array}{llll}0 & 1 & 5 \\ 0 & 1 & \\ 0\end{array}$ | $\begin{array}{lll}0 & 1 & 4 \\ 0 & 1 & 8\end{array}$ | - | $\begin{array}{lll}0 & 3 & 4 \\ 0 & 4 & 2\end{array}$ |
| 6 | 0 1 $1 \frac{1}{2}$ | $\begin{array}{lll}0 & 0 & 9\end{array}$ | 0 1 3  | $\begin{array}{llll}0 & 1 & 6\end{array}$ | $\begin{array}{llll}0 & 1 & 9\end{array}$ | $\begin{array}{lll}0 & 2 & 0\end{array}$ | $\begin{array}{llll}0 & 2 & 3\end{array}$ | $\begin{array}{llll}0 & 5 & 0\end{array}$ |
| 8 | 0 13 | $0{ }_{0}^{0} 0010 \frac{1}{2}$ | $\begin{array}{lll}0 & 1 & 5\end{array}$ | $\begin{array}{lll}0 & 1 & 9\end{array}$ | $\begin{array}{lll}0 & 2 & 0 \frac{1}{2}\end{array}$ | $\begin{array}{lll}0 & 2 & 4\end{array}$ | $\begin{array}{lll}0 & 2 & 7 \frac{1}{2}\end{array}$ | $\begin{array}{llll}0 & 5 & 10\end{array}$ |
| 8 | 0 | $\begin{array}{lll}0 & 1 & 0 \\ 0\end{array}$ | $\begin{array}{llll}0 & 1 & 8 \frac{1}{2}\end{array}$ | $\begin{array}{lll}0 & 2 & 0\end{array}$ | $\begin{array}{llll}0 & 2 & 4\end{array}$ | $\begin{array}{lll}0 & 2 & 8\end{array}$ | $\begin{array}{lll}0 & 3 & 0\end{array}$ | 0 6 |
| 9 | ${ }_{0}^{0}$ 21 | $\begin{array}{lll}0 & 1 & 1 \frac{1}{2} \\ 0 & 1 & \end{array}$ | $\begin{array}{llll}0 & 1 & 10\end{array}$ | $\begin{array}{lll}0 & 2 & 3\end{array}$ | $\begin{array}{llll}0 & 2 & 7 \frac{1}{2}\end{array}$ | $\begin{array}{llll}0 & 3 & 0\end{array}$ | $\begin{array}{llll}0 & 3 & 4 \frac{1}{2}\end{array}$ | $\begin{array}{llll}0 & 7 & 6\end{array}$ |
| 10 | $\begin{array}{ll}0 & 2 \frac{1}{2} \\ 0 & 3 \frac{1}{2}\end{array}$ | $\begin{array}{lll}0 & 1 & 3 \\ 0 & 1 & 9\end{array}$ | $\begin{array}{llll}0 & 2 & 1 \\ 0 & 2 & 11\end{array}$ | $\begin{array}{lll}0 & 2 & 6 \\ 0 & 3\end{array}$ |  | $\begin{array}{lll}0 & 3 & 4\end{array}$ | $\begin{array}{llll}0 & 3 & 9\end{array}$ | $\begin{array}{llll}0 & 8 & 4\end{array}$ |
| 14 |  | $\begin{array}{llll}0 & 1 & 9 \\ 0 & 2 & 6\end{array}$ | $\begin{array}{rrrr}0 & 2 & 11 \\ 0 & 4 & 2\end{array}$ | $\begin{array}{lll}0 & 3 & 6 \\ 0 & 5 & 0\end{array}$ | $\begin{array}{llll}0 & 4 & 1 \\ 0 & 5 & 1\end{array}$ | $\begin{array}{lll}0 & 4 & 8\end{array}$ | $\begin{array}{lll}0 & 5 & 3\end{array}$ |  |
| 24 | 06 | $\begin{array}{llll}0 & 2 & 6 \\ 0 & 3 & 0\end{array}$ | $\begin{array}{lll}0 & 4 & 2 \\ 0 & 5 & 0\end{array}$ | 0 | $0 \quad 510$ | $\begin{array}{lll}0 & 6 & 8\end{array}$ | $\begin{array}{lll}0 & 7 & 6 \\ 0 & 9\end{array}$ |  |
| 25 | 061 | $\begin{array}{llll}0 & 3 & 1 & \frac{1}{2}\end{array}$ | $\begin{array}{llll}0 & 5 & 2\end{array}$ | $\begin{array}{llll}0 & 6 & 3\end{array}$ | $\begin{array}{lll}0 & 7 & 0 \\ 0 & 7 & 3 \\ 0\end{array}$ | $\begin{array}{lll}0 & 8 & 0 \\ 0 & 8 & 4\end{array}$ | $\begin{array}{lll}0 & 9 & 0 \\ 0 & 9 & 41\end{array}$ | $\begin{array}{rrrr}1 . & 0 & 0 \\ 1 & 0 & 10\end{array}$ |
| 28 | 07 | $\begin{array}{llll}0 & 3 & 6\end{array}$ | $\begin{array}{llll}0 & 5 & 10\end{array}$ | $\begin{array}{llll}0 & 7 & \\ 0\end{array}$ | $\begin{array}{llll}0 & 8 & { }^{3} \\ 0 & 8\end{array}$ | $\begin{array}{llll}0 & 8 & 4 \\ 0 & 9 & 4\end{array}$ | $\begin{array}{rrrr}0 & 9 & 4 \frac{1}{2} \\ 0 & 10 & 6\end{array}$ | $\begin{array}{lrr}1 & 0 & 10 \\ 1 & 3 & 4\end{array}$ |
| 30 | 0 7 ${ }^{1}$ | $\begin{array}{llll}0 & 3 & 9\end{array}$ |  | $\begin{array}{llll}0 & 7 & 6\end{array}$ | $\begin{array}{llll}0 & 8 & 9\end{array}$ | 010 | $\begin{array}{llll}0 & 11 & 3\end{array}$ | 150 |
| 50 | $10 \frac{1}{2}$ | $\begin{array}{lll}0 & 6 & 3\end{array}$ | $\begin{array}{llll}0 & 10 & 5\end{array}$ | $\begin{array}{llll}0 & 12 & 6\end{array}$ | $\begin{array}{llll}0 & 14 & 7\end{array}$ | 0168 | $\begin{array}{llll}0 & 18 & 9\end{array}$ | $\begin{array}{llll}2 & 1 & 8\end{array}$ |
| 100 | 21 | 0126 | $\begin{array}{llll}1 & 0 & 10\end{array}$ | $\begin{array}{lll}1 & 5 & 0\end{array}$ | 192 | $1 \begin{array}{lll}1 & 13 & 4\end{array}$ | 1176 | $4 \quad 3 \quad 4$ |
| 112 | 24 | 0140 | 1300 | 1880 | 1128 | $1 \begin{array}{lll}1 & 17 & 4\end{array}$ | 220 | $413 \quad 4$ |
| 120 | 26 | $\begin{array}{lll}0 & 15 & 0\end{array}$ | 150 | 1100 | 1150 | 200 | $2 \quad 50$ | $\begin{array}{llll}5 & 0 & 0\end{array}$ |
| 144 | 30 | 0180 | $1 \quad 100$ | 1160 | 220 | 2880 | 2140 | $6 \quad 00$ |

## USEFUL TABLES.

Table to Calculate Wages and other Payments.

| Year. | Per Month. | Per Week. | Per Day. | Year. | Per Month. | Per Week. | Per Day. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| £. | £. s. d. | £. s. d. | s. d. | $£$. | £. s. d. | f. s. d. | s. d. |
| 1 | $\begin{array}{llll}0 & 1 & 8\end{array}$ | 0 0-0 $4 \frac{3}{4}$ | 0 0, ${ }^{3}$ | 13 | 118 | 0411 年 | 0 8 ${ }^{\frac{1}{2}}$ |
| 2 | $\begin{array}{llll}0 & 3 & 4\end{array}$ | 0 0 0 91 | 0 11 | 14 | $1 \begin{array}{lll}1 & 3 & 4\end{array}$ | $\begin{array}{llll}0 & 5 & 4 \frac{1}{4}\end{array}$ | 0 9 9 |
| 3 | 0 5 0 | 0 1 1 1 | 02 | 15 | 150 | $\begin{array}{llll}0 & 5 & 9\end{array}$ | 010 |
| 4 | 0 0 68 | $0116 \frac{1}{2}$ | 0 23 | 16 | 168 | $\begin{array}{llll}0 & 6 & 1 \frac{3}{4}\end{array}$ | 0 10, |
| 5 | $\begin{array}{llll}0 & 8 & 4\end{array}$ | 0 1 11 | 0 3 ${ }^{\frac{1}{4}}$ | 17 | 188 | $\begin{array}{llll}0 & 6 & 6 \frac{1}{4}\end{array}$ | $011 \frac{1}{4}$ |
| 6 | 010 | $0233 \frac{1}{2}$ | 04 | 18 | 1100 | $0610 \frac{3}{4}$ | $011 \frac{3}{4}$ |
| 7 | 0118 | 0288 | 0 4 4 | 19 | 1118 | 0731 | $10 \frac{1}{2}$ |
| 8 | $\begin{array}{llll}0 & 13 & 4\end{array}$ | $\begin{array}{llll}0 & 3 & 0 \frac{3}{4}\end{array}$ | 0 5 ${ }^{\frac{1}{4}}$ | 20 | 1134 | $\begin{array}{llll}0 & 7 & 8\end{array}$ | $1{ }^{1} \frac{5}{4}$ |
| 9 | 0150 | $\begin{array}{llll}0 & 3 & 5 \frac{1}{2}\end{array}$ | 06 | 30 | 2100 | $\begin{array}{llll}0 & 11 & 6\end{array}$ | $17 \frac{8}{4}$ |
| 10 | 0168 | $0 \quad 310$ | 0 6 ${ }^{\frac{1}{2}}$ | 40 | $\begin{array}{lll}3 & 6 & 8\end{array}$ | $\begin{array}{llll}0 & 15 & 4\end{array}$ | 2 2t |
| 11 | $\begin{array}{llll}0 & 18 & 4\end{array}$ | $\begin{array}{lll}0 & 4 & 23\end{array}$ | 0 7i ${ }^{4}$ | 50 | $\begin{array}{llll}4 & 3 & 4\end{array}$ | $\begin{array}{lll}0 & 19 & \end{array}$ | 29 |
| 12 | 100 | $\begin{array}{llll}0 & 4 & 7 \frac{1}{4}\end{array}$ | 08 | 100 | $8 \quad 68$ | 118 41 | 5 53 |

If the wages be guineas, add at the rate of one penny for every pound to each month.

Increase of Weekly Savings at Compound Interest.

| At Year's End. | One Shilling per Week. | Three Shillings per Week. | Five Shillings per Week. | Seven Shillings per Week. |
| :---: | :---: | :---: | :---: | :---: |
|  | f. s. d. | £. s. d. | £. s. d. | £. s. d. |
| 1st. | 2120 | 7160 | 1300 | 1840 |
| 2nd. | $5 \begin{array}{lll}5 & 5 & 9\end{array}$ | $1517 \quad 3$ | 2688 | $37 \quad 0 \quad 3$ |
| 3rd. | $8 \quad 14$ | 2440 | 4068 | $\begin{array}{llll}56 & 9 & 4\end{array}$ |
| 4th . | 101810 | $\begin{array}{llll}32 & 16 & 6\end{array}$ | $54 \quad 14 \quad 2$ | 761110 |
| 5 th . | $1318 \quad 3$ | 4114 | 69113 | 97 <br> 7 |
| 6 th. | 16199 | 50193 | 84189 | $11818 \quad 3$ |
| 7th. | $20 \quad 34$ | $60 \quad 10 \quad 0$ | 100168 | 1413 |
| 8 th. | $23 \quad 9 \quad 1$ | $\begin{array}{lll}70 & 7 & 3\end{array}$ | 1175 | $164 \quad 3 \quad 7$ |
| 9th . | $2617 \quad 1$ | 80113 | 13455 | 187197 |
| 10th. | $\begin{array}{llll}30 & 7 & 5\end{array}$ | $\begin{array}{lll}91 & 2 & 3\end{array}$ | 151171 | 2121111 |
| 11th. . | $\begin{array}{llll}34 & 0 & 2\end{array}$ | 10206 | $170 \quad 0 \quad 10$ | 23812 |
| 12th. | $3715 \quad 5$ | 11363 | $188 \quad 171$ | 261711 |
| 13th. | 41132 | 124196 | $208 \quad 510$ | $29112 \quad 2$ |
| 14th. | $\begin{array}{llll}45 & 13 & 7\end{array}$ | 13700 | 228711 | $\begin{array}{llll}319 & 15 & 1\end{array}$ |
| 15th . | $4916 \quad 9$ | $14910 \quad 3$ | 24939 | 34817 |
| 16th. | $\begin{array}{llll}54 & 2 & 9\end{array}$ | 16283 | $27013 \quad 9$ | $378 \quad 19 \quad 3$ |
| 17th. | $5811 \quad 9$ | $17515 \quad 3$ | $29218 \quad 9$ | 41023 |
| 18th. | $63 \quad 3 \quad 9$ | 189113 | $31518 \quad 9$ | $442 \quad 6$ |
| 19th . | 671811 | 203169 | 339147 | $475 \quad 12$ |
| 20th . | $\begin{array}{llllllllllllll}72 & 17\end{array}$ | 218120 | 36460 | $\begin{array}{llll}510 & 1\end{array}$ |

Rule for Calculating Interest, at 5 per Cent.
Multiply the Pounds by the Days, and divide the Product by 365 . The Quotient gives the Interest at 5 per Cent. in Shillings.

## WEIGHTS AND MEASURES.

## Measure of Length.

| 12 | Inches | make 1 Foot |  |
| ---: | :--- | :---: | :--- |
| 3 | Feet | $"$ | 1 Yard |
| $5 \frac{1}{2}$ | Yards | " | 1 Rod or Pole |
| 40 | Poles | $"$ | 1 Furlong |
| 8 | Furlongs | " | 1 Mile |
| 69 | Miles | " | 1 Degree |

A Nail is equal to $2 \frac{1}{4}$ Inches

| Ell | $"$ | 5 |
| :--- | :--- | :--- |
| Hand Quarters |  |  |
| Hathom | $"$ | 4 |
| Inches, of horses |  |  |

An English mile is 5,280 feet.
A Scotch mile contains 1,500 paces.
The German mile is rather more than 4글 English miles.

A sea mile is 6,078 feet.
A sea league is $\mathbf{3 . 4 5 3 6}$ miles, or the 20th of a degree. A league is 3 sea miles.

A great league in France is 3,000 paces, and a mean league 2,500 .

A Russian verst is 3,508 English feet, or about two-thirds of a mile.

A Scotch ell is $37 \frac{2}{10}$ inches.
The Irish acre is 7,840 square yards.
A hide of land was one plough's work.
A hair's breadth is the 48th of an inch.
A geometrical pace is 4.4 feet English.

## Measure of Surface.

144 Sq . Inches is equal to 1 Sq . Foot
9 Sq. Feet
", 1 Sq . Yard
$30 \frac{1}{4}$ Sq. Yards $\quad, \quad 1$ Perch or Rod
40 Perches , 1 Rood
4 Roods
" 1 Acre

540 Acres
" 1 Sq. Mile
Measures of Capacity.
4 Gills make 1 Pint
2 Pints " 1 Quart
4 Quarts ", 1 Gallon
2 Gallons " 1 Peck
8 Gallons ", 1 Bushel
8 Bushels " 1 Quarter
5 Quarters ", 1 Load
The four last are used for dry goods only. For Beer, the Firkin of 9 Gallons, the Kilderkin of 18 , the Barrel of 36 , the Hogshead of 54, and the Butt of 108 Gallons.

Measure of Weight.
Avoirdupois Weight.
$27 \frac{1}{32}$ Grains make 1 Dram equal $27 \frac{1}{32}$ gr. 16 Drams ", 1 Ounce $\quad 437 \frac{1}{2}$ 16 Ounces " 1 Pound (lb.)", 7000 28 Pounds ", 1 Quarter (qr.)
4 Quarters " 1 Hundredweight (cwt.) 20 Cwt. " 1 Ton
This weight is used in trade and commerce.
Wool Trade. Cwt. qr. lb.
14 Pounds make 1 Stone equal to $0 \quad 014$

| 2 Stone | $"$ | 1 Tod | $"$ | 0 | 1 | 0 |
| :---: | :--- | :--- | :--- | ---: | :--- | ---: |
| $6 \frac{1}{2}$ Tod | $"$ | 1 Wey | $"$ | 1 | 2 | 14 |
| 2 Weys | $"$ | 1 Sack | $"$ | 3 | 1 | 0 |
| 12 Sacks | $"$ | 1 Last | $"$ | 39 | 0 | 0 |

## Troy Weight.

24 Grains make 1 Pennywt. equal 24 gr. 20 Pennywts, " 1 Ounce " 480 12 Ounces " 1 Pound , 5760

The above are for weighing gold, silver, and precious stones (except diamonds), and used by apothecaries in compounding medicines, and by them the ounce is divided into 8 drams, and the dram into 3 scruples, so that the scruple is equal to 20 grains.

Measure of Time.

| 60 Seconds | make 1 Minute |
| :---: | :---: |
| 60 Minutes | 1 Hour |
| 24 Hours | ", 1 Day |
| 7 Days | ", 1 Week |
| 28 Days | " 1 Lunar Mth. |
| 28, 29, 30, or 31 Days | $s$, 1 Cal, month |
| 12 Calendar Months | 1 Year |
| 365 Days | 1 Common Yr. |
| 366 Days | 1 Leap Year |

In 400 Years, 97 are leap years, and 303 common.


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