

## PART II.—OF DIET.

IN this part of my work I propose to consider briefly the adaptation of aliment to the different wants and conditions of human existence. But as it involves the consideration of the digestibility and nutritious quality of foods, as well as of the times best fitted for eating, I propose to offer a few remarks on these subjects, before proceeding to the examination of dietaries and the dietetical treatment of diseases.

## CHAP. I.—Of the Digestibility of Food.

The term *assimilation*, as used in its most general sense, by Dr. Prout, has been applied to those processes by which alimentary substances are converted into the organized tissues of the body: *primary assimilation* comprising those concerned in the conversion of food into blood;—*secondary assimilation*, those by which organized or living textures are formed from the blood, and afterwards redissolved and removed from the system.

I need hardly explain that digestion is one of the primary assimilating processes. It comprehends those changes effected on the food in the stomach and intestines; and is partly a mechanical, but principally a

chemical process. Dr. Prout speaks of it as being likewise a vitalizing process.

Most of the well-ascertained changes effected in the food in the stomach can be produced out of the body. By digestion starch is converted into gum and sugar: oily or fatty bodies are minutely divided (not dissolved), and formed into a kind of emulsion: proteinaceous substances (fibrine, albumen, caseine, and gluten) are dissolved or liquefied in the stomach, and afterwards precipitated in the duodenum. Now all these processes can be imitated out of the body. Thus fibrine or coagulated albumen can be dissolved either in the gastric juice withdrawn from the stomach, or in an artificial digestive liquor prepared by macerating the dried lining membrane of the fourth stomach of the calf in water acidulated with hydrochloric acid (see p. 71).

The saccharine matter, the emulsified oily or fatty substances, and the finely divided or redissolved proteinaceous matters are absorbed, and pass into the chyle.

The formation or secretion of the matters necessary to produce the requisite chemical changes in the food, is, as far as we at present know, a vital act. To dissolve the proteinaceous compounds two substances are required, an acid (hydrochloric) and a matter called *pepsine* or *chymosine*. According to Dumas, the first softens these bodies and causes them to swell up,—the second determines their liquefaction.

Without adopting the fermentation hypothesis of digestion, to which I have already (see p. 71) offered some objections, the necessity of certain agents in the

stomach to effect the solution or liquefaction of the food is obvious; and if we admit that these are formed by the vital powers, we can readily comprehend how, in certain morbid conditions of the organism, the digestive agents are altered in their nature, and the natural and healthy process of digestion thereby deranged.

The digestibility of food is affected by two classes of circumstances;—the one relating to the foods themselves, the other to those of the individual or the organism.

1. *Digestibility of food affected by circumstances relating to the foods themselves.*—A variety of circumstances affect the facility with which different kinds of foods undergo digestion. Some foods are naturally more difficult of digestion than others. This is especially the case with the oily or fatty substances. I have, however, already fully considered the subject, and I, therefore, beg to refer my readers to the opinions before expressed (see pp. 170-175).

“Vegetables,” says Dr. Beaumont, “are generally slower of digestion than meats and farinaceous substances, though they sometimes pass out of the stomach before them, in an undigested state. Crude vegetables, by some law of the animal economy not well understood, are allowed, even when the stomach is in a healthy state, sometimes to pass the pyloric orifice, while other food is retained there to receive the solvent action of the gastric juice. This may depend upon their comparative indigestibility; for it is well known that cathartic medicines, various fruits, seeds,

&c. which operate as laxatives, are not digested; are incapable of being retained in the stomach; and pass rapidly through the intestinal tube.”

In digestion, as in all chemical processes, cohesion is a force which is opposed to molecular changes; and the efficacy of various means of augmenting the digestibility of foods is ascribable to their influence in lessening this force. The more easy digestibility of whipped or lightly-boiled eggs than the same bodies when fried or hard-boiled is explicable in this way (see pp. 270 and 271).

Tenderness of fibre facilitates the digestive process; and, therefore, all those circumstances (see pp. 238-241) which affect the texture of flesh, have an influence over its digestibility. Violent muscular exertion immediately previous to the death of an animal renders its flesh more tender; and thus the meat of hunted animals is more digestible than it would otherwise have been. It is not improbable that the still more cruel practices of bull-baiting and whipping pigs to death, had their origin in some object of this kind (see p. 239).

Incipient decomposition promotes the tenderness and digestibility of food. Most persons are aware that fresh-killed meat is tougher than that which has been kept for some time (see p. 239).

To these observations some apparent objections exist. The flesh of young animals, as I have already stated (see pp. 239-240), is more tender and soluble than that of the adult animal; yet the latter is the more digestible. Moreover it might be supposed that liquid foods, on account of their lesser cohesion, would

be more digestible than solid foods: yet such does not appear to be the case. "Solid food," says Dr. Beaumont, "is sooner disposed of by the stomach than fluid, and its nutritive principles are sooner carried into the circulation. It has been observed, however, that the exhaustion from abstinence is quicker removed by liquid than by solid aliment."

Minuteness of division of solids is an important aid to digestion. Thus potatoes, when so far cooked as to be easily mashed, are more easily digestible than when cooked for a shorter period of time, so as to retain their form; and for the same reason mealy potatoes are more digestible than waxy ones (see pp. 376 and 377). It is obvious, also, that perfect mastication, by effecting the minute division of food, must be an important aid to digestion; and this fact cannot be too strongly urged on dyspeptics: for if the food be imperfectly chewed and hastily swallowed, greater difficulty is experienced in the subsequent operation of digestion. To the toothless, therefore, artificial teeth are important adjuvants to the gastric operations.

Nor is the process of insalivation, as affecting the digestibility of the food, to be overlooked. When food has been thoroughly intermixed with the saliva and mucus of the mouth, it is more readily and speedily permeated and acted on by the gastric juice. We may draw an illustration of the use of the saliva from the preparatory proceeding of the operation of displacement by percolation. In order to prepare a tincture of any medicinal substance by percolation, the solid material, first reduced to a moderately fine powder, is

moistened with a sufficiency of the solvent to form a thick pulp. This preliminary operation—which is analogous to insalivation—facilitates the percolation of the remainder of the liquid, while it also assists its solvent action on the solid material. If dry food be hastily swallowed without being duly admixed with the saliva and mucus of the mouth, we instinctively desire drink to moisten the alimentary mass; so that in this dry state it does not appear to be so readily converted into chyme; and it is probable that chylification, as well as chymification, is checked by imperfect insalivation.

The cookery of foods has for its immediate object the gratification of the palate; but it can scarcely be doubted that its more remote end is the promotion of digestion. The reader will scarcely fail to observe that nearly every substance possessing an organized texture, is, by civilized man, submitted to some cooking process before it is employed as food. One point, therefore, attained by cooking, is the more or less complete destruction of organization. Its effect, as I have before remarked (see p. 238), is not always to produce a chemical change in the ultimate constitution of food, for it does not appear that roasting affects the ultimate composition of meat. Boiling, however, produces some changes in the proximate composition of it (see pp. 408 and 409), and, in the case of the farinaceous substances, serves to break or split the starch grains (see pp. 125 and 126). Frying, of all culinary operations, is the most obnoxious to the digestive function, for reasons which I have before explained (see pp. 172 and 173).

2. *Digestibility of foods affected by circumstances relating to the individual or organism.*—The state of body and mind, idiosyncrasy or constitutional peculiarity, habit, the interval that has elapsed since the preceding meal, the keenness of the appetite, the amount of exercise taken either immediately before or after eating, and the quantity of food swallowed at one meal, are some of the circumstances relating to the individual, which affect digestion. Violent anger, for example, disturbs this process, and, according to Dr. Beaumont, gives rise to the appearance of bile in the stomach. In febrile diathesis, with dryness of mouth, thirst, accelerated pulse, &c. very little or no gastric juice is secreted. Under such circumstances, therefore, the propriety of withholding food is very obvious: if we permit its use no nourishment can be obtained from it, while its presence in the stomach is a source of irritation. The idiosyncrasy of some constitutions with regard to mutton has been already alluded to (see p. 242).

Considerable discrepancy of opinion has existed with regard to the influence of repose after eating. By one class of writers on dietetics exercise is said to promote, by another to retard, digestion; and both parties appeal to experience for evidence in proof of their position. "From numerous trials, I am persuaded," says Dr. Beaumont, "that moderate exercise conduces considerably to healthy and rapid digestion. The discovery was the result of accident, and contrary to preconceived opinions." Dr. Combe, on the other hand, observes, "that *active* exercise *immediately* after a *full* meal, such as is generally taken for dinner, is

prejudicial to its digestion, seems to me to be proved by daily and unequivocal experience, and I have often seen patients labouring under indigestion benefited by refraining from it."

It will, I think, be generally admitted, that after a full meal the functions of the body are more or less impaired, sluggishness is induced, and a tendency to repose experienced. These effects are almost universal in the animal kingdom. We experience them in our own persons, and we witness them not only on our fellow men, but on the inferior animals. The dog, when allowed to indulge his natural instinct, lies down and sleeps after he has satisfied his appetite; and the Python or Indian Boa, we are told, lies in a torpid state for three or four weeks after gorging itself with a goat.

These and many other analogous facts are satisfactory to my mind that repose is natural to animals after a hearty meal; and that the practice of taking the *siesta*, or after-dinner sleep, is not injurious, if moderately indulged in. It should, however, be followed by moderate exercise. But there are exceptions to these statements, and I have met with some few persons who have asserted that they find advantage in using exercise immediately after dinner; but these form exceptions to the general rule. After the earlier and lighter meals of the day, breakfast or luncheon, quietude or repose is neither desired nor required.

I shall close these observations on the digestibility of foods by subjoining Dr. Beaumont's table, shewing the mean time of digestion of various articles of food,

as ascertained by experiments on the Canadian, whose case I have already had occasion to refer to (see p. 160). I may premise, however, that his statements are by no means to be implicitly adopted. "The rapidity of digestion, as the author himself shows, varies greatly according to the quantity eaten, the amount and nature of the previous exercise, the interval of the preceding meal, the state of health and of the weather, and also the state of the mind. But in scarcely any of the experiments have these conditions been carefully noted."\*

\* *Experiments and Observations on the Gastric Juice and the Physiology of Digestion*, by W. Beaumont, M.D., Edinb. 1833. Foot-note, p. 37, by Dr. Combe.

TABLE

Shewing the Mean Time of Digestion of the different Articles of Diet, naturally, in the Stomach, and artificially in Phials, on a Bath.

The proportion of gastric juice to aliment, in artificial digestion, was generally calculated at one ounce of the former to one drachm of the latter, the bath being kept as near as practicable at the natural temperature, 100° Fahrenheit, with frequent agitation.

Articles of Diet.	Mean Time of Chymification.			
	In Stomach.		In Phials.	
	Preparation.	H. M.	Preparation.	H. M.
Rice . . . . .	Boiled	1		
Pigs' feet, soused . . . . .	Boiled	1		
Tripe, soused . . . . .	Boiled	1		
Eggs, whipped . . . . .	Raw	1 30	Whipped	4
Trout, salmon, fresh . . . . .	Boiled	1 30	Boiled	3 30
Trout, salmon, fresh . . . . .	Fried	1 30		
Soup, barley . . . . .	Boiled	1 30		
Apples, sweet, mellow . . . . .	Raw	1 30	Masticated	6 45
Venison steak . . . . .	Broiled	1 35		
Brains, animal . . . . .	Boiled	1 45	Boiled	4 30
Sago . . . . .	Boiled	1 45	Boiled	3 15
Tapioca . . . . .	Boiled	2	Boiled	3 20
Barley . . . . .	Boiled	2		
Milk . . . . .	Boiled	2	Boiled	4 15
Liver, beef's, fresh . . . . .	Broiled	2	Cut fine	6 30
Eggs, fresh . . . . .	Raw	2	Raw	4 15
Codfish, cured dry . . . . .	Boiled	2	Boiled	5
Apples, sour, mellow . . . . .	Raw	2	Masticated	8 30
Cabbage, with vinegar . . . . .	Raw	2	Shaved	10 15
Milk . . . . .	Raw	2 15	Raw	4 45
Eggs, fresh . . . . .	Roasted	2 15		
Turkey, wild . . . . .	Roasted	2 18		
Turkey, domestic . . . . .	Boiled	2 25		
Gelatine . . . . .	Boiled	2 30	Boiled	4 45
Turkey, domestic . . . . .	Roasted	2 30		
Goose, wild . . . . .	Roasted	2 30		
Pig, sucking . . . . .	Roasted	2 30		
Lamb, fresh . . . . .	Broiled	2 30		
Hash, meat and vegetables . . . . .	Warmed	2 30		
Beans, pod . . . . .	Boiled	2 30		
Cake, sponge . . . . .	Baked	2 30	Broken	6 16
Parsnips . . . . .	Boiled	2 30	Mashed	6 45
Potatoes, Irish . . . . .	Roasted	2 30		
Potatoes, Irish . . . . .	Baked	2 30		
Cabbage, head . . . . .	Raw	2 30	Masticated	12 30

Articles of Diet.	Mean Time of Chymification.			
	In Stomach.		In Phials.	
	Preparation.	H. M.	Preparation.	H. M.
Spinal marrow, animal	Boiled	2 40	Boiled	5 25
Chicken, full grown	Fricassee	2 45		
Custard	Baked	2 45	Baked	6 30
Beef, with salt only	Boiled	2 45		9 30
Apples, sour, hard	Raw	2 50	Entire pieces	18
Oysters, fresh	Raw	2 55	Raw, entire	7 30
Eggs, fresh	Soft boiled	3	Soft boiled	6 30
Bass, striped, fresh	Broiled	3		
Beef, fresh, lean, rare	Roasted	3	Roasted	
Beef-steak	Broiled	3	Masticated	8 15
Pork, recently salted	Raw	3	Raw	8 30
Pork, recently salted	Stewed	3		
Mutton, fresh	Broiled	3	Masticated	6 45
Mutton, fresh	Boiled	3		
Soup, bean	Boiled	3		
Chicken soup	Boiled	3		
Aponeurosis	Boiled	3	Boiled	6 30
Dumpling, apple	Boiled	3		
Cake, corn	Baked	3		
Oysters, fresh	Roasted	3 15		
Pork, recently salted	Broiled	3 15		
Pork-steak	Broiled	3 15		
Mutton, fresh	Roasted	3 15		
Bread, corn	Baked	3 15		
Carrot, orange	Boiled	3 15	Mashed	6 15
Sausage, fresh	Broiled	3 20		
Flounder, fresh	Fried	3 30		
Catfish, fresh	Fried	3 30		
Oysters, fresh	Stewed	3 30	Stewed	8 25
Beef, fresh, lean, dry	Roasted	3 30	Roasted	7 45
Beef, with mustard, &c.	Boiled	3 30		
Butter	Melted	3 30		
Cheese, old, strong	Raw	3 30	Masticated	7 15
Soup, mutton	Boiled	3 30		
Oyster soup	Boiled	3 30		
Bread, wheat, fresh	Baked	3 30	Masticated	4 30
Turnips, flat	Boiled	3 30		
Potatoes, Irish	Boiled	3 30	Mashed	8 30
Eggs, fresh	Hard boiled	3 30	Hard boiled	8
Eggs, fresh	Fried	3 30		
Green corn and Beans	Boiled	3 45		
Beets	Boiled	3 45		
Salmon, salted	Boiled	4	Boiled	7 45
Beef	Fried	4		12 30
Veal, fresh	Broiled	4		
Fowls, domestic	Boiled	4	Masticated	6 30
Fowls, domestic	Roasted	4		

Articles of Diet.	Mean Time of Chymification.			
	In Stomach.		In Phials.	
	Preparation.	H. M.	Preparation.	H. M.
Ducks, domestic	Roasted	4		
Soup, beef, vegetables and bread	Boiled	4		
Heart, animal	Fried	4	Entire piece	13 30
Beef, old, hard, salted	Boiled	4 15		
Pork, recently salted	Fried	4 15		
Soup, marrow bones	Boiled	4 15		
Cartilage	Boiled	4 15	Masticated	10
Pork, recently salted	Boiled	4 30	Masticated	6 30
Veal, fresh	Fried	4 30		
Ducks, wild	Roasted	4 30		
Suet, mutton	Boiled	4 30	Divided	10
Pork, fat and lean	Roasted	5 15		
Tendon	Boiled	5 30	Masticated	12 45
Suet, beef, fresh	Boiled	5 30	Entire piece	12
Beef-steak	Broiled		Cut fine	8
Beef-steak	Raw		Cut fine	8 15
Beef	Boiled		Entire piece	9
Mutton, fresh	Broiled		Unmasticated	8 30
Cream			Raw	25 30
Cheese, old, strong			Entire piece	18
Cheese, new, mild			Divided	8 30
Oil, olive			Raw	60
Tendon			Entire piece	24
Cartilage			Divided	12
Bone, beef's, solid			Entire piece	80
Bone, hog's, solid			Entire piece	80
Parsnips	Boiled		Entire piece	13 15
Parsnips	Raw		Entire piece	18
Carrot, orange			Entire piece	12 30
Carrot, orange	Raw		Raw piece	17 15
Potatoes, Irish			Entire piece	14
Cabbage	Boiled	4 30	Boiled	20
Peach, mellow			Cut small	10
Peach, mellow			Mashed	6

CHAP. II.—Of the Nutritive Qualities of Foods.

In order to arrive at any accurate conclusions with respect to the relative nutritive powers of different

kinds of foods, it is necessary, in the first place, to ascertain the amount of water these substances respectively contain; for it will be found that in this respect the difference between different kinds of food is enormous. Thus Turnips and Cabbages contain somewhat more than 92 per cent. of water, or not quite 8 per cent. of anhydrous or dry solid matter; while the Fixed Oils or Fats are anhydrous, or nearly so.

But of the anhydrous or dry matter of foods the whole is not necessarily nutritive. I have already stated (see p. 138), that the ligneous or woody tissue of vegetable foods is indigestible, and is evacuated with the fæces. Moreover, the green resinous matter of plants, called *chlorophylle*, does not possess alimentary properties, as I have before remarked (see p. 381). So that from the amount of anhydrous, or dry solid matter of ordinary vegetable foods, we must deduct woody tissue and the colouring matter.

Furthermore, it is doubtful whether some of the substances which enter into the composition of animal foods are nutritive, at least under ordinary circumstances; such as *pack-wax* (see p. 235), and some of the membranous tissues which approximate to horny matter in composition (see p. 209).

Of the positively digestible and nutritive matter of foods we must distinguish those principles which are nitrogenized from such as are not. For whether the views of Liebig, as to the exclusively nutritive quality of nitrogenized foods, be or be not correct, it cannot be doubted that the mode of nutrition of substances which are devoid of nitrogen must be different from that of bodies which contain it, and whose ulti-

mate composition is identical with that of the living tissues.

The value of non-nitrogenized substances as aliments is probably in proportion to the quantity of carbon which they contain. In this point of view the oils and fats exceed all other foods of this class.

Of the nitrogenized aliments, those which contain the largest amount of proteinaceous principles (which are identical in ultimate composition with our own flesh and blood), exceed all other foods in nutritive power. I have already (see p. 55) mentioned Boussingault's opinion, that the nutritive value of nitrogenized foods is in proportion to the quantity of nitrogen entering into their composition; and I have pointed out some objections to this notion (see pp. 55 and 338). I may further add, that if it were true, the gelatinous alimentary principles must exceed the proteinaceous ones in nutritive power,—a conclusion not borne out by experience.

In the following table, which I have drawn up from the best accessible sources, will be found the percentage quantities of water, anhydrous or dry matter, carbon, and nitrogen, contained in foods as we usually meet with them in commerce. The numbers contained in the table are not always the actual ones given by the authorities quoted; but have in most cases been obtained by calculation from data furnished by the authors respectively quoted.

TABLE

Representing the Average Quantities of Dry Matter, Moisture, Carbon, and Nitrogen, in various Alimentary Substances of commerce.

100 PARTS.	Solid or Dry Matter.	Water or Moisture.	Carbon.	Nitrogen.	Authority.
Gum Arabic .....	87.6	12.4	36.3	0	Prout.
Ditto .....	82.4	17.6	31.78	0.14	Guerin.*
Sugar candy .....	89.47	10.53	42.09	0	Peligo.
Ditto .....	..	..	42.83	0	Prout.
English refined sugar.....	..	..	{ 41.5 to 42.5 }	0	Prout.
Maple sugar .....	..	..	42.1	0	Prout.
Beet-root sugar .....	..	..	42.1	0	Prout.
East India moist sugar .....	..	..	40.88	0	Prout.
Sugar of Narbonne honey .....	..	..	36.36	0	Prout.
Sugar from starch [Potato sugar?]	..	..	36.2	0	Prout.
Sugar of milk .....	..	..	40.0	0	Prout.
Ditto (crystallized).....	87.3	12.3	40.46	0	Liebig.
Manna sugar (Mannite).....	..	..	38.7	0	Prout.
Ditto .....	..	..	39.83	0	Liebig.
Potato starch (commercially dried)	82	18	36.44	0	Dumas.
Fine Wheat starch .....	85.2	14.8	37.3	0	Prout.
Arrow root .....	81.8	18.2	36.4	0	Prout.
Almond oil.....	100	0	77.403	0.288	Saussure.
Olive oil .....	100	0	77.50	0	Saussure.
Butter† .....	100	0	65.6	0	Berard.
Hog's lard .....	100	0	79.098	0	Chevrel.
Mutton suet .....	100	0	78.996	0	Chevrel.
Wheat .....	83.3	14.3	39.415	1.966	Boussingault.
Rye .....	83.4	16.6	38.530	1.417	Boussingault.
Oats .....	79.2	20.8	40.151	1.742	Boussingault.
Oatmeal .....	93.4	6.6	..	..	Christison.
Bread (Rye) average.....	67.79	32.21	30.674	..	Breckmann.
Ditto ditto .....	..	..	30.15	..	Liebig.
Leguminous seeds ditto .....	..	..	37.00	..	Liebig.
Peas .....	81.0	16.0	35.743	..	Playfair.
Ditto (Pois jaunes).....	91.4	8.6	42.4	3.838	Boussingault.
Ditto .....	85.94	14.06	..	..	Einhof.
Beans .....	85.69	14.11	38.24	..	Playfair.
Ditto (Broad or Windsor Bean)	84.37	15.63	..	..	Einhof.
Lentils.....	84.1	15.9	37.38	..	Playfair.
Potatoes .....	24.1	75.9	10.604	0.3615	Boussingault.
Ditto (fresh).....	20.6	79.4	12.2	0.37	Boussingault.
Ditto (fresh).....	23.2	76.8	..	0.28	Liebig.
Ditto (kept 10 months).....	7.7	92.3	..	0.28	Boussingault.
Cabbage .....	7.3	92.3	3.2175	0.1275	Boussingault.
Turnips .....	12.4	87.6	..	0.30	Boussingault.
Carrots .....	20.8	79.2	9.0	0.3328	Boussingault.
Jerusalem Artichoke .....	25.13	74.87	..	..	Berard.
Apricot (ripe).....	28.90	71.10	..	..	Berard.
Green-gage (ripe).....	19.76	80.24	..	..	Berard.
Peach (ripe) .....	25.15	74.85	..	..	Berard.
Cherries (ripe) .....	16.12	83.88	..	..	Berard.
Pear (ripe Jargonelle).....	18.90	81.10	..	..	Berard.
Gooseberries (ripe) .....	84.09	16.00	..	..	Berard.
Smyrna Figs .....	2.86	97.14	..	..	Bey.
Cucumber (peeled) .....	20.00	80.00	10.392	3.014	John.
Blood .....	12.98	87.02	..	..	Liebig.
Milk, Cow's .....	8.35	91.65	..	..	..
" Ass's .....	12.02	87.98	..	..	O. Henri
" Woman's .....	13.20	86.80	..	..	and
" Goat's .....	14.38	85.62	..	..	Chevallier.
" Ewe's .....	..	..	..	..	..

\* Guerin's analysis is that of what he calls *Arabin*.

† Butter usually contains about one-sixth of its weight of butter-milk.

100 PARTS.	Solid or Dry Matter.	Water or Moisture.	Carbon.	Nitrogen.	Authority.
Butcher's meat, devoid of fat .....	26	74	13.6	..	Liebig.
" " with 1-7th fat and cellular tissue .....	..	..	21.75	..	Liebig.
" " including bones, as purchased.....	29	71	..	..	Liebig.
Fresh beef flesh .....	23	75	12.937	3.752	Breckmann.
Muscular flesh of Ox.....	22.5	77.5	..	..	Schlossberger
" " Calf .....	{ 20.3 to 21.8 }	{ 79.7 to 78.2 }	..	..	Schlossberger
" " Pigeon.....	24.0	76.0	..	..	Schlossberger
" " Chicken .....	22.7	77.3	..	..	Schlossberger
" " Carp and Trout (average).....	19.7	80.3	..	..	Schlossberger
" " Cod, Haddock, & Sole (average).....	20.0	80.0	..	..	Brande.
Egg, white of.....	20.0	80.0	..	..	Bostock.
" yolk of .....	46.23	53.77	..	..	Prout.
" dried and purified albumen of Calf's sweetbread .....	30.0	70.0	55.00	15.681	Scherer.
Oysters .....	12.6	87.4	..	..	Morin.
Isinglass.....	92.5	7.5	..	..	Pasquier.
Beef Tea .....	1.5625	98.4375	..	..	John.
Soup of the House of Arrest at Giessen	..	..	0.75	..	Christison.
..	..	..	..	..	Liebig.

In several parts of this work (see pp. 175, 180-181, 183-184, 190, 192, 212-213, 234, and 241) I have referred to the statements contained in the Report made to the Academy of Sciences in Paris by the Gelatine Commission; and I, therefore, think it advisable to subjoin the conclusions which Magendie, in the name of the Commission, has drawn from the facts detailed:—

1. We cannot, by any known proceeding, extract from bones an aliment which, either alone or mixed with other substances, can be substituted for meat.
2. Gelatine, albumen, and fibrine, taken separately, nourish animals for a very limited period only, and in an incomplete manner. In general they soon excite such an insurmountable disgust, that animals die rather than partake of them.
3. The same immediate principles artificially reunited, and rendered agreeably sapid by seasoning, are eaten more readily, and for a longer period, than the same substances singly, but their ultimate influence on nutrition is not better; for animals who take them, even in considerable quantities, die ultimately with all the symptoms of complete inanition.
4. Muscular flesh, in which gelatine, albumen, and fibrine are united according to the laws of organic nature, and where they are



- associated with other matters—as fat, salts, &c., suffices, even in very small quantity, for complete and prolonged nutrition.
5. Raw bones have the same effect, but the quantity consumed in twenty-four hours ought not to be much greater than in the case of meat.
  6. Every kind of preparation, such as decoction with water, the action of hydrochloric acid, and especially the transformation into gelatine, diminishes, and, in some cases, seems even to destroy the nutritive quality of bones.
  7. The Commission, however, does not wish at present to offer an opinion on the employment of gelatine, associated with other aliments, in the nourishment of man. It believes that direct experiment can alone illustrate this subject in a definite manner. It has been actively occupied with this subject, and the results will be published in the second and last part of this Report.
  8. Gluten, from wheat or maize, alone satisfies complete and prolonged nutrition.
  9. Fat, taken alone, sustains life during some time, but the nutrition is imperfect and disordered. It accumulates in all the tissues, sometimes in the state of *claine* (*oleine*) and of *stearine*, sometimes in the state of almost pure *stearine*.

### CHAP. III.—*Of the Times of Eating.*

An able writer (Dr. Combe), on Digestion and Dietetics, has very justly observed, that “the grand rule in fixing the number and periods of our meals, is, to proportion them to the real wants of the system as modified by age, sex, health and manner of life, and as indicated by the true returns of appetite.”

The time required for the digestion of the food, by the healthy stomach, varies from one to three or four hours; but hunger, or the desire to take more food, is not usually experienced until some time after this viscus has disposed of its contents. If fresh food be introduced into the stomach before that of the previous meal has been digested, the process of digestion is disturbed. The solution which Dr. Beaumont offers of

this generally admitted fact is, that *more food is received into the stomach, in the aggregate, than the gastric juice can dissolve.* But this explanation is by no means a satisfactory one. It leads to the conclusion, that *eating a little and often* is not injurious, provided the total amount of food taken does not exceed that capable of being dissolved by the gastric juice. General experience, however, is opposed to this practice; and it can scarcely be doubted that, in the healthy state of the system, the custom of eating moderately at more prolonged intervals is most natural to man.

A variety of circumstances affect the length of the interval between each meal. On account of the greater activity of the organs of respiration, children require to be more frequently fed than adults, and they bear hunger less easily. For the same reason, also, persons who take much exercise, or labour hard, require more frequent and copious meals than the indolent and sedentary. In the former the number of respirations is greater than in the latter; and, therefore, a more frequent supply of food is required to supply the necessary quantity of carbon and hydrogen to be consumed in the lungs. “A bird deprived of food,” says Liebig, “dies on the third day, while a serpent, with its sluggish respiration, can live without food three months or longer.”

From experiments\* made a few years ago at the Zoological Gardens, it appears that carnivorous mammalia require one meal in twenty-four hours only, and

\* See the *Proceedings of the Zoological Society*, No. xviii. p. 49.

that if fed more frequently their health suffers. It was found that when Leopards and Hyænas were fed with two meals daily they did not continue in equally good condition with those which had the same quantity of flesh daily in one meal only. It further appears, that in one instance (that of the Leopard), the temper changed for the worse; and in another instance the habits were altered as regarded exercise, a diminution of which, in confined animals, must be injurious to health.

It cannot be doubted that the practice of having fixed periods for eating is more conducive to health than eating at irregular intervals. But it will be obvious, from the foregoing observations, that the periods should vary for different classes of individuals. "So strong is the tendency to periodicity in the system," says Dr. Combe, "that the appetite returns at the accustomed hour, even after the mode of life, and consequently the wants of the system, have undergone a change; and if not gratified, it again subsides. Ultimately, however, its calls become too urgent to admit of being a second time disregarded."

The number of meals per day, and the intervals between them, must vary according to several circumstances; but for adults it may be admitted, as a general rule, that three meals at least are essential to health, though five are in frequent use; viz. breakfast, luncheon, dinner, tea, and supper. In public pauper establishments three only are permitted; viz. breakfast, dinner, and supper.

1. *Breakfast*.—The system is more susceptible of the influence of morbid causes before breakfast than

at any other period of the day. "It is well known," observes Dr. Combe, "that the system is more susceptible of infection, and of the influence of cold, miasma, and other morbid causes, in the morning before eating than at any other time; and hence it has become a point of duty with all naval and military commanders, especially in bad climates, always to give their men breakfast before exposing them to morning dews and other noxious influences. Sir George Ballingall even mentions a regiment quartered at Newcastle, in which typhus fever was very prevalent, and in which, of all the means used to check its progress, nothing proved so successful as an early breakfast of warm coffee. In aguish countries, also, experience has shown that the proportion of sick among those who are exposed to the open air before getting any thing to eat, is infinitely greater than among those who have been fortified by a comfortable breakfast."

In some constitutions, especially those denominated delicate, much exercise, either of body or mind, before breakfast, operates injuriously; producing exhaustion, languor, and unfitness for the ordinary occupations of the day.

These facts show the importance of breakfasting soon after rising and dressing; at least in many cases. I am fully aware that there are numerous exceptions to this. Some persons not only suffer no injury from, but actually appear to be benefited by, active exercise taken before breakfast; its effect being with them to create or augment the appetite. But in others the effects are those which I have already stated. I am

satisfied, from repeated observation, that in children disposed to spasmodic and other brain diseases, the practice of making them attend school for two hours before breakfast is injurious; and I fully agree, therefore, with Dr. Combe, that in "boarding-schools for the young and growing, who require plenty of sustenance, and are often obliged to rise early, an early breakfast is almost an indispensable condition of health." Epileptics, especially those disposed to morning attacks, should invariably breakfast soon after rising. I think I have seen the fits brought on by neglecting this precaution. For travellers a light breakfast before starting is a great protection "against colds and subsequent fatigue or exhaustion." Medical men and others should not, if possible, expose themselves to the influence of infectious or contagious disorders, as fevers, &c. before breakfast, as the danger of infection then is greatly enhanced. For the same reason the practice of making post-mortem examinations and dissections before breakfast is to be condemned.

2. *Luncheon*.—This meal is admissible only when either the interval between the breakfast and dinner is very prolonged, or when the quantity of food taken at breakfast is very small. The lower classes, as well as the children of the higher classes, dine early, and thus with them luncheon is unnecessary, and accordingly is not usually taken. Not so, however, with adults of the middling and higher classes. With them, either from business or other causes, the practice of dining late has become general; and with such luncheon becomes a necessary meal. It should be taken about five hours after breakfast, and though called by

another name, it may be considered as a light dinner, taken to allay the cravings of nature, but not entirely to destroy the appetite.

3. *Dinner*.—"Supposing nine o'clock to be the hour of breakfast," observes Dr. Combe, "the natural dinner-hour would be two o'clock; and such, accordingly, is that sanctioned by the most extended experience, and which ought to be adhered to by all whose occupations will admit of its observance, and who wish to enjoy the highest health of which they are susceptible." This rule is a very good general one for adults, to which, however, exceptions oftentimes occur. Digestion is a process which is not effected in the same period of time in different individuals,—in some it is slow, in others rapid. In the former a longer interval between breakfast and dinner is necessary than in the latter. A variety of other circumstances, such as the quantity of food taken at breakfast, the occupation of the individual, &c. &c. also affect the length of the interval.

Business and the customs of society have led to the practice of dining late, which, as I have already stated, involves the propriety of taking the intermediate meal called luncheon.

4. *Tea*.—The moderate use of tea or coffee, two or three hours after dinner, forms a very agreeable and refreshing meal.

5. *Supper*.—General experience is unfavourable to the use of much food at supper. To those who dine late, supper is an unnecessary meal; whereas to those who dine early, and who take much active exercise, or are employed in laborious work after dinner, it is by

no means an unnecessary or unwholesome meal. An empty stomach, under such circumstances, will sometimes prove a most disagreeable preventive of sleep.

#### CHAP. IV.—*On Dietaries.*

It will, I think, be generally admitted, that an accurate acquaintance with the quantity and quality of food necessary to the maintenance of human health and life, under different circumstances, is a matter of great interest to every one; but it is more especially so to statesmen, magistrates, naval and military officers, physicians and surgeons, governors of hospitals and other public institutions, and the guardians of the poor. To them are entrusted the care and supervision of the inhabitants of prisons, ships, garrisons, armies, asylums, hospitals, and poor-houses; and on their knowledge or ignorance depends the health or disease—the life or the death—of a considerable portion of the community.

The Reports of the Inspectors of Prisons have furnished abundant evidence of the errors committed by magistrates in the dieting of criminals. Debility, diarrhœa, scurvy, and other evils known to be consequences of defective nutriment, have prevailed in many of the prisons of this country to a serious and alarming extent. I am fully aware of the difficulty, in many cases, of determining the cause or causes of these evils, and I am willing to admit that, possibly, in some of the instances in which defective nutriment has alone been charged with the production of diseases of an epidemic character, that other morbid causes,

either alone or concurrently with defective nutriment, may have contributed to the result. But in some cases the cause of the evils is too clear and unequivocal to admit of any doubt. Take the case of the Lewes House of Correction. The Inspectors of Prisons\* inform us, that "Scurvy at one time prevailed in the prison: by an increase of the diet it disappeared. The diet was again diminished, and the scurvy again appeared. The diet was then permanently increased; the scurvy again disappeared, and has not since occurred."

The actual quantity of food required for the support of human health and life is subject to considerable modification by a variety of circumstances; and, therefore, it is quite impossible to lay down a fixed rule, or to adopt any standard: for the quantity of food which may be suited to the wants of one individual may be insufficient for another, or too much for a third. Age, sex, the amount and kind of exercise and labour, the constitution, the state of health, and the condition of life, are some of the modifying circumstances; the agency of several of which is too obvious to require comment.

Captain Parry,† in his Account of one of the Polar Expeditions, states, that experience satisfied him that the following daily allowance was quite enough to support his crew on ship-board; that is, while performing the ordinary or regular ship duties:—

\* *Third Report of the Inspectors of Prisons.* Supplement to Part I. Home District, p. 94. 1838.

† *Narrative of an Attempt to reach the North Pole in boats fitted for the purpose, and attached to His Majesty's ship Hecla, in the year 1827.* London, 1828.

Biscuit . . . . .	10 ounces.
Beef Pemmican* . . . . .	9 ounces.
Sweetened Cocoa Powder . . . . .	1 ounce.
Rum . . . . .	1 gill.
Tobacco . . . . .	3 ounces per week.

But this quantity was found to be by no means sufficient to support the strength of the men during their harassing journey across the ice, living constantly in the open air, exposed to the wet and cold for twelve hours a day, seldom enjoying the luxury of a warm meal, and having to perform very severe labour. Their strength became considerably impaired, owing to want of sufficient sustenance; and both Captain Parry and Mr. Beverley, the surgeon, were of opinion, that in order to maintain the strength of the men thus employed for several weeks together, an addition would be requisite, of at least one-third more, to the provisions daily issued.

In framing prison dietaries an important element for consideration is the amount and nature of the labour to which the prisoners are subjected; those who are put to hard labour requiring a greater quantity of food to enable them to support the augmented expenditure of power. Accordingly, in the dietaries framed by the Inspectors of Prisons, and adopted by Sir James Graham, Her Majesty's Secretary of State for the Home Department, this element has been kept in view.

\* Pemmican is prepared by drying large thin slices of the lean of the meat over the smoke of wood fires, then pounding it, and, lastly, mixing it with about an equal weight of its own fat. In this state it is ready for use without further cooking.

An opinion has of late prevailed that the condition of life, as regards liberty or imprisonment, is a circumstance which modifies the quantity of food necessary for the maintenance of health. On this point I shall quote the opinion of one of the Inspectors of Prisons, in his own words:—"In the construction of a dietary for a House of Correction, it is not unfrequently assumed that something less than what is the customary food of the labouring population of the vicinity should be sufficient for those in the degraded condition of criminals. Accordingly, in those agricultural districts where meat forms but a very small proportion of the ordinary food, less has been accorded, and in some instances none, without consideration being given to the wide distinction between the condition of the freeman and the prisoner:—the one enjoying purity of air, active bodily and healthful mental exercise, social intercourse, choice and diversity of diet. It is under such circumstances that the smallest modicum of animal food proves sufficient for the preservation even of the most robust health. But reverse the situation: place the individual, as an offender against the law, in a small, cold, ill-ventilated cell; a prey to his own reflections, or, what is worse, with his mind almost a vacuum, cut off from all real social intercourse, subjected to the irksome, uninteresting labour of treading a wheel or picking oakum; it is in this condition, I contend, that the stimulus of animal food becomes indispensable for his support against the inroads of low and debilitating diseases. I scarcely recollect an instance of scurvy being prevalent in a prison but where it might be distinctly traced

to a want of variety in the diet, and its deficiency in nutritive qualities."\*

That deprivation of liberty, with all its accompanying restrictions, exercises a depressing influence on the mind, and through this on the body, cannot be for a moment doubted. In this indirect way it becomes a means of affecting the organic functions; and thus it happens that an amount of nutriment, which, under the most cheering circumstances, is barely sufficient to sustain health, may prove, when conjoined with depressing mental influences, totally insufficient for the maintenance of health, and may be followed by scurvy and other diseases known to be common consequences of defective sustenance.

And here I may be permitted to remind my reader, that scurvy has ever been a disease remarkable for the influence exercised over it by passions of the mind. In Lord Anson's Voyage, we are told, "that whatever discouraged the seamen, or at any time damped their hopes, never failed to add new vigour to the distemper; for it usually killed those who were in the last stages of it, and confined those to their hammocks who were before capable of some kind of duty. So that it seemed as though alacrity of mind and sanguine thoughts were no contemptible preservatives from its fatal malignity." Mr. Ives, in his Journal, also gives an excellent illustration of the beneficial influence of mental exhilaration on this disease; for he states, "Upon the British fleet coming into the Bay of Hieres (February, 1744),

\* *Seventh Report of the Inspectors of Prisons.* II. Northern and Eastern District, p. iii. London, 1842.

our men understood that the enemy's fleet and ours were soon to engage. There appeared not only in the healthy, but also in the sick, the highest marks of satisfaction and pleasure, and these last mended surprisingly daily, insomuch that on the 11th of February, the day we engaged the combined fleets of France and Spain, we had not above four or five but what were at their fighting quarters." Dr. Lind\* relates a still more striking exemplification of the position here contended for, as having occurred at the siege of Breda in 1625.

In the Dietaries for Prisons recently adopted by the Secretary of State, the length of imprisonment has, very properly as I conceive, been taken into consideration. For if it be admitted that imprisonment has an injurious influence over the nutrition of the body, it is obvious that the longer the period the more marked will be the effect. Those, therefore, who have to suffer prolonged terms of imprisonment require to be better nourished than those who are sentenced for shorter periods, in order to enable them the better to resist the depressing influences to which they are, for a more lengthened term, to be subjected; and the consequences of which (viz. loss of health and strength) constitute "a punishment not contemplated by law, and which it is unjust and cruel to inflict.†"

Observation and experiment have fully proved the absolute necessity of considerable variety of food for

\* *Treatise on the Scurvy.*

† Sir J. R. G. Graham, in a Circular Letter to the Chairmen of Quarter Sessions, dated Jan. 27, 1843.

the preservation of health and life; and there is nothing surprising in this. The body is made up of many principles, differing the one from the other in composition and chemical properties; and we might *à priori* have presumed, that textures which are chemically different would require different aliments for their nourishment. The living body, as I have already stated (see p. 4, *et seq.*), has no power of creating elementary substances; and it is obvious, therefore, that the system must be supplied with foods containing all the elements which enter into its composition. Moreover, it is not sufficient to present animals with these elements in their raw or uncombined state; for the animal system has no power of forming its organic constituents out of simple or elementary bodies. It is capable of effecting a considerable number of combinations and decompositions; but there is a limit to its chemical powers. It cannot form the organic constituents of the tissues out of any substances which may happen to contain the same elements, but only out of those substances whose composition and properties are analogous to, or identical with, those of the principles of which the tissues are composed. With the exception of cellular tissue and of membranes, of the brain and nerves, which vegetables cannot produce, Liebig denies that the animal organism has the power of creating any of the organic principles which compose the animal tissues.

Nitrogenized foods are necessary for the formation of tissues into the composition of which nitrogen enters. Thus proteinaceous substances (fibrine, albumen, caseine, and gluten) serve for the formation of

muscle and of the albuminous tissues, and, in the case of infants nourished by milk alone, they must also become food for the gelatinous tissues (cartilage, cellular tissue, membrane, the true skin, &c.) But as the foods on which the adult animal feeds, contain, or are capable of yielding, gelatine, it is probable that the gelatinous tissues are, in this case, wholly or partially nourished from this source.

Non-nitrogenized foods serve several important purposes in the animal economy; though perhaps their ultimate use is to act as fuel to be burnt in the lungs, and thereby to develop sufficient heat to support the high temperature necessary for the manifestation of vital power. Oily or fatty substances, sugar, and the starchy or amylaceous substances, serve this purpose. They save the injurious and excessive action of oxygen on the tissues of the body. "By diminishing the amount of alkali in the blood, and by giving non-nitrogenous food, the scurvy is cured, or prevented, in consequence of such substances being acted on instead of the tissues of the body. No other explanation can be given of the benefit which arises from vegetable acids, from fresh vegetables, from sugar, wine, beer, wort, treacle, potatoes, &c. all of which have been used with the best effects."\* Oily or fatty substances are absorbed, and afterwards either laid up in cells, to be consumed at some future time, or immediately burnt in the lungs to furnish heat.

---

\* Mr. Bence Jones, *On Gravel, Calculus, and Gout*, p. 48. Lond. 1842.

According to Liebig, saccharine and farinaceous substances also contribute to the formation of fat, though, as I have before stated, Dumas denies this.

#### 1. DIETARIES FOR CHILDREN.

In children the function of nutrition is more active than in adults. They have not merely to repair the daily waste, that is, to renovate their tissues, but to grow. Their functions of circulation and respiration are, therefore, more active than in after-life; and they require food; that is, substances to support the process of respiration, to be administered at shorter intervals.

There is also another reason why in children the elements of respiration (non-nitrogenous foods) are more necessary than in adults. In the former the transformation or metamorphosis of the existing tissues is less intense than in the latter. In an adult, who neither gains nor loses in weight perceptibly from day to day, the nourishment and waste of organized tissue are equally balanced; but in the young the weight augments daily, and, consequently, the nourishment must exceed the waste. In order that this may take place, the child must be supplied with a sufficient quantity of non-nitrogenous food, which, by yielding carbon and hydrogen to be burnt in the lungs, protects the organized tissues from the transformations consequent on the injurious action of oxygen. "What is wanting for these purposes an infinite wisdom has supplied to the young animal in

its natural food. The carbon and hydrogen of butter, and the carbon of the sugar of milk, no part of either of which can yield blood, fibrine, or albumen, are destined for the support of the respiratory process, at an age when a greater resistance is opposed to the metamorphosis of existing organisms; or, in other words, to the production of compounds which in the adult state are produced in quantity amply sufficient for the purpose of respiration. The young animal receives the constituents of its blood in the caseine of the milk. A metamorphosis of existing organs goes on, for bile and urine are secreted; the matter of the metamorphosed parts is given off in the form of urine, of carbonic acid, and of water; but the butter and sugar of milk also disappear; they cannot be detected in the *faeces*. The butter and sugar are given out in the form of carbonic acid and water, and their conversion into oxidized products furnishes the clearest proof that far more oxygen is absorbed than is required to convert the carbon and hydrogen of the metamorphosed tissues into carbonic acid and water. The change and metamorphosis of organized tissues going on in the vital process in the young animal, consequently yield, in a given time, much less carbon and hydrogen, in the form adapted for the respiratory process, than corresponds to the oxygen taken up in the lungs. The substance of its organized parts would undergo a more rapid consumption, and would necessarily yield to the action of oxygen, were not the deficiency of carbon and hydrogen supplied from another source."\*

\* Liebig's *Animal Chemistry*, pp. 68 and 69.



Children, for the most part, evince an almost instinctive fondness for sugar, which is supplied to them in their mother's milk. This perhaps is to be explained by the fact that it is an element of respiration, and, therefore, is more necessary for them than adults, on account of the greater activity of their function of respiration. But this fondness for sugar is by no means universal among children. In very cold countries, substances richer in carbon and hydrogen, and, therefore, yielding more heat by combustion, are preferred. "In one of those late extravagant voyages to discover a north-west passage," says Sir Anthony Carlisle,\* "the most northern race of mankind were found to be unacquainted with the taste of sweets, and their infants made very wry faces, and sputtered out sugar with disgust; but the little urchins grinned with ecstasy at the sight of a bit of whale's blubber."

The natural appetite I believe to be an index of the wants of the system; and ought, therefore, to be consulted, to a certain extent, in the dieting of children; and I believe that parents commit a gross error who totally disregard it. I have seen children refused vegetable food, though they ardently desired it, because they would not eat what their nurses supposed to be the proper proportion of animal food; and, on the other hand, I have known children denied animal food, on the mistaken notion that it would be injurious to them, though the digestive functions were active, and the appetite for meat most keen.

\* *Practical Observations on the Preservation of Health*, p. 73. Lond. 1833.

Arrow-root, tapioca, sago, potato-starch, *tous-les-mois*, sugar, butter, and other fatty bodies; are elements of respiration, and if used in greater quantity than is necessary for combustion in the lungs, they contribute to the increase of fat; but they do not contain the necessary ingredients for the growth of bone, cartilage, ligament, muscle, membrane, and cellular tissue. For the latter purpose, nitrogenized food is necessary. The caseine or curd of milk is an aliment of this kind, supplied by nature, for the use of mammals. It is a proteinaceous substance, adapted for the growth of the organized tissues; and is accompanied by phosphate of lime, which is necessary for the solidification of bone. The cereal grains (as wheat, barley, oats) also yield most valuable nitrogenized foods for children; and of these, *Hard's Farinaceous Food*, *Semolina*, *Groats*, *Oatmeal*, &c. have been already noticed.

The uses of animal foods (meats) have been so fully described, that any further reference to them is unnecessary here.

Children may be over fed or under fed. Instances of the former, however, are comparatively rare. Of the ill consequences of defective nutriment we have, unfortunately, too many instances continually presented to our notice. Irritable bowels or diarrhoea, tumid abdomen, mesenteric disease, wasting, and fever, are the ordinary and obvious effects. They frequently follow the continued use of pea-soup and potato stews,—dishes which are in common use at poor-houses and other establishments for pauper children. Scrofulous and strumous diseases, marasmus, rickets, distortions,

and pot bellies, so commonly met with among children of the poor, are referrible, in part at least, to food defective either in quantity or quality, or perhaps in both. I think it will be found that more than two-thirds of pauper children are strumous. They derive this condition in part, perhaps, from hereditary tendency; but partly also, as I believe, from defective nutriment. To the same cause also is ascribable their inferior development. If the children in poor-houses be examined, they will be found, for the most part, smaller and shorter for their age, more frequently distorted, and more readily fatigued, than the children of the middling and higher classes.

Subjoined are the dietaries of several of the principal metropolitan establishments for children:—

### 1. FOUNDLING HOSPITAL.

#### 1. DIET FOR CHILDREN UNDER NINE.

<i>Breakfast</i> .....	Bread, 4 oz. Milk, half pint, boiled with an equal quantity of water.
Monday .....	4 oz. uncooked Mutton for roasting; 6 oz. Potatoes; 2 oz. of Bread.
Tuesday .....	4 oz. of uncooked Beef to be boiled into soup, with 1½ oz. of Rice; 4 oz. of Bread.
Wednesday .....	Same as Monday.
Thursday .....	Same as Tuesday.
Friday .....	Same as Monday.
Saturday .....	Rice Pudding (viz. milk ¾ pint, rice 3 oz. treacle ¼ oz.) and Suet Pudding (viz. flour 7½ oz. suet 1¼ oz. milk ¾ of a pint) alternately.
Sunday .....	4 oz. of uncooked Beef for roasting (cold); 6 oz. of Potatoes; 2 oz. of Bread.
<i>Supper</i> .....	Bread, 4 oz.; ¼ of a pint of Milk.

#### 2. DIET FOR CHILDREN AT AND ABOVE NINE.

<i>Breakfast</i> .....	Bread, 6 oz. Milk half pint, boiled with an equal quantity of water.
Monday .....	7 oz. of uncooked Mutton, for roasting; 10 oz. of Potatoes.
Tuesday .....	7 oz. of uncooked Beef, to be boiled into soup; 4 oz. of Bread.
Wednesday .....	Same as Monday.
Thursday .....	Same as Tuesday.
Friday .....	Same as Monday.
Saturday .....	Rice Pudding, with Suet Pudding alternately.
Sunday .....	7 oz. of uncooked Beef for roasting (cold); with 10 oz. of Potatoes.
<i>Supper</i> .....	Bread, 6 oz.; Butter, ¼ oz.; Treacle alternate nights.

### 2. ROYAL MILITARY ASYLUM, CHELSEA.

(Boys of from 5 to 14 Years of Age.)

<i>Breakfast</i> .....	Milk Pottage. Milk, 1-6th of a quart; Oatmeal, 1-16th of a lb.; Bread, 1-20th of a quartern loaf.
Sunday .....	Meat, 8oz.; Potatoes, 12oz.; Bread, 1-20th qu. loaf.
<i>Dinner</i> .....	Beer, ¼ pint. { (On Sunday the meat is roast beef; on Tuesday and Thursday, stewed beef, and on Saturday, stewed mutton.)
Monday .....	Pudding, Suet 1½ oz.; Flour, 6 oz.; Potatoes, 8 oz.; Beer, half a pint.
Friday .....	Beer, half a pint.
Wednesday .....	Pease Soup, 1 gill; Potatoes, 12 oz.; Bread, 1-20th of a quartern loaf; Beer, half a pint.
Daily .....	Bread, 1-20th of a quartern loaf.
<i>Supper</i> .....	Cheese, 1½ oz.; Beer, half a pint.
Sunday .....	
Tuesday .....	
Thursday .....	
Saturday .....	
Monday .....	Milk, half a pint.
Wednesday .....	
Friday .....	

N.B.—The Meat is estimated as taken from the butcher, including bone. A proportion of the very small children on 6 oz. of Meat.

### 3. NAVAL ASYLUM, GREENWICH.

<i>Breakfast</i> .....	1 pint Cocoa (¼ oz. cocoa, ¼ oz. sugar, 1 gill milk); 5 oz. Bread.
Sunday .....	Roast Beef, 9½ oz.
Tuesday .....	Potatoes, 8 oz.
Thursday .....	Bread, 3½ oz.
Friday .....	Beer, half pint.
<i>Dinner</i> .....	Suet Pudding 1½ oz. Suet, 6 oz. Flour—Bread & Beer as above.
Monday .....	
Friday .....	
Wednesday .....	Pea Soup (1 gill of Pease) Potatoes, 8 oz.—Bread and Beer as above.
Saturday .....	Mutton, boiled Potatoes, 8 oz. } Irish Stew—Bread & Beer.
<i>Supper</i> .....	Half pint Milk, and 5 oz. of Bread.

### 4. INFANT ORPHAN ASYLUM, DALSTON.

<i>Breakfast</i> .....	Bread and Milk daily.
Monday .....	Meat, or boiled Beef-steak Pudding.
Tuesday .....	Mutton (not over-boiled) Potatoes, and boiled Rice.
Wednesday .....	Cold Mutton, and family Pudding.
<i>Dinner</i> .....	Roasted Legs of Mutton and Potatoes.
Thursday .....	Cold Mutton, and family Pudding.
Friday .....	Cold Mutton, and family Pudding.
Saturday .....	Roasted Beef, Potatoes, and Suet Pudding.
Sunday .....	Cold roasted Beef, and mashed Potatoes. Beverage—Toast-water.
<i>Supper</i> .....	Bread and Butter, with Milk and Water.

Children under three years of age to have Beef Tea, or Mutton Broth, besides cold Meat, on Sundays.

Where the medical officers prescribe, Beer is substituted at dinner for Toast-water. Family Puddings to consist of dried Raisins, Apples, Rhubarb, &c. according to the season.

Green Vegetables are occasionally introduced, as circumstances require.

The Bread to be of the best quality, and two days old before cut.

The joints to consist of top sides of rounds of the best Ox Beef, weighing about 28lbs., and legs of the best Wether Mutton, weighing about 10lbs. each.

As much as they like to eat, within moderation.

5. MR. AUBIN'S ESTABLISHMENT AT NORWOOD, SURREY.

Breakfast .....	Milk Porridge with Bread in It.
Dinner.....	{ Sunday .... } Baked or Boiled Mutton or Beef, with Vegetables
	{ Tuesday... } and Broth.
	{ Thursday .. }
Supper.....	{ Monday.... } Soup with Bread in It.
	{ Friday .... }
	{ Wednesday } Baked or Boiled Rice Pudding, with Milk and
	{ Saturday .. } Sugar.
	Bread and Butter, with Milk and Water.

Children under 8 years not restricted to quantity: those from 8 to 14 or 15 are allowed 1½ pints Porridge, 4 oz. Bread, 5 oz. Meat, 1 lb. Potatoes, 2 pint Broth, 1½ pints Soup, 16 oz. boiled Rice, 6 or 8 oz. of Bread and Butter. Those under 7 years of age to be allowed Sago, Arrow-root, Milk, or any other nourishment their tender age may require.  
Children, when ill, to be dieted by the medical attendant. Roast Veal or Pork to be allowed on Easter and Whit-Sundays, and Roast Beef and Plum Pudding on Christmas day.

6. DIETARY FOR FOUNDLINGS AND ORPHANS OF THE HOSPICE DES ENFANS TROUVÉS, AND THE LUNATIC AND INFIRM CHILDREN OF THE HOSPICES DES INCURABLES\*, IN PARIS.

DIVISION OF THE DAY.	KIND OF FOOD.	QUANTITY ALLOWED.	
		Unpre- pared.	Prepared.
Daily ..	CLASS I.—Infants less than a Month old.		
	Milk .....	—	30 cent.
	Vermicelli, Semolina, Wheaten or Rice Flour.. Sugar.....	—	1 décag. 3 décag.
Daily ..	CLASS II.—Infants from One to Twelve Months old, or until weaning.		
	Milk .....	—	50 cent.
	White Bread .....	—	5 décag.
	Vermicelli, Semolina, Wheaten or Rice Flour.. Sugar.....	—	3 décag. 5 décag.
Daily .. Breakfast	CLASS III.—Children from One to Two Years old.		
	White Bread .....	—	30 décag.
Dinner..	Soup or Milk Porridge.....	—	20 cent.
	Meat Broth for Soup, or Vegetable Broth for Soup	—	20 cent.
	Meat .....	10 décag.	7 décag.
	or Dry Legumes (Haricots, Split-peas, Lentils)	5 cent.	10 cent.
	or Fresh Vegetables (Cabbage, Turnips, Carrots)	18 décag.	12 cent.
	or Potatoes .....	18 décag.	18 cent.
	or Rice .....	3 décag.	15 cent.
Supper..	or Eggs .....	—	1 No.
	Dry Legumes .....	5 cent.	10 cent.
	or Fresh Vegetables .....	18 décag.	12 cent.
	or Potatoes .....	18 décag.	18 cent.
	or Rice .....	3 décag.	16 cent.
	Prunes .....	5 décag.	7 cent.
	or Currant Jelly.....	—	2 décag.
	or Cheese .....	—	3 décag.

\* From the Règlement sur le Régime Alimentaire des Hôpitaux et Hospices civils de la Ville Paris, approuvé par le Ministre de l'Intérieur, le 30 Novembre 1841. Paris 1841.

CLASS	FOOD	QUANTITY ALLOWED FOR CLASS IV.		QUANTITY ALLOWED FOR CLASS V.		QUANTITY ALLOWED FOR CLASS VI.	
		Unpre- pared.	Prepared.	Unpre- pared.	Prepared.	Unpre- pared.	Prepared.
Daily ..	White Bread for Soup, for Boys and Girls.....	—	10 décag.	—	12 décag.	—	12 décag.
	Middling Bread { Boys .....	—	30 décag.	—	40 décag.	—	40 décag.
	{ Girls .....	—	26 décag.	—	36 décag.	—	48 décag.
Breakfast	Wine for Boys and Girls.....	—	10 cent.	—	10 cent.	—	10 cent.
	Jours Gras (Sundays, Mondays, Tuesdays, Wednesdays, & Thursdays)	—	30 cent.	—	40 cent.	—	50 cent.
	Vegetable Broth (Bouillon maigre) for Soup { Boys .....	—	30 cent.	—	30 cent.	—	40 cent.
Dinner..	Meat Broth (Bouillon gras) for Soup { Boys .....	—	30 cent.	—	30 cent.	—	40 cent.
	{ Girls .....	—	20 cent.	—	20 cent.	—	25 décag.
	Boiled Meat { Boys .....	15 décag.	7 décag.	20 décag.	8 décag.	25 décag.	10 décag.
Supper..	Dry Legumes .....	6 cent.	12 cent.	16 décag.	8 cent.	20 décag.	10 décag.
	or Fresh Vegetables.....	24 décag.	16 cent.	30 décag.	20 cent.	36 décag.	24 cent.
	or Potatoes .....	24 décag.	24 cent.	30 décag.	30 cent.	36 décag.	36 cent.
Breakfast	or Rice .....	4 décag.	20 cent.	5 décag.	25 cent.	6 décag.	30 cent.
	Cheese .....	—	12 cent.	—	15 cent.	—	18 cent.
	or Prunes.....	—	8 décag.	—	6 décag.	—	7 décag.
Dinner..	or Raisiné (Thick confection of grapes).....	—	5 décag.	—	6 décag.	—	7 décag.
	Jours Maigres (Fridays and Saturdays)	—	30 cent.	—	40 cent.	—	50 cent.
	Vegetable Broth for Soup { Boys .....	—	20 cent.	—	30 cent.	—	40 cent.
Supper..	{ Girls .....	—	20 cent.	—	30 cent.	—	40 cent.
	Vegetable Broth for Soup { Boys .....	—	20 cent.	—	30 cent.	—	40 cent.
	{ Girls .....	—	24 cent.	—	30 cent.	—	36 cent.
Breakfast	Dry Legumes .....	12 cent.	36 cent.	15 cent.	40 cent.	18 cent.	45 cent.
	or Fresh Vegetables.....	50 décag.	50 cent.	60 décag.	60 cent.	70 décag.	70 cent.
	or Potatoes .....	—	1 No.	—	1 No.	—	2 No.
Dinner..	or Eggs .....	—	12 cent.	—	16 cent.	—	20 cent.
	Dry Legumes .....	6 cent.	16 cent.	8 cent.	20 cent.	10 cent.	24 cent.
	or Fresh Vegetables .....	24 décag.	24 cent.	30 décag.	30 cent.	36 décag.	36 cent.
Supper..	or Potatoes .....	4 décag.	20 cent.	5 décag.	25 cent.	6 décag.	30 cent.
	Cheese .....	—	12 cent.	—	15 cent.	—	18 cent.
	or Prunes.....	—	8 décag.	—	6 décag.	—	7 décag.
	or Raisiné.....	—	5 décag.	—	6 décag.	—	7 décag.

\* The abbreviation cent. means centilitre. Thus, 50 centilitres are equal to ½ of a litre. A centilitre is equal to 2 1/16 fluid drachms (Apothecaries' measure): while a litre is equal to 2 1/16 pints (Apothecaries' measure). The abbreviation décag. means décagramme, or 10 grammes, equal to 15 1/100 troy grains.

7. MERCHANTS' SEAMEN'S ORPHAN ASYLUM.

(Ages of Children from 7 to 15 Years.)

Breakfast.....	1 lb. Bread, 1/2 pint Milk.
Dinner.....	Sunday ....
	Tuesday....
	Wednesday..
	Thursday ..
	Friday .....
	1 lb. Meat, 6 oz. Potatoes, 4 1/2 oz. Flour.
Supper.....	Monday....
	Saturday ..
	17 lbs. Rice, boiled and divided among 90 children.
	1 lb. Bread.
	10 lbs. Peas in Soup, divided among 90 children.
	1 lb. Bread, 1 oz. Cheese.

2. DIETARY FOR THE NAVAL SERVICE.

“The victualling of the Navy,” says Dr. John Wilson\*, “is as nearly as possible uniform throughout the service as circumstances will permit; at sea it is almost entirely so; in harbour it varies more or less, according to the supplies of fresh provisions procurable in different places.”

In the “Regulations for His Majesty's Service at Sea,” established by the King in Council, Jan. 1st, 1833, is contained the following scale of diet used in the Navy:—

“There shall be allowed to every person serving in His Majesty's ships the following quantities of provisions:—viz.			
Bread.....	1 lb.	Fresh Meat.....	1 lb. }
Beer.....	1 gallon.	and	
Cocoa.....	1 oz.	Vegetables.....	1/2 lb. }
Sugar.....	1 1/2 oz.	Tea.....	1/4 oz.
“When Fresh Meat and Vegetables are not issued, there shall be allowed in lieu thereof—			
Salt Beef.....	2 lb. }	or Salt Pork.....	2 lb.
and		and	
Flour.....	2 lb. }	Pease.....	1/2 pint.
“And weekly, whether Fresh or Salt Meat be issued—			
Oatmeal.....	1/2 pint.	Vinegar.....	1/2 pint.

\* Statistical Reports of the Health of the Navy, for the Years 1830—1836. South American, West Indian and North American, Mediterranean and Peninsular Commands. Ordered by the House of Commons to be printed, March 24, 1840.

“The following Scheme shows the proportion of Provisions with Salt Meat for each man for fourteen days:—

DAYS OF THE WEEK.	Bread	Beer	Sugar	Cocoa	Tea	Beef	Pork	Flour	Pease	Oatmeal	Vinegar.
	lb.	gall.	oz.	oz.	oz.	lb.	lb.	lb.	pint	pint	pint
Sunday....	1	1	1 1/2	1	1	2	2	2	1/2		
Monday....	1	1	1 1/2	1	1	2	2	2	1/2		
Tuesday....	1	1	1 1/2	1	1	2	2	2	1/2	1	1
Wednesday..	1	1	1 1/2	1	1	2	2	2	1/2		
Thursday ..	1	1	1 1/2	1	1	2	2	2	1/2		
Friday .....	1	1	1 1/2	1	1	2	2	2	1/2		
Saturday ..	1	1	1 1/2	1	1	2	2	2	1/2		
Proportion for 14 days }	14	14	21	14	3 1/2	5 1/2	5 1/2	5 1/2	3 1/2	1	1

“On the days on which Flour is ordered to be issued, Suet and Raisins or Currants may be substituted for a portion of Flour.

1 lb. of Raisins being considered equal to 1 lb. of Flour.  
 1/2 lb. of Currants ..... } ditto ditto.  
 1/2 lb. of Suet .....

“In case it should be found necessary to alter any of the above species of Provisions, and to issue others as their substitutes, it is to be observed that—

1 1/2 lb. of Soft Bread .... }  
 or  
 1 lb. of Rice ..... } to be considered equal to 1 lb. of Biscuit.  
 or  
 1 lb. of Flour ..... }  
 1 pint of Wine ..... } is to be considered equal to 1 gallon of Beer.  
 or  
 1/2 pint of Spirits ..... }  
 1 oz. of Coffee ..... } is to be considered equal to 1 oz. of Cocoa.  
 or  
 1/2 oz. of Tea ..... }  
 1 lb. of Rice ..... } is to be considered equal to 1 pint of Pease.  
 or  
 1 pint of Calavances\*.. }  
 or  
 1 pint of Dhol† ..... } is to be considered equal to 1 lb. of Cocoa.  
 1 lb. of Butter ..... } are to be considered equal to 1 lb. of Cocoa.  
 2 lbs. of Cheese ..... }  
 1/2 lb. of Onions..... } is to be considered equal to 1 lb. of other Vegetables.”  
 or  
 1 lb. of Leeks .....

“After fourteen days' use of salt food, lemon juice, with an additional allowance of sugar, is issued as an antiscorbutic ‡.”

\* Calavances, a kind of pulse. According to Sir H. Sloane it is the Phaseolus spherospermus.

† Dhol or Dal is the split pease of India. That which is obtained from Phaseolus radiatus is reckoned the best kind.

‡ Dr. J. Wilson's Statistical Reports.

From these statements it is obvious that the quantity of food supplied to the Navy is most ample, though not excessive. The total weekly allowance, when either fresh or salt meat is issued, is as follows :—

	Fresh Meat Diet.	Salt Meat Diet.
Bread . . . . .	112 oz.	112 oz.
Meat . . . . .	112 oz.	84 oz.
Vegetables . . . . .	56 oz.	0
Flour . . . . .	0	42 oz.
Pease . . . . .	0 [1½ pints say]	29½ oz.
Oatmeal [½ pint say] . . . . .	5 oz.	5 oz.
Sugar . . . . .	10½ oz.	10½ oz.
Cocoa . . . . .	7 oz.	7 oz.
Total . . . . .	302½	290½
Beer . . . . .	7 gallons	7 gallons
Vinegar . . . . .	¼ pint	¼ pint
Tea . . . . .	1½ oz.	1½ oz.

The substitution of one kind of provision for another is an excellent arrangement, by which considerable variety of food, so necessary for the preservation of health, is obtained. A reasonable complaint, however, may be made with regard to the scale of equivalents adopted. It will be perceived that 8 oz. of fresh vegetables are considered equal to 12 oz. of flour, or to half a pint of pease: whereas in reality at least 86 oz. of fresh vegetables are required to be equal to 12 oz. of wheat flour\*.

\* In making the above calculation, I have assumed that 100 parts of wheat flour contain 88 parts of dry nutritive matter, and that 100 parts of fresh vegetables (potatoes, cabbage, carrots, and turnips) contain, on the average, only 12·15 parts of dry nutritive matter. For

100 parts of potatoes contain about . . . . .	21	parts dry matter.
"    cabbage                  "          " . . . . .	7·7	"
"    turnips                  "          " . . . . .	7·5	"
"    carrots                  "          " . . . . .	12·4	"
Total . . . . .	48·6	
Average . . . . .	12·15	

If we calculate according to Boussingault's nitrogen scale of nutritive equivalents (see p. 55), about 105½ parts of fresh vegetables (potatoes, cabbage, carrots, and turnips), are equivalent to 12 parts of wheat flour.

Dr. Wilson declares the naval rations to be both abundant in quantity and excellent in quality; and he adds that they contribute largely to the high degree of health now enjoyed in the Royal Navy.

The water employed in the navy was formerly carried to sea in casks, and soon became putrid and offensive owing to the vegetable admixture. The substitution of iron tanks for casks has remedied this evil; and the water can now be kept for any length of time without becoming offensive either to the palate or nose. The metal becomes oxidized, and the oxide of iron thus formed mixes with the water; but, by its weight and insolubility, it soon falls, at least for the most part, to the bottom; and should a small portion remain suspended and be drunk, it can have no injurious effect, but may possibly prove beneficial.

Subjoined are the *Scale of Victualling for Troops from England to India*, as fixed by the East India Company; and the *Dietary for Emigrants*, as fixed by Her Majesty's Colonial Land and Emigration Commissioners :—

SCALE OF VICTUALLING FOR TROOPS FROM ENGLAND TO INDIA.

For Two Days ..	Beef,* Two Pieces, or .....	16 lb.	} For a Mess of Six Men per Week.
	Flour.....	3 lb.	
	Suet.....	1 lb.	
For One Day ....	Preserved Meat .....	6 lb.	
	Rice .....	3 lb.	
For Three Days ..	Pork,* Three Pieces, or .....	18 lb.	
	Pease.....	3 Pints	
For One Day ....	Flour.....	3 lb.	
	Suet.....	1 lb.	
	Plums .....	1 1/2 lb.	
For Seven Days ..	Mustard .....	1 lb.	
	Biscuit .....	30 lb.	
	Tea.....	1 lb.	
	Sugar (crushed).....	6 lb.	
	Vinegar.....	3 Pints	
	Best London Porter .....	42 Pints	

Water at the rate of Seven Pints per man per day, for twenty weeks; this quantity covers Wastage. Lemon Juice at the rate of One Quart per man for the Voyage out. The allowance of Porter to be exclusive of Wastage.

Fresh Beef or Mutton to be issued to the Troops when procurable; 1 1/2 lb. per man per day, with Vegetables for the Soup, and Oatmeal.

\* New India Beef and New India Pork of British curing.

QUANTITIES FOR EACH MAN PER DAY.

	Beef.	Flour.	Suet.	Plums.	Pork.	Pease.	Preserved Meat.	Rice.	Biscuit.	London Porter.	Sugar.	Tea.	Vinegar.	Mustard.	Potatoes.
	oz.	oz.	oz.	oz.	oz.	pits.	lb.	lb.	lb.	pl.	lb.	lb.	pl.	lb.	lb.
Sunday .....	21 1/2	6 1/2	1 1/2	—	—	—	—	—	—	—	—	—	—	—	—
Monday.....	—	—	—	—	16	—	—	—	—	—	—	—	—	—	—
Tuesday ....	—	13 1/2	2	4	—	—	—	—	—	—	—	—	—	—	—
Wednesday ..	—	—	—	—	16	—	—	—	—	—	—	—	—	—	—
Thursday ....	21 1/2	6 1/2	1 1/2	—	—	—	—	—	—	—	—	—	—	—	—
Friday .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Saturday ....	—	—	—	—	16	—	—	—	—	—	—	—	—	—	—

N.B. Women receive the same rations as Men, and Children half the ration, with the exception of Beer, half the ration only being allowed to Women.

The Porter to be in Hogsheads when the number of Persons is under 120.

DAILY MEALS.

Breakfast .....	Biscuits, Tea and Sugar.
Dinner .....	According to the above Scale.
Supper .....	Biscuits, Tea and Sugar.

DIETARY FOR EMIGRANTS.

The Passengers to be in Messes of six or more, as the Surgeon may determine; and to be victualled according to the following Scale, for one Adult:—

DAYS.	Biscuit.*	Beef.†	Pork.‡	Preserved Meat.	Flour.	Raisins.	Suet.	Pease.	Rice.†	Tea.	Coffee.	Sugar.	Butter.	Water.	Pickled Cabbage.	Mustard.	Salt.
	lb.	lb.	lb.	lb.	lb.	oz.	oz.	Pl.	lb.	oz.	oz.	lb.	oz.	qts.	Pl.	oz.	oz.
Sunday ..	2	—	—	3	3	2	1 1/2	—	4	—	—	4	—	3	—	—	—
Monday ..	4	—	4	—	4	—	—	4	—	—	—	4	—	3	—	—	—
Tuesday ..	4	4	—	—	4	2	1 1/2	—	4	—	—	4	—	3	—	—	—
Wednesday	2	—	4	—	4	—	—	4	—	—	—	4	—	3	—	—	—
Thursday ..	2	—	—	4	4	2	1 1/2	—	4	—	—	4	—	3	—	—	—
Friday ....	2	—	4	—	4	—	—	4	—	—	—	4	—	3	—	—	—
Saturday ..	2	4	—	—	4	2	1 1/2	—	—	—	—	—	—	3	—	—	—

\* The Biscuit must not be of a more inferior description than the second quality of that article.

† Prime new Irish East India Beef, and prime mess Pork.

‡ During the first month 1 1/2 lbs. of Potatoes may be substituted for 1/2 lb. of Rice.

Women, and Children of 14 years and upwards, to receive the same rations as Men; Children from 7 to 14 to receive two-thirds, and Children from 1 to 7 years of age to receive one-half, of the above quantities.

The Children between 1 and 7 shall, three times a week, receive 4 oz. of Rice, or 3 oz. of Sago, each, in lieu of their salt Meat.

Children under twelve months receive no rations.

One pound of fresh Meat and one pound of soft Bread per adult, to be issued, with a suitable quantity of Vegetables, until one day after passing the Downs, and whenever opportunity shall offer, in lieu of the salt and preserved Meat, and of the Flour, Suet and Raisins, Rice and Pease.

3. ARMY RATIONS.

The daily allowance to the Soldier in Great Britain is 1 lb. of Bread, and 3 lb. of Meat, making together 196 oz. of solid food weekly. For this he pays a fixed sum daily, viz. 6d. whatever may be the market price; any excess being paid for by Government. He furnishes himself with other provisions.

4. DIETARIES FOR PAUPERS.

It has been very properly stated by the Poor Law Commissioners, that in the dieting of the inmates of workhouses, the object is to give them an adequate supply of wholesome food, not superior in quantity or quality to that which the labouring classes in the respective neighbourhoods provide for themselves.

To effect so desirable an object, the Commissioners, in their Second Annual Report (1836), have adopted six dietaries (numbered from 1 to 6), for use in poor-

houses; and we are told that all of them have been employed in different parts of England, and have been proved to be sufficient in quantity, and perfectly unexceptionable as to the nature of the provisions specified in each.

1. DIETARY FOR ABLE-BODIED MEN AND WOMEN.

	Breakfast.		Dinner.				Supper.		
	Bread.	Gruel.	Cooked Meat.	Potatoes.	Soup.	Suet or Rice Pudding.	Bread.	Cheese.	Broth.
	oz.	pints	oz.	lbs.	pints	oz.	oz.	oz.	
Sunday... { Men .....	6	1½	3	¼	—	—	6	—	1½
Tuesday .. { Women ..	5	1½	5	¼	—	—	5	—	1½
Thursday .. { Women ..	5	1½	—	—	1½	—	6	2	—
Monday .. { Men .....	6	1½	—	—	1½	—	5	2	—
Wednesday .. { Women ..	5	1½	—	—	—	—	5	2	—
Saturday .. { Women ..	5	1½	—	—	—	—	5	2	—
Friday .... { Men .....	6	1½	—	—	—	1½	6	2	—
Friday .... { Women ..	5	1½	—	—	—	1½	5	2	—

Old people of 60 years of age and upwards, may be allowed 1 oz. of tea, 5 oz. of butter, and 7 oz. of sugar, per week, in lieu of gruel for breakfast, if deemed expedient to make this change.  
Children under 9 years of age to be dieted at discretion; above 9, to be allowed the same quantities as women.

2. GENERAL DIETARY FOR THE ABLE-BODIED.

	Breakfast.			Dinner.				Supper.		
	Bread.	Cheese.	Butter.	Meat, Pudding, or Vegetables.	Suet Pudding, or Vegetables.	Bread.	Cheese.	Bread.	Cheese.	Butter.
	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz.
Sunday... { Men ..	6	1	—	16	—	—	—	6	1	—
Sunday... { Women ..	5	—	¼	10	—	—	—	5	—	¼
Monday .. { Men ..	6	1	—	—	—	7	1	6	1	—
Wednesday .. { Women ..	5	—	¼	—	—	7	1	5	—	¼
Thursday .. { Women ..	5	—	¼	—	—	7	1	5	—	¼
Saturday .. { Women ..	5	—	¼	—	—	7	1	5	—	¼
Tuesday .. { Men ..	6	1	—	—	16	—	—	6	1	—
Friday .... { Women ..	5	—	¼	—	10	—	—	5	—	¼

Old people, being all 60 years of age and upwards:—The weekly addition of 1 oz. of tea, and milk or sugar; also an additional meat pudding dinner on Thursday in each week, in lieu of bread and cheese, to those for whose age and infirmities it may be deemed requisite.  
Children under 9 years of age:—Bread and milk for their breakfast and supper, or gruel when milk cannot be obtained; also such proportions of the dinner diet as may be requisite for their respective ages.

\* The vegetables are extra, and not included in the weight specified.

3. DIETARY FOR ABLE-BODIED PAUPERS.

	Breakfast.		Dinner.				Supper.		
	Bread.	Gruel.	Cooked Meat.	Potatoes or other Vegetables.	Soup.	Bread.	Cheese.	Bread.	Cheese.
	oz.	pints	oz.	lb.	pints	oz.	oz.	oz.	oz.
Sunday .. { Men ....	8	1½	—	—	—	7	2	6	1½
Monday .. { Women ..	6	1½	—	—	—	6	1½	5	1½
Wednesday .. { Women ..	6	1½	—	—	—	—	—	6	1½
Friday... .. { Women ..	6	1½	6	2	—	—	—	5	1½
Tuesday .. { Men ....	8	1½	6	2	—	—	—	6	1½
Tuesday .. { Women ..	6	1½	6	2	—	—	—	5	1½
Thursday.. { Men ....	8	1½	—	—	1½	6	—	6	1½
Thursday.. { Women ..	6	1½	—	—	1½	5	—	5	1½
Saturday.. { Men ....	8	1½	5	2	—	—	—	6	1½
Saturday.. { Women ..	6	1½	4	2	—	—	—	5	1½

Old people of 60 years of age and upwards may be allowed 1 oz. of tea, 5 oz. of butter, and 7 oz. of sugar, per week, in lieu of gruel for breakfast, if deemed expedient to make this change.

Children under 9 years of age to be dieted at discretion; above 9, to be allowed the same quantities as women.

4. DIETARY FOR ABLE-BODIED PAUPERS OF BOTH SEXES.

	Breakfast.		Dinner.					Supper.	
	Bread.	Gruel.	Pickled Pork or Bacon with Vegls.	Soup.	Bread.	Meat Pudding with Vegetables.	Rice or Suet Pudding with Vegetables.	Bread.	Cheese.
	oz.	pints	oz.	pints	oz.	oz.	oz.	oz.	oz.
Sunday { Men ....	8	1½	—	2	6	—	—	6	2
Tuesday { Women ..	6	1½	—	1½	5	—	—	5	1½
Friday.. { Women ..	6	1½	—	—	—	—	12	6	2
Monday { Men ....	8	1½	—	—	—	—	10	5	1½
Thursday { Women ..	6	1½	—	—	—	—	—	6	2
Wednesday { Men ..	8	1½	6	—	—	—	—	5	1½
Wednesday { Women ..	6	1½	5	—	—	—	—	5	1½
Saturday { Men ....	8	1½	—	—	—	12	—	6	2
Saturday { Women ..	6	1½	—	—	—	10	—	5	1½

The vegetables are not included in the weight specified, which is for the meat when cooked. If it be thought desirable, ¼ an ounce of butter may be given to the women, in lieu of cheese, for supper.

Old people of 60 years of age and upwards may be allowed 1 oz. of tea, 5 oz. of butter, and 7 oz. of sugar, per week, in lieu of gruel for breakfast, if deemed expedient to make this change.

Children under 9 years of age to be dieted at discretion: above 9, to be allowed the same quantities as women.

5. DIETARY FOR ABLE-BODIED MEN AND WOMEN.

	Breakfast.		Dinner.					Supper.			
	Bread.	Gruel or Porridge.	Cooked Meat.	Vegetables.	Soup.	Boiled Rice or Suet Pudding.	Bread.	Cheese.	B read.	Potatoes.	Cheese.
Sunday .. { Men ...	7	1 1/2	5	1/2	1	1	7	1	7	1	1 1/2
Thursday.. { Women	6	1 1/2	5	1/2	1	1	6	1	6	1	1 1/2
Monday .. { Men ...	7	1 1/2	5	1/2	1	1	7	1	7	1	1 1/2
Friday .... { Women	6	1 1/2	5	1/2	1	1	6	1	6	1	1 1/2
Tuesday .. { Men ...	7	1 1/2	5	1/2	1	1	7	1	7	1	1 1/2
Wednesday { Women	6	1 1/2	5	1/2	1	1	6	1	6	1	1 1/2
Wednesday { Men ...	7	1 1/2	5	1/2	1	1	7	2	7	1	1 1/2
Saturday.. { Women	6	1 1/2	5	1/2	1	1	6	2	6	1	1 1/2

Old people of 60 years of age and upwards may be allowed 1 oz. of tea, 5 oz. of butter, and 7 oz. of sugar, per week, in lieu of gruel for breakfast, if deemed expedient to make this change.  
 Children under 9 years of age to be dieted at discretion; above 9, to be allowed the same quantity as women.

6. DIETARY FOR ABLE-BODIED PAUPERS.

	Breakfast.			Dinner.					Supper.				
	Bread.	Cheese.	Butter.	Boiled Meat.	Potatoes.	Yeast Dumpling.	Suet Dumpling.	Bread.	Cheese.	Bread.	Cheese.	Butter.	Broth.
Sunday.... { Men ...	6	1	4	1	1	1	16	1	1	6	1	4	1
Monday .. { Women	5	1	4	1	1	1	12	1	1	5	1	4	1
Monday .. { Men ...	6	1	4	1	1	1	16	1	1	6	1	4	1
Wednesday { Women	5	1	4	1	1	1	12	1	1	5	1	4	1
Saturday.. { Men ...	6	1	4	1	1	1	16	1	1	6	1	4	1
Tuesday .. { Women	5	1	4	1	1	1	12	1	1	5	1	4	1
Thursday.. { Men ...	6	1	4	1	1	1	16	1	1	6	1	4	1
Friday .... { Women	5	1	4	1	1	1	12	1	1	5	1	4	1

Old people, being all 60 years of age and upwards:—The weekly addition of 1 oz. of tea, and milk or sugar, to those for whose age and infirmities it may be deemed requisite.  
 Children under 9 years of age:—Bread and milk for their breakfast and supper, or gruel when milk cannot be obtained; also such proportions of the dinner diet as may be requisite for their respective ages.

[\* 1 oz. butter ordered on Wednesdays for men. Is it a typographical error?]

From these six dietaries each Board of Guardians

of the Poor is required to select one most suitable to the circumstances of each Union.

It will be perceived that *beer* is not permitted unless specially ordered by the surgeon, and that the use of *tea* is confined to the aged and infirm. In all cases the sick to be dieted as directed by the medical officer.

The following table gives a comparative view of these dietaries:—

	DIETARY No. 1.		DIETARY No. 2.		DIETARY No. 3.		DIETARY No. 4.		DIETARY No. 5.		DIETARY No. 6.	
	Men.	Women. Children above 9.	Men.	Women. Children above 9.	Men.	Women. Children above 9.	Men.	Women. Children above 9.	Men.	Women. Children above 9.	Men.	Women. Children above 9.
Bread .....	84	70	112	99	132	106	116	92	98	84	102	88
Cooked meat .....	15	15	—	—	8	6	—	—	10	10	8	8
Potatoes .....	24	24	—	—	24	24	—	—	48	48	24	24
Suet or Rice Pudding .....	14	12	32*	20*	—	—	24*	20*	14	12	16	12
Cheese .....	8	8	18	4	18 1/2	16 1/2	14	10 1/2	8 1/2	8 1/2	15	3
Meat Pudding with vegetables .....	—	—	16	10	—	—	12	10	—	—	—	—
Butter .....	—	—	—	7	—	—	—	—	—	—	1	6
Hacon .....	—	—	—	—	5	4	6	5	—	—	—	—
Yeast dumpling .....	—	—	—	—	—	—	—	—	—	—	22	22
Vegetable .....	—	—	—	—	—	—	—	—	24	24	—	—
Total .....	145	129	178	139	187 1/2	156 1/2	172	137 1/2	202 1/2	186 1/2	188	163
Gruel .....	10 1/2	16 1/2	—	—	10 1/2	10 1/2	10 1/2	10 1/2	10 1/2	10 1/2	—	—
Soup .....	4 1/2	4 1/2	—	—	1 1/2	1 1/2	6	4 1/2	3	3	—	—
Broth .....	4 1/2	4 1/2	—	—	—	—	—	—	—	—	—	—
Vegetables .....	—	—	?	?	—	—	?	?	—	—	—	—

\* Besides vegetables.  
 † The vegetables are extra, and are not included in the weights specified.

The average weekly amount of solid food supplied by these dietaries is for men nearly 179 ounces,—and for women about 152 ounces.

Dietary No. 1.	145 oz.	129 oz.
" No. 2.	178	139
" No. 3.	187 1/2	156 1/2
" No. 4.	172	137 1/2
" No. 5.	202 1/2	186 1/2
" No. 6.	188	163
Average	178 3/8	152 (about).



Now according to the result of the Commissioners of Inquiry \*, agricultural labourers are unable to procure for themselves and families an average allowance of more than 122 oz. of solid food (principally bread) weekly; and if we assume that the man consumes 140 ounces (say 134 bread and 6 meat) as his share, it is evident that his allowance would not be equal to that of the above dietaries.

The dietary marked No. 2 is that of twenty-six Unions of the county of Kent; and, at a meeting of the chairmen and vice-chairmen of all the twelve East Kent unions, it was unanimously declared that this Dietary had answered well, and that no alteration in it was desirable †.

I have inquired at several workhouses the composition of the *suet-pudding*, the *soup*, and the *gruel*, used in these establishments. Subjoined are some of the answers which I have received.

1. SOUP (*in use at the Wapping Workhouse* ‡).—Liquor in which 119 lbs. of meat have been boiled, Legs and Shins of Beef 42 lbs., Residual Cuttings of Meat 9½ lbs., Split-peas 40 lbs., Onions and Carrots 16 lbs., Oatmeal 6 lbs., Dripping 6 lbs., Pepper 3 oz., Salt 1 lb., and Crumbs of Bread 5 lbs. This quantity is for 240 females, each having 1 pint (weighing about 1½ lb.)

\* See Mr. Tuffnell's report, in the *Second Annual Report of the Poor Law Commissioners*.

† See Mr. Tuffnell's report, before cited.

‡ For the above and some of the subsequent information respecting the Wapping Workhouse, I am indebted to Mrs. Megson, the very intelligent matron of that establishment.

A pint and a half of the soup prepared at the poor-house of *St. George's, Middlesex*, contains 6 ounces of meat and bone (equal to about 4½ ounces solid meat), ¼th of a pint of Peas, ½ of an ounce of Groats, ⅓th of an ounce of Pepper, ⅓th of an ounce of Salt, and ⅓th of a pennyworth of Vegetables.

2. GRUEL (*in use at the Wapping Workhouse*).—Each pint of gruel contains 1½ oz. of the best Berwick Oatmeal.

3. SUET PUDDINGS (*in use at the Wapping Workhouse*).—Flour 1 lb., Suet ¼ lb., Water 13 oz. These quantities yield, when boiled, full 2 lbs. of pudding.

Mr. Gray, of the Stepney Union, informs me that,—

lbs.	lbs.	lbs.	lbs. oz.	lbs. oz.
10	2½	11	2 1	21 7
10	2½	8	0 4	20 12
10	2½	6	1 13	20 5

So that by making the puddings over stiff, that is, with 6 oz. of water, 1 lb. 2 oz. more were lost (equal to about 5½ per cent.) than when made with 11 lbs. of water."

Mr. Gray has also furnished me with the following curious information respecting the loss sustained in cooking and serving in pauper establishments.

A Table of the Consumption of Beef and Mutton in certain Metropolitan Workhouses, shewing the "Number of Boilings," the "Average Weight of each Ration," and the "Total Loss" sustained in cooking and serving the same.

Number of Workhouses and State of Cooking Apparatus.	Period of Time over which the Consumption extends.	Number of Boilings.	Average Weight of each Ration.	Total Consumption of Beef and Mutton (including loss).	Total Loss or waste in Cooking and Serving.	Centesimal Proportion of Loss and Waste to total Consumption.
				lbs.	lbs.	lbs.
1 good	15 months	193	7 ounces	34354	12013	31.16
1 good	15 months	193	7 ounces	31134	10323	30.83
1 very good	15 months	193	7 ounces	31550	10810	31.33
1 good	15 months	193	5 ounces	24488	7950	32.48
2 good	3 months	78	7 ounces	12689	3909	30.81
1 good	3 months	39	5 ounces	8238	2504	30.39
1 very good	3 months	39	5 1/2 ounces	7311	2024	27.57
2 good	3 months	78	7 ounces	12161	3811	31.28
1 good	3 months	39	5 ounces	8384	2371	26.97
1 very good	3 months	39	5 1/2 ounces	6743	1952	28.9
4 good	3 months	136	5 1/2 ounces	21671	7743	30.98
4 good	3 months	136	5 1/2 ounces	27883	8214	29.46
1 very good	2 years.	312	6 ounces	58131	16672	28.68
		1716		297920	90134	30.06

The *Or-Beef* was without bone, and consisted of Flanks, Leg of Mutton Pieces, Clods, and Briskets.

The *Mutton* consisted of the Fore Quarters, weighing above 40 lbs.

The loss sustained in preparing and serving cooked meat, in large Public Institutions, is very great, and may appear to the unpractised observer extraordinary; but there are so many sources from which loss accrues, that the surprise would be soon removed by an attentive consideration of the subject.

1st, *The Cooking*.—The quality of the meat will cause a difference of from 7 to 8 per cent. The want of skill, inattention, or inadvertence, on the part of the Cook, will at times increase the loss very greatly; for, in cooking large quantities, great and undivided attention is necessary to produce the article properly cooked.

2nd, *The Serving*.—Great dispatch is necessary in the serving. Two persons, one to cut, the other to weigh, will, on the average, have to serve 14 rations in two minutes. So much to be done, and, from necessity, in so short a period of time, requires some skill, and not a little practice, on the part of Carver and Weigher, to keep within a moderate loss. The following are among the principal sources of loss: the bone and fat of mutton—the outside and coarser parts of the beef—the evaporation and the running off of the juices during carving. To these must be added the drafts in weighing.

The annexed Table shows the Consumption and Amount of Loss in several large Establishments, and, I am of opinion, may be considered as something more than an approximation to the truth. It extends over a sufficient period of time "to take in Meat of all the Seasons." It was cooked in different apparatus, and served in the separate houses, by careful and intelligent individuals. The quantity cooked, and the rations served at each house, was sufficient to have formed a good average; but taken in the aggregate, they give data for calculation seldom to be met with.

32 *Boilings of Mutton*.—The parts cooked were the Fore Quarters, weighing 40 lbs. the pair; the contract price 7s. 5d. per stone, 14 lbs.

Total Quantity Cooked .....	3209 lbs.
Loss sustained in Boiling .....	563 lbs.
Centesimal Proportion of Loss to whole Quantity Cooked ..	17.5444 lbs.
Maximum Loss .....	19.7 lbs.
Minimum Loss .....	14.3 lbs.

64 *Boilings of Beef*.—Parts: Brisket, thick and thin Flanks, Leg of Mutton Pieces, and Clods, the whole free from bone; contract price 7s. 5d. per stone, 14 lbs.

Total Quantity Cooked .....	5772 lbs.
Loss sustained in Boiling .....	1018 lbs.
Centesimal Proportion of Loss to the whole Quantity Cooked	17.637 lbs.
Maximum Loss .....	21 lbs.
Minimum Loss .....	13.8 lbs.

## 6. DIETARIES FOR PRISONERS.

I have already (see p. 462, *et seq.*) offered some remarks on the peculiar circumstances affecting the diet of persons confined in prisons.

In January, 1843, the Inspectors of Prisons made a Report to the Secretary of State relative to the system of Prison Discipline, &c., in which they state that, with respect to Dietaries, they have arrived at the following conclusions:—

1. We have framed a series of tables, according to the length of the imprisonment, the additional punishment of hard labour, and the sex of the prisoners; and, as far as practicable, with regard also to the kind and degree of discipline enforced other than hard labour.
2. These dietaries are given as the minimum of what we recommend for each class, without reference to the local situations of the prisons, or to any peculiar circumstances which may render an increase necessary. Such peculiarities may also render it expedient, in certain cases, to substitute other kinds of food (of an equivalent amount of nutriment) for some of those included in the scale of diet.
3. The principle which we are of opinion ought to be acted on in framing a scale of prison diet, and that which we have endeavoured to carry into effect as far as possible in the annexed scale, is, that that quantity of food should be given in all cases which is sufficient, and not more than sufficient, to maintain health and strength, at the least possible cost; and that, whilst due care should be exercised to prevent extravagance or luxury in a prison, the diet ought not to be made an instrument of punishment.
4. In endeavouring to ascertain the precise quantities of food which ought to be allowed to different classes of prisoners, in accordance with the foregoing principle, we have been guided by our own experience, by the opinions of several prison medical officers of long standing, and by the dietaries in use.
5. We are of opinion that there ought always to be three meals each day in prisons, and that at least two of the three should be hot.
6. That there should be variety in the kinds of food forming the diet, with occasional changes; and that a considerable portion of the food should be solid.
7. That in the selection of the kinds of food, it is essential, for the

- maintenance of health, to include substances which are necessary for the support of the various parts of the body.
8. That it is very important to ascertain that the water is pure and wholesome, and that there is an abundant supply.
  9. That prisoners should not be set to work immediately after any meal.
  10. That animal food should form part of the diet of prisoners employed at hard labour.
  11. That the attention of the medical officer should be directed to the scale of diet on which each prisoner is placed, and that he should have a discretionary power to increase or diminish the quantity of food with reference to the constitution and state of health of the particular prisoner.
  12. That with regard to age, it is only in the extremes of youth and old age that any distinction of diet is advisable, and that the discretion of the medical officer should extend to these cases."

It will be perceived that the conclusions which the Inspectors have arrived at accord with the principles which I have advocated in this work. The scale of diet which they recommend, and which has been adopted by the Secretary of State, is subjoined.

It appears, however, that the Inspectors were not unanimous as to the dietaries; and it is but fair, therefore, that the reader should be put in possession of the following *Reasons of Dissent as to the Scales of Diet* assigned by Mr. F. Hill, one of the Inspectors:—

- " 1. There is at present a great want of information on the subject of diet generally, both as respects the real quantity of nutriment required for health under various circumstances, and the best form in which that nutriment can be given, as regards bulk, solidity, quantity of animal matter, and the necessary variety to supply all the wants of the frame for renewing bone, muscle, &c. There is but little certain knowledge also respecting the comparative quantity of nutriment contained in substances of different kinds, such as wheaten bread, meat, and potatoes.
2. Owing to the many circumstances which affect the natural demand for food, such as age, sex, constitution, state of health, kind and quantity of work, it is difficult, under any arrangement, to determine what quantity of food any prisoner ought to have; and it

is impossible, in my opinion, to classify prisoners for this purpose with any degree of accuracy otherwise than by considering the case of each prisoner separately, which may be done by laying down a few scales of diet, and then empowering those who must be best acquainted with the case of each prisoner, viz. the Governor and Surgeon, to settle from time to time, subject to the control of the visiting justices, on what scale each prisoner shall be placed.

If a classification be made according to any one or two only of the disturbing causes, the rate of diet, if suited to the wants of a portion of the class, will, in my opinion, be found insufficient for some and too much for others, producing injury to health in both cases, and in one waste and extravagance also.

3. While it is right to give prisoners such a quantity of food as will keep up robust health, it is important to allow nothing beyond what is really necessary; both because excess of food is injurious to health as well as deficiency, and because the motives to honest industry will be weakened if any thing like luxury be admitted into prisons.
4. It having been declared as a principle that the allowance of food ought not to be made an instrument of punishment, and that that quantity of food should be given which is sufficient, and not more than sufficient, to maintain health and strength, I cannot see any ground for giving less food to a prisoner who is employed at the same kind of labour as another prisoner, and otherwise similarly circumstanced with him, except that he is to leave the prison sooner, unless, as has been alleged, the expectation of a long imprisonment has a depressing effect on the mind, and that effect can be counteracted, in its influence on the health, by a greater quantity of food. Without inquiring into the accuracy of the fact, as a general rule, I cannot agree to the inference from it. I believe, on the contrary, that a depressed state of the mind weakens the digestive powers, and makes them incapable of receiving even so much food as when the mind is cheerful."

Sir James Graham, Her Majesty's Secretary of State for the Home Department, in a letter to the Chairmen of Quarter Sessions, dated 27th January, 1843, adopts the recommendations of the Inspectors with regard to dietaries, and offers the following very proper observations:—

"I desire to call the especial attention of the magistracy to those rules which relate to the Diet of Prisoners. On the proper adjustment of this particular their health mainly depends; and I am convinced that the adoption of the proposed scales will prevent the recurrence of those complaints which have frequently been preferred, and in some instances justly preferred, against the prison authorities. It is by no means intended that the precise articles of food specified in the dietaries should be strictly adhered to in the table which you may adopt; other kinds of food, containing an equivalent amount of nutriment, may, with advantage, be substituted, when those articles which have been named are either difficult to be obtained in your neighbourhood, or are considered not suited to the customs and habits of the prisoners; but that quantity of food must, in all cases, be given which is sufficient, though not more than sufficient, to maintain health and strength at a moderate cost; and, while due care should be exercised to prevent any approach to luxurious living in a prison, the diet ought on no account to be made an instrument of punishment. I have consulted not only the Prison Inspectors, but medical men of the greatest eminence, possessing the advantage of long experience; I have carefully revised the dietaries now in use; and I have come to the conclusion,—

- 1stly, That animal food should in all cases form part of the diet of prisoners employed at hard labour.
- 2ndly, That a considerable portion of the food of every prisoner should be solid; and,
- 3rdly, That there should be variety in the kinds of food forming the diet, and that occasional changes are necessary.

The dietaries which I now offer for your adoption are framed on these principles, and are upheld by medical science, and by the recommendation of persons on whose authority and knowledge reliance may be placed, but they have been framed without reference to the local situation of particular prisons, or to any peculiar circumstances which may render an increase necessary; they are therefore proposed as the *minimum* amount which can safely be afforded to prisoners without the risk of inflicting a punishment not contemplated by law, and which it is unjust and cruel to inflict; namely, loss of health and strength through the inadequacy of the food supplied."

DIETARIES FOR PRISONS IN ENGLAND AND WALES,  
Recommended by the Prison Inspectors, and ordered by her Majesty's  
Secretary of State for the Home Department.

## CLASS I.

Prisoners confined for any term not exceeding three days:—

	<i>Males.</i>	<i>Females.</i>
Breakfast.....	1 pint of Oatmeal gruel...	1 pint of Oatmeal gruel.
Dinner.....	1 lb. of Bread.....	1 lb. of Bread.
Supper.....	1 pint of Oatmeal gruel ..	1 pint of Oatmeal gruel.

## CLASS II.

Convicted prisoners for any term exceeding three days, and not exceeding fourteen days:—

	<i>Males.</i>	<i>Females.</i>
Breakfast....	{ 1 pint of Oatmeal gruel; 6 oz. of Bread..... }	1 pint of Oatmeal gruel; 6 oz. of Bread.
Dinner.....	12 oz. of Bread.....	6 oz. of Bread.
Supper.....	{ 1 pint of Oatmeal gruel; 6 oz. of Bread..... }	1 pint of Oatmeal gruel; 6 oz. of Bread.

Prisoners of this class employed at hard labour, to have, in addition, 1 pint of Soup per week.

## CLASS III.

Prisoners employed at hard labour for terms exceeding fourteen days, but not more than six weeks:—

	<i>Males.</i>	<i>Females.</i>
Breakfast.—	1 pint of Oatmeal gruel; 8 oz. of Bread.....	1 pint of Oatmeal gruel; 6 oz. of Bread.
Sunday and Thursday... {	Dinner.—1 pint of Soup; 8 oz. of Bread.....	1 pint of Soup; 6 oz. of Bread.
Tuesday and Saturday.... {	3 oz. of cooked Meat, without bone; 8 oz. of Bread; ½ lb. of Potatoes	3 oz. of cooked Meat, without bone; 6 oz. of Bread; ½ lb. of Potatoes.
Monday, Wednesday, & Friday..... {	8 oz. of Bread; 1 lb. of Potatoes, or 1 pint of Gruel, when Potatoes cannot be obtained.....	6 oz. of Bread; 1 lb. of Potatoes, or 1 pint of Gruel when Potatoes cannot be obtained.
Supper.—	Same as breakfast.....	Same as breakfast.

## CLASS IV.

Prisoners employed at hard labour for terms exceeding six weeks, but not more than three months:—

	<i>Males.</i>	<i>Females.</i>
Breakfast.—	1 pint of Oatmeal gruel; 8 oz. of Bread.....	1 pint of Oatmeal gruel; 6 oz. of Bread.
Sunday, Tuesday, Thursday, Saturday.... {	Dinner.—3 oz. of cooked Meat, without bone; ½ lb. of Potatoes; 8 oz. of Bread.....	3 oz. of cooked Meat, without bone; ½ lb. of Potatoes; 6 oz. of Bread.
Monday, Wednesday, & Friday..... {	1 pint of Soup; 8 oz. of Bread.....	1 pint of Soup; 6 oz. of Bread.
Supper.—	Same as breakfast.....	Same as breakfast.

## CLASS V.

Prisoners employed at hard labour for terms exceeding three months:—

	<i>Males.</i>	<i>Females.</i>
Breakfast.—	1 pint of Oatmeal gruel; 6 oz. of Bread.....	1 pint of Oatmeal gruel; 6 oz. of Bread.
Sunday, Tuesday, Thursday, Saturday.... {	Dinner.—4 oz. of cooked Meat, without bone; 1 lb. of Potatoes; 6 oz. of Bread.....	3 oz. of cooked Meat, without bone; ½ lb. of Potatoes; 6 oz. of Bread.
Monday, Wednesday, Friday..... {	Breakfast.—1 pint of Cocoa, made of ½ oz. of flaked cocoa or cocoa-nibs, sweetened with ½ oz. of molasses or sugar; 6 oz. of Bread	1 pint of Cocoa, made of ½ oz. of flaked cocoa or cocoa-nibs, sweetened with ½ oz. of molasses or sugar; 6 oz. of Bread.
Dinner.—	1 pint of Soup; 1 lb. of Potatoes; 6 oz. of Bread.....	1 pint of Soup; ½ lb. of Potatoes; 6 oz. of Bread.
Supper the seven days.—	1 pint of Oatmeal gruel; 6 oz. of Bread..	1 pint of Oatmeal gruel; 6 oz. of Bread.

**CLASS VI.**  
Convicted prisoners not employed at hard labour for periods exceeding fourteen days:—

	<i>Males.</i>	<i>Females.</i>
	Breakfast.—1 pint of Oatmeal gruel; 8 oz. of Bread.....	1 pint of Oatmeal gruel; 6 oz. of Bread.
Sunday, Tuesday, Thursday, Saturday....	Dinner.—3 oz. of cooked Meat, without bone; ¼ lb. of Potatoes; 8 oz. of Bread.....	3 oz. of cooked Meat, without bone; ¼ lb. Potatoes; 6 oz. of Bread.
Monday, Wednesday, Friday.....	1 pint of Soup; 8 oz. of Bread....	1 pint of Soup; 6 oz. of Bread.
	Supper.—Same as breakfast..... Same as breakfast.	

**CLASS VII.**  
Prisoners sentenced by Court to solitary confinement:—

<i>Males.</i>	<i>Females.</i>
The same as Class VI.	The same as Class VI.

**CLASS VIII.**  
Prisoners for examination, before trial, and misdemeanants of the first division, who do not maintain themselves:—

<i>Males.</i>	<i>Females.</i>
The same as Class IV.	The same as Class IV.

**CLASS IX.**  
DESTITUTE DEBTORS.

<i>Males.</i>	<i>Females.</i>
The same as Class IV.	The same as Class IV.

**CLASS X.**  
Prisoners under punishment for prison offences for terms not exceeding three days:—  
1 lb. of Bread per diem.

Prisoners in close confinement for prison offences under the provisions of the 42nd section of the Gaol Act:—

	<i>Males.</i>	<i>Females.</i>
Breakfast..	1 pint of Gruel; 8 oz. of Bread..	1 pint of Gruel; 6 oz. of Bread.
Dinner....	8 oz. Bread.....	6 oz. of Bread.
Supper....	1 pint of Gruel; 8 oz. of Bread..	1 pint of Gruel; 6 oz. of Bread.

*Note.*—The Soup to contain, per pint, 3 oz. of cooked meat without bone, 3 oz. of potatoes, 1 oz. of barley, rice, or oatmeal, and 1 oz. of onions or leeks, with pepper and salt. The Gruel, when made in quantities exceeding 50 pints, to contain 1½ oz. of oatmeal per pint, and 2 oz. per pint when made in less quantities. The Gruel on alternate days to be sweetened with ½ oz. of molasses or sugar, and seasoned with salt.

The following table gives a comparative view of the weekly quantity of food allowed to prisoners confined for terms exceeding three days:—

	CLASS 2.		CLASS 3.		CLASS 4. CLASS 8. CLASS 9.		CLASS 5.		CLASS 6. CLASS 7.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Bread.....oz	168	126	168	126	168	126	126	126	168	126
Cooked meat,oz	0	0	6	6	12	12	16	12	12	12
Potatoes....oz	0	0	64	64	32	32	112	56	32	32
Total solid food	168	126	238	196	212	170	254	194	212	170
Gruel....pints	14	14	14	14	14	14	11	11	14	14
Soup....pints	0	0	2	2	3	3	3	3	3	3
Cocoa....pints	0	0	0	0	0	0	3	3	0	0

These dietaries appear to me well calculated to carry into effect the principles laid down by the Prison Inspectors, that the quantity of food supplied to prisoners should in all cases be sufficient, and not more than sufficient, to maintain health and strength.

They have, however, been objected to, on the ground that the amount of food which they supply is greater than the hard-working, sober, and honest labourer can in general obtain for himself and family; and, therefore, that they hold out rather a temptation than a discouragement to crime. Should such be their effect, it is greatly to be regretted; but it cannot form a valid ground for altering them. For the question is, not what the honest labourer can obtain, but what is necessary for the prisoner; and under this point of view it appears to me that there exists no just ground of objection to these rates of diet. The dietary for the fifth class, which has been especially objected to, as being indulgent if not luxurious, allows an ample, but by no means an excessive, amount of food, when we take into consideration the hard labour to which the prisoners of this class are subjected, as well as their term of imprisonment (see p. 465, *et seq.*)

6. DIETARIES FOR THE SICK.

In the treatment of many diseases, attention to diet is a point of considerable importance; and in none is it more necessary than in non-febrile disorders of the digestive and urinary organs. For in acute maladies, in which abstinence or low diet is requisite, there is

usually no disposition to take food: on the contrary, solids of all kinds are generally loathed; and in such cases, therefore, there is little or no chance of any error of diet being committed. Dietetical regimen is more important in chronic diseases of the assimilating organs, in which the appetite is unimpaired, or even increased,—since in such the patient is more apt to overstep the bounds of prudence by the employment of a diet improper, either from the quantity or quality of the food used. In chronic local diseases, when the constitution is unimpaired, and the appetite for food remains natural, I would, by no means, advocate the adoption of a spare or low diet; since I believe that in such cases the indulgence of a moderate appetite for plain food is attended with beneficial results. From this statement, however, maladies affecting the organs of assimilation must be frequently excepted. “Natural instincts,” justly observes Dr. Billing,\* “are too often thwarted: it is much too common to put patients empirically on low diet; and patients of the higher classes—the better educated—very often put themselves on low diet unnecessarily. So far as we may take natural instinct for a guide,” he further observes, “we may assert, that when a patient *can* eat, he may be allowed to do so; for if he has even a slight degree of fever, he *cannot* eat.”

Several diets, or kinds of dietetical regimen, are employed in the treatment of diseases. The most important of these are the following:—

---

\* *First Principles of Medicine.* 4th edit. p. 109.

1. FULL, COMMON, OR MEAT DIET.—On many occasions where it is desirable to restore or support the powers of the system, patients are permitted to satisfy their appetite for plain vegetable and animal food. In many indolent diseases, in scrofula, in some affections of the nervous system (as chorea and epilepsy), and in the stage of convalescence after acute maladies, &c. this kind of diet is frequently directed. In these cases beer and, sometimes, wine are permitted; and spirit is occasionally required. In some diseases of, and in accidents occurring in, confirmed drunkards, it is frequently found injurious to withhold the stimulus to which the patient's system has been long accustomed; and thus wine, brandy, rum, or gin, is ordered, according to circumstances.

2. ANIMAL DIET.—This term is applied to a diet composed of animal food, either exclusively or principally. The only disease, in which a diet *exclusively* of animal food is recommended, is diabetes. In this malady, strict abstinence from vegetable substances is attended with the diminution of both the quantity, and the saccharine condition, of the urine. But it deserves especial notice that the amount, as well as the nature, of the food taken in this disease, requires carefully attending to, as the craving for food is sometimes apt to induce the patient to indulge to an injurious extent.

A considerable variety of food is necessary for patients limited to the exclusive use of animal diet, on account of the loathing of the same substance if frequently repeated. *Butcher's meat, bacon, poultry, game, fish, shell-fish, cheese, eggs, sausages, and brawn,*

are allowed in private practice. For common drink, *water*, *beef-tea*, or *mutton-broth*, may be sparingly used. *Milk* is generally permitted, but as it contains *sugar*, its use is not unobjectionable.

By the use of animal food exclusively, the quantity of sugar in the urine of diabetic patients is greatly reduced; but I have never seen this secretion entirely lose its saccharine condition by even the most rigorous adoption of animal diet. In one case, recently under my care in the London Hospital, the quantity of urine passed in twenty-four hours was reduced from about eleven, to three or four, pints in the twenty-four hours; but its specific gravity (1.010 to 1.015) and saccharine quality remained unaltered. From whence, it may be asked, in such cases, is the sugar derived? Where the use of milk is permitted, this perhaps is in part the source of it. I have, however, found it, where neither milk nor vegetable food was employed; and in such cases the only substances which were used as food, and from which sweet or saccharine matter is known to be obtainable, were gelatine and oil or fat. But neither the sugar of gelatine (*glycicoll*) nor the sweet principle of oils and fats (*glycerine*) is identical with diabetic sugar (*glucose*); and we are unacquainted with any means of converting the two former into the latter substance.

Patients, we are told, sometimes evince such an inordinate craving for vegetable food, that it is difficult, if not impossible, to persevere for any considerable length of time on an exclusively animal diet. In the cases which have fallen under my observation this has not been the case. I have several times met with

patients who have objected to persevere with this diet, not on the above ground, but simply because they became satisfied of its inefficacy; the diminution in the quantity of urine not being attended with a corresponding relief of the constitutional symptoms.

In those diabetic cases in which it is thought advisable to permit a limited quantity of vegetable food, in conjunction with animal diet, those vegetables should be selected which are most highly nitrogenized, and which are freest from sugar or substances capable of being converted into saccharine matter, as the starchy bodies. These conditions are best fulfilled by the cruciferous plants,—as *cabbage*, *greens*, *cauliflower*, *broccoli*, *watercress*, and *mustard and cress*. *Sauerkraut*, or fermented cabbage (see p. 383), is sometimes permitted. The *aromatic condiments* (as sage, mint, marjoram, fennel, parsley, caraway, cinnamon, nutmegs, allspice, pepper, mustard, &c.) are, of course, unobjectionable, as far as sugar is concerned. *Fruits*, especially apples and pears, are highly objectionable, on account of the saccharine and amylaceous matters which they usually contain. For drink, Dr. Prout recommends sound *porter* in preference to wine or spirits.

Some practitioners, among whom Dr. Prout deserves to be especially mentioned, object to the exclusive use of animal food in diabetes; “but consider a certain proportion of *farinaceous* matters proper. The recommendation of this admixture of farinaceous matters is founded upon a fact already alluded to, and apparently well established, viz. that the assimilation of the saccharine principle is one of the last functions

that becomes extinct in animals. The proportions of these two forms of aliment must be varied according to the circumstances of the patient; and particularly according to the degree in which he is able to assimilate albuminous, in preference to farinaceous, matters; a point not difficult to be determined by a little attention. Of farinaceous matters, the *high* or *strong*, as the farina of wheat in the shape of bread, &c., seem to be most easily assimilated. The *low* kinds of farinaceous matters, as arrow-root, potatoes, &c. (with the exception perhaps of rice), seem to be reduced to a species of sugar, more difficult of assimilation than the sugar from wheat-flour, &c., and in general, therefore, should be avoided\*."

*Gluten* is a nutritious vegetable principle, to the employment of which in diabetes no objection can be raised; and I have already (see p. 314) had occasion to notice *gluten bread*, which has been made for the use of diabetic patients.

3. VEGETABLE DIET.—The exclusive employment of vegetable food, in conjunction with the use of distilled water, has been recommended, by Dr. Lambe †, as a remedy for cancer, scrofula, consumption, asthma, and other chronic diseases; but he has, I suspect, gained few, if any, proselytes to his opinions and practice.

4. SPARE OR ABSTEMIOUS DIET.—The term *spare* or *abstemious diet* is sometimes used to indicate the

\* *On the Nature and Treatment of Stomach and Urinary Diseases*, p. 41. London, 1840.

† *Reports of the Effects of a Peculiar Regimen on Scirrhus Tumours and Cancerous Ulcers*. Lond. 1809.—*Additional Reports on the Effects of a Peculiar Regimen in cases of Cancer, Scrofula, Consumption, Asthma, and other Chronic Diseases*. Lond. 1815.

employment of vegetable substances principally (not exclusively). It generally includes the use of the white fish (the flesh of which is less nourishing and stimulating than butchers' meat, see p. 281), sometimes alternating with a limited quantity of poultry or butchers' meat. In plethoric habits, where the appetite is unimpaired, this diet is ordered in cases of threatened apoplexy, gout, &c. By its adoption we diminish the quantity of nutritive matter supplied to the system, while we keep the digestive organs actively employed.

5. FEVER DIET (*Thin Diet*; *Spoon Diet*; *Slops*).—“In febrile diathesis,” says Dr. Beaumont\*, “very little or no gastric juice is secreted. Hence the importance of withholding food from the stomach in febrile complaints. It can afford no nourishment, but is actually a source of irritation to that organ; and, consequently, to the whole system.” In another place † the same author observes, “that drinks received are immediately absorbed, or otherwise disposed of, none remaining in the stomach ten minutes after being swallowed. Food taken in this condition of the stomach remains undigested for twenty-four or forty-eight hours, or more, increasing the derangement of the whole alimentary canal, and aggravating the general symptoms of disease.”

These observations suggest the appropriate diet for febrile states of the system. Foods which require digestion are to be withheld; indeed, they are generally loathed,—want of appetite being one of the

\* *Experiments and Observations on the Gastric Juice, &c.*, p. 132.

† *Op. supra cit.* p. 99.



early symptoms of fever. Aqueous drinks (commonly called diluents or slops), however, are rapidly absorbed without undergoing digestion. Tea, toast-water, and barley-water, therefore, may be taken *ad libitum*. Of the foods which are most admissible when the patient feels capable of taking them, the saccharine and the amylaceous are the lightest and most appropriate. Acidulous fruits and drinks sometimes prove most refreshing. Saccharine substances are absorbed and pass into the chyle, and subsequently support the process of respiration, while amylaceous substances yield sugar in the stomach independently of the gastric juice, and probably by the aid of the saliva merely (see p. 126).

6. **LOW DIET.**—In acute inflammation of important organs, and after serious accidents, surgical operations, and parturition, patients in general are directed to adopt a low diet, consisting principally of liquid foods, as gruel, broth, milk, tea, and barley-water, and a moderate allowance of bread or biscuit, and light farinaceous puddings. The effect of low diet on the blood is similar to that of loss of blood; namely, a diminution of the number of the blood disks\*.

7. **MILK DIET.**—Besides cow's milk, which constitutes the principal article of food, this diet includes the use of farinaceous substances (such as arrow-root, sago, and tapioca), bread, and light puddings (of rice, bread, or batter). Milk diet is ordered when we are

---

\* See Andral and Gavarret's *Recherches sur les Modifications de Proportion de quelques Principes du Sang*. Paris, 1842.

desirous of affording support to the system with the least possible stimulus or excitement. It is well adapted for inflammatory diseases of the chest (phthisis especially), of the alimentary canal, and of the bladder, when it is considered expedient to employ a nutritious but not stimulating diet. After hemorrhages, when the powers of the system have been greatly exhausted, a milk diet is frequently beneficial. It has also been considered one of the best means of preventing and of curing the gout. It is a good diet also for many of the diseases of children, especially those of a strumous or scrofulous nature. In some of the above-mentioned maladies, where the stomach is weak and irritable, cow's milk is apt to occasion vomiting and other unpleasant effects, in consequence of the butter which it contains. In such cases, skim-milk or ass's milk may be advantageously substituted.

8. **DRY DIET.**—In several maladies it becomes necessary to restrict the quantity of liquids used; as in valvular disease of the heart, aortic aneurism, diabetes, and diuresis with either excess or deficiency of urea. The first of these diseases is incurable, and, therefore, our object is its palliation. One mode of attempting this is, to relieve the obstructed circulation by lessening the volume of blood; and which may be in some degree effected by limiting the amount of drink. In aneurism of the aorta we endeavour to lessen the tension of, and to promote the deposition of fibrine within, the sac. The indications are in part fulfilled by a dry diet, by which fulness of vessels and thinness of the blood are lessened. In diabetes, and also in diuresis, with either excess or deficiency of urea, a

most important part of the treatment is to diminish, as much as possible, the quantity of fluids taken.

I have said nothing of the nature of the solid food which is used by those who adopt a dry diet ; because it is subject to considerable variation. In some cases a generous, in others a spare, diet should accompany it.

Subjoined are the diet-tables of the *Metropolitan Hospitals for the Sick\** of the *Royal Ordnance Hospitals*, and of the *Royal Navy Hospitals and Marine Infirmaries* :—

1. LONDON HOSPITAL.

	COMMON DIET.	MIDDLE DIET.	LOW DIET.	MILK DIET.
<i>Per Day . .</i>	12 oz. Bread. 1 pint Porter, <i>Men.</i> ½ pint do. <i>Women.</i>	The same, except that 4oz. of Meat shall be given instead of 8 oz.	8 oz. Bread.	12 oz. Bread.
<i>Breakfast . .</i>	Gruel.		Gruel.	Gruel.
<i>Dinner . .</i>	8 oz. Beef, with Potatoes, thrice a week. 8 oz. Mutton, with Potatoes, twice a week. 8 oz. Potatoes, & Soup, with Vegetables, twice a week.		Broth.	1 pint Milk.
<i>Supper . . . .</i>	1 pint of Broth.		Gruel or Broth.	1 pint Milk.

2. ST. BARTHOLOMEW'S HOSPITAL.

	COMMON DIET.	BROTH DIET.	THIN OR FEVER DIET.	MILK DIET.
<i>Daily . . . . .</i>	Milk Porridge. 12 oz. Bread. 6oz. Mutt* or Beef 1 pt. Broth (with Peas or Potatoes, 4 times a week). 2 pts. Beer, <i>Men.</i> 1 pint, <i>Women.</i> 1 oz. Butter, twice a week.	Milk Porridge. 12 oz. Bread. 2 pints Broth. 1 pint Beer. 1 oz. Butter.	Milk Porridge. 12 oz. Bread. 1 pint of Milk, with Tapioca, Arrow-root, Sago, or Rice, as may be prescribed. Barley-water.	Milk Porridge. 12 oz. Bread. 2 pts. Milk, with Tapioca, Arrow-root, Sago, or Rice, as may be prescribed. Barley-water. 1 oz. Butter. Bread Pudding, 3 times a week, when ordered.

\* In addition to the substances specified in the following Diet Tables of the Metropolitan Hospitals, other articles (as chops, steaks, fish, wine, spirit, porter, &c.) are permitted, when specially ordered by the medical officers. These are denominated *extras*.

3. GUY'S HOSPITAL.

	FULL DIET.	MIDDLE DIET.	LOW DIET.	MILK DIET.	FEVER DIET.
<i>Daily . .</i>	14 oz. Bread. 1½ oz. Butter. 1 quart Table Beer. 8 oz. Meat when dressed.	12 oz. Bread. 1½ oz. Butter. 1 pt. Table Beer. 4 oz. Meat, when dressed, and ½ pint Broth.	12 oz. Bread. 1 oz. Butter. Tea & Sugar.	12 oz. Bread. 1 oz. Butter. 2 pints Milk.	6 oz. Bread. 1 oz. Butter. Tea & Sugar. Half a pound of Beef (for Beef-tea), or Arrow-root or Sago, when ordered.
For each diet, Gruel or Barley-water, as required.					

4. ST. THOMAS'S HOSPITAL.

	FULL DIET.	MILK DIET.	DRY DIET.	FEVER DIET.
<i>Daily . . . . .</i>	2 pints of Beer; 14 oz. of Bread.	12 oz. of Bread.	14 oz. of Bread, 2 pints of Beer.	12 oz. of Bread; 2 pints of Beer.
<i>Breakfast . . . .</i>	Water Gruel.	1 pint of Milk.	Water Gruel.	Water Gruel.
<i>Dinner . . . . .</i>	½ lb. of Beef, when dressed, twice a week; 4 oz. of Butter, or 6 oz. of Cheese, thrice a week; ½ lb. of Mutton, when boiled, thrice a week.	1 pint of Milk four times a week. Rice Pudding thrice a week.	4 oz. of Butter, four times a week; Rice Pudding and 4 oz. of Butter, three times a week.	2 of a lb. of Beef for tea.
<i>Supper . . . . .</i>	1 pint Broth, four times a week.	1 pint of Milk.		

5. ST. GEORGE'S HOSPITAL.

	EXTRA DIET.	ORDINARY DIET.	FISH DIET.	FEVER DIET.	BROTH DIET.	MILK DIET.
<i>Daily</i>	12 oz. Bread. <i>Men.</i> 2 pints Beer. <i>Women.</i> 1½ pts. Beer.	12 oz. Bread. 1 pint Beer.	12 oz. Bread.	12 oz. Bread. Barley Water <i>ad libitum.</i>	12 oz. Bread.	12 oz. Bread.
<i>Breakfast</i>	1 pint Tea. ½ pint Milk.	1 pint Tea. ½ pint Milk.	1 pint Tea. ½ pint Milk.	1 pint Tea. ½ pint Milk.	1 pint Tea. ½ pint Milk.	1 pint Tea. ½ pint Milk.
<i>Dinner</i>	12 oz. Meat, roasted with the bone before it is dressed) four days, — boiled three days. ½ lb. Potatoes.	One half the meat allowed for extra diet. ½ lb. Potatoes.	4 oz. of plain boiled white fish (as Whiting, Plaice, Flounders, or Haddock).	Arrow-root, &c. must be specially directed.	1 pt. Broth. 6 oz. light Pudding.	1½ pints Rice Milk four days. ½ lb. Bread or Rice Pudding three days.
<i>Supper</i>	1 pint Gruel. ½ pint Milk.	1 pint Gruel. ½ pint Milk.	1 pint Gruel. ½ pint Milk.	1 pint Tea. ½ pint Milk.	1 pint Gruel. ½ pint Milk.	½ pint Milk.

6. WESTMINSTER HOSPITAL.

	FULL DIET.	MIDDLE DIET.	LOW DIET.		SPoon, OR FEVER DIET.	INCURABLES' DIET.
			Fixed.	Casual.		
Daily ..	14 oz. Bread.	10 oz. Bread.	1 lb. Bread.	—	1 lb. Bread.	2 lb. Bread. 1 lb. Meat. 1 lb. Potatoes 1 pint Milk. 1 pt. Porter.
Break-fast	1 pint Milk Porridge, or Rice Gruel.	1 pint Milk Porridge, or thin Gruel.	1 pint Tea, with Sugar and Milk.	—	1 pint Tea, with Sugar and Milk.	
Dinner	1 lb. Meat roasted, boiled, or chops. 1 lb. of Potatoes.	1 lb. Meat roasted, boiled, or chops. 1 lb. of Potatoes.	No fixed Diet for Dinner.	1 pint of Broth, or 1 lb. of Bread, or Rice Pudding, or 1 pint Beef Tea, or a Chop, or Fish.	Barley Water.	
Supper	1 pint Milk Porridge, or Rice Gruel.	1 pint Milk Porridge, or thin Gruel.	1 pint Tea, with Sugar and Milk.	—	1 pint Tea, with Sugar and Milk.	

7. MIDDLESEX HOSPITAL.

	DIETA CARNIS OR MEAT DIET.	DIETA JUSCULI OR SOUP DIET.	DIETA LACTIS OR MILK DIET.	DIETA SIMPLEX OR SIMPLE DIET.	CANCER DIET.
Daily..	12 oz. Bread.	12 oz. Bread.	12 oz. Bread.	6 oz. Bread.	12 oz. Bread. 1 lb. Meat. 1 lb. Potatoes. 1 pint Milk.
Break-fast..	1 pint Milk.	1 pint Milk.	1 pint Milk.	1 pint Barley-water.	
Dinner	<i>Physicians' Patients.</i> 1 lb. Potatoes, 4 oz. dressed meat (beef or mutton), roast and boiled alternately, 4 days. 4 oz. Meat in Soup, 3 days.	1 pint Soup, made with 4 oz. Beef, alternately with 1 pint of Broth with Barley.	1 pint Milk with Rice Pudding, 4 days, and with Batter Pudding 3 days.	1 pint Gruel.	
	<i>Surgeons' Patients.</i> 1 lb. Potatoes, 4 oz. dressed meat (beef or mutton), roast and boiled alternately.				
Supper	1 pint Gruel alternately, with 1 pint of Barley-water.	1 pint Gruel.	1 pint Milk, or 1 pint of Gruel.	1 pint of Gruel or Barley-water.	

8. KING'S COLLEGE HOSPITAL.

	FULL DIET.	MIDDLE DIET.	MILK DIET.	LOW DIET.	FEVER DIET.
Daily ...	1 pint Beer, or 1 pint Porter. 14 oz. Bread.	14 oz. Bread.	1 lb. Bread.	8 oz. Bread.	—
Breakfast	1 pint Milk Porridge.	1 pint Milk Porridge.	1 pint Milk.	1 pint Gruel.	1 pint Gruel.
Dinner..	1 lb. Meat. 1 lb. Potatoes.	1 lb. Meat. 1 lb. Potatoes.	1 pint Milk.	1 pint Broth.	2 pints Barley Water.
Supper..	1 pint Milk Porridge.	1 pint Milk Porridge.	1 pint Gruel.	1 pint Milk Porridge.	1 pint Milk Porridge.

9. NORTH LONDON HOSPITAL.

	FULL DIET.	MIDDLE DIET.	LOW DIET.	MILK DIET.
Daily ..	16 oz. Bread. 1 pint Milk. 1 lb. Meat and 1 lb. Potatoes 4 days. 1 pint Soup or Rice three days.	16 oz. Bread. 1 pint Milk. 1 pint Soup or Rice.	8 oz. Bread. 1 pint Milk. Oatmeal for Gruel.	17 oz. Bread. 2 pints Milk.

10. DREADNOUGHT HOSPITAL SHIP.

	FULL DIET.	ORDINARY DIET.	LOW DIET.	MILK DIET.	FEVER DIET.
Breakfast	1 pint Tea. 1 lb. Bread.	Ditto. Ditto.	Ditto. 1 lb. Bread.	Ditto. 1 lb. Bread.	Ditto.
Dinner..	1 lb. Meat. 1 lb. of Potatoes. 2 pints Beer (if ordered).	1 lb. of Meat. 1 lb. of Potatoes. 1 pint of Beer (if ordered).	1 pint of Beef Tea.	1 pint Milk.	Gruel.
Supper....	1 pint Broth.	1 pint Broth, or Gruel.	1 pint Gruel, or Milk (if ordered).	1 pint Milk.	Gruel, or Barley Water.

Dr. Carpenter \* observes that "there can be little

\* Principles of Human Physiology, p. 334.

doubt that, as a whole, the diet of patients in English hospitals is much too high, being far better than that to which the same class of persons is accustomed in health: this is attended with injury to the patients, and with increased expense to the institution; and it has further the injurious effect of tempting the patients to stay in the hospital for a longer time than is necessary."

Taking the dietaries of the metropolitan hospitals as fair samples of those of the English hospitals generally, I am quite willing to admit that the full diet of these establishments is, in many cases, "better than that to which the same class of persons is accustomed in health;" but I by no means agree with Dr. Carpenter in his sweeping assertion that it is "much too high." That life may be supported on a more restricted diet cannot be denied; but I agree with the Rev. Mr. Porteus, in his letter\* to the citizens of Glasgow, that "it is a difficult matter to ascertain what is necessary to preserve life," and that, "wherever the starving point lies, the managers of charity funds should endeavour to be above it."

In framing dietaries for the public hospitals, it is necessary to adapt them to the wants of the average of the patients. No diet scale can be formed which will not be open to objection in individual cases; but

---

\* See Mr. Mott's report, in *The Second Annual Report of the Poor Law Commissioners*.

I contend as a whole the dietaries of the metropolitan hospitals are unobjectionable. To take the hospital (London Hospital, Mile End) with which I am connected, as an example, I may observe, that it is much more common to hear the patients complain of the insufficiency, than of the superabundance, of its full diet. Many of them are strong, healthy men, as sailors, accustomed to eat heartily, and who have received some accident which has led to their admission into the hospital. Others are convalescents from long and lingering illnesses, with depressed vital powers, which require, not merely to be maintained, but to be renovated or raised to the healthy standard. The rations allowed are not, in general, greater, but oftentimes less, than can be eaten with appetite; but should, in any particular case, the quantity served out be more than is requisite, it is the duty of the medical officer to place such patient on a more limited diet.

The objection raised by Dr. Carpenter to the diet of the English hospitals, that it has "the injurious effect of tempting the patients to stay in the hospital for a longer time than is necessary," would be valid, if these establishments were compelled to retain the patients as long as they are disposed to stay; but such is not the case. They are discharged by the surgeon or physician, under whose care they have been placed, as soon as their state of health permits this to be done with safety.

11. DIETARIES OF ROYAL NAVAL HOSPITALS AND MARINE INFIRMARIES.

	Full.	Half.	Low.	Fever.
Bread .....	1 lb.	1 lb.	8 oz.	8 oz. or Sago 4 oz.
Beef or Mutton.....	1 lb.	8 oz.	0	0
Potatoes or Greens ..	1 lb.	8 oz.	0	0
Herbs for broth ....	23 drachms	23 drachms	12½ drachms	0
Barley .....	14 ditto	14 ditto	7 ditto	0
Salt .....	8 ditto	8 ditto	8 ditto	0
Vinegar .....	16 ditto	16 ditto	0	0
Tea .....	4 ditto	4 ditto	4 ditto	4 oz.
Sugar .....	16 ditto	16 ditto	16 ditto	20 ditto
Milk { for tea .....	2-Gths of a pint	2-Gths of pint	2-Gths of pint	2-Gths of a pint
{ for diet .....	0	0	1 ditto	½ pint
Broth .....	1 pint	1 pint	½ ditto	
House { Beer (small) ..	2 pints	1½ pints		
{ or strong ..	1½ pints	1 pint		
Foreign { Wine ..	1 pint			
{ or Porter ..	1½ pints			
	at Surgeon's discretion			
Veal .....	Such quantities in lieu of beef or mutton as the medical officer may prescribe.			
Fowls .....				
Fish .....				
Rice or Flour pudding .....	At the discretion of the medical officer.			

Note.—Two drachms of souchong tea, 8 drachms of Muscovado sugar, and one-sixth of a pint of milk, to be allowed to each patient for a pint of tea morning and evening.

The meat for the full and half diet is to be boiled together, with the 14 drachms of Scotch barley, 8 drachms of onions, 1 drachm of parsley, and 16 drachms of cabbage, for every pint of broth; or, at the discretion of the medical officers, 8 drachms of carrots and 8 drachms of turnips, in lieu of the cabbage, which will make a sufficient quantity of good broth to allow a pint to each on full and half diet, and half a pint to each on low diet:—

Rice Pudding.—Each to contain

Rice.....	3 oz.
Sugar.....	1 oz.
Milk.....	½ pint
Eggs.....	1 No.
Cinnamon.....	1 blade

Flour Pudding.—Each to contain

Flour.....	4 oz.
Sugar.....	1 oz.
Milk.....	½ pint
Eggs.....	1 No.
Ginger.....	a few grains

12. ROYAL ORDNANCE HOSPITALS.

ESTABLISHED DIET TABLE.					
MEALS.	FEVER.	LOW.	HALF.	FULL.	COMMON DRINKS.
Breakfast {	One Pint of Tea.	One Pint of Tea	One Pint of Milk Porridge	One Pint of Milk Porridge	Toast and Water
Dinner .. {	One Pint of Water Gruel	Broth or Beef Tea } 1 Pint	Meat.... ¼lb.	Meat.... ½lb.	Acidulated Drink
		Bread..... ¼lb.	Bread .. ½lb.	Bread .. 1 lb.	
		Bread, ¼lb. (To make Broth)	Meat..... ¼lb.	Broth 1 Pint	Broth 1 Pint
Supper .. {	One Pint of Tea	One Pint of Rice Gruel	Potatoes 1 lb.	Potatoes ¼ lb.	Barley } Water or Rice }
				Beer .. 1 Pint	

The FEVER Diet is adapted to such cases as will not allow of any excitement from animal food, in the shape of Broth or otherwise: extras, therefore, to this rate of Diet, are to be given with the same view, except in cases of early convalescence from Febrile Diseases, and of such as are attended with great debility. The Bread is for Panado or Toast and Water.

It is to be considered a General Rule that extras are to be ordered in addition to the Fever Diet. In particular cases, however, Rice or Bread Pudding, Sago, an increased quantity of Bread, or other similar articles, may be added to the low diet.

Milk Diet is to be formed by the substitution of one pint of Milk for Tea, either in the Fever or Low Diet, for Breakfast or Supper, or both, at the discretion of the prescribing Medical Officer.

The Meat mentioned in the three first classes of Diet is to be Beef and Mutton alternately; and the best pieces for making Broth are to be selected.

In particular cases Coffee may be ordered instead of Tea.

As the Diet Table provides liberally for almost every case of Disease that can occur in Hospital Practice, Medical Officers are strictly to adhere to it, unless very peculiar circumstances render a deviation unavoidable. The Diet ordered for Convalescents should always be increased gradually, and with discrimination.

The following proportions of Articles are to be allowed for those parts of the above-mentioned Diet to which they belong:—

Tea for one Meal.....	Tea ½ ounce, Sugar 2 ounce, Milk ½ gill.
Coffee.....	Coffee ½ ounce, Sugar 2 ounce, Milk 1 gill.
Milk Porridge.....	Oatmeal 1½ ounce, Milk 1 gill, Salt ½ ounce.
Rice Gruel .....	Rice 1½ ounce, Sugar ½ ounce, Milk 1 gill.
Water Gruel.....	Oatmeal 1½ ounce, Sugar ½ ounce.
Broth.....	Oatmeal ½ ounce, Barley 2 ounce, Salt ½ ounce.
Sago for one allowance..	Sago 1 ounce, Sugar ½ ounce, Water 2 pint—Wine may be added at the discretion of the Medical Officer.
Rice Pudding .....	Rice 2 ounces, Egg 1, Sugar 1 ounce, Milk ½ pint, Cinnamon 1 Scruple.
Bread Pudding .....	Bread (from the Man's allowance) 2 ounces, Milk 1½ gill, Egg 1, a little Salt, and a few grains of Ginger, Butter ½ ounce, to smear the inside of the Basin.

7. DIETARIES FOR THE INSANE.

I have selected the diet tables of Hanwell Lunatic Asylum, Bethlem Hospital, and St. Luke's Hospital, as examples of the dietaries of public establishments for the reception of the insane.

It has been remarked by Dr. Conolly\* that in all Lunatic Asylums "there are patients who require food in much greater proportion than others; there are also some whose restlessness at night seems to be allayed by food, although they do not complain of hunger. The capriciousness of some patients respecting taking food is only to be overcome by temporary indulgence and little extra allowances. Without this consideration a great amount of discontent will occasionally prevail in the wards, particularly among the female patients; and attention to this point is to them more important than the application of medicine."

The same writer in another place † observes that the cases of refusal of food by insane patients are chiefly of two kinds:—"one, in which food is refused in consequence of some delusion, or some vow, or from mere obstinacy; the patient being in tolerable bodily health, or certainly not incapable of digesting food;—another, in which it is utterly repugnant to a stomach in a high state of disorder."

In the first description of cases, if all other means (such as varying the food, persuasion, &c.), "tried with the utmost patience, fail, it is justifiable and even necessary to introduce food into the stomach by artificial means." This is usually effected by the stomach pump. "In the second, the condition of the patient

\* *The Report of the Resident Physician of the Hanwell Lunatic Asylum, presented to the Court of Quarter Sessions for Middlesex, at the Michaelmas Sessions, 1840.*

† *The Third Report of the Resident Physician of the County of Middlesex Pauper Lunatic Asylum at Hanwell, Oct. 1st, 1841.*

is entirely different. The tongue is red, or thickly coated; the bowels are disordered; there is present a low kind of fever; the brain is highly excited, and the patient almost too feeble to stand or walk except by sudden and frantic efforts. His face is pale, the eyes are sunk, and wild in their expression; and the whole frame is emaciated to an extreme degree. All these are so many sure signs of death ensuing on long-continued disease of the brain, with all its complications. No where except in a Lunatic Asylum would such signs of sinking life be recorded as the result of food being refused. The aversion to take food arises, in such cases, as in cases of fever, from the general and terrible disorder of the system; from a diseased condition of the stomach itself, among other organs, associated with a brain disturbed to excess. To force food into the enfeebled and dying stomach of such patients would not be sanctioned by any well-regulated hospital, or by any competent physician; and their distinction ought not to be overlooked because they occur in an hospital for the insane."

## 1. THE HANWELL LUNATIC ASYLUM.

Breakfast .....	Males.—Milk thickened with Oatmeal and Flour, 1 pint; Bread, 6 ounces.
	Females.—Bread, 5 ounces; Butter, half an ounce; Sugar, 4 ounces per week; Tea, 1 pint.
Dinner .....	Sunday..... { Meat, 5 ounces, cooked.
	Tuesday..... { Yeast Dumpling, 4 ounces.
	Wednesday..... { Beer, half a pint.
	Friday..... { Vegetables.
	Monday..... { 1 pint Soup.
Thursday..... { Bread, 6 ounces.	Beer, half a pint.
	Saturday..... { Meat Pie Crust, 12 ounces.
	Beer, half a pint.
Supper.....	Males.—Bread, 6 ounces; Cheese, 2 ounces; Beer, half a pint.
	Females.—Milk thickened with Oatmeal and Flour, 1 pint; Bread, 5 ounces.
Extras.....	To Workmen.—Out-door Workers to be allowed half a pint of Beer at 11 o'clock, A.M. and at 4 P.M. daily, and 1 ounce of Tea and 4 ounces of Sugar per week.
	To Laundry Women, &c.—Laundry Women to be allowed half a pint of Beer at 4 P.M., and together with Helpers, &c. 1 ounce of Tea and 4 ounces of Sugar per week, in lieu of the ordinary supper.

## 2. BETHLEM HOSPITAL.

Breakfast .....	Gruel.
	Every day..... Table Beer.
	Sunday..... { 8 oz. cooked Meat.
	Tuesday..... { 8 oz. Bread.
	Friday..... { Vegetables.
Dinner.....	Monday..... { Baked Batter Pudding.
	4 oz. Bread.
	1 oz. Cheese or $\frac{1}{2}$ oz. Butter.
	Wednesday..... { Pea Soup, with Legs and Shins of Beef,
	8 oz. Bread. In the summer months,
Thursday..... { Baked Rice Pudding, 4 oz. Bread, 1 oz.	
Cheese, or $\frac{1}{2}$ oz. Butter.	
Friday..... { Boiled Suet Puddings, 4 oz. Bread, 1 oz.	
Cheese, or $\frac{1}{2}$ oz. Butter.	
Saturday..... { Rice Milk, 8 oz. Bread, 2 oz. Cheese, or	
1 oz. Butter.	
Supper.....	{ 8 oz. Bread, 2 oz. Cheese or 1 oz. Butter.
	Table Beer.
Extras.....	For the Sick. Mutton Broth, Beef Tea, Puddings, Fish, Meat, Eggs, Wine, Strong Beer, &c. &c., or whatever may be ordered by the medical officer.
	Christmas Day.. { 8 oz. Roast Beef, 8 oz. Bread. (Mem.—If it fall on an ordinary Meat Day, the patients have a Meat Dinner on the following day).
	A Mince Pie, 6d.
New Year's Day { Plum Puddings, in addition to the ordinary dinner.	
Good Friday..... A Bunn, 1d.	
Easter Monday... 8 oz. Roast Veal, 8 oz. Bread, Vegetables.	
Whit Monday.... 8 oz. Roast Veal, 8 oz. Bread, Vegetables.	
During the summer, about the month of August, 6 oz. Bread, Bacon, Beans, 8 oz. Bread, 1 oz. Butter. Fruit, consisting of Currants and Gooseberries,	
In the month of October, Apple Pies, in addition to the ordinary dinner.	

## 3. ST. LUKE'S HOSPITAL.

Breakfast .....	Males.—2 pints of Gruel made of equal parts of Milk and Water with 2 ounces of Bread.
	Females.—1 $\frac{1}{2}$ pints Gruel with 2 ounces of Bread.
Dinner.....	Daily..... Males.—1 pint Beer. Females.— $\frac{1}{2}$ pint Beer.
	Sunday.. { Males.— $\frac{1}{2}$ lb. Cooked Meat; Vegetables; 6 ounces Bread.
	Tuesday.. { Females.— $\frac{1}{2}$ lb. Cooked Meat; Vegetables; 6 oz. Bread.
	Thursday { Males.—2 pints Broth * and 6 ounces of Bread.
	Monday.. { Females.—1 $\frac{1}{2}$ pint Broth and 6 ounces of Bread.
	Friday... { Males.—1 pint Broth, 4 ounces Bread, $\frac{1}{2}$ lb. Baked Suet Pudding.
	Wednesday { Females.—1 pint of Broth, 4 ounces Bread, $\frac{1}{2}$ lb. Pudding.
	Saturday.. { Males.—2 pints Rice Milk, or 1 lb. Baked Rice Pudding, and 6 ounces Bread.
	Females.—1 $\frac{1}{2}$ pint Rice Milk, or $\frac{1}{2}$ lb. Pudding, and 6 ounces Bread.
	Supper..... { 8 oz. Bread, and 2 oz. Cheese or Butter, or, on Wednesdays, 1 pint Broth and 8 ounces Bread.
Males.—1 pint Beer; Females, $\frac{1}{2}$ pint of Beer.	

\* The Broth is made of the liquor of the preceding day's meat, with pease, &c. and 2 stones of fresh meat, for every 50 patients.

## 8. DIETARIES FOR PUERPERAL WOMEN.

The following are the dietaries employed at two Metropolitan Lying-in Hospitals.

## 1. CITY OF LONDON LYING-IN HOSPITAL.

Breakfast.—Tea and Bread and Butter, *ad libitum*.  
 Dinner.—Broth or Gruel until the third day, after which Boiled Mutton and Broth.  
 Tea.—As Breakfast.  
 Supper.—Gruel until after the ninth day; then Bread and Cheese and Beer.  
 Should the patient be delicate she is allowed Wine, Fish, Light Puddings, or any other thing she may fancy.  
 In cases of disease the diet is under the direction of the medical officers.  
 When the mother is prevented suckling, the child is suckled by some other patient, or is fed with Arrow-root, or a little of the Gruel prepared for the mother.

## 2. GENERAL LYING-IN HOSPITAL, WESTMINSTER.

Dr. Rigby informs me that there is no peculiar dietary. Gruel, with Bread and Butter and Tea, is the chief diet for the first three days; then a little Broth or Light Pudding; so that by the fifth day or so Meat is permitted.  
 If the mother be unable to suckle, the infant is occasionally fed with Gruel or equal parts of Milk and Water slightly sweetened.

CHAP. V.—*On the Dietetical Regimen suited for Disordered States of the Digestive Organs.*

In consequence of the great extent to which the preceding parts of this work have run out,—an extent considerably greater than was originally contemplated,—I am under the necessity of compressing the subjects of this chapter into a much narrower compass than was at first proposed. Most of them, however, have already been incidentally referred to; and the principles, on which are founded the precepts, which I am about to lay down, have been before sufficiently discussed. The present chapter is, in fact, a condensed and brief summary of some of the topics already examined. In order, therefore, to save repetition, I shall put within brackets the pages at which the different points under examination have been respectively considered.

The subjects of the present chapter may be conveniently arranged under the following heads:—

1. Cookery of Foods.
2. Times of Eating.
3. Quantity of Food taken at one meal.
4. Conduct before, at, and after eating.
5. Nature and Quality of the Food eaten.

1. *Cookery of Foods.*—The influence of cookery on food I have on several occasions already referred to (see pp. 125, 191, 208, 211, 234, 238, 270, 286, 445, &c.)

Foods possessing an organized texture, as animal

flesh and amylaceous substances, require to be cooked previous to use (see p. 445). To this statement the oyster is an exception (see p. 295); the raw animal being more digestible than the cooked one. Apples, pears, and some other fruits, likewise form exceptions.

By salting, smoking, and pickling (see pp. 227 and 286) the animal textures become harder and more indigestible; and foods thus prepared are, therefore, unfitted for the use of dyspeptics. From this statement bacon must, in some cases, be excepted; as it occasionally proves more digestible than the fresh fat (see p. 173).

Sausages and cured meats occasionally acquire deleterious qualities by keeping (see p. 300).

The ordinary operations of the cook may be reduced to five in number; viz. boiling, roasting, broiling, baking, and frying.

*Boiling* is the operation by far the best suited for the dyspeptic, the convalescent, and the sick. In the case of vegetables, it effects the solution of gummy and saccharine substances, and the expulsion, wholly or partially, of volatile oil (see p. 380); while starch grains are ruptured and partially dissolved (see p. 126), and albuminous and fibrinous liquids coagulated (see p. 375). The changes which it effects on animal flesh have already been fully considered (see pp. 408-409). Over-boiling proves injurious to certain substances, as to eggs (see pp. 191 and 270),—which are thereby hardened, and rendered difficult of digestion,—and to the gelatinous foods, which become by it both less digestible and less nutritive (see pp. 208 and 211). Boiling renders potatoes more fit for



use, not merely by promoting their digestibility and nutritive power, but also by extracting or destroying noxious matter in the tuber (see p. 375). Over-boiling, however, though it may promote their digestibility, probably lessens their nutritive quality (see p. 377). Foliaceous parts, as of cabbages, greens, &c. require well boiling to render them digestible.

*Roasting*, next to boiling, is the best method of preparing food for dyspeptics. It splits and renders more or less soluble starch grains, and, therefore, serves to make some vegetables more digestible and nutritive than they would be in the raw state; as apples (see p. 349) and potatoes. It also coagulates the vegetable albumen. It deprives flesh of part of its water, liquefies the fat, which thereby partially escapes during the operation, coagulates the albumen, and corrugates the fibrine. It does not appear that it effects any change in the composition of the proteinaeous constituent of meat (see p. 238). Roasted meat should be neither *over-done* nor *under-done*. It is a popular opinion that it is much more nourishing when under-done; but this is, probably, an error. For the juice, which is more abundant in the under-dressed meat, is almost entirely aqueous, and can possess very slightly nutritive qualities. Moreover, by the prolonged roasting, the water of the juice is evaporated, the nutritive matter almost entirely remaining in the cooked meat; the composition of the solid or dry matter of which is, as I have already stated, identical with that of raw meat. So that well-done meat, probably, differs essentially from meat under-dressed, in having a little less both of water and fat, while it has

the additional advantage of being more digestible. By roasting, the gelatine is not extracted, as in the operation of boiling.

*Broiling* effects the same changes in meat as those produced by roasting, but more rapidly; so that while the outside is scorched, the inside retains its juiciness. Broiled meat, like roasted meat, is more savoury, though somewhat less fitted for very delicate stomachs, than boiled meat. A well-broiled mutton chop, however, is, for the most part, an unobjectionable dish for the dyspeptic.

*Baking* is a more objectionable process than any of the preceding. Though the general effects produced by it are analogous to those of roasting and boiling, yet meat so cooked is less fitted for delicate stomachs in consequence of being more impregnated with empyreumatic oil. From an experiment already related (see pp. 376 and 377), it appears that baked potatoes are less nutritive than boiled ones. The dyspeptic will act wisely in avoiding the use of all baked foods, except, perhaps, baked amylaceous puddings, as puddings made with sago, tapioca, arrow-root, rice, &c.

*Frying* is of all culinary operations the most objectionable; fried foods being more obnoxious to the digestive organs than foods prepared by any other methods. The reason of this I have already explained (see p. 173). Invalids, convalescents, and dyspeptics, will, therefore, do well to eschew this method of cookery; and abstain from the use of eggs, omelettes, pancakes, fritters, fish, livers, and other dishes cooked by frying.

2. *Times of Eating*.—I have already fully discussed

this topic (see p. 456). It is to be remembered that the practice of eating a little and often is, for the most part, injurious; and that the adoption of fixed periods for taking food is much more conducive to health than eating at irregular times. The length of the interval between the meals must, however, be regulated by circumstances; such as the rapidity of digestion, the age, the amount of fatigue or labour, &c. In some persons (as those of sluggish temperament) digestion is much slower than in others; and in such the interval between the meals ought to be more prolonged, in order that fresh food may not be introduced into the stomach before that of the previous meal has been disposed of. Children, old persons, and those who are engaged in laborious occupations, require food at shorter intervals.

Breakfast should in general be taken soon after rising, for reasons already assigned (see p. 450). Dinner should follow at an interval of about five hours, more or less according to circumstances. The practice of dining late is objectionable for the dyspeptic; the most natural and healthy dinner-time being about the middle of the day. Luncheon is admissible only where dinner is unavoidably late, or where fatigue has been endured. Tea or a liquid meal may succeed dinner at an interval of three or four hours. Supper for those who dine late is unnecessary.

3. *Quantity of Food taken at one Meal.*—The quantity of food proper to be taken at one meal can only be determined by the feelings of the patient, as it varies in different individuals, and under different circumstances. It is impossible, therefore, to affix a

standard of weights or measures by which this can be ascertained. On this point I cannot do better than quote the following observations of Dr. Beaumont:—  
 “There appears to be a sense of perfect intelligence conveyed from the stomach to the encephalic centre, which, in health, invariably dictates what quantity of aliment (responding to the sense of hunger and its due satisfaction) is naturally required for the purposes of life; and which, if noticed and properly attended to, would prove the most salutary monitor of health, and effectual preventive of, and restorative from, disease. It is not the sense of *satiety*, for this is beyond the point of *healthful* indulgence, and is Nature’s earliest indication of an *abuse* and *overburthen* of her powers to replenish the system. It occurs immediately previous to this, and may be known by the pleasurable sensation of *perfect satisfaction, ease, and quiescence of body and mind*. It is when the stomach says *enough*, and is distinguished from satiety by the difference of the sensations—the former feeling *enough*—the latter *too much*. The first is produced by the timely reception into the stomach of proper aliment, in exact proportion to the requirements of nature, for the perfect digestion of which a definite quantity of gastric juice is furnished by the proper gastric apparatus. But to effect this most agreeable of all sensations and conditions—the real Elysian satisfaction of the *reasonable* epicure—timely attention must be paid to the preliminary processes, such as thorough mastication, and moderate or slow deglutition. These are indispensable to the due and natural supply of the stomach at the stated periods of

alimentation; for if food be swallowed too fast, and pass into the stomach imperfectly masticated, too much is received in a short time, and in too imperfect a state of preparation, to be disposed of by the gastric juice."

4. *Conduct before, at, and after eating.*—Excessive fatigue, whether mental or bodily, immediately before a meal, disturbs the digestive function. The stomach participates with the other parts of the system in the exhaustion, and its function is thereby impaired. A little rest before eating is, therefore, under such circumstances, desirable. Hence the wisdom and advantage "of appropriating half an hour to any light occupation, such as dressing, before setting down to dinner\*."

While at meals eat slowly, masticate thoroughly, and cease as soon as a feeling of satisfaction is perceived. Indulgence in the use of a variety of food at one meal leads to the overburthening of the stomach by provoking the appetite beyond its natural extent. This the dyspeptic should carefully avoid.

I have already expressed my opinion of the propriety of repose after dinner (see pp. 446 and 447). The Inspectors of Prisons seem to have been influenced by a similar opinion when they came to the conclusion "that prisoners should not be set to work immediately after any meal" (see p. 492). But the after-dinner repose should be followed by moderate exercise.

5. *Nature and Quality of the Food eaten.*—I have

\* Dr. Combe, *The Physiology of Digestion*, p. 260. 4th ed.

already remarked (see p. 230) that man is an omnivorous animal; that is, he requires both animal and vegetable food.

Several alimentary principles (fibrine, albumen, caseine, oil, and sugar) are found in both animal and vegetable foods. But the nutritive principles of animal foods are intermixed with a much smaller proportion of non-nutritive substances than those of vegetable foods. Hence animal diet yields a much larger amount of nourishment than vegetable diet.

Vegetable food requires for its digestion more time, and probably greater power of the gastric organs, than animal food. Moreover, it is more apt to create flatulency and acescency than the latter. "Its digestibility is, however, dependent upon the same laws as those that govern the solution of animal food; and it is facilitated by division and tenderness\*."

"Bulk is, perhaps, nearly as necessary to the articles of diet as the nutrient principle. They should be so managed that one shall be in proportion to the other. Too highly nutritive diet is, probably, as fatal to the prolongation of life and health as that which contains an insufficient quantity of nutriment. It has been ascertained that carnivorous animals will not live on highly concentrated food alone†." (See p. 455).

According to Dr. Beaumont's observations, solid food is sooner digested than liquid food. Fluids

\* Dr. Beaumont, *Experiments and Observations on the Gastric Juice*, p. 27. Edinb. ed. 1838.

† *Ibid.* p. 31.

holding proteinaceous substances (albumen or caseine) in solution, as milk or raw egg, are coagulated in the stomach before they suffer the action of the gastric juice, which subsequently redissolves them. Solutions of gelatine (as strong broths and soups) being unsusceptible of coagulation, are not digested until they have acquired a more solid consistence by the absorption of their more watery part. These observations, therefore, suggest some useful practical applications. Persons with weak stomachs should not indulge in the copious use of liquid food.

Acidity of stomach arises from the presence of acids derived either from the gastric vessels or from the food. The latter is the only source of acidity which it will be requisite for me to notice, and that so far only as may be necessary to explain the nature of the alimentary substances which develop acid.

Lactic acid (see pp. 115 and 156) is one of the substances derived, in part at least, from the food. The alimentary principles which yield it are sugar, dextrine (starch gum), and gum:\* those which furnish it with

\* The organic principles capable of yielding lactic acid have a composition analogous to that of the acid itself: that is, they consist of carbon and water (or its elements).

	Atoms.	Atoms.
Lactic acid . . . . .	12 carbon	+ 10 water.
Starch . . . . .	12 carbon	+ 10 water.
Dextrine . . . . .	12 carbon	+ 10 water.
Cane sugar . . . . .	12 carbon	+ 11 water.
Gum . . . . .	12 carbon	+ 11 water.
Sugar of milk . . . . .	12 carbon	+ 12 water.
Grape sugar . . . . .	12 carbon	+ 14 water.

But in order to convert them into this acid, or, in other words, to effect what has been termed the *lactic fermentation*, the presence of

the most facility are sugar of milk and dextrine. The acidity of stomach which is produced in some dyspeptics by saccharine substances, arises from the development of lactic acid. Milk also is apt to disagree with such individuals, not only in consequence of the difficult digestibility of its fatty constituent (the butter), but also on account of the conversion of its sugar into lactic acid. Both bread and beer contain dextrine, and are the occasional sources of this acid. The tendency which some farinaceous substances—as oatmeal (see pp. 156 and 326) and potato starch (p. 133) have to cause acidity of stomach, is owing, probably, to the formation first of dextrine, and afterwards of lactic acid.

Some of the fatty acids are also produced in the stomach from the food. The volatile ones (as butyric acid from butter) are exceedingly obnoxious to this organ. The disagreeable sour and rancid eructations which sometimes follow the use of fatty foods, especially of melted butter, are due to the development of these acids.

The difficult digestion of oils and fats I have on several occasions noticed (see p. 174); and to the remarks already offered on this subject I must refer my reader for further information. I have expressed

an organic nitrogenized substance, which has been modified by exposure to the air, is necessary: Its influence is that of a kind of ferment. Diastase, caseine, and animal membrane (as that of the stomach), when they have been exposed to the air, act as ferments. According to Boutron and Fremy (*Journ. de Pharm.* t. xxvii. 1841) mannite and viscid matter are not always simultaneously developed with lactic acid, as stated by some other chemists (see *ante*, p. 115).

an opinion (see pp. 171 and 172), that in cases where these substances prove obnoxious to the stomach, it is in consequence of the evolution of the oily or fatty acids. In connexion with this opinion I may refer to some recent observations of Dumas,\* who has suggested that the separation of the neutral fats into an acid and a base is probably effected by a kind of fermentation (which he denominates the *fatty fermentation*) set up by an albuminous substance, aided by the presence of air, water, and a certain temperature. Thus the facility with which butter becomes rancid depends on the presence of caseine; from which it is necessary to separate it in order to its preservation. This is usually effected by fusion. The acid properties which the fats sometimes acquire in the stomach may arise from their having undergone some analogous change; and Dumas suggests that the influence of pepsine on the fats should be examined.

New bread, rolls, fancy bread, cakes (especially rich plum cakes), and hot buttered toast, should be carefully avoided by the dyspeptic. Good loaf bread, when a day old, is in general unobjectionable: it may be taken either in the form of dry toast, or, in some cases, thinly covered with butter. When the ordinary loaf bread disagrees with the patient, Dodson's unfermented bread (see p. 319) may be tried. Biscuits, on account of their compactness, are slow of digestion, though they sometimes suit dyspeptics better than fermented bread. Pastry, suet and yeast pudding, and pancake

\* *Traité de Chimie appliqué aux Arts*, t. vi. 1843.

are totally unfit for those troubled with a delicate stomach (see p. 322).

Of butcher's meat, mutton and beef are best fitted for the dyspeptic. They should be cooked by boiling, roasting, or broiling; and moderately well dressed. With some persons, however, mutton is apt to disagree (see p. 242); with others I have occasionally found beef to disagree. The young meats (lamb and veal) are less adapted for persons troubled with indigestion, being both less indigestible and nutritive than the older meats. Veal is further objectionable on account of the melted butter and stuffing usually eaten with it. Pork should be avoided by dyspeptics; but pickled pork and bacon are, in general, less objectionable than fresh pork (see p. 175).

Venison is one of the most digestible of meats (see p. 239); but it is too savoury and stimulating for convalescents. The flesh of the rabbit is light, and easy of digestion.

Of birds, the white-fleshed, as the common fowl, are best fitted for dyspeptics and invalids, on account of their meat being readily digestible, moderately nutritious, and not too stimulating. They are best cooked by boiling, and should be eaten without melted butter. Game, as the pheasant and partridge, is richer and more stimulating. The aquatic birds, as the duck and goose, are more difficult of digestion on account of their flesh being permeated with fat; and they are, therefore, unfit for weak stomachs.

The white fish (as the sole and whiting) form light

and easily digestible articles of food, and are well adapted for the use of dyspeptics, invalids, and convalescents. They should be cooked by boiling, and eaten without melted butter. Salmon, eels, herrings, and sprats, abound in oil, and on that account are objectionable. Cured fish of all kinds are unfit for persons with a delicate stomach.

Shell fish, with the exception of the oyster, are difficult of digestion, and should be avoided by the dyspeptic.

Mealy potatoes, when well boiled, are readily digestible; and, in general, are an unobjectionable article of food. The cabbage tribe is somewhat uncertain: when sufficiently cooked it is frequently taken by dyspeptics without any inconvenience; but at other times it proves indigestible, and occasions flatulence. Pease and beans, especially when old, are difficult of digestion, and apt to cause flatulence.

The oily seeds, as the walnut, the filbert, and the almond, are highly indigestible foods.

Of the fleshy fruits, the grape is the safest. Apples and pears should be roasted before use. Oranges, when quite ripe, seldom prove injurious; unripe ones, however, are apt to gripe.

For drink, simple water or toast water are unobjectionable. In many cases the limited use of weak table ale is unattended with ill effects (see p. 417). Malt liquor of all kinds, in some instances, proves injurious, creating flatulence and acidity, and otherwise disturbing the digestive functions. In such cases a small quantity of sherry wine may be substituted.

Dr. Paris states, that, in some cases of dyspepsia, wine and beer equally disagree with the stomach, producing acidity and other distressing symptoms; and in such, he observes, "very weak spirit may, perhaps, be taken with advantage." To the accuracy of this observation I can bear testimony, having repeatedly found the substitution of a weak spirit preferable to fermented liquids.

A weak infusion of black tea rarely proves injurious (see p. 398 *et seq.*) Coffee, employed moderately, is, in general, a wholesome beverage (see p. 401 *et seq.*) Chocolate and cocoa are objectionable in some cases, on account of their oily ingredient (see pp. 404 and 405). But to all these statements exceptions occasionally are met with.

I have already stated (see p. 436) that many of the substances called condiments are, in fact, aliments; and as such their dietetical properties have already been alluded to. But the hot and pungent condiments, such as pepper, cayenne, mustard, &c. as well as the ingredients of some of the sauces, cannot be regarded as alimentary. They act as stimulants to the stomach, and though, when used very moderately, they may not prove injurious, it can scarcely be doubted that their free employment must be hurtful to the dyspeptic, not only by provoking the appetite beyond its natural limit, but also by exciting the stomach itself. On this subject, however, I have already offered some remarks, to which the reader is referred (see p. 438.)

I do not think it necessary to enter further into

the digestible properties of aliments, and their suitability to the dyspeptic, as these subjects have been already fully discussed in previous parts of this work.

## INDEX.

	PAGE		PAGE
A.		Alcoholic alimentary principle, the	157
Abstemious diet . . . . .	502	Ale . . . . .	417
Acid, acetic . . . . .	148	“ Indian pale . . . . .	417
“ “ conversion of, into carbonic acid and water . . . . .	28	“ table . . . . .	417
“ benzole, conversion of, into hippuric acid . . . . .	43	Algae, or sea-weeds . . . . .	388
“ caffeic . . . . .	401	Alimentary principle, the aqueous	78
“ carbonic, quantity of, pro- duced in the system . . . . .	11	“ principles . . . . .	77
“ cerebrie . . . . .	243	“ “ containing an excess of	
“ choleic . . . . .	224	“ oxygen . . . . .	25
“ citric . . . . .	151	“ “ containing an excess of	
“ hippuric . . . . .	43	“ hydrogen . . . . .	23
“ hydrocyanic or prussic . . . . .	341	“ “ relative pro- portion of	
“ lactic or milk . . . . .	156	“ carbon and	
“ malic . . . . .	155	“ oxygen in . . . . .	27
“ of tartar . . . . .	153	“ “ relative quan- tity of hy- drogen and	
“ oxalic . . . . .	155	“ oxygen in . . . . .	21
“ pectic . . . . .	141	“ “ whose oxygen and hydro- gen are in	
“ pyroligneous . . . . .	149	“ the same ratio as in	
“ tannic . . . . .	156	“ water . . . . .	22
“ tanno-caffeic . . . . .	401	Alimentiveness, or the propensity to eat and drink . . . . .	18
“ tartaric . . . . .	153	Aliments, compound . . . . .	230
“ “ conversion of, into carbonic acid and water . . . . .	28	“ derived from flowerless plants . . . . .	386
“ uric, conversion of, into urea . . . . .	83	“ proper . . . . .	230
Acidity of stomach, causes of . . . . .	526	“ simple . . . . .	77
Acidulated drops . . . . .	155	“ solid . . . . .	230
Acidulous alimentary principle, the . . . . .	146	Alkali, concrete acidulated . . . . .	153
Aeroleine or acroleon . . . . .	173	Allspice . . . . .	185
Agricultural labourers, average quantity of food of . . . . .	488	Almonds, sweet and bitter . . . . .	340
Air, vital . . . . .	26	Ammonia in the atmosphere . . . . .	35
Albumen, animal . . . . .	190	“ maple juice . . . . .	38
“ composition of, accord- ing to Dumas . . . . .	39	Amontillado . . . . .	431
“ composition of, accord- ing to Mulder . . . . .	66	Amygdalin . . . . .	341
“ vegetable . . . . .	200	Amylaceous alimentary principle . . . . .	121
Alcohol . . . . .	157	Animal diet . . . . .	499
“ action of, on the liver . . . . .	52	“ substances, diseased and decayed . . . . .	300
“ obtained in bread-making . . . . .	310	Anthiarin . . . . .	56
“ an element of respiration . . . . .	50		

	PAGE		PAGE
Antiscorbutic acids . . . . .	117	Birds, fat of . . . . .	268
" lemon juice . . . . .	358	" the aquatic . . . . .	265
" potatoes . . . . .	371, 378	" the dark-fleshed . . . . .	265
" sweetwort . . . . .	329	" the rapacious . . . . .	265
Aponeuroses of mammals . . . . .	235	" the white-fleshed . . . . .	261
Apples . . . . .	319	" viscera of . . . . .	266
Apple tea . . . . .	406	Biscuit meal . . . . .	316
Apricot . . . . .	311	" powder . . . . .	315
Arabine (soluble gum) . . . . .	109	Biscuits, Abernethy . . . . .	316
Army rations . . . . .	183	" buttered . . . . .	316
Arrack or rack . . . . .	161	" captains' . . . . .	315
Arrow-root, common or West		" sea . . . . .	315
Indian . . . . .	131	" York . . . . .	316
East Indian . . . . .	134	Blood . . . . .	216
English . . . . .	374	" corpuscles . . . . .	69
Portland . . . . .	134	Bodies, organised or living, che-	
Tahiti . . . . .	133	mical elements of . . . . .	3
Arsenic in bones . . . . .	4	" simple or undecomposed . . . . .	2
Artesian wells . . . . .	94	Boiling . . . . .	519
Artichoke, the garden . . . . .	385	" loss of weight in . . . . .	490
" the Jerusalem . . . . .	369	Bones . . . . .	232
Asafetida . . . . .	65	Bone-black . . . . .	6
Asparagine . . . . .	381, 396	Bracotte . . . . .	251
Asparagus . . . . .	381	Brandy . . . . .	161
Azote, <i>see</i> nitrogen.		" burnt . . . . .	162
		" mixture . . . . .	162
		Bread . . . . .	309
		" adulteration of . . . . .	311
		" barley . . . . .	328
		" black . . . . .	313
		" brown . . . . .	139
		" compressed . . . . .	314
		" Dodson's patent . . . . .	319
		" fancy . . . . .	314
		" gluten . . . . .	314
		" loaf . . . . .	310
		" new . . . . .	313
		" oat . . . . .	324
		" piled or flaky . . . . .	310
		" pudding . . . . .	322
		" formula for unfermented . . . . .	320
		" patent unfermented . . . . .	316
		" ship . . . . .	315
		" unfermented or unleavened . . . . .	315
		" wheat . . . . .	309
		Breads, of the light and elastic	
		(spongy) unfermented . . . . .	316
		Breakfast . . . . .	458
		Bright's farina . . . . .	374
		Broccoli . . . . .	382
		Broiling . . . . .	520
		Broths and soups . . . . .	408
		Browning . . . . .	119
		Buds and young shoots . . . . .	380
		Burgundy wine . . . . .	436
		Butchers' meat . . . . .	236
		Butter . . . . .	179
		" cause of its becoming rancid . . . . .	528
		" milk . . . . .	260

## B.

Baccate or berried fruits . . . . .	350
Baking . . . . .	521
Bark-bread ( <i>barkbrød</i> ) . . . . .	138
Barley . . . . .	327
" bread . . . . .	328
" meal . . . . .	328
" patent . . . . .	327
" pearl . . . . .	327
" Scotch . . . . .	327
" water . . . . .	328
" compound . . . . .	328
Batatas . . . . .	369
Bean, broad . . . . .	337
" garden . . . . .	337
" kidney . . . . .	337
" scarlet . . . . .	337
" Windsor . . . . .	337
Beef-brose or kale-brose . . . . .	325
Beef flesh . . . . .	237
" tea . . . . .	410
Beer . . . . .	112
Beer-finings . . . . .	219
Beer-topers and spirit-tiplers,	
difference between . . . . .	54
Bees . . . . .	53
Bect-root . . . . .	368
Bile, assists the chymification of	
oils and fats . . . . .	171
Birds . . . . .	262
" eggs of . . . . .	268

	PAGE		PAGE
Cabbage . . . . .	382	Cloves . . . . .	185
" lettuces . . . . .	385	Cocoa . . . . .	405
Cacao . . . . .	403	" nib . . . . .	404
Caffeine . . . . .	401	Cod . . . . .	280
Cagliari paste . . . . .	308	" liver oil . . . . .	287
Cakes, plum, &c. . . . .	321	" sounds . . . . .	220
" Dodson's unfermented . . . . .	322	Cockles . . . . .	299
Calavanees . . . . .	479	Cocote . . . . .	252
Calcium . . . . .	73	Coffee . . . . .	399
Calf's sweetbread . . . . .	244	" Dunn's essence of . . . . .	402
Callipash and callipee . . . . .	272	Collin or colla . . . . .	207
Caramel . . . . .	119	Condiments or seasoning agents . . . . .	436
Carbon . . . . .	6	Constipation, diet for . . . . .	139, 349
" hydrates of . . . . .	22	Cooked meat, loss in preparing and	
Carbonic acid, production of, in		serving . . . . .	490
the system . . . . .	11, 28, 51, &c.	Cookery . . . . .	445, 518
Carrageen, or Irish moss . . . . .	389	Cooking, loss in . . . . .	490
Carrageenin . . . . .	115, 389	Corinths, or currants . . . . .	354
Carrot . . . . .	368	Corn . . . . .	304
Cascine, animal . . . . .	193	Corstorphin cream . . . . .	261
" composition of, according		Cos lettuces . . . . .	385
" to Dumas . . . . .	39	Crayfish, the sea . . . . .	293
" quantity of, in milk . . . . .	193	Cows' heels . . . . .	223
" vegetable . . . . .	201	Crab . . . . .	293
Casium . . . . .	193	Cranberry, the . . . . .	351
Cassada or cassava bread . . . . .	131	Cream . . . . .	250
Cartilages of mammals . . . . .	235	" clouted or Devonshire . . . . .	261
Cauliflower, the . . . . .	382	Creatine . . . . .	236
Caviare . . . . .	289	Crèmes . . . . .	165
Celery . . . . .	65	Crustaceans . . . . .	290
Cellular tissue of mammals . . . . .	235	Cucumber . . . . .	360
Cereal grains . . . . .	305	Cucurbitaceous fruits . . . . .	360
Cerebric acid . . . . .	243	Curaçoa . . . . .	165
Ceylon or Jafna moss . . . . .	390	Curd . . . . .	193
Champagne . . . . .	434	Cure de raisins . . . . .	355
Charcoal, vegetable . . . . .	6	Cures de petit lait . . . . .	260
Cheese . . . . .	194	Currants, red and black . . . . .	350
Cherry, the . . . . .	316, 161	Currant juice . . . . .	350
Chestnut . . . . .	339	Currants or corinths . . . . .	354
Chicken . . . . .	264		
" broth . . . . .	411		
Chicory or succory . . . . .	402		
Chloride of sodium . . . . .	223		
" potassium . . . . .	75		
Chlorine . . . . .	70		
Chlorophylle . . . . .	381		
Chocolate . . . . .	403		
Choleic acid . . . . .	224		
Chondrin . . . . .	207		
Chymosine . . . . .	441		
Chymous mass of the dog, compo-			
sition of . . . . .	45		
Cinnamon . . . . .	185		
Citron, the . . . . .	359		
Claret wines . . . . .	435		
Clay, eaten as a luxury . . . . .	6		
Climates, cold, remarks on . . . . .	15		

## D.

Dal . . . . .	479
Date . . . . .	347
Densham's farinaceous food . . . . .	309
Dextrine . . . . .	413, 414, 415
Dholl . . . . .	479
Diabetes, diet for . . . . .	499
Diamond, the . . . . .	6
Diastase . . . . .	329
Didym . . . . .	2
Diet . . . . .	440
" abstemious . . . . .	502
" animal . . . . .	499
" common . . . . .	499
" dry . . . . .	84, 505
" fever . . . . .	503



	PAGE		PAGE
Diet, fish . . . . .	281, 507	Dietary of the Naval service . . . . .	478
" for diabetic patients . . . . .	499	" Westminster Hospital . . . . .	508
" full . . . . .	499	Digestion . . . . .	110
" lent . . . . .	282	" Liebig's hypothesis of . . . . .	71
" low . . . . .	501	" " objections to . . . . .	72
" meat . . . . .	499	Dinner . . . . .	461
" milk . . . . .	501	Drinks . . . . .	392, 529
" spare . . . . .	502	" acidulous . . . . .	405
" spoon . . . . .	503	" alcoholic and other intoxi-	
" thin . . . . .	503	cating . . . . .	412
" vegetable . . . . .	502	" aromatic or astringent . . . . .	393
Dietaries . . . . .	462	" containing gelatine and os-	
" for children . . . . .	470	mazone . . . . .	408
" " emigrants . . . . .	483	" cmulsive or milky . . . . .	411
" " paupers . . . . .	483	" mucilaginous, farinaceous,	
" " " comparative . . . . .		or saccharine . . . . .	392
view of . . . . .	487	" or liquid aliments . . . . .	392
" " prisoners . . . . .	491	Duck . . . . .	265
" " puerperal women . . . . .	517		
" " the insane . . . . .	513	E.	
" " the sick . . . . .	497	Eating, times of . . . . .	456, 521
" " troops for India . . . . .	482	" repose after . . . . .	417, 524
" prison . . . . .	461, 494	" conduct before, at, and	
Dietary for foundlings in Paris . . . . .	476	after . . . . .	525
" for orphans in Paris . . . . .	476	Eels . . . . .	281
" of Bethlem Hospital . . . . .	516	Eggs . . . . .	268
" of Dreadnought Hospital . . . . .	509	" cannot support life . . . . .	41
" of the City of London . . . . .		" fixed constituents of . . . . .	270
Lying-in Hospital . . . . .	517	" slip . . . . .	271
" of the Foundling Hospital . . . . .	474	" white or glaire of . . . . .	268
" of the General Lying-in . . . . .		" yolk of . . . . .	269
Hospital . . . . .	517	Elaterin . . . . .	56
" of Guy's Hospital . . . . .	507	Elderberry . . . . .	351
" of Hanwell Lunatic Asy-		Elements, chemical . . . . .	2
lum . . . . .	516	Endive, the . . . . .	381
" of the Infant Orphan Asy-		Entophyta . . . . .	92
lum . . . . .	478	Entozoa . . . . .	92
" of King's College Hospital . . . . .	509	Ergotism . . . . .	331
" of the London Hospital . . . . .	506	Etherio . . . . .	361
" of Marine Infirmary . . . . .	512		
" of the Merchant Sea-		F.	
man's Orphan Asylum . . . . .	478	Farina, fossil . . . . .	6
" of the Middlesex Hospital . . . . .	508	Fats . . . . .	528
" of Naval Hospitals . . . . .	512	" animal . . . . .	182
" of the Naval Asylum . . . . .	475	Fattening . . . . .	53
" of North London Hospital . . . . .	509	Farinaceous food for infants . . . . .	308, 371
" of the Norwood Establish-		or starchy substances . . . . .	121
ment for Children . . . . .	476	Fecula . . . . .	125
" of the Royal Military Asy-		Fermentation, digestive . . . . .	71, 411
lum . . . . .	475	" fatty . . . . .	528
" of Royal Ordnance Hos-		" lactic . . . . .	526
pitals . . . . .	513	" panary . . . . .	310
" of Soldiers . . . . .	483	" viscous . . . . .	115
" of St. Bartholomew's Hos-		Ferns . . . . .	386
pital . . . . .	506	Ferrotypes . . . . .	68
" of St. George's Hospital . . . . .	507		
" of St. Luke's Hospital . . . . .	517		
" of St. Thomas's Hospital . . . . .	507		

	PAGE		PAGE
Ferruginous compounds . . . . .	229	Gastric juice . . . . .	71
Fibrine, animal . . . . .	189	Gelatine altered by heat . . . . .	208
" composition of, according		" Commission, experiments	
to Dumas . . . . .	39	made by the French . . . . .	212, 455
" composition of, according		" common . . . . .	207
to Mulder . . . . .	66	" dry and hard . . . . .	220
" vegetable . . . . .	260	" French . . . . .	220
Fig, the . . . . .	362	" from elastic tissues . . . . .	207
Fish diet . . . . .	283, 507	" Nelson's patent opaque . . . . .	220
" methods of preserving . . . . .	285	" pale English machine-cut . . . . .	220
" milt of . . . . .	289	" sugar . . . . .	215
" poison . . . . .	301	Gelatinous alimentary principle . . . . .	205
" poisonous species of . . . . .	283	" substances . . . . .	208
" the roe or ovary of . . . . .	288	Gin . . . . .	163
" the viscera of . . . . .	286	Ginger beer . . . . .	407
Fishes . . . . .	274, 276	Gingerbread . . . . .	316
Fixed oils . . . . .	166	Globules of the blood . . . . .	67
Flesh . . . . .	236	Glue . . . . .	207
" and blood of animals, com-		Gluten . . . . .	201
position of the . . . . .	238	" Beccaria's . . . . .	201
" tenderness of . . . . .	238	" bread . . . . .	205
Flounder, the . . . . .	280	" pure . . . . .	201
Flour, wheaten . . . . .	306	Glutinous matter . . . . .	202
Fluorine . . . . .	76	Glycicoll . . . . .	215, 500
Flummery . . . . .	325	Goose . . . . .	265
Food consumed by and excretions		" fattening of . . . . .	53
of a horse in 24 hours, table of . . . . .	41	" fatty liver of . . . . .	20, 267
Food, digestibility of . . . . .	440	Gooseberries . . . . .	351
" do. affected by circumstances		Gormandizing powers of the natives	
relating to the foods them-		of the Arctic Regions . . . . .	15
selves . . . . .	442	Gourds . . . . .	360
Foods, animal . . . . .	231, 525	Grape, the . . . . .	351
" bulk of . . . . .	525	" juice . . . . .	353
" chemical elements of . . . . .	2	" sugar . . . . .	113
" digestibility of, affected by		" " not detected in the	
circumstances relating to		blood . . . . .	48
the individual or organism . . . . .	446	Greens . . . . .	382
" nature and quality of . . . . .	524	Grenetine . . . . .	220
" nitrogenized . . . . .	31	Groats . . . . .	323
" quantity of, at a meal . . . . .	522	Gruel . . . . .	324
" refusal of, by lunatics . . . . .	514	" used at Poorhouses . . . . .	489
" solid and liquid . . . . .	525	Gums . . . . .	108
" the nutritive qualities of . . . . .	451	Gun Arabic lozenges . . . . .	111
" vegetable . . . . .	302, 525	" pastes (pâtes) . . . . .	111
Fowl . . . . .	261	" said to support life . . . . .	37
Fruits, aurantiaceous . . . . .	356	" water . . . . .	110
" cucurbitaceous . . . . .	360	Gypsum, eaten . . . . .	74
" drupaceous or stone . . . . .	344	" in water . . . . .	96
" fleshy . . . . .	344		
" leguminous . . . . .	362	H.	
Frying . . . . .	173, 521	Haddock, the . . . . .	280
Funct . . . . .	265	Hard's farinaceous food . . . . .	309
Fungi or mushrooms . . . . .	390	Haricot . . . . .	362
Fungin . . . . .	140	Hartshorn . . . . .	221
Fur of tea kettles . . . . .	88	Hazel-nut . . . . .	339
		Hemp, Indian . . . . .	436
G.		Herring . . . . .	281
Garlic . . . . .	380		

	PAGE		PAGE
Hippuric acid, formation of, in the system . . . . .	43	Lettuce leaves . . . . .	384
Horse, food consumed by, and excretions of . . . . .	41	" opium . . . . .	385
Hydrogen . . . . .	21	Lichenin, or feculoid . . . . .	135
		Lichens . . . . .	387
I.		Liebig's plastic elements of nutrition . . . . .	31
Ice-land moss . . . . .	387	" elements of respiration . . . . .	31
Ichthyophagi . . . . .	275	Ligaments of mammals . . . . .	235
Imperial . . . . .	154	Ligneous alimentary principle, the . . . . .	135
Indian corn starch . . . . .	371	Lignine; woody fibre . . . . .	135
Indigestion, diet for . . . . .	518	Lime . . . . .	73, 228
Insane, dietaries for . . . . .	513	" phosphate . . . . .	73, 117, 228
Iron . . . . .	60, 229	" sulphate . . . . .	71, 96
Isinglass . . . . .	215	Limpets . . . . .	299
" varieties of . . . . .	217	Liqueurs and compounds . . . . .	165
		Liquid aliments, or drinks . . . . .	392
J.		Liquorice . . . . .	120
Jams . . . . .	115	Liver, fatty, of the goose . . . . .	267
Jargonelle, the . . . . .	318	" the frequency of diseases of the, in tropical climates . . . . .	20
Jellies, fruit . . . . .	111	Lobster, the . . . . .	292
Jelly, calf's-foot . . . . .	210	Lancheon . . . . .	460
" isinglass . . . . .	207-210		
" vegetable . . . . .	110	M.	
Jerusalem artichoke . . . . .	369	Macaroni . . . . .	308
		Madeira . . . . .	433
K.		Magnesium . . . . .	75
Ketchup . . . . .	439	Maize, or Indian corn . . . . .	335
Kidney . . . . .	245	Malt . . . . .	329
King's cup . . . . .	357	" liquor . . . . .	412
Kirschenwasser . . . . .	165	Mammals . . . . .	232
		" fat of . . . . .	235
L.		" muscles, or flesh of . . . . .	235
Lactalbumen . . . . .	193	Mannacroup . . . . .	307
Lactic acid . . . . .	115, 156	Mannite . . . . .	115
Lactometer . . . . .	253	Maraschino di zara . . . . .	165
Lactucarium . . . . .	385	Marmalade . . . . .	145
Laver . . . . .	388	Marrow . . . . .	181
Leaves and leafstalks . . . . .	381	" the vegetable . . . . .	361
Leeks . . . . .	380	Meat, black . . . . .	237
Legumine . . . . .	201	" butcher's . . . . .	236
Leguminous fruits; legumes or pods . . . . .	362	" diet . . . . .	499
Lemonade . . . . .	357, 156	" salted . . . . .	226
" iced . . . . .	357	" white . . . . .	237
Lemon and kali . . . . .	152	Melon, the . . . . .	361
" juice . . . . .	356	" the water . . . . .	361
" artificial . . . . .	152	Milk . . . . .	217, 250
Lemons . . . . .	356	" almond . . . . .	411
Lentils . . . . .	337	" and lime water . . . . .	259
		" animal . . . . .	411
		" artificial asses' . . . . .	261
		" asses' . . . . .	261
		" cocoa-nut . . . . .	412
		" cows' . . . . .	248
		" cream of . . . . .	251
		" diet . . . . .	504
		" ewes' . . . . .	261

	PAGE		PAGE
Milk, goats' . . . . .	261	Olive . . . . .	347
" quantity of cream in cows' . . . . .	253	Olive, pickled . . . . .	347
" skimmed . . . . .	251	Onion . . . . .	380
" supplied to the London Hospital . . . . .	254	Opium . . . . .	436
Molasses and treacle . . . . .	119	Orange . . . . .	356
Molkeneuren . . . . .	260	Orange, the Seville . . . . .	359
Mollusks . . . . .	293	Orange-juice . . . . .	359
Morel, common . . . . .	391	Organic tissues . . . . .	209
Moss, carrageen or Irish . . . . .	389	Orgeat . . . . .	411
" Ceylon, or Jafna . . . . .	390	Osmazome . . . . .	236, 409
Mucilage . . . . .	111	Ox, liver of the . . . . .	245
Mucilaginous or gummy alimentary principle, the . . . . .	108	Oxalic acid . . . . .	155
Mulberry, the . . . . .	363	Oxygen . . . . .	25
Muscle . . . . .	231	" consumption of, in respiration . . . . .	11
Muscular flesh . . . . .	231	Oyster, the . . . . .	294
Mushroom, field or cultivated . . . . .	391		
Mussel, the . . . . .	298	P.	
Mussels and oysters, deleterious effects of . . . . .	294	Packwax . . . . .	235
Mustard . . . . .	65	Panada . . . . .	323
" and cress . . . . .	384	Pancakes . . . . .	322
Mutton, occasional ill effects of . . . . .	242	Parsley . . . . .	184, 501
Mutton broth . . . . .	410	Pastry . . . . .	322
		Patés de foies gras . . . . .	20, 267
N.		Peas . . . . .	337
Nectarine, the . . . . .	315	Peach, the . . . . .	345
Nitrogen or azote . . . . .	29	Pearl moss . . . . .	389
" generation of . . . . .	35	Pectine . . . . .	141
Nitrogenized foods . . . . .	31	Pectinaceous alimentary principle, the . . . . .	140
Non-nitrogenised foods . . . . .	36, 469	Pemmican . . . . .	464
Nutmeg . . . . .	185	Pepones . . . . .	360
Nutritive equivalents . . . . .	55	Pepper . . . . .	185
Nutritious farina . . . . .	374	Pepsine . . . . .	71, 441
		Periwinkles . . . . .	299
O.		Petit-toes . . . . .	223
Oats . . . . .	323	Phosphates, earthy . . . . .	73, 117, 227
Oat-bread, unfermented . . . . .	324	Phosphorus . . . . .	57, 61
Oatmeal . . . . .	324	Pilchards . . . . .	281
Oatmeal porridge . . . . .	325	Pine-apple . . . . .	364
Obesity, mode of promoting . . . . .	53	Picrotoxine . . . . .	56
Oil, Florence . . . . .	178	Plaice, the . . . . .	280
" Gallipoli . . . . .	178	Plum, the . . . . .	345
" Genoa . . . . .	178	Polenta . . . . .	336
" Lucca . . . . .	178	Pomaceous fruits or apples . . . . .	348
" olive, or sweet . . . . .	178	Porridge . . . . .	325
" Provence . . . . .	178	Port-wine . . . . .	432
" Sicily . . . . .	178	Porter . . . . .	417
" Spanish . . . . .	178	Potash . . . . .	75
" sweet, droppings of . . . . .	178	" quadroxalate of . . . . .	156
Oils, essential or volatile . . . . .	184	" salts . . . . .	229
" fixed . . . . .	166	Potassium . . . . .	75
Oily alimentary principle, the . . . . .	166	Potato flour . . . . .	374
Oleaginous aliments . . . . .	166	" starch . . . . .	133
		" the . . . . .	369
		Potatoes, quantity of starch yielded by . . . . .	373

	PAGE		PAGE
Potatoes cause dropsy . . . . .	37	Roots, subterraneous stems, and tubers . . . . .	366
Powders, ginger-beer . . . . .	151	Rum . . . . .	162
"    soda . . . . .	153	Rusks . . . . .	311
"    Seidlitz . . . . .	151	Rye . . . . .	329
Prawns and shrimps . . . . .	293	"    bread . . . . .	330
Preserves . . . . .	121	"    ergot of . . . . .	331
Prison diet, dissent of Mr. Hill respecting . . . . .	492	"    pottage . . . . .	330
"    "    observations of the Secretary of State on . . . . .	494		
"    Inspectors, conclusions of . . . . .	491	S.	
Prisoners, weekly allowance of food to . . . . .	496	Saccharine alimentary principle . . . . .	112
Proteine . . . . .	39, 186	Sago, pearl and brown . . . . .	128
Proteinaceous alimentary principle . . . . .	183	"    meal . . . . .	128
"    principles, animal . . . . .	189	Salep . . . . .	135
"    "    vegetable . . . . .	198	Saline alimentary principle . . . . .	223
Prunes . . . . .	316	Salmon, the . . . . .	281
Pudding, black . . . . .	216	Salt, common . . . . .	223, 226
"    bread . . . . .	322	"    of sorel . . . . .	156
"    flour . . . . .	512	Salted meat . . . . .	225, 226
"    rice . . . . .	512	Salts, potash . . . . .	229
"    sago . . . . .	129	Sauces . . . . .	438
"    suet . . . . .	489	Savoy, the . . . . .	382
Putrescent matter, ill effects of . . . . .	89	Scallops . . . . .	299
Pyrrhin . . . . .	86	Scurvy . . . . .	358, 379, 466
		Seeds . . . . .	303, 325
Q.		"    leguminous . . . . .	336
Quina . . . . .	56	"    mealy or farinaceous . . . . .	303
Quince, the . . . . .	319	"    of cupuliferie . . . . .	339
		"    oily . . . . .	339
R.		Semolina . . . . .	307
Rabbit . . . . .	237	Serai . . . . .	251
Raisiné . . . . .	477	Shallots . . . . .	380
Raisins . . . . .	351	Sheeps' trotters . . . . .	223
Raspberry, the . . . . .	365	Sherry . . . . .	431
Ratafias . . . . .	165	Shrimps . . . . .	293
Rations, army . . . . .	483	Sise . . . . .	207
Receptacles and bracts . . . . .	365	Slops . . . . .	503
Rennet . . . . .	258	Smelts . . . . .	277
Reptiles . . . . .	271	Snails . . . . .	299
Respiration . . . . .	11	Snow . . . . .	87
Rhubarb . . . . .	385	Societies, teetotal . . . . .	51
Rice . . . . .	331	"    temperance . . . . .	51
"    mucilage of . . . . .	334	Soda powders . . . . .	153
"    spirit . . . . .	161	"    water, bottled . . . . .	406
Ricotta . . . . .	251	"    "    Webb's . . . . .	406
Roasted flesh . . . . .	238	Sodium . . . . .	72
Roasting . . . . .	445, 521	"    chloride of, conversion of into hydrochloric acid and soda . . . . .	83
Roe . . . . .	288	Solanina . . . . .	374
"    hard . . . . .	278, 288	Sole, the . . . . .	280
"    soft . . . . .	278, 289	Sorosis . . . . .	363
Rolls, hot . . . . .	313	Souchy, water . . . . .	280
		Soujee . . . . .	307
		Soup for prisoners . . . . .	496
		"    used at poorhouses . . . . .	488
		Soups . . . . .	211, 233, 408

	PAGE		PAGE
Sourkront or Sauerkraut . . . . .	383	Turnip-tops . . . . .	384
Sowins, or Sowans . . . . .	325	Turtle . . . . .	271
Spare diet . . . . .	502		
Spinage . . . . .	384	U.	
Spirit . . . . .	50, 157	Universal sanative breakfast beverage . . . . .	374
"    weak, as a drink . . . . .	529		
Sponge . . . . .	310	V.	
Sprats . . . . .	281	Veal . . . . .	240
Starch . . . . .	122	"    broth . . . . .	411
"    potato . . . . .	133	Vegetable albumen . . . . .	200
"    rice . . . . .	134	"    aliments . . . . .	302
Stems . . . . .	386	"    caseine . . . . .	201
Stir-about . . . . .	325	"    diet . . . . .	502
Strawberry, the . . . . .	365	"    "    best adapted for divers . . . . .	27
Stuff, used by bakers . . . . .	311	"    fibrine . . . . .	200
Suet puddings, formulæ for . . . . .	489	Venison . . . . .	242
"    "    used at poorhouses . . . . .	489	Vermicelli . . . . .	308
Succory or chicory . . . . .	402	Victualling of troops for India . . . . .	482
Sugar an element of respiration . . . . .	44	Vinegar . . . . .	146
"    boiled . . . . .	118	"    common . . . . .	149
"    brown . . . . .	117	"    distilled . . . . .	150
"    burnt . . . . .	119	"    malt . . . . .	149
"    candy . . . . .	118	"    pickling . . . . .	149
"    cannot support life . . . . .	36	"    proof . . . . .	149
"    crystal . . . . .	117	"    white . . . . .	149
"    liquorice . . . . .	120	"    wood . . . . .	149
"    potato . . . . .	117	Viscera of quadrupeds . . . . .	212
"    purified or refined . . . . .	116		
Sulphur . . . . .	62	W.	
Sulphuretted hydrogen of water . . . . .	92	Water . . . . .	80
Supper . . . . .	461	"    as a dietetical remedy . . . . .	83
Sweetwort . . . . .	329	"    barley . . . . .	328
Sweetbread . . . . .	244	"    common, purification of . . . . .	102
Syconus . . . . .	362	"    "    tests of the usual impurities in . . . . .	100
Syrup of almonds . . . . .	411	"    cress . . . . .	384
"    of orgeat . . . . .	411	"    impregnated with lead . . . . .	96
		"    lake . . . . .	100
T.		"    marsh . . . . .	100
Tasters, wine . . . . .	433	"    of the Dead Sea . . . . .	104
Tamarind, the . . . . .	362	"    preservation of, at sea . . . . .	481
Tapioca . . . . .	130	"    Prof. Clark's patent for . . . . .	103
Tea . . . . .	393, 461	"    rain . . . . .	85
Tench, the . . . . .	290	"    river . . . . .	87
Tendons of mammals . . . . .	235	"    sea . . . . .	104
Theine . . . . .	395	"    snow . . . . .	87
Theobromine . . . . .	403, 404	"    spring . . . . .	87
Tickor . . . . .	134	"    Thames . . . . .	91
Tickhur . . . . .	134	"    toast . . . . .	392
Toast water . . . . .	392	"    well . . . . .	94
Tops and bottoms . . . . .	314	"    "    of London . . . . .	90
Tous-les-mois . . . . .	132		
Tripe . . . . .	245		
"    de roche . . . . .	387		
Truffle, common . . . . .	391		
Turbot, the . . . . .	280		
Turnips . . . . .	367		

	PAGE		PAGE
Waters, carbonated or acidulous	106	Wheaten flour	306
" " chalybeates	106	Wheals	299
" common	85	Whey	257
" distilled	107	" alum	258
" mineral	105	" cream of tartar	258
" of Bath and Bristol	106	" mustard	259
" chalybeate or ferruginous	106	" rennet	258
" Malvern	106	" tamarind	258
" of Cheshire	106	" white wine	258
" Cheltenham	106	White bait	275
" Geyser and Reikum	106	Whiting, the	280
" Harrowgate	106	Whisky	161
" Teplitz	106	Wine	419
" Isle of Wight	106	Wines, bouquet of	421
" the Thames and Colne,		" Burgundy	436
table of the solid con-		" Champagne	434
stituents of	88	" claret	435
" Tunbridge Wells	106	" German	434
" purging saline	106	" Madeira	433
" saline	106	" port	432
" sulphated chalybeates	106	" sherry	431
" sulphureous or hepatic	106		
" the alkaline	106		
" brine	105		
" calcareous	106		
" siliceous	106		
Wheat	305		
Wheaten bread	309		
		Z.	
		Zeiger	251
		Zymome	201

THE END.

**An ALPHABETICAL CATALOGUE of  
NEW WORKS  
IN  
GENERAL & MISCELLANEOUS LITERATURE,**

PUBLISHED BY  
MESSRS. LONGMAN, BROWN, GREEN, AND LONGMANS,  
PATERNOSTER ROW, LONDON.

**Classified Index.**

**Agriculture and Rural Affairs.**

Bayly on valuing Rents, &c.	3
Crocker's Land Surveying	7
Johnson's Farmer's Encyclopedia	15
London's Agriculture	17
Self-Instruction	17
Lady's Country Companion	17
Low's Elements of Agriculture	18
On Landed Property	18

**Arts, Manufactures, and Architecture.**

Bourne's Catechism of the Steam Engine	4
Bradley's Dictionary of Science, &c.	4
Burke's Miner's Guide	4
Crosby's Civil Engineering	6
D'Agincourt's History of Art	21
Dresden Gallery	8
Eastlake on Oil Painting	8
Evans's Sugar-Planter's Manual	9
Gault's Encyclop. of Architecture	10
Humphreys' Illuminated Books	11
Jamieson's Sacred and Legendarial Art	11
London's Rural Architecture	15
Mosley's Engineering	22
Scoble on Sugar Manufacture	23
Steam Engine, by the Artisan Club	3
Tate on Strength of Materials	28
Twinning on Painting	31
Ure's Dictionary of Arts, &c.	31

**Biography.**

Foss's English Judges	9
Grant's Memoir & Correspondence	10
Hadley's Memoirs of Cardinal Paacca	11
Humphreys' Black Prince	14
Kimble's De Boyard	15
Mauder's Biographical Treasury	20
Southey's Life of Wesley	29
Life and Correspondence	28
Stephen's Ecclesiastical Biography	29
Taylor's Loyola	29
Townsend's Eminent Judges	31
Waterton's Autobiography & Essays	31

**Books of General Utility.**

Acton's Cookery	3
Black's Treatise on Brewing	4
Cabinet Lawyer	5
Hints on Etiquette	12
Hudson's Executor's Guide	13
On Making Wills	13
London's Self-Instruction	17
Lady's Companion	17
Amateur Gardener	17
Mauder's Treasury of Knowledge	20
Biographical Treasury	20
Scientific Treasury	20
Treasury of History	20
Natural History	20
Pocket and the Stud	11
Pycroft's English Reading	21
Reece's Medical Guide	21
Rich's Comp. to Latin Dictionary	21
Riddle's Latin Dictionaries	25
Howton's Debater	25
Short Whist	26
Thomas's Interest Tables	30
Thomson on the Sick Room	30
Thomson's Interest Tables	30
Webster's Domestic Economy	32

**Botany and Gardening.**

Callcott's Scripture Herbal	6
Conversations on Botany	6
Evans's Sugar-Planter's Manual	9
Hours on Cultivation of the Vine	12
Hooker's British Flora	12
Guide to Kew Gardens	12
Introduction to Botany	16
Lindley's Introduction to Botany	16
London's Hortus Britannicus	18
Amateur Gardener	17
Self-Instruction	17
Trees and Shrubs	17
Gardening	17
Plants	17
Rivers's Home Amateur's Guide	23
Schleiden's Botany, by Lankester	23

**Chronology.**

Allen on Prerogative	3
Blair's Chronological Tables	4
Bunsen's Ancient Egypt	5
Haydn's Beaton's Index	11

**Commerce and Mercantile Affairs.**

Banfield and Wells's Statistics	3
Gilbert's Treatise on Banking	9
Gray's Tables of Life Contingencies	10
Leomer's Letters to a Young Master Mariner	16
McCulloch's Commerce & Navigation	19
Steel's Shipmaster's Assistant	29
Symon's Merchant Seamen's Law	29
Thomas's Interest Tables	30
Thomson's Interest Tables	30

**Criticism, History, and Memoirs.**

Blair's Chron. and Histor. Tables	4
Bunsen's Ancient Egypt	5
Coak's Memorandum	6
Conybeare and Howson's St. Paul	6
Dandolo's Italian Volunteers	7
Dennistoun's Dukes of Urbino	7
Dunlop's History of Fiction	8
Eastlake's History of Oil Painting	8
Foss's English Judges	9
Foster's European Literature	9
Gibbon's Roman Empire	9
Grant's Memoir & Correspondence	10
Hamilton's (Sir W.) Essays	10
Harrison on the English Language	10
Hadley's Memoirs of Cardinal Paacca	11
Holland's (Lord) Foreign Reminiscences	12
Humphreys' Black Prince	14
Jeffrey's (Lord) Contributions	15
Kimble's Anglo-Saxons	15
Macaulay's Crit. and Hist. Essays	16
History of England	15
Markintosh's Miscellaneous Works	15
McCulloch's Geographical Dictionary	19
Mauder's Treasury of History	20
Menville's History of Rome	21
Mosheim's Ecclesiastical History	22
Mure's Ancient Greece	22
Rich's Comp. to Latin Dictionary	21
Rogers's Essays from the Edinburgh Review	25
Schmitt's History of Greece	30

**Pages.**

Smith's St. Paul	21
Southey's The Doctor &c.	24
Stephen's (Sir J.) Essays	29
Sydney Smith's Works	27
Lectures on Moral Philosophy	27
Taylor's Loyola	29
Thirlwall's History of Greece	30
Took's History of Prices	30 & 31
Townsend's State Trials	31
Twinning's Philosophy of Painting	31
Twiss on the Pope's Letters	31
Zumpt's Latin Grammar	32

**Geography and Atlases.**

Butler's Geography and Atlases	5
Erman's Travels through Siberia	9
Hall's Large Library Atlas	10
Railway Map of England	10
Johnston's General Gazetteer	15
McCulloch's Geographical Dictionary	19
Murray's Encyclop. of Geography	22
Sharp's British Gazetteer	26

**Juvenile Books.**

Amy Herbert	25
Cornier's Children's Sunday Book	26
Earl's Daughter (The)	26
Gertrude	26
Howitt's Boy's Country Book	13
(Mary) Children's Year	12
Laneton Parsonage	26
Mrs. Marcell's Conversations	19
Margaret Percival	26
Murray's Masterman Ready	19
Mission	19
Settlers in Canada	20
Privateer's Man	20
Pycroft's English Reading	21

**Medicine.**

Bull's Hints to Mothers	5
Management of Children	6
Copland's Dictionary of Medicine	8
Latham on Diseases of the Heart	16
Moore on Health, Disease & Remedy	21
Pereira on Food and Diet	23
Reece's Medical Guide	21

**Miscellaneous and General Literature.**

Allen on Prerogative	3
Coak's Memorandum	6
Dresden Gallery	8
Dunlop's History of Fiction	8
Graham's English	10
Grant's Letters from the Mountains	10
Haydn's Book of Dignities	11
Hooker's Kew Guide	12
Howitt's Rural Life of England	13
Visits to Remarkable Places	13
Jardine's Treatise of Equivocation	15
Jeffrey's (Lord) Contributions	15
Kay (On Education, &c., in Europe	15
London's Lady's Country Comp.	17
Macaulay's Crit. and Hist. Essays	16
Markintosh's Miscellaneous Works	18

CLASSIFIED INDEX—continued.

	Pages.		Pages.
Maitland's Church in the Catacombs	19	Cook's Edition of the Acts	6
Pascal's Works, by Peirce	23	Crocker's Sermons	6
Pycroft's English Reading	21	Crocker's Sunday Book	6
Rich's Comp. to Latin Dictionary	21	Dale's Domestic Liturgy	7
Riddle's Latin Dictionaries	23	Discipline	7
Roston's Debater	23	Dale's Daughter (The)	26
Seaward's Narrative of his Shipwreck	26	Eckivastes, illuminated	8
Sir Roger de Coverley	27	Eliot's Thought Book	8
Smith's (Rev. Sydney) Works	27	Englishman's Greek Concordance	8
Southey's Common-place Books	28	Englishman's Heb. & Chald. Concord.	8
" The Doctor &c.	28	Gertrude	26
Stephen's Essays	29	Hook's Lectures on Passion Week	12
Stow's Training System	29	Horne's Introduction to Scriptures	12
Townsend's State Trials	31	" Abolition of ditto	12
Zumpt's Latin Grammar	32	Howson's Sunday Evening	13
		Jameson's Sacred Legends	14
		" Monastic Legends	14
		" Legends of the Madonna	15
		Jeremy Taylor's Works	15
		London Parsonage	16
		Letters to My Unknown Friends	16
		" on Happiness	16
		Maitland's Church in the Catacombs	19
		Margaret Perriani	26
		Margaret Service (illuminated)	26
		Maxims of Our Saviour	14
		More on the Use of the Holy	21
		" " Soul and Body	21
		" " Man and His Motives	21
		More's Philosophy of Religion	21
		Musie m's Eccles. Astrol. History	22
		Mount St. Lawrence	22
		Neale's Chiving Scene	22
		" Resting Places of the Just	22
		Newman's J. H. Discourses	22
		Paley's Evidences, &c. by Potts	21
		Parables of Our Lord	14
		Readings for Lent	15
		Robinson's Lexicon to the Greek Testament	23
		Search on the Mount (The)	24
		Sinclair's Journey of Life	26
		" Business of Life	26
		Smith's (G.) Perils of Tongue	27
		Smith's (G.) Religion of Anc. Britain	27
		" Sacred Annals	27
		" Doctrine of the Cherubim	27
		" (Sydney) Moral Philosophy	27
		" (J.) St. Paul	27
		Solomon's Song, illuminated	21
		Southey's Life of Wesley	29
		Taylor's Jolly Mary	29
		" Margaret, or, the Pearl	29
		" (Isaac) Joseph	29
		Thumb Bible (The)	30
		Tomline's Introduction to the Bible	30
		Turner's Sacred History	31
		Twelve Years Ago	31
		Twiss on the Pope's Letters	31
		Willerforce's View of Christianity	31
		Wisdom of Johnson's Hamlet, &c.	15

  

Natural History in General.	
Catlow's Popular Conchology	5
Doubleday's Butterflies and Moths	8
Ephemeran & Young on the Salmon	8
Gosse's Nat. Hist. of Jamaica	9
Gray and Mitchell's Birds	10
Kirby and Spence's Entomology	16
Lee's Taxidermy	16
" Elements of Natural History	16
Maudslayi's Natural History	20
Taiton's Snails of the British Islands	31
Waterhouse's Essays on Natural Hist.	31
Westwood's Classification of Insects	32
Youatt's The Dog	32
" The Horse	32

  

Novels and Works of Fiction.	
Dunlop's History of Fiction	5
Hera's Metamorphoses of Apuleius	11
Lady Willoughby's Diary	12
Macedonia's Villa Verocchio	12
Murray's Masterman Ready	19
" Settlers in Canada	20
" Mission	19
" Privateer's man	20
Mount St. Lawrence	22
Sir Roger de Coverley	27
Sketches (The)	27
Southey's The Doctor &c.	28
Twelve Years Ago: a Tale	31

  

One-Volume Encyclopedias and Dictionaries.	
Blaine's Rural Sports	4
Brand's Science, Literature, & Art	4
Crocker's Dictionary of Medicine	6
Cresy's Civil Engineering	6
Gwilt's Architecture	10
Johnson's Farmer's Encyclopedia	15
Johnson's Geographical Dictionary	15
London's Agriculture	17
" Rural Architecture	17
" Gardening	17
" Plants	17
" Trees and Shrubs	17
McCulloch's Geographical Dictionary	19
" Dictionary of Commerce	19
Murray's Encyclop. of Geography	22
Ure's Dictionary of Arts, &c.	31
Webster's Domestic Economy	32

  

Religious and Moral Works.	
Amy Herbert	26
Bloomfield's Greek Testament	4
" Annotations on do.	4
" College and School do.	4
" Lexicon to do.	4
Book of Ruth (illuminated)	14
Calcott's Scripture Herbal	5
Conybeare and Howson's St. Paul	6

  

Poetry and the Drama.	
Atkin's (Dr.) British Poets	3
Baillie's (Joanna) Poetical Works	3
Flowers and their kindred Thoughts	22
Fruits from Garden and Field	22
Goldsmith's Poems, illustrated	9
Gray's Elegy, illuminated	22
Hey's Moral of Flowers	12
" Sylvan Musings	17
L. E. L.'s Poetical Works	16
Linwood's Anthologia Grecinensis	16
Macaulay's Lays of Ancient Rome	14
Montgomery's Poetical Works	21
Moore's Poetical Works	21
" Lalla Rookh	21
" Irish Melodies	21
" Songs and Ballads	21
Shakspeare, by Bowdler	16
" Sentiments & Similes	13
Southey's Poetical Works	28
" British Poets	28
Swain's English Melodies	29
Taylor's Virgin Widow	29
Thomson's Seasons, illustrated	30
" edited by Dr. A. T. Thomson	30
Watts's Lyrics of the Heart	32
Winged Thoughts	22

  

Political Economy and Statistics.	
Banfield and Weld's Statistics	3
Gilbert's Treatise on Banking	9
Gray's Tables of Life Contingents	10

AN  
Alphabetical Catalogue

OF  
NEW WORKS AND NEW EDITIONS,

PUBLISHED BY

MESSRS. LONGMAN, BROWN, GREEN, AND LONGMANS,  
PATERNOSTER ROW, LONDON.

MISS ACTON'S MODERN COOKERY-BOOK.

Modern Cookery in all its Branches, reduced to a System of Easy Practice. For the use of Private Families. In a Series of Receipts, all of which have been strictly tested, and are given with the most minute exactness. By ELIZA ACTON. New Edition; with Directions for Carving, and other Additions. Fcp. 8vo. with Plates and Woodcuts, 7s. 6d. cloth.

AIKIN.—SELECT WORKS OF THE BRITISH POETS,

From Ben Jonson to Beattie. With Biographical and Critical Prefaces by Dr. AIKIN. New Edition, with Supplement, by LUCY AIKIN; consisting of additional Selections from more recent Poets. 8vo. 18s. cloth.

ALLEN ON THE ROYAL PREROGATIVE.—AN INQUIRY

into the RISE and GROWTH of the ROYAL PREROGATIVE. By the late JOHN ALLEN, Master of Dulwich College. New Edition, with the Author's last Corrections; preceded by M. Bérenger's *Rapport* on the Work read before the Institute of France; an Article on the same from the EDINBURGH REVIEW; and a Biographical Notice of the Author. To which is added, An Inquiry into the Life and Character of King Eadwig, from the Author's MS. 8vo. 12s. cloth.

THE ARTISAN CLUB.—A TREATISE ON THE STEAM

ENGINE, in its Application to Mines, Mills, Steam Navigation, and Railways. By the Artisan Club. Edited by JOHN BOURNE, C.E. New Edition. With 30 Steel Plates and 349 Wood Engravings. 4to. 27s. cloth.

JOANNA BAILLIE'S DRAMATIC AND POETICAL WORKS.

Now first collected; complete in One Volume; and comprising the Plays of the Passions, Miscellaneous Dramas, Metrical Legends, Fugitive Pieces (including several now first published), and *Alhaya Bacc*. Uniform with the New Edition of *James Montgomery's Poetical Works*; with Portrait engraved in line by H. Robinson, and Vignette. Square crown 8vo. 21s. cloth; or 42s. handsomely bound in morocco by Hayday.

BANFIELD AND WELD.—THE STATISTICAL COMPANION,

Corrected to 1850; exhibiting the most interesting Facts in Moral and Intellectual, Vital, Economical, and Political Statistics, at home and abroad. Compiled from Official and other authentic Sources, by T. C. BANFIELD, Statistical Clerk to the Council of Education; and R. C. WELD Assistant-Secretary to the Royal Society. New Edition (1850), corrected and extended. Fcp. 8vo. 5s. cloth.

BAYLTON'S ART OF VALUING RENTS AND TILLAGES,

And Tenant's Right of Entering and Quitting Farms, explained by several Specimens of Valuations; with Remarks on the Cultivation pursued on Soils in different Situations. Adapted to the Use of Landlords, Land-Agents, Appraisers, Farmers, and Tenants. New Edition; corrected and revised by John Donaldson. 8vo. 10s. 6d. cloth.

The Sciences  
in General and Mathe-  
matics.

Bourne's Catechism of the Steam Engine	4
Brande's Dictionary of Science, &c.	4
Conversations on Mineralogy	6
Cresy's Civil Engineering	6
De la Roche's Geology of Cornwall, &c.	7
" Geological Observer	7
De la Roche's Electricity	7
Dixon's Elements of Survey	9
Gosse's Scientific Phenomena	9
Herschel's Outlines of Astronomy	11
Humboldt's Aspects of Nature	13
" Cosmos	13
Hunt's Researches on Light	14
Mare's, Mrs. Conversations	19
Memorial of the Geological Survey	20
Moseley's Practical Mechanics	21
" Engineering & Architecture	22
Owen's Lectures on Comp. Anatomy	23
Poichet's Elements of Physics	24
Phillips's Fossils of Cornwall, &c.	24
" Mineralogy, by Miller	24
Portlock's Geology of London ferry	24
Schlothen's Scientific Botany	25
Smee's Electro-Metallurgy	27
Steam Engine (The)	3
Tate on Strength of Materials	19
Thomson's School Chemistry	30

Rural Sports.

Blaine's Dictionary of Sports	4
The Cricket Field	6
Ephemeran on Angling	4
" Book of the Salmon	4
Hawker's Instructions to Sportsmen	11
The Hunting Field	11
London's Lady's Country Comp.	17
Pocket and the Stud	11
Practical Horsemanship	11
Pulman's Fly Fishing	24
Ronald's Fly Fishing	25
Stable Talk and Table Talk	11
The Stud, for practical purposes	11
Wheatley's Rod and Line	32

Veterinary Medicine,  
&c.

Hunting Field (The)	11
Pocket and the Stud	11
Practical Horsemanship	11
Stable Talk and Table Talk	11
Stud (The)	11
Youatt's The Dog	32
" The Horse	32

Voyages and  
Travels.

Chesney's Euphrates and Tigris	5
Erman's Travels through Siberia	9
Forbes's Dahomey	9
Forester and Biddulph's Norway	9
Head's Tour in Rome	11
Humboldt's Aspects of Nature	13
Laing's Notes of a Traveller	16
Powers's New Zealand Sketches	24
Richardson's Overland Journey	25
Roivings in the Pacific	25
Seaward's Narrative	26
Snow's Arctic Voyage	28

**BLACK.—A PRACTICAL TREATISE ON BREWING,**

Based on Chemical and Economical Principles: with Formulæ for Public Brewers, and Instructions for Private Families. By WILLIAM BLACK, Practical Brewer. New Edition, with considerable Additions. 8vo. 10s. 6d. cloth.

**BLAINE.—AN ENCYCLOPEDIA OF RURAL SPORTS;**

Or, a complete Account, Historical, Practical, and Descriptive, of Hunting, Shooting, Fishing, Racing, and other Field Sports and Athletic Amusements of the present day. By DELAWARE P. BLAINE, Esq. Author of "Canine Pathology," &c. Illustrated by nearly 600 Engravings on Wood, by R. Branston, from Drawings by Alken, T. Landseer, Dickes, &c. A New and thoroughly revised Edition, corrected to 1831. In One Large Volume, 8vo. *[In the press.]*

**BLAIR'S CHRONOLOGICAL AND HISTORICAL TABLES,**

From the Creation to the present time: with Additions and Corrections from the most authentic Writers; including the Computation of St. Paul, as connecting the Period from the Exode to the Temple. Under the revision of Sir HENRY ELLIS, K.H., late Principal Librarian of the British Museum. Imperial 8vo. 31s. 6d. half-bound in morocco.

**BLOOMFIELD.—THE GREEK TESTAMENT:**

With copious English Notes, Critical, Philological, and Explanatory. Especially formed for the use of advanced Students and Candidates for Holy Orders. By Rev. S. T. BLOOMFIELD, D.D. F.S.A. New Edition. 2 vols. 8vo. with a Map of Palestine, £2, cloth.

**THE REV. DR. S. T. BLOOMFIELD'S ADDITIONAL ANNOTATIONS, CRITICAL, PHILOLOGICAL, and EXPLANATORY, on the NEW TESTAMENT:**

being a Supplemental Volume to his Edition of *The Greek Testament with English Notes*, in 2 vols. 8vo. In One large Volume, of 460 pages, printed in double columns, uniformly with Dr. Bloomfield's larger Edition of the Greek Testament with English Notes; and so arranged as to be divisible into Two Parts, each of which may be bound up with the Volume to which it refers. 8vo. 15s. cloth.

**BLOOMFIELD.—COLLEGE & SCHOOL GREEK TESTAMENT:**

With shorter English Notes, Critical, Philological, and Explanatory, formed for use in Colleges and the Public Schools. By the Rev. S. T. BLOOMFIELD, D.D. F.S.A. New Edition, greatly enlarged and improved. Fcp. 8vo. 10s. 6d. cloth.

**BLOOMFIELD.—GREEK AND ENGLISH LEXICON TO THE**

NEW TESTAMENT: especially adapted to the use of Colleges, and the Higher Classes in Public Schools; but also intended as a convenient Manual for Biblical Students in general. By Dr. S. T. BLOOMFIELD. New Edition, enlarged and improved. Fcp. 8vo. 10s. 6d. cloth.

**BOURNE.—A CATECHISM OF THE STEAM ENGINE,**

Illustrative of the Scientific Principles upon which its Operation depends, and the Practical Details of its Structure, in its applications to Mines, Mills, Steam Navigation, and Railways: with various Suggestions of Improvement. By JOHN BOURNE, C.E., Editor of the Artisan Club's "Treatise on the Steam Engine." 3d Edition, corrected. Fcp. 8vo. 6s. cloth.

**BRANDE.—A DICTIONARY OF SCIENCE, LITERATURE,**

AND ART; comprising the History, Description, and Scientific Principles of every Branch of Human Knowledge; with the Derivation and Definition of all the Terms in General Use. Edited by W. T. BRANDE, F.R.S.L. & E.; assisted by Dr. J. CAUVIN. A New and thoroughly revised Edition, corrected to 1851. In One Large Volume, 8vo. with Wood Engravings. *[In the press.]*

**BUDGE.—THE PRACTICAL MINER'S GUIDE.**

Comprising a Set of Trigonometrical Tables adapted to all the purposes of Oblique or Diagonal, Vertical, Horizontal, and Traverse Dialling; with their application to the Dial, Exercise of Drifts, Lodes, Slides, Levelling, Inaccessible Distances, Heights, &c. By J. BUDGE. New Edition, considerably enlarged. 8vo. with Portrait of the Author, 12s. cloth.

**BULL.—THE MATERNAL MANAGEMENT OF CHILDREN,**

in HEALTH and DISEASE. By T. BULL, M.D. Member of the Royal College of Physicians; formerly Physician-Accoucheur to the Finsbury Midwifery Institution, and Lecturer on Midwifery and on the Diseases of Women and Children. New Edition, carefully revised and enlarged. Fcp. 8vo. 5s. cloth.

**BULL.—HINTS TO MOTHERS,**

For the Management of their Health during the Period of Pregnancy and in the Lying-in Room: with an Exposure of Popular Errors in connexion with those subjects, &c.; and Hints upon Nursing. By THOMAS BULL, M.D. New Edition, carefully revised and enlarged. Fcp. 8vo. 5s. cloth.

**BUNSEN.—EGYPT'S PLACE IN UNIVERSAL HISTORY:**

An Historical Investigation, in Five Books. By CHRISTIAN C. J. BUNSEN, D.Ph. & D.C.L. Translated from the German, by C. H. CORRELL, Esq. M.A.—Vol. I. containing the First Book, or Sources and Primeval Facts of Egyptian History: with an Egyptian Grammar and Dictionary, and a complete List of Hieroglyphical Signs; an Appendix of Authorities, embracing the complete Text of Manetho and Eratosthenes, *Ægyptiaca* from Pliny, Strabo, &c.; and Plates representing the Egyptian Divinities. 8vo. with numerous illustrations, 28s. cloth.

**BISHOP BUTLER'S SKETCH OF MODERN AND ANCIENT**

GEOGRAPHY, for the use of Schools. An entirely New Edition (1851), carefully revised throughout, with such Alterations introduced as continually progressive Discoveries and the latest Information have rendered necessary. Edited by the Author's Son, the Rev. THOMAS BUTLER, Rector of Langar. 8vo. 9s. cloth.

**BISHOP BUTLER'S GENERAL ATLAS OF MODERN AND**

ANCIENT GEOGRAPHY; comprising Fifty-one full-coloured Maps; with complete Indices. New Edition (1851), nearly all re-engraved, enlarged, and greatly improved; with corrections from the most authentic sources in both the Ancient and Modern Maps, many of which are entirely new. Edited by the Author's Son, the Rev. T. BUTLER. Royal 4to. 24s. half-bound.

Separately {The Modern Atlas. 28 full-coloured Maps. Royal 8vo. 12s. half-bound.  
The Ancient Atlas. 23 full-coloured Maps. Royal 8vo. 12s. half-bound.

**THE CABINET LAWYER:**

A Popular Digest of the Laws of England, Civil and Criminal; with a Dictionary of Law Terms, Maxims, Statutes, and Judicial Antiquities; Correct Tables of Assessed Taxes, Stamp Duties, Excise Licenses, and Post-Horse Duties; Post-Office Regulations, and Prison Discipline. 15th Edition (1851), enlarged, and corrected throughout, with the Legal Decisions and Statutes to Michaelmas Term, 13 and 14 Victoria. Fcp. 8vo. 10s. 6d. cloth.

**CALLCOTT.—A SCRIPTURE HERBAL.**

With upwards of 120 Wood Engravings. By Lady CALLCOTT. Square crown 8vo. 25s. cloth.

**CATLOW.—POPULAR CONCHOLOGY;**

Or, the Shell Cabinet arranged: being an Introduction to the Modern System of Conchology; with a sketch of the Natural History of the Animals, an account of the Formation of the Shells, and a complete Descriptive List of the Families and Genera. By AGNES CATLOW. Fcp. 8vo. with 312 Woodcuts, 10s. 6d. cloth.

**CHESNEY.—THE EXPEDITION FOR THE SURVEY OF**

THE RIVERS EUPHRATES and TIGRIS, carried on by order of the British Government, in the Years 1835, 1836, and 1837. By Lieut.-Col. CHESNEY, R.A., F.R.S., Commander of the Expedition. Vols. I. and II. in royal 8vo. with a coloured Index Map and numerous Plates and Woodcuts, 63s. cloth.—Also, an ATLAS of Thirteen Charts of the Expedition, price £1. 11s. 6d. in case.

\* \* \* The entire work will consist of Four Volumes, royal 8vo. embellished with Ninety-seven Plates, besides numerous Woodcut Illustrations, from Drawings chiefly made by Officers employed in the Surveys.

**JOHN COAD'S MEMORANDUM.—A CONTEMPORARY ACCOUNT** of the SUFFERINGS of the REBELS sentenced to TRANSPORTATION by JUDGE JEFFERIES; being, A Memorandum of the Wonderful Providences of God to a poor unworthy Creature, during the time of the Duke of Monmouth's Rebellion, and to the Revolution in 1688. By JOHN COAD, one the Sufferers. Square fcp. 8vo. 4s. 6d. cloth.

**CONYBEARE AND HOWSON.—THE LIFE AND EPISTLES** of SAINT PAUL; comprising a complete Biography of the Apostle, and a Paraphrastic Translation of his Epistles inserted in Chronological Order. Edited by the Rev. W. J. CONYBEARE, M.A. late Fellow of Trinity College, Cambridge; and the Rev. J. S. HOWSON, M.A. late Principal of the Collegiate Institution, Liverpool. Copiously illustrated by numerous Engravings on Steel and Wood of the Principal Places visited by the Apostle, from Original Drawings made on the spot by W. H. Bartlett; and by Maps, Charts, Woodcuts of Coins, &c. Vol. I. Part I.; with Thirteen Engravings on Steel, Seven Maps and Plans, and numerous Woodcuts. 4to. 17s. boards.

\* In course of publication in Twenty Parts, price 2s. each; of which Twelve are now ready.

**CONVERSATIONS ON BOTANY.**

New Edition, improved. Fcp. 8vo. 22 Plates, 7s. 6d. cloth; with the plates coloured, 12s. cloth.

**CONVERSATIONS ON MINERALOGY.**

With Plates, engraved by Mr. and Mrs. Lowry, from Original Drawings. New Edition, enlarged. 2 vols. fcp. 8vo. 14s. cloth.

**COOK.—THE ACTS OF THE APOSTLES:**

With a Commentary, and Practical and Devotional Suggestions, for the Use of Readers and Students of the English Bible. By the Rev. F. C. COOK, M.A. one of Her Majesty's Inspectors of Church Schools. Post 8vo. 8s. 6d. cloth.

**COOPER.—PRACTICAL AND FAMILIAR SERMONS,**

Designed for Parochial and Domestic Instruction. By the Rev. EDWARD COOPER. New Edition. 7 vols. 12mo. £1. 18s. boards.

**COPLAND.—A DICTIONARY OF PRACTICAL MEDICINE;**

comprising General Pathology, the Nature and Treatment of Diseases, Morbid Structures, and the Disorders especially incidental to Climates, to Sex, and to the different Epochs of Life; with numerous approved Formulæ of the Medicines recommended. By JAMES COPLAND, M.D. Consulting Physician to Queen Charlotte's Lying-in Hospital, &c. &c. Vols. I. and II. 8vo. £3, cloth; and Parts X. to XIV. 4s. 6d. each, sewed.

**THE CHILDREN'S OWN SUNDAY-BOOK.**

By Miss JULIA CORNER, Author of "Questions on the History of Europe," &c. With Two Illustrations engraved on Steel. Square fcp. 8vo. 5s. cloth.

**CRESY.—AN ENCYCLOPÆDIA OF CIVIL ENGINEERING,**

Historical, Theoretical, and Practical. By EDWARD CRESY, F.S.A. C.E. In One very large Volume, illustrated by upwards of Three Thousand Engravings on Wood, explanatory of the Principles, Machinery, and Constructions which come under the Direction of the Civil Engineer. 8vo. £3. 13s. 6d. cloth.

**THE CRICKET-FIELD; OR, THE SCIENCE AND HISTORY**

of the GAME. Illustrated with Diagrams, and enlivened with Anecdotes. By the Author of "Principles of Scientific Batting," "Recollections of College Days," &c. With Two Engravings on Steel; uniform with *Harry Hicover's Hunting-Field*. Fcp. 8vo.

[Nearly ready.]

**CROCKER'S ELEMENTS OF LAND SURVEYING.**

New Edition, corrected throughout, and considerably improved and modernized, by T. G. HUNT, Land Surveyor. To which are added, TABLES OF SIX-FIGURE LOGARITHMS, &c., superintended by R. FARLEY, of the Nautical Almanac Establishment. Post 8vo. 12s. cloth.

\* Mr. Farley's Tables of Six-Figure Logarithms may be had separately, price 4s. 6d.

**DALE.—THE DOMESTIC LITURGY AND FAMILY CHAPLAIN,**

in two Parts: The First Part being Church Services adapted for domestic use, with Prayers for every day of the week, selected exclusively from the Book of Common Prayer; Part II. comprising an appropriate Sermon for every Sunday in the year. By the Rev. THOMAS DALE, M.A., Canon Residentiary of St. Paul's Cathedral. 2d Edition. Post 4to. 21s. cloth; or, bound by Hayday, 31s. 6d. calf lettered; £2. 10s. morocco.

Separately { THE FAMILY CHAPLAIN, price 12s. cloth.  
THE DOMESTIC LITURGY, price 10s. 6d. cloth.

**DANDOLO.—THE ITALIAN VOLUNTEERS AND LOMBARD**

RIFLE BRIGADE in the YEARS 1818-49. Translated from the Italian of Emilio Dandolo. Edited by the Rev. T. L. WOLLEY. [Nearly ready.]

**DELABECHE.—THE GEOLOGICAL OBSERVER.**

By Sir HENRY T. DELABECHE, F.R.S., Director-General of the Geological Survey of the United Kingdom. In One large Volume, with many Wood Engravings. 8vo. 18s. cloth.

**DELABECHE.—REPORT ON THE GEOLOGY OF CORN-**

WALL, DEVON, and WEST SOMERSET. By HENRY T. DELABECHE, F.R.S., Director-General of the Geological Survey of the United Kingdom. Published by Order of the Lords Commissioners of H.M. Treasury. 8vo. with Maps, Woodcuts, and 12 large Plates, 14s. cloth.

**DE LA RIVE'S WORK ON ELECTRICITY.—A TREATISE**

on ELECTRICITY; its Theory and Practical Application. By A. DE LA RIVE, of the Academy of Geneva. Illustrated with numerous Wood Engravings. 2 vols. 8vo.

[Nearly ready.]

**DENNISTOUN.—MEMOIRS OF THE DUKES OF URBINO;**

Illustrating the Arms, Arts, and Literature of Italy, from MCCCCXL. to MDCXXX. By JAMES DENNISTOUN, of Dennistoun. With numerous Portraits, Plates, Fac-similes, and Engravings on Wood. 3 vols. crown 8vo. £2. 8s. cloth.

"The object of these volumes is to combine a general picture of the progress of Italian literature and art under the patronage of the smaller Italian principalities, with a history of the houses of Montefeltro and Della Rovere, so far as they were connected with Urbino. For the execution of his purpose Mr. Dennistoun enjoyed numerous advantages. He has resided in Italy for many years, and is well acquainted with the country whose history as a dukedom he intended to relate: besides the common research in printed volumes, he has gained access to various Italian libraries, including that of Urbino, and examined their manuscripts; and he has closely inspected Umbrian art, whether in palatial, military, or ecclesiastical architecture, or in painting. With the appreciation of Italy which such a course of study stimulates and implies, Mr. Dennistoun has good taste, a sound, though not always an un-biased judgment, and a zeal for mediæval subjects, especially art, almost enthusiastic." SECRATOR.

**DISCIPLINE.**

By the Authoress of "Letters to my Unknown Friends," "Twelve Years Ago," "Some Passages from Modern History," and "Letters on Happiness." Second Edition, enlarged. 18mo. 2s. 6d. cloth.

**DIXON.—THE GEOLOGY AND FOSSILS OF THE TERTIARY**

and CRETACEOUS FORMATIONS of SUSSEX. By the late FREDERICK DIXON, Esq. F.G.S. The Fossils engraved from Drawings by Messrs. Sowerby, Dinkel, and Erxleben. In One large Volume, with 41 Plates and many Wood Engravings. Royal 4to. 63s. cloth; India Proofs, £5s. 5s.

\* In this work are embodied the results of many years' Geological and Palæontological observations by the Author, together with some remarks on the Archæology of Sussex. It also includes Descriptions—Of the fossil Reptilia, by Prof. Owen, F.R.S.; of the Echinoderma, by Prof. Edward Forbes, F.R.S.; of the Crustacea, by Prof. Thomas Bell, Sec. R.S.; of the Corals, by William Lonsdale, Esq. F.G.S.; and of the fossil Shells, by J. De Carle Sowerby, Esq. F.L.S.



**DOUBLEDAY AND HEWITSON'S BUTTERFLIES. — THE**

**GENERA OF DIURNAL LEPIDOPTERA;** comprising their Generic Characters—a Notice of the Habits and Transformations—and a Catalogue of the Species of each Genus. By EDWARD DOUBLEDAY, Esq. F.L.S. &c., late Assistant in the Zoological Department of the British Museum. Continued by J. O. WESTWOOD, Esq. Illustrated with 75 Coloured Plates, by W. C. HEWITSON, Esq. Author of "British Oology." Imperial 4to. uniform with Gray and Mitchell's "Genera of Birds."

\*.\* In course of publication in Monthly Parts, 3s. each; of which 41 have appeared. The publication, which had been suspended in consequence of the death of Mr. Doubleday, is now resumed, and will be continued regularly until the completion of the work in about Fifty Parts.

**DRESDEN GALLERY. — THE MOST CELEBRATED PICTURES**

of the ROYAL GALLERY at DRESDEN, drawn on Stone, from the Originals, by Franz Hanfstaeugl; with Descriptive and Biographical Notices, in French and German. Nos. I. to LVIII. imperial folio, each containing 3 Plates, with Letter press, price 20s. to Subscribers; to Non Subscribers, 30s. Single Plates, 12s. each.

\*.\* To be completed in 2 more numbers, price 20s. each, to Subscribers. Nos. LI. to LX. contain each *Four Plates* and Letterpress.

**DUNLOP. — THE HISTORY OF FICTION :**

Being a Critical Account of the most celebrated Prose Works of Fiction, from the earliest Greek Romances to the Novels of the Present Age. By JOHN DUNLOP, Esq. New Edition, complete in One Volume. 8vo. 15s. cloth.

**EASTLAKE. — MATERIALS FOR A HISTORY OF OIL**

**PAINTING.** By CHARLES LOCK EASTLAKE, Esq. P.R.A. F.R.S. F.S.A.; Secretary to the Royal Commission for Promoting the Fine Arts in connexion with the rebuilding of the Houses of Parliament, &c. 8vo. 16s. cloth.

\*.\* Vol. II. On the Italian Practice of Oil Painting, is preparing for publication.

**ELMES'S THOUGHT BOOK, OR HORÆ VACUÆ.**

Horæ Vacuæ; or, a Thought Book of the Wise Spirits of all Ages and all Countries, for all Men and all Hours. Collected, arranged, and edited by JAMES ELMES, Author of "Memoirs of Sir Christopher Wren," &c. Fcp. 16mo. (printed by C. Whittingham, Chiswick), 4s. 6d. bound in cloth.

**THE ENGLISHMAN'S GREEK CONCORDANCE OF THE**

**NEW TESTAMENT;** being an Attempt at a Verbal Connexion between the Greek and the English Texts; including a Concordance to the Proper Names, with Indexes, Greek-English and English-Greek. New Edition, with a new Index. Royal 8vo. 42s. cloth.

**THE ENGLISHMAN'S HEBREW AND CHALDEE CON-**

**CORDANCE OF THE OLD TESTAMENT;** being an Attempt at a Verbal Connection between the Original and the English Translations; with Indexes, a List of the Proper Names and their occurrences, &c. 2 vols. royal 8vo. £3. 13s. 6d. cloth; large paper, £4. 14s. 6d.

**EPIHEMERA. — THE BOOK OF THE SALMON :**

In Two Parts. Part I. The Theory, Principles, and Practice of Fly-Fishing for Salmon: with Lists of good Salmon Flies for every good River in the Empire; Part II. The Natural History of the Salmon, all its known Habits described, and the best way of artificially Breeding it explained. Usefully illustrated with numerous Coloured Engravings of Salmon Flies and Salmon Fry. By EPIHEMERA, Author of "A Hand-Book of Angling;" assisted by ANDREW YOUNG, of Invershin, Manager of the Duke of Sutherland's Salmon Fisheries. Fcp. 8vo. with coloured Plates, 14s. cloth.

**EPIHEMERA. — A HAND-BOOK OF ANGLING ;**

Teaching Fly-fishing, Trolling, Bottom-fishing, Salmon-fishing; with the Natural History of River Fish, and the best modes of Catching them. By EPIHEMERA, of "Bell's Life in London." New Edition, enlarged. Fcp 8vo. with numerous Woodcuts, 9s. cloth.

**ERMAN. — TRAVELS IN SIBERIA :**

Including Excursions northwards, down the Obi, to the Polar Circle, and southwards to the Chinese Frontier. By ADOLPH ERMAN. Translated by W. D. COOLEY, Esq. Author of "The History of Maritime and Inland Discovery;" 2 vols. 8vo. with Map, 31s. 6d. cloth.

**EVANS. — THE SUGAR PLANTER'S MANUAL :**

Being a Treatise on the Art of obtaining Sugar from the Sugar Cane. By W. J. EVANS, M.D. 8vo. 9s. cloth.

**FORBES. — DAHOMEY AND THE DAHOMANS :**

Being the Journals of Two Missions to the King of Dahomey, and Residence at his Capital, in the Years 1849 and 1850. By FREDERICK E. FORBES, Commander, R.N., F.R.G.S.; Author of "Five Years in China," and "Six Months in the African Blockade." With 10 Plates, printed in Colours, and 3 Wood Engravings. 2 vols. post 8vo. 21s. cloth.

**FORESTER AND BIDDULPH'S NORWAY.**

Norway in 1848 and 1849: containing Rambles among the Fjelds and Fjords of the Central and Western Districts; and including Remarks on its Political, Military, Ecclesiastical, and Social Organisation. By THOMAS FORESTER, Esq. With Extracts from the Journals of Lieutenant M. S. BIDDULPH, Royal Artillery. With a new Map, Woodcuts, and Ten coloured Plates from Drawings made on the spot. 8vo. 18s. cloth.

**FOSS. — THE JUDGES OF ENGLAND :**

with Sketches of their Lives, and Miscellaneous Notices connected with the Courts at Westminster from the time of the Conquest. By EDWARD FOSS, F.S.A. of the Inner Temple. Vols. I. and II. 8vo. 28s. cloth.

**FOSTER. — A HANDBOOK OF MODERN EUROPEAN LITE-**

**RATURE:** British, Danish, Dutch, French, German, Hungarian, Italian, Polish and Russian, Portuguese, Spanish, and Swedish. With a full Biographical and Chronological Index. By Mrs. FOSTER. Fcp. 8vo. 6s. 6d. cloth.

\*.\* The object of this book is, not so much to give elaborate criticisms on the various writers in the language to whose literature it is intended as a guide, as to direct the student to the best writers in each, and to inform him on what subjects they have written.

**GIBBON'S HISTORY OF THE DECLINE AND FALL OF THE**

**ROMAN EMPIRE.** A new Edition, complete in One Volume. With an Account of the Author's Life and Writings, by ALEXANDER CHALMERS, Esq. F.A.S. 8vo. with Portrait, 18s. cloth.

\*.\* An Edition, in 8 vols. 8vo. 60s. boards.

**GILBART. — A PRACTICAL TREATISE ON BANKING.**

By JAMES WILLIAM GILBART, F.R.S. General Manager of the London and Westminster Bank. 5th Edition, with Portrait of the Author, and View of the "London and Westminster Bank," Lothbury. 2 vols. 8vo. 24s. cloth.

**GOLDSMITH. — THE POETICAL WORKS OF OLIVER**

**GOLDSMITH.** Illustrated by Wood Engravings, from Designs by Members of the Etching Club. With a Biographical Memoir, and Notes on the Poems. Edited by BOLTON CORNEY, Esq. Square crown 8vo. uniform with *Thomson's Seasons illustrated by the Etching Club*, 21s. cloth; or, bound in morocco by Hayday, £1. 16s.

**GOSSE. — NATURAL HISTORY OF THE ISLAND OF JAMAICA.**

By P. H. GOSSE, Author of "The Birds of Jamaica," "Popular British Ornithology," &c. Post 8vo. with coloured Plates. [Nearly ready.]

**GOWER. — THE SCIENTIFIC PHENOMENA OF DOMESTIC**

**LIFE,** familiarly explained. By CHARLES FOOTE GOWER. New Edition. Fcp. 8vo. with Wood Engravings, 5s. cloth.

**GRAHAM.—ENGLISH; OR, THE ART OF COMPOSITION:**  
explained in a Series of Instructions and Examples. By G. F. GRAHAM. New Edition, revised and improved. Fcp. 8vo. 6s. cloth.

**GRANT.—LETTERS FROM THE MOUNTAINS.**  
Being the Correspondence with her Friends, between the years 1773 and 1803. By Mrs GRANT, of Laggan. New Edition. Edited, with Notes and Additions, by her son, J. P. GRANT, Esq. 2 vols. post 8vo. 21s. cloth.

**GRANT.—MEMOIR AND CORRESPONDENCE OF THE**  
late Mrs. Grant, of Laggan, Author of "Letters from the Mountains," "Memoirs of an American Lady," &c. Edited by her Son, J. P. GRANT, Esq. New Edition. 3 vols. post 8vo. with Portrait, 31s. 6d. cloth.

**GRAY.—TABLES AND FORMULE FOR THE COMPUTATION**  
of LIFE CONTINGENCIES; with copious Examples of Annuity, Assurance, and Friendly Society Calculations. By PETER GRAY, F.R.A.S. Associate of the Institute of Actuaries of Great Britain and Ireland. Royal 8vo. 15s. cloth.

**GRAY AND MITCHELL'S ORNITHOLOGY.—THE GENERA**  
OF BIRDS; comprising their Generic Characters, a Notice of the Habits of each Genus, and an extensive List of Species, referred to their several Genera. By GEORGE ROBERT GRAY, Acad. Imp. Georg. Florent. Soc. Corresp. Senior Assistant of the Natural History Department in the British Museum. Illustrated with 360 Plates (173 plain and 183 coloured), drawn on stone, by DAVID WILLIAM MITCHELL, B.A., F.L.S., Secretary to the Zoological Society of London, &c. 3 vols. imperial 4to. £31. 10s. half-bound morocco, gilt tops.

**GWILT.—AN ENCYCLOPEDIA OF ARCHITECTURE;**  
Historical, Theoretical, and Practical. By JOSEPH GWILT. Illustrated with more than One Thousand Engravings on Wood, from Designs by J. S. GWILT. Second Edition (1851), with a Supplemental View of the Symmetry and Stability of Gothic Architecture; comprising upwards of Eighty additional Woodcuts. 8vo. 52s. 6d. cloth.

**SUPPLEMENT TO GWILT'S ENCYCLOPEDIA OF ARCHITECTURE.** Comprising a View of the Symmetry and Stability of Gothic Architecture; Addenda to the Glossary; and an Index to the entire Work. By JOSEPH GWILT. Illustrated by upwards of Eighty Wood Engravings by R. Branston. 8vo. 6s. cloth.

**SIDNEY HALL'S NEW GENERAL LARGE LIBRARY ATLAS**  
OF FIFTY-THREE MAPS (size 20 in. by 16 in.), with the Divisions and Boundaries carefully coloured; and an Alphabetical Index of all the Names contained in the Maps, with their Latitude and Longitude. An entirely New Edition, corrected throughout from the best and most recent Authorities; with all the Railways laid down, and many of the Maps re-drawn and re-engraved. Colombier 4to. £5. 5s. half-bound in russia.

**SIDNEY HALL'S RAILWAY MAP OF ENGLAND AND WALES.** Square fcp. 8vo. 2s. 6d. cloth.

\* \* The Map of England and Wales, contained in "Sidney Hall's Large Railway Atlas" (size 20 in. by 16 in.) corrected and re-engraved, with all the Lines of Railway laid down, may be had separately, price 2s. 6d., coloured and mounted on folding canvas in a case for the pocket.

**HAMILTON.—CRITICAL ESSAYS ON PHILOSOPHY, LITERATURE, and ACADEMICAL REFORM,** contributed to The Edinburgh Review by Sir William Hamilton, Bart. With additional Notes and Appendices. [In the press.]

**HARRISON.—ON THE RISE, PROGRESS, AND PRESENT STRUCTURE** of the ENGLISH LANGUAGE. By the Rev. M. HARRISON, M.A. late Fellow of Queen's College, Oxford. Post 8vo. 8s. 6d. cloth.

**HARRY HIEOVER.—THE HUNTING-FIELD.**

By HARRY HIEOVER, Author of "Stable-Talk and Table-Talk; or, Spectacles for Young Sportsmen." With Two Plates—One representing *The Right Sort*; the other, *The Wrong Sort*. Fcp. 8vo. 5s. half-bound.

**HARRY HIEOVER.—PRACTICAL HORSEMANSHIP.**

By HARRY HIEOVER, Author of "Stable Talk and Table Talk; or, Spectacles for Young Sportsmen." With 2 Plates—One representing *Going like Workmen*; the other, *Going like Nuffs*. Fcp. 8vo. 5s. half-bound.

**HARRY HIEOVER.—THE STUD, FOR PRACTICAL PURPOSES AND PRACTICAL MEN:** being a Guide to the Choice of a Horse for use more than for show. By HARRY HIEOVER, Author of "Stable Talk and Table Talk." With Two Plates—One representing *A pretty good sort for most purposes*; the other, *'Rayther' a bad sort for any purpose*. Fcp. 8vo. 5s. half-bound.

**HARRY HIEOVER.—THE POCKET AND THE STUD;**

Or, Practical Hints on the Management of the Stable. By HARRY HIEOVER, Author of "Stable-Talk and Table-Talk; or, Spectacles for Young Sportsmen." Second Edition; with Portrait of the Author on his favourite Horse *Harlequin*. Fcp. 8vo. 5s. half-bound.

**HARRY HIEOVER.—STABLE TALK AND TABLE TALK;**  
or, SPECTACLES for YOUNG SPORTSMEN. By HARRY HIEOVER. New Edition. 2 vols. 8vo. with Portrait, 21s. cloth.

**HAWKER.—INSTRUCTIONS TO YOUNG SPORTSMEN**

In all that relates to Guns and Shooting. By Lieut.-Col. P. HAWKER. New Edition, corrected, enlarged, and improved; with Eighty-five Plates and Woodcuts by Adlard and Branston, from Drawings by C. Varley, Dickes, &c. 8vo. 21s. cloth.

**HAYDN.—THE BOOK OF DIGNITIES; OR, ROLLS OF THE OFFICIAL PERSONAGES** of the BRITISH EMPIRE, from the EARLIEST PERIODS to the PRESENT TIME: comprising the Administrations of Great Britain; the Offices of State, and all the Public Departments; the Ecclesiastical Dignitaries; the Functionaries of the Law; the Commanders of the Army and Navy; and the Hereditary Honours and other Distinctions conferred upon Families and Public Men. Being a New Edition, improved and continued, of BEATSON'S POLITICAL INDEX. By JOSEPH HAYDN, Compiler of "The Dictionary of Dates," and other Works. In One very large Volume, 8vo. [In the Spring.]

**HEAD.—THE METAMORPHOSES OF APULEIUS:**

A Romance of the Second Century. Translated from the Latin by Sir GEORGE HEAD, Author of "A Tour of Many Days in Rome;" Translator of "Historical Memoirs of Cardinal Pacca." Post 8vo. 12s. cloth.

**HEAD.—HISTORICAL MEMOIRS OF CARDINAL PACCA,**

Prime Minister to Pius VII. Written by Himself. Translated from the Italian, by Sir GEORGE HEAD, Author of "Rome: a Tour of Many Days." 2 vols. post 8vo. 21s. cloth.

**SIR GEORGE HEAD.—ROME:**

A Tour of Many Days. By Sir GEORGE HEAD. 3 vols. 8vo. 36s. cloth.

**SIR JOHN HERSCHEL.—OUTLINES OF ASTRONOMY.**

By Sir JOHN F. W. HERSCHEL, Bart. &c. &c. New Edition; with Plates and Wood Engravings. 8vo. 16s. cloth.

**MRS. HEY.—THE MORAL OF FLOWERS;**

Or, Thoughts gathered from the Field and the Garden. By Mrs. HEY. Being a New Edition of "The Moral of Flowers;" and consisting of Poetical Thoughts on Garden and Field Flowers, accompanied by Drawings beautifully coloured after Nature. Square crown 8vo. uniform in size with *Thomson's Seasons illustrated by the Etching Club*, 21s. cloth.

**MRS. HEY.—SYLVAN MUSINGS;**

Or, the Spirit of the Woods. By Mrs. HEY. Being a New Edition of the "Spirit of the Woods;" and consisting of Poetical Thoughts on Forest Trees, accompanied by Drawings of Blossoms and Foliage, beautifully coloured after Nature. Square crown 8vo. uniform in size with *Thomson's Seasons illustrated by the Etching Club*, 21s. cloth.

**HINTS ON ETIQUETTE AND THE USAGES OF SOCIETY:**

With a Glance at Bad Habits. By *Αγωγός*. "Manners make the man." New Edition, revised (with additions) by a Lady of Rank. Fcp. 8vo. 2s. 6d. cloth.

**HOARE.—A PRACTICAL TREATISE ON THE CULTIVATION OF THE GRAPE VINE ON OPEN WALLS.** By CLEMENT HOARE. New Edition. 8vo. 7s. 6d. cloth.**LORD HOLLAND'S FOREIGN REMINISCENCES.—FOREIGN**

REMINISCENCES. By HENRY RICHARD LORD HOLLAND. Comprising Anecdotes, and an Account of such Persons and Political Intrigues in Foreign Countries as have fallen within his Lordship's observation. Edited by his Son, HENRY EDWARD LORD HOLLAND; with Fac-simile. Post 8vo. 10s. 6d.

**HOOK.—THE LAST DAYS OF OUR LORD'S MINISTRY:**

A Course of Lectures on the principal Events of Passion Week. By WALTER FARQUHAR HOOK, D.D. Vicar of Leeds, Prebendary of Lincoln, and Chaplain in Ordinary to the Queen. New Edition. Fcp. 8vo. 6s. cloth.

**HOOKE.—KEW GARDENS;**

Or, a Popular Guide to the Royal Botanic Gardens of Kew. By Sir WILLIAM JACKSON HOOKE, K.H. D.C.L. F.R.A. & L.S. &c. &c. Director. New Edition. 16mo. with numerous Wood Engravings, 6d. sewed.

**HOOKE AND ARNOTT.—THE BRITISH FLORA;**

Comprising the Phanogamous or Flowering Plants, and the Ferns. The Sixth Edition (1850), with Additions and Corrections; and numerous Figures illustrative of the Umbelliferous Plants, the Composite Plants, the Grasses, and the Ferns. By Sir W. J. HOOKE, F.R.A. and L.S. &c., and G. A. WALKER-ARNOTT, LL.D. F.L.S. and R.S. Ed.; Regius Professor of Botany in the University of Glasgow. In One very thick Volume, 12mo. with 12 Plates, 14s. cloth; or with the Plates coloured, price 21s.

**HORNE.—AN INTRODUCTION TO THE CRITICAL STUDY**

and KNOWLEDGE of the HOLY SCRIPTURES. By THOMAS HARTWELL HORNE, B.D. of St. John's College, Cambridge; Rector of the united Parishes of St. Edmund the King and Martyr, and St. Nicholas Acons, Lombard Street; Prebendary of St. Paul's. New Edition, revised and corrected. 5 vols. 8vo. with numerous Maps and Facsimiles of Biblical Manuscripts, 63s. cloth; or £5, bound in calf.

**HORNE.—A COMPENDIOUS INTRODUCTION TO THE**

STUDY of the BIBLE. By THOMAS HARTWELL HORNE, B.D. of St. John's College, Cambridge. Being an Analysis of his "Introduction to the Critical Study and Knowledge of the Holy Scriptures." New Edition, corrected and enlarged. 12mo. with Maps and other Engravings, 9s. boards.

**HOWITT.—THE CHILDREN'S YEAR.**

By MARY HOWITT. With Four Illustrations, engraved by John Absolon, from Original Designs by ANNA MARY HOWITT. Square 16mo. 5s. cloth.

**HOWITT.—THE BOY'S COUNTRY BOOK:**

Being the real Life of a Country Boy, written by himself; exhibiting all the Amusements, Pleasures, and Pursuits of Children in the Country. Edited by WILLIAM HOWITT. New Edition. Fcp. 8vo. with 40 Woodcuts, 6s. cloth.

**HOWITT.—THE RURAL LIFE OF ENGLAND.**

By WILLIAM HOWITT. New Edition, corrected and revised; with Engravings on wood, by Bewick and Williams; uniform with *Visits to Remarkable Places*. Medium 8vo. 21s. cloth.

**HOWITT.—VISITS TO REMARKABLE PLACES;**

Old Halls, Battle-Fields, and Scenes illustrative of Striking Passages in English History and Poetry. By WILLIAM HOWITT. New Edition; with 40 Engravings on Wood. Medium 8vo. 21s. cloth.

SECOND SERIES, chiefly in the Counties of NORTHUMBERLAND and DURHAM, with a Stroll along the BORDER. With upwards of 40 Engravings on Wood. Medium 8vo. 21s. cloth.

**HOWSON.—SUNDAY EVENING:**

Twelve Short Sermons for Family Reading. 1. The Presence of Christ; 2. Inward and Outward Life; 3. The Threefold Warning; 4. Our Father's Business; 5. Spiritual Murder; 6. The Duty of Amiability; 7. Honesty and Candour; 8. St. Peter and Cornelius; 9. The Midnight Traveller; 10. St. Andrew; 11. The Grave of Lazarus; 12. The Resurrection of the Body. By the Rev. J. S. HOWSON, M.A. Principal of the Collegiate Institution, Liverpool, and Chaplain to the Duke of Sutherland. Fcp. 8vo. 2s. 6d. cloth.

**HOWSON AND CONYBEARE.—THE LIFE AND EPISTLES**

of SAINT PAUL. By the Rev. J. S. HOWSON, M.A., and the Rev. W. J. CONYBEARE, M.A. 2 vols. 4to. very copiously illustrated by W. H. Bartlett. [See page 6.]

**HUDSON.—THE EXECUTOR'S GUIDE.**

By J. C. HUDSON, Esq. late of the Legacy Duty Office, London; Author of "Plain Directions for Making Wills," and "The Parent's Hand-book." New Edition. Fcp. 8vo. 5s. cloth.

**HUDSON.—PLAIN DIRECTIONS FOR MAKING WILLS**

In Conformity with the Law, and particularly with reference to the Act 7 Will. 4 and 1 Vict. c. 26. To which is added, a clear Exposition of the Law relating to the distribution of Personal Estate in the case of Intestacy; with two Forms of Wills, and much useful information, &c. By J. C. HUDSON, Esq. New Edition, corrected. Fcp. 8vo. 2s. 6d. cloth.

\* \* \* These Two works may be had in One Volume, 7s. cloth.

**HUMBOLDT.—ASPECTS OF NATURE**

In Different Lands and Different Climates; with Scientific Elucidations. By ALEXANDER VON HUMBOLDT. Translated, with the Author's sanction and co-operation, and at his express desire, by Mrs. SABINE. New Edition. 16mo. 6s. cloth; or in 2 vols. 3s. 6d. each, cloth; Half-a-Crown each, sewed.

**BARON HUMBOLDT'S COSMOS;**

Or, a Sketch of a Physical Description of the Universe. Translated, with the Author's sanction and co-operation, under the superintendence of Lieutenant-Colonel EDWARD SABINE, R.A. For. Sec. R.S. New Edition. Vols. I. and II. 16mo. Half-a-Crown each, sewed; 3s. 6d. each, cloth; or in post 8vo. 12s. each, cloth.—Vol. III. Part I. post 8vo. 6s. cloth; or in 16mo. 2s. 6d. sewed; 3s. 6d. cloth.

**HUMPHREYS.—SENTIMENTS & SIMILES OF SHAKSPEARE:**

A Classified Selection of Similes, Definitions, Descriptions, and other remarkable Passages in Shakspeare's Plays and Poems. With an elaborately illuminated border in the characteristic style of the Elizabethan Period, and other Embellishments. Bound in very massive carved and pierced covers containing in deep relief a medallion Head of Shakspeare. The Illuminations and Ornaments designed and executed by Henry Noel Humphreys, Illuminator of "A Record of the Black Prince," &c. Square post 8vo. [Nearly ready.]

**HUMPHREYS.—A RECORD OF THE BLACK PRINCE;**

Being a Selection of such Passages in his Life as have been most quaintly and strikingly narrated by the Chroniclers of the Period. Embellished with highly-wrought Miniatures and Borderings, selected from various Illuminated MSS. referring to Events connected with English History. By HENRY NOEL HUMPHREYS. Post 8vo. in a richly carved and pierced binding, 21s.

**HUMPHREYS.—THE BOOK OF RUTH.**

From the Holy Scriptures. Embellished with brilliant coloured Borders, selected from some of the finest Illuminated MSS. in the British Museum, the Bibliothèque Nationale, Paris, the Soane Museum, &c.; and with highly-finished Miniatures. The Illuminations executed by HENRY NOEL HUMPHREYS. Square fcp. 8vo. in deeply embossed leather covers, 21s.

**HUMPHREYS.—MAXIMS AND PRECEPTS OF THE**

SAVIOUR: being a Selection of the most beautiful Christian Precepts contained in the Four Gospels. Illustrated by a series of Illuminations of original character, founded on the Passages—"Behold the Fowls of the Air," &c., "Consider the Lilies of the Field," &c. The Illuminations executed by HENRY NOEL HUMPHREYS. Square fcp. 8vo. 21s. richly bound in stamped calf; or 30s. in morocco by Hayday.

**HUMPHREYS.—THE MIRACLES OF OUR SAVIOUR.**

With rich and appropriate Borders of original Design, a series of Illuminated Figures of the Apostles from the Old Masters, Six Illuminated Miniatures, and other Embellishments. The Illuminations executed by HENRY NOEL HUMPHREYS. Square fcp. 8vo. in massive carved covers, 21s.; or bound in morocco by Hayday, 30s.

**HUMPHREYS.—PARABLES OF OUR LORD.**

Richly illuminated with appropriate Borders printed in Colours and in Black and Gold; with a Design from one of the early German Engravers. The Illuminations executed by HENRY NOEL HUMPHREYS. Square fcp. 8vo. 21s. in a massive carved binding; or 30s. bound in morocco by Hayday.

**HUMPHREYS AND JONES.—THE ILLUMINATED BOOKS**

OF THE MIDDLE AGES: A series of Fac-similes from the most beautiful MSS. of the Middle Ages, printed in Gold, Silver, and Colours by OWEN JONES; selected and described by HENRY NOEL HUMPHREYS. Elegantly bound in antique calf. Royal folio, £10. 10s.; imperial folio (large paper), £16. 16s.

**HUNT.—RESEARCHES ON LIGHT:**

An Examination of all the Phenomena connected with the Chemical and Molecular Changes produced by the Influence of the Solar Rays: embracing all the known Photographic Processes, and new Discoveries in the Art. By ROBERT HUNT, Keeper of Mining Records, Museum of Practical Geology. 8vo. with Plate and Woodcuts, 10s. 6d. cloth.

**MRS. JAMESON'S LEGENDS OF THE MONASTIC ORDERS,**

as represented in the Fine Arts. Containing St. Benedict and the Early Benedictines in Italy, France, Spain, and Flanders; the Benedictines in England and in Germany; the Reformed Benedictines; early Royal Saints connected with the Benedictine Order; the Augustines; Orders derived from the Augustine Rule; the Mendicant Orders; the Jesuits; and the Order of the Visitation of St. Mary. Forming the SECOND SERIES of Sacred and Legendary Art. With Eleven Etchings by the Author, and 84 Woodcuts. Square crown 8vo. 28s. cloth.

**MRS. JAMESON'S SACRED AND LEGENDARY ART;**

Or, Legends of the Saints and Martyrs. FIRST SERIES. Containing Legends of the Angels and Archangels; the Evangelists and Apostles; the Greek and Latin Fathers; the Magdalene; the Patron Saints; the Virgin Patronesses; the Martyrs; the Bishops; the Hermits; and the Warrior-Saints of Christendom. Second Edition (1850), printed in One Volume for the convenience of Students and Travellers; with numerous Woodcuts, and Sixteen Etchings by the Author. Square crown 8vo. 28s. cloth.

**MRS. JAMESON'S LEGENDS OF THE MADONNA,**

As represented in the Fine Arts. Forming the THIRD and concluding SERIES of Sacred and Legendary Art. By Mrs. JAMESON, Author of "Characteristics of Women," &c. With Etchings by the Author, and Engravings on Wood. Square crown 8vo. [In the press.]

**JARDINE.—A TREATISE OF EQUIVOCATION;**

Wherein is largely discussed the question Whether a Catholicke or any other Person before a Magistrate, being demanded upon his Oath whether a Preiste were in such a place, may (notwithstanding his perfect knowledge to the contrary), without Perjury, and securely in conscience, answer No: with this secret meaning reserved in his Mynde—That he was not there, so that any man is bounde to detect it. Edited from the Original Manuscript in the Bodleian Library, by DAVID JARDINE, of the Middle Temple, Esq., Barrister at Law; Author of the "Narrative of the Gunpowder Treason," prefixed to his edition of the "Criminal Trials." [In the press.]

**JEFFREY.—CONTRIBUTIONS TO THE EDINBURGH**

REVIEW. By FRANCIS JEFFREY, late One of the Judges of the Court of Session in Scotland. Second Edition. 3 vols. 8vo. 42s. cloth.

**BISHOP JEREMY TAYLOR'S ENTIRE WORKS:**

With the Life by Bishop HEBER. Revised and corrected by the Rev. CHARLES PAGE EDEN, Fellow of Oriel College, Oxford. Vols. II. III. IV. V. VI. VII. and VIII. 8vo. 10s. 6d. each.

\* \* \* In course of publication, in Ten Volumes, price Half-a-Guinea each.—Vol. I. (the last in order of publication) will contain Bishop Heber's Life of Jeremy Taylor, extended by the Editor.—Vol. IX. is in the press.

**BISHOP JEREMY TAYLOR.—READINGS FOR EVERY DAY**

in LENT: compiled from the Writings of BISHOP JEREMY TAYLOR. By the Author of "Amy Herbert," "The Child's First History of Rome," &c. Fcp. 8vo. 5s. cloth.

**JOHNSON.—THE FARMER'S ENCYCLOPEDIA,**

And Dictionary of Rural Affairs: embracing all the recent Discoveries in Agricultural Chemistry; adapted to the comprehension of unscientific readers. By CURTHERBERT W. JOHNSON, Esq. F.R.S. Barrister-at-Law; Editor of the "Farmer's Almanack," &c. 8vo. with Wood Engravings, £2. 10s. cloth.

**JOHNSON.—THE WISDOM OF THE RAMBLER, ADVENTURER, and IDLER:**

comprising a Selection of 110 of the best Essays. By SAMUEL JOHNSON, LL.D. Fcp. 8vo. 7s. cloth.

**JOHNSTON.—A NEW DICTIONARY OF GEOGRAPHY,**

Descriptive, Physical, Statistical, and Historical: forming a complete General Gazetteer of the World. By ALEXANDER KEITH JOHNSTON, F.R.S.E. F.R.G.S. F.G.S.; Geographer at Edinburgh in Ordinary to Her Majesty; Author of "The Physical Atlas of Natural Phenomena." In One very large Volume of 1,440 pages; comprising nearly Fifty Thousand Names of Places. 8vo. 36s. cloth; or strongly half-bound in russia, with flexible back, price 41s.

**KAY.—THE SOCIAL CONDITION AND EDUCATION OF**

the PEOPLE in ENGLAND and EUROPE: shewing the Results of the Primary Schools and of the Division of Landed Property in Foreign Countries. By JOSEPH KAY, Esq. M.A. of Trinity College, Cambridge: Barrister-at-Law; and late Travelling Bachelor of the University of Cambridge. 2 thick vols. post 8vo. 21s. cloth.

**KEMBLE.—THE SAXONS IN ENGLAND:**

a History of the English Commonwealth till the period of the Norman Conquest. By JOHN MITCHELL KEMBLE, M.A., F.C.P.S., &c. 2 vols. 8vo. 28s. cloth.

**KINDERSLEY.—THE VERY JOYOUS, PLEASANT, AND**

REFRESHING HISTORY of the Feats, Exploits, Triumphs, and Achievements of the Good Knight, without Fear and without Reproach, the gentle LORD DE BAYARD. Set forth in English by EDWARD COCKBURN KINDERSLEY, Esq. With Ornamental Headings, and Frontispiece by E. H. Wehnert. Square post 8vo. 9s. 6d. cloth.

**KIRBY & SPENCE.—AN INTRODUCTION TO ENTOMOLOGY;**

Or, Elements of the Natural History of Insects; comprising an account of noxious and useful Insects, of their Metamorphoses, Food, Stratagems, Habitations, Societies, Motions, Noises, Hybernation, Instinct, &c. By W. Kirby, M.A. F.R.S. & L.S. Rector of Barham; and W. Spence, Esq. F.R.S. & L.S. New Edition. 2 vols. 8vo. with Plates, 31s. 6d. cloth.

**LAING.—OBSERVATIONS ON THE SOCIAL AND POLITICAL STATE OF THE EUROPEAN PEOPLE IN 1818 AND 1819:**

being the Second Series of "Notes of a Traveller." By SAMUEL LAING, Esq. Author of "A Journal of a Residence in Norway," "A Tour in Sweden," the Translation of "The Heimskringla," and of "Notes of a Traveller on the Social and Political State of France, Prussia, &c." 8vo. 14s. cloth.

**LATHAM.—ON DISEASES OF THE HEART.**

Lectures on Subjects connected with Clinical Medicine; comprising Diseases of the Heart By P. M. LATHAM, M. D., Physician Extraordinary to the Queen; and late Physician to St. Bartholomew's Hospital. New Edition. 2 vols. 12mo. 16s. cloth.

**LEE.—ELEMENTS OF NATURAL HISTORY;**

Or, First Principles of Zoology. For the use of Schools and Young Persons. Comprising the Principles of Classification interspersed with amusing and instructive original Accounts of the most remarkable Animals. By Mrs. R. LEE. New Edition, revised and enlarged, with numerous additional Woodcuts. Fcp. 8vo. 7s. 6d. cloth.

**LEE.—TAXIDERMY;**

Or, the Art of Collecting, Preparing, and Mounting Objects of Natural History. For the use of Museums and Travellers. By Mrs. R. LEE. New Edition, improved; with an account of a Visit to Walton Hall, and Mr. Waterston's Method of Preserving Animals. Fcp. 8vo. with Woodcuts, 7s. cloth.

**L. E. L.—THE POETICAL WORKS OF LETITIA ELIZABETH**

LANDON; comprising the IMPROVISATRICE, the VENETIAN BRACELET, the GOLDEN VIOLET, the TROUBADOUR, and other Poetical Remains. New Edition, uniform with Moore's *Songs, Ballads, and Sacred Songs*; with 2 Vignettes by Richard Doyle. 2 vols. 16mo. 10s. cloth; morocco, 21s.

\* Also, an Edition, in 4 vols. fcp. 8vo. with Illustrations by Howard, &c. 28s. cloth; or £2. 4s. bound in morocco.

**LETTERS ON HAPPINESS, ADDRESSED TO A FRIEND.**

By the Authoress of "Letters to My Unknown Friends," "Twelve Years Ago, a Tale," "Some Passages from Modern History," and "Discipline." Fcp. 8vo. 6s. cloth.

**LETTERS TO MY UNKNOWN FRIENDS.**

By A LADY, Authoress of "Letters on Happiness," "Twelve Years Ago," "Discipline," and "Some Passages from Modern History." 3d Edition. Fcp. 8vo. 6s. cloth.

**LINDLEY.—INTRODUCTION TO BOTANY.**

By J. LINDLEY, Ph.D. F.R.S. L.S. &c. Professor of Botany in University College, London. New Edition, with Corrections and copious Additions. 2 vols. 8vo. with Six Plates and numerous Woodcuts, 24s. cloth.

**LINWOOD.—ANTHOLOGIA OXONIENSIS,**

Sive Florilegium e Lusibus poeticis diversorum Oxoniensium Græcis et Latinis decerptum. Curante GULIELMO LINWOOD, M.A. Ædis Christi Alumino. 8vo. 14s. cloth.

**LORIMER.—LETTERS TO A YOUNG MASTER MARINER**

On some Subjects connected with his Calling. By the late CHARLES LORIMER. New Edition. Fcp. 8vo. 5s. 6d. cloth.

**LOUDON.—THE AMATEUR GARDENER'S CALENDAR:**

Being a Monthly Guide as to what should be avoided, as well as what should be done, in a Garden in each Month; with plain Rules *how to do* what is requisite; Directions for Laying Out and Planting Kitchen and Flower Gardens, Pleasure Grounds, and Shrubberies; and a short Account, in each Month, of the Quadrupeds, Birds, and Insects then most injurious to Gardens. By Mrs. Loudon. 16mo with Wood Engravings, 7s. 6d. cloth.

**LOUDON.—THE LADY'S COUNTRY COMPANION;**

Or, How to Enjoy a Country Life Rationally. By Mrs. Loudon, Author of "Gardening for Ladies," &c. New Edition. Fcp. 8vo. with Plate and Wood Engravings, 7s. 6d. cloth.

**LOUDON'S SELF-INSTRUCTION FOR YOUNG GARDENERS,**

Foresters, Bailiffs, Land Stewards, and Farmers; in Arithmetic, Book-keeping, Geometry, Mensuration, Practical Trigonometry, Mechanics, Land-Surveying, Levelling, Planning and Mapping, Architectural Drawing, and Isometrical Projection and Perspective; with Examples shewing their applications to Horticulture and Agricultural Purposes. With a Portrait of Mr. Loudon, and a Memoir by Mrs. Loudon. 8vo. with Woodcuts, 7s. 6d. cloth.

**LOUDON'S ENCYCLOPEDIA OF GARDENING;**

Comprising the Theory and Practice of Horticulture, Floriculture, Arboriculture, and Landscape Gardening; including all the latest improvements; a General History of Gardening in all Countries; and a Statistical View of its Present State: with Suggestions for its Future Progress in the British Isles. Illustrated with many hundred Engravings on Wood by Branston. An entirely New Edition (1850), corrected throughout and considerably improved by Mrs. Loudon. In One large Volume, 8vo. 50s. cloth.

**LOUDON'S ENCYCLOPEDIA OF TREES AND SHRUBS:**

being the *Arboretum et Fruticetum Britannicum* abridged: containing the Hardy Trees and Shrubs of Great Britain, Native and Foreign, Scientifically and Popularly Described; with their Propagation, Culture, and Uses in the Arts; and with Engravings of nearly all the Species. Adapted for the use of Nurserymen, Gardeners, and Foresters. 8vo. with 2,000 Engravings on Wood, £2. 10s. cloth.

**LOUDON'S ENCYCLOPEDIA OF AGRICULTURE:**

Comprising the Theory and Practice of the Valuation, Transfer, Laying-out, Improvement, and Management of Landed Property, and of the Cultivation and Economy of the Animal and Vegetable productions of Agriculture; including all the latest Improvements, a general History of Agriculture in all Countries, a Statistical View of its present State, with Suggestions for its future progress in the British Isles. New Edition; with upwards of 1,100 Engravings on Wood. In One large Volume, 8vo. £2. 10s. cloth.

**LOUDON'S ENCYCLOPEDIA OF PLANTS:**

Including all the Plants which are now found in, or have been introduced into, Great Britain; giving their Natural History, accompanied by such descriptions, engraved figures, and elementary details, as may enable a beginner, who is a mere English reader, to discover the name of every Plant which he may find in flower, and acquire all the information respecting it which is useful and interesting. The Specific Characters by an Eminent Botanist; the Drawings by J. D. C. Sowerby. New Edition with Supplement, and new General Index. 8vo. with nearly 10,000 Wood Engravings, £3. 13s. 6d. cloth.

**LOUDON'S ENCYCLOPEDIA OF COTTAGE, FARM, AND**

VILLA ARCHITECTURE and FURNITURE; containing numerous Designs, from the Villa to the Cottage and the Farm, including Farm Houses, Farmeries, and other Agricultural Buildings; Country Inns, Public Houses, and Parochial Schools; with the requisite Fittings-up, Fixtures, and Furniture, and appropriate Offices, Gardens, and Garden Scenery: each Design accompanied by Analytical and Critical Remarks. New Edition, edited by Mrs. Loudon. 8vo. with more than 2,000 Engravings on Wood, £3. 3s. cloth.

**LOUDON'S HORTUS BRITANNICUS;**

Or, Catalogue of all the Plants indigenous to, cultivated in, or introduced into Britain. An entirely New Edition (1830), corrected throughout; with a Supplement, including all the New Plants down to March, 1830; and a New General Index to the whole Work. Edited by Mrs. Loudon; assisted by W. H. BAXTER, Esq., and DAVID WOOSTER. 8vo. 31s. 6d. cloth.

**SUPPLEMENT TO LOUDON'S HORTUS BRITANNICUS;**

Including all the Plants introduced into Britain, all the newly-discovered British Species, and all the kinds originated in British Gardens, up to March 1830. With a New General Index to the whole Work, including the Supplement. Prepared by W. H. BAXTER, Esq.; assisted by D. WOOSTER, under the direction of Mrs. Loudon. 8vo. 14s. cloth.

**LOW.—ELEMENTS OF PRACTICAL AGRICULTURE;**

Comprehending the Cultivation of Plants, the Husbandry of the Domestic Animals, and the Economy of the Farm. By D. Low, Esq. F.R.S.E. New Edition, with Alterations and Additions, and an entirely new set of above 200 Woodcuts. 8vo. 21s. cloth.

**LOW.—ON LANDED PROPERTY,**

And the ECONOMY of ESTATES; comprehending the Relation of Landlord and Tenant, and the Principles and Forms of Leases; Farm-Buildings, Enclosures, Drains, Embankments, and other Rural Works; Minerals; and Woods. By DAVID Low, Esq. F.R.S.E. 8vo. with numerous Wood Engravings, 21s. cloth.

**MACAULAY.—THE HISTORY OF ENGLAND FROM THE**

ACCESSION OF JAMES II. By THOMAS BABINGTON MACAULAY. New Edition. Vols. I. and II. 8vo. 32s. cloth.

**MACAULAY.—CRITICAL AND HISTORICAL ESSAYS CON-**

TRIBUTED to The EDINBURGH REVIEW. By THOMAS BABINGTON MACAULAY. New Edition, complete in One Volume; with Portrait by E. U. Eddis, engraved in line by W. Greatbach, and Vignette. Square crown 8vo. 21s. cloth; 30s. calf extra by Hayday.—Or in 3 vols. 8vo. 36s. cloth.

**MACAULAY.—LAYS OF ANCIENT ROME.**

With "Ivry" and "The Armada." By THOMAS BABINGTON MACAULAY. New Edition. 16mo. 4s. 6d. cloth; or 10s. 6d. bound in morocco by Hayday.

**MR. MACAULAY'S LAYS OF ANCIENT ROME.**

With numerous Illustrations, Original and from the Antique, drawn on Wood by George Scharf, Jun. and engraved by Samuel Williams. New Edition. Fcp. 4to. 21s. boards; or 42s. bound in morocco by Hayday.

**MACDONALD.—VILLA VEROCCHIO;**

Or, the YOUTH of LEONARDO DA VINCI: a Tale. By the late DIANA LOUISA MACDONALD. Fcp. 8vo. 6s. cloth.

"An exceedingly agreeable volume, full of feeling and interest."  
 "In this most pleasing of historiettes we have an episode from the life of one who carved out for himself the highest place among the great master-minds of his age.... The scenery of the locality (the Val d'Arco and Firenze), the manners of the day, the characters of the great men of that age, and the affections of the best of the world's race, which go far to console us for our sad lot here below, are sketched with a facility, a correctness, and a delicacy, that fail not of carrying the reader, without a moment's stop, from the first to the last sentence of this little volume."  
 BRITANNIA.

**MACKINTOSH.—SIR JAMES MACKINTOSH'S MISCELLA-**

NEOUS WORKS; including his Contributions to The EDINBURGH REVIEW. A New Edition (1851), complete in One Volume; with Portrait engraved in line by W. Greatbach, and Vignette. Square crown 8vo. 21s. cloth; or 30s. calf extra by Hayday.

**M'CULLOCH.—A DICTIONARY, PRACTICAL, THEORETI-**  
**CAL, AND HISTORICAL, OF COMMERCE AND COMMERCIAL NAVIGATION.** Illustrated with Maps and Plans. By J. R. M'CULLOCH, Esq. New Edition, (1850), corrected, enlarged, and improved; with a Supplement. 8vo. 50s. cloth; or 55s. half-bound in russia.

\*. The SUPPLEMENT to the last Edition, published in 1849, may be had separately, price 4s. 6d. sewed.

**M'CULLOCH.—A DICTIONARY, GEOGRAPHICAL, STATIS-**  
**TICAL, AND HISTORICAL, of the various Countries, Places, and Principal Natural Objects in the WORLD.** By J. R. M'CULLOCH, Esq. Illustrated with 6 large Maps. New Edition (1850-1851), corrected, and in part re-written; with a Supplement. 2 thick vols. 8vo. 63s. cloth.

**M'CULLOCH.—AN ACCOUNT, DESCRIPTIVE AND STATIS-**  
**TICAL, of the BRITISH EMPIRE; exhibiting its Extent, Physical Capacities, Population, Industry, and Civil and Religious Institutions.** By J. R. M'CULLOCH, Esq. New Edition, corrected, enlarged, and greatly improved. 2 thick vols. 8vo. 42s. cloth.

**M'CULLOCH.—A TREATISE ON THE PRINCIPLES AND**  
**PRACTICAL INFLUENCE of TAXATION and the FUNDING SYSTEM.** By J. R. M'CULLOCH, Esq. 8vo. 10s. cloth.

**MAITLAND.—THE CHURCH IN THE CATACOMBS:**

A Description of the Primitive Church of Rome. Illustrated by its Sepulchral Remains. By CHARLES MAITLAND. New Edition, corrected. 8vo. with numerous Wood Engravings, 14s. cloth.

**MARCET.—CONVERSATIONS ON CHEMISTRY;**

In which the Elements of that Science are familiarly Explained and Illustrated by Experiments. By JANE MARCET. New Edition, enlarged and improved. 2 vols. fcp. 8vo. 14s. cloth.

**MARCET.—CONVERSATIONS ON NATURAL PHILOSOPHY;**

In which the Elements of that Science are familiarly explained. By JANE MARCET. New Edition, enlarged and corrected. Fcp. 8vo. with 23 Plates, 10s. 6d. cloth.

**MARCET.—CONVERSATIONS ON POLITICAL ECONOMY;**

In which the Elements of that Science are familiarly explained. By JANE MARCET. New Edition revised and enlarged. Fcp. 8vo. 7s. 6d. cloth.

**MARCET.—CONVERSATIONS ON VEGETABLE PHYSIO-**

LOGY; comprehending the Elements of Botany, with their application to Agriculture. By JANE MARCET. New Edition. Fcp. 8vo. with 4 Plates, 9s. cloth.

**MARCET.—CONVERSATIONS ON LAND AND WATER.**

By JANE MARCET. New Edition, revised and corrected. With a coloured Map, shewing the comparative altitude of Mountains. Fcp. 8vo. 5s. 6d. cloth.

"This work consists of desultory Conversations with a family of children from six to ten years of age, in which the author has endeavoured to mingle information with amusement, and to teach the youthful student of geography that there are other matters connected with land and water quite as interesting as the names and situations of the different parts of the earth. Two new Conversations have been added to this edition, containing the 'Adventures of a Drop of Water.'" PREFACE.

**MARRYAT.—MASTERMAN READY;**

Or, the Wreck of the Pacific. Written for Young People. By Captain F. MARRYAT, C.B. Author of "Peter Simple," &c. 3 vols. fcp. 8vo. with Wood Engravings, 22s. 6d. cloth.

**MARRYAT.—THE MISSION;**

Or, Scenes in Africa. Written for Young People. By Captain F. MARRYAT, C.B. Author of "Masterman Ready," &c. 2 vols. fcp. 8vo. 12s. cloth.

**MARRYAT.—THE PRIVATEER'S-MAN ONE HUNDRED YEARS AGO.** By Captain F. MARRYAT, C.B. Author of "Masterman Ready," &c. 2 vols. fcp. 8vo. 12s. cloth.

**MARRYAT.—THE SETTLERS IN CANADA.** Written for Young People. By Captain F. MARRYAT, C.B. Author of "Masterman Ready," &c. New Edition. Fcp. 8vo. with 2 Illustrations, 7s. 6d. cloth.

**MAUNDER.—THE BIOGRAPHICAL TREASURY;** Consisting of Memoirs, Sketches, and brief Notices of above 12,000 Eminent Persons of all Age, and Nations, from the Earliest Period of History; forming a new and complete Dictionary of Universal Biography. By SAMUEL MAUNDER. A New and carefully-revised Edition (1851); corrected throughout, and brought down to the Present Time, by the introduction of numerous additional Lives. Fcp. 8vo. 10s. cloth; bound in roan, 12s.

**MAUNDER.—THE TREASURY OF HISTORY;** Comprising a General Introductory Outline of Universal History, Ancient and Modern, and a Series of separate Histories of every principal Nation that exists; their Rise, Progress, and Present Condition, the Moral and Social Character of their respective Inhabitants, their Religion, Manners, and Customs, &c. By SAMUEL MAUNDER. New Edition. Fcp. 8vo. 10s. cloth; bound in roan, 12s.

**MAUNDER.—THE SCIENTIFIC & LITERARY TREASURY;** A new and popular Encyclopædia of Science and the Belles-Lettres; including all Branches of Science, and every Subject connected with Literature and Art. The whole written in a familiar style, adapted to the comprehension of all persons desirous of acquiring information on the subjects comprised in the work, and also adapted for a Manual of convenient Reference to the more instructed. By S. MAUNDER. New Edition. Fcp. 8vo. 10s. cloth; bound in roan, 12s.

**MAUNDER.—THE TREASURY OF NATURAL HISTORY;** Or, a Popular Dictionary of Animated Nature: in which the Zoological Characteristics that distinguish the different Classes, Genera, and Species are combined with a variety of interesting Information illustrative of the Habits, Instincts and General Economy of the Animal Kingdom. To which are added, a Syllabus of Practical Taxidermy, and a Glossarial Appendix. Embellished with 900 accurate Engravings on Wood, from Drawings made expressly for this work. By SAMUEL MAUNDER. New Edition. Fcp. 8vo. 10s. cloth, bound in roan, 12s.

**MAUNDER.—THE TREASURY OF KNOWLEDGE,** And LIBRARY OF REFERENCE. Comprising an English Grammar; Tables of English Verbal Distinctions; Proverbs, Terms, and Phrases, in Latin, Spanish, French, and Italian, translated; New and Enlarged English Dictionary; Directions for Pronunciation; New Universal Gazetteer; Tables of Population and Statistics; List of Cities, Boroughs, and Market Towns in the United Kingdom; Regulations of the General Post Office; List of Foreign Animal, Vegetable, and Mineral Productions; Compendious Classical Dictionary; Scripture Proper Names accented, and Christian Names of Men and Women: with Latin Maxims translated; List of Abbreviations; Chronology and History; compendious Law Dictionary; Abstract of Tax Acts; Interest and other Tables; Forms of Epistolary Address; Tables of Precedency; Synopsis of the British Peerage; and Tables of Number, Money, Weights, and Measures. By SAMUEL MAUNDER. 18th Edition, revised throughout, and greatly enlarged. Fcp. 8vo. 10s. cloth; bound in roan, 12s.

**MEMOIRS OF THE GEOLOGICAL SURVEY OF GREAT BRITAIN,** and of the Museum of Economic Geology in London. Published by order of the Lords Commissioners of Her Majesty's Treasury. Royal 8vo. with Woodcuts and 9 large Plates (seven coloured), 21s. cloth; and Vol. II. in Two thick Parts, with 63 Plates (three coloured), and numerous Woodcuts, 42s. cloth, or, separately, 21s. each Part.—Also, **BRITISH ORGANIC REMAINS;** consisting of Plates of Figures engraved on Steel, with descriptive Letterpress, and forming a portion of the Memoirs of the Geological Survey. Decades I. to III. royal 8vo. 2s. 6d. each; or, royal 4to. 4s. 6d. each, sewed.

**MERIVALE.—A HISTORY OF THE ROMANS UNDER THE EMPIRE.** By the Rev. CHARLES MERIVALE, late Fellow and Tutor of St. John's College, Cambridge. Vols. I. and II. 8vo. 28s.

**JAMES MONTGOMERY'S POETICAL WORKS.** With some additional Poems, and the Author's Autobiographical Prefaces. A New Edition, complete in One Volume, uniform with Southey's "The Doctor &c." and "Commonplace Book;" with Portrait and Vignette. Square crown 8vo. 10s. 6d. cloth; morocco, 21s.—Or, in 4 vols. fcp. 8vo. with Portrait, and Seven other Plates, 20s. cloth; morocco, 36s.

**MOORE.—HEALTH, DISEASE, AND REMEDY,** Familiarly and practically considered in a few of their relations to the Blood. By GEORGE MOORE, M.D. Member of the Royal College of Physicians. Post 8vo. 7s. 6d. cloth.

**MOORE.—MAN AND HIS MOTIVES.** By GEORGE MOORE, M.D., Member of the Royal College of Physicians. New Edition. Post 8vo. 8s. cloth.

**MOORE.—THE POWER OF THE SOUL OVER THE BODY,** Considered in relation to Health and Morals. By GEORGE MOORE, M.D. Member of the Royal College of Physicians. New Edition. Post 8vo. 7s. 6d. cloth.

**MOORE.—THE USE OF THE BODY IN RELATION TO THE MIND.** By GEORGE MOORE, M.D. Member of the Royal College of Physicians. New Edition. Post 8vo. 9s. cloth.

**THOMAS MOORE'S POETICAL WORKS;** Containing the Author's recent Introduction and Notes. Complete in One Volume, uniform with Lord Byron's and Southey's Poems. With a Portrait by George Richmond, engraved in line, and a View of Sloperston Cottage. Medium 8vo. 21s. cloth; morocco by Hayday, 42s.—Or, in 10 vols. fcp. 8vo. with Portrait, and 19 Plates, £2. 10s. cloth; morocco, £4. 10s.

**MOORE.—SONGS, BALLADS, AND SACRED SONGS.** By THOMAS MOORE, Author of "Lalla Rookh," "Irish Melodies," &c. First collected Edition, uniform with the smaller Edition of Mr. Macaulay's *Lays of Ancient Rome*; with Vignette by R. Doyle. 16mo. 5s. cloth; 12s. 6d. smooth morocco, by Hayday.

**MOORE'S IRISH MELODIES.** New Edition, uniform with the smaller Edition of Mr. Macaulay's *Lays of Ancient Rome*. With the Autobiographical Preface from the Collective Edition of Mr. Moore's Poetical Works, and a Vignette Title by D. Maclise, R.A. 16mo. 5s. cloth; 12s. 6d. smooth morocco, by Hayday.—Or, in fcp. 8vo. 10s. cloth; bound in morocco, 13s. 6d.

**MOORE'S IRISH MELODIES.** Illustrated by D. MACLISE, R.A. Imperial 8vo. with 161 Steel Plates, £3. 3s. boards; or £4. 14s. 6d. bound in morocco by Hayday. Proof Impressions (only 200 copies printed, of which a very few now remain), £6. 6s. boards.

**MOORE'S LALLA ROOKH: AN ORIENTAL ROMANCE.** New Edition, uniform with the smaller Edition of Mr. Macaulay's *Lays of Ancient Rome*. With the Autobiographical Preface from the Collective Edition of Mr. Moore's Poetical Works, and a Vignette Title by D. Maclise, R.A. 16mo. 5s. cloth; 12s. 6d. smooth morocco, by Hayday.—Or, in fcp. 8vo. with Four Engravings from Paintings by Westall, 10s. 6d. cloth; bound in morocco, 14s.

**MOORE'S LALLA ROOKH: AN ORIENTAL ROMANCE.** With 13 Plates from Designs by Corbould, Meadows, and Stephanoff, engraved under the superintendence of Mr. Charles Heath. Royal 8vo. 21s. cloth; morocco, 35s; or, with India Proof Plates, 42s. cloth.

**MORELL.—THE PHILOSOPHY OF RELIGION.** By J. D. MORELL, M.A. Author of an Historical and Critical *View of the Speculative Philosophy of Europe in the Nineteenth Century*. 8vo. 12s. cloth.

**MOSELEY.—THE MECHANICAL PRINCIPLES OF ENGINEERING AND ARCHITECTURE.** By the Rev. H. MOSELEY, M.A. F.R.S., Professor of Natural Philosophy and Astronomy in King's College, London. 8vo. with Woodcuts and Diagrams, 21s. cloth.

**MOSELEY.—ILLUSTRATIONS OF PRACTICAL MECHANICS.** By the Rev. H. MOSELEY, M.A., Professor of Natural Philosophy and Astronomy in King's College, London. New Edition. Fcp. 8vo. with numerous Woodcuts, 8s. cloth.

**MOSHEIM'S ECCLESIASTICAL HISTORY,** Ancient and Modern. Translated, with copious Notes, by JAMES MURDOCK, D.D. New Edition, revised, and continued to the Present Time, by the Rev. HENRY SOAMES, M.A. 4 vols. 8vo. 48s. cloth.

**MOUNT SAINT LAWRENCE.** By the Author of "Mary the Star of the Sea." 2 vols. post 8vo. 12s. cloth.

**MURE.—A CRITICAL HISTORY OF THE LANGUAGE AND LITERATURE OF ANCIENT GREECE.** By WILLIAM MURE, M.P., of Caldwell. 3 vols. 8vo. 36s. cloth.

**MURRAY.—ENCYCLOPEDIA OF GEOGRAPHY;** Comprising a complete Description of the Earth: exhibiting its Relation to the Heavenly Bodies, its Physical Structure, the Natural History of each Country, and the Industry, Commerce, Political Institutions, and Civil and Social State of all Nations. By HUGH MURRAY, F.R.S.E.: assisted by other Writers of eminence. Second Edition. 8vo. with 82 Maps, and upwards of 1,000 other Woodcuts, £3. cloth.

**NEALE.—THE EARTHLY RESTING PLACES OF THE JUST.** By the Rev. ERSKINE NEALE, M.A., Rector of Kirton, Suffolk; Author of "The Closing Scene," &c. With Wood Engravings. Fcp. 8vo. 7s. cloth.

**NEALE.—THE CLOSING SCENE;** Or, Christianity and Infidelity contrasted in the Last Hours of Remarkable Persons. By the Rev. ERSKINE NEALE, M.A., Rector of Kirton, Suffolk; Author of "The Earthly Resting-places of the Just," &c. New Editions of the First and Second Series. 2 vols. fcp. 8vo. 12s. cloth; or separately, 6s. each.

**NEWMAN.—DISCOURSES ADDRESSED TO MIXED CONGREGATIONS.** By JOHN HENRY NEWMAN, Priest of the Oratory of St. Philip Neri. Second Edition. 8vo. 12s. cloth.

**OWEN JONES.—WINGED THOUGHTS:** A Series of Poems. By MARY ANNE BACON. With Illustrations of Birds, designed by E. L. Bateman, and executed in Illuminated Printing by Owen Jones. Uniform with *Flowers and their Kindred Thoughts* and *Fruits from the Garden and the Field*. Imperial 8vo. 31s. 6d. elegantly bound in calf.

**OWEN JONES.—FLOWERS AND THEIR KINDRED THOUGHTS:** A Series of Stanzas. By MARY ANNE BACON, Authoress of "Winged Thoughts." With beautiful Illustrations of Flowers, designed and printed in Colours by Owen Jones. Uniform with *Fruits from the Garden and the Field*. Imperial 8vo. 31s. 6d. elegantly bound in calf.

**OWEN JONES.—FRUITS FROM THE GARDEN AND THE FIELD.** A Series of Stanzas. By MARY ANNE BACON, Authoress of "Winged Thoughts." With beautiful Illustrations of Fruit, designed and printed in Colours by Owen Jones. Uniform with *Flowers and their Kindred Thoughts*. Imperial 8vo. 31s. 6d. elegantly bound in calf.

**OWEN JONES'S ILLUMINATED EDITION OF GRAY'S ELEGY.** GRAY'S ELEGY, WRITTEN IN A COUNTRY CHURCHYARD. Illuminated, in the Missal Style, by OWEN JONES, Architect. Imperial 8vo. 31s. 6d. elegantly bound.

**OWEN JONES'S ILLUMINATED EDITION OF THE SERMON ON THE MOUNT.** THE SERMON ON THE MOUNT. Printed in Gold and Colours, in the Missal Style; with Ornamental Borders by OWEN JONES, and an Illuminated Frontispiece by W. HOSALL. New Edition. Square fcp. 8vo. in rich silk covers, 21s.; or bound in morocco by Hayday, 25s.

**OWEN JONES'S ILLUMINATED EDITION OF THE MARRIAGE SERVICE.** THE FORM OF SOLEMNISATION OF MATRIMONY. From *The Book of Common Prayer*. Illuminated, in the Missal Style, by OWEN JONES. Square 18mo. 21s. elegantly bound in white calf.

**OWEN JONES'S ILLUMINATED EDITION OF THE PREACHER.** The Words of the Preacher, Son of David, King of Jerusalem. From the Holy Scriptures. Being the Twelve Chapters of the Book of Ecclesiastes, elegantly Illuminated, in the Missal Style, by OWEN JONES. Imperial 8vo. in very massive carved covers, 42s.; or, handsomely bound in calf, 31s. 6d.

**OWEN JONES'S ILLUMINATED EDITION OF SOLOMON'S SONG.** THE SONG OF SONGS, WHICH IS SOLOMON'S. From the Holy Scriptures. Being the Six Chapters of the Book of the Song of Solomon, richly Illuminated, in the Missal Style, by OWEN JONES. Elegantly bound in relievo leather. Imperial 16mo. 21s.

**OWEN JONES'S TRANSLATION OF D'AGINCOURT'S HISTORY OF ART.** THE HISTORY OF ART, BY ITS MONUMENTS, from its Decline in the Fourth Century to its Restoration in the Sixteenth. Translated from the French of SEROUX D'AGINCOURT, by OWEN JONES, Architect. In 3,335 Subjects, engraved on 328 Plates. Vol. I. Architecture, 73 Plates; Vol. II. Sculpture, 51 Plates; Vol. III. Painting, 204 Plates. 3 vols. royal folio, £3. 5s. sewed.

**OWEN.—LECTURES ON THE COMPARATIVE ANATOMY and PHYSIOLOGY of the INVERTEBRATE ANIMALS,** delivered at the Royal College of Surgeons in 1813. By RICHARD OWEN, F.R.S. Hunterian Professor to the College. New Edition, corrected. 8vo. with very numerous Wood Engravings. [Nearly ready.]

**OWEN.—LECTURES ON THE COMPARATIVE ANATOMY and PHYSIOLOGY of the VERTEBRATE ANIMALS,** delivered at the Royal College of Surgeons in 1814 and 1816. By RICHARD OWEN, F.R.S. Hunterian Professor to the College. In 2 vols. Vol. I. 8vo. with numerous Woodcuts, 14s. cloth.

**PALEY'S EVIDENCES OF CHRISTIANITY:** And Horæ Pauline. A New Edition, with Notes, an Analysis, and a Selection of Papers from the Senate-House and College Examination Papers. Designed for the Use of Students in the University. By ROBERT Potts, M.A. Trinity College, Cambridge. 8vo. 10s. 6d. cloth.

**PASCAL'S ENTIRE WORKS, TRANSLATED BY PEARCE.** THE COMPLETE WORKS of BLAISE PASCAL: With M. Villemain's Essay on Pascal considered as a Writer and Moralist prefixed to the *Provincial Letters*; and the *Miscellaneous Writings, Thoughts on Religion, and Evidences of Christianity* re-arranged, with large Additions, from the French Edition of Mons. P. Faugère. Newly Translated from the French, with Memoir, Introductions to the various Works, Editorial Notes, and Appendices, by GEORGE PEARCE, Esq. 3 vols. post 8vo. with Portrait, 25s. 6d. cloth.

\* \* \* The Three Volumes may be had separately, as follows:—

Vol. I.—PASCAL'S PROVINCIAL LETTERS: with M. Villemain's Essay on Pascal prefixed, and a new Memoir. Post 8vo. Portrait, 8s. 6d.

Vol. II.—PASCAL'S THOUGHTS ON RELIGION and EVIDENCES of CHRISTIANITY, with Additions, from Original MSS.: from M. Faugère's Edition. Post 8vo. 8s. 6d.

Vol. III.—PASCAL'S MISCELLANEOUS WRITINGS, Correspondence, Detached Thoughts, &c.: from M. Faugère's Edition. Post 8vo. 8s. 6d.



**PEREIRA.—A TREATISE ON FOOD AND DIET:**

With Observations on the Dietetical Regimen suited for Disordered States of the Digestive Organs; and an Account of the Diets of some of the principal Metropolitan and other Establishments for Paupers, Lunatics, Criminals, Children, the Sick, &c. By **JON. PEREIRA**, M.D. F.R.S. & L.S. Author of "Elements of Materia Medica." 8vo. 16s. cloth.

**PESCHEL.—ELEMENTS OF PHYSICS.**

By **C. F. PESCHEL**, Principal of the Royal Military College, Dresden. Translated from the German, with Notes, by **E. WEST**. 3 vols. fcp. 8vo. with Diagrams and Woodcuts, 21s. cloth.

Separately { Part 1. The Physics of Ponderable Bodies. Fcp. 8vo. 7s. 6d. cloth.  
Part 2. Imponderable Bodies (Light, Heat, Magnetism, Electricity, and Electro-Dynamics). 2 vols. fcp. 8vo. 13s. 6d. cloth.

**PHILLIPS.—AN ELEMENTARY INTRODUCTION TO MINERALOGY;**

comprising a Notice of the Characters, Properties, and Chemical Constitution of Minerals; with Accounts of the Places and Circumstances in which they are found. By **WILLIAM PHILLIPS**, F.L.S.M.G.S. &c. A New Edition, corrected, enlarged, and improved, by **H. J. BROOKE**, F.R.S.; and **W. H. MILLER**, M.A., F.R.S., Professor of Mineralogy in the University of Cambridge. Post 8vo. with numerous Wood Engravings. [In the press.]

**PHILLIPS.—FIGURES AND DESCRIPTIONS OF THE**

**PALEOZOIC FOSSILS** of CORNWALL, DEVON, and WEST SOMERSET; observed in the course of the Ordnance Geological Survey of that District. By **JOHN PHILLIPS**, F.R.S. F.G.S. &c. Published by Order of the Lords Commissioners of H.M. Treasury. 8vo. with 60 Plates, comprising very numerous figures, 9s. cloth.

**PORTLOCK.—REPORT ON THE GEOLOGY OF THE COUNTY**

of LONDONDERRY, and of Parts of Tyrone and Fermanagh, examined and described under the Authority of the Master-General and Board of Ordnance. By **J. E. PORTLOCK**, F.R.S. &c. 8vo. with 48 Plates, 21s. cloth.

**POWER.—SKETCHES IN NEW ZEALAND,**

with Pen and Pencil. By **W. TYRONE POWER**, D.A.C.G. From a Journal kept in that Country, from July 1846 to June 1848. With 8 Plates and 2 Woodcuts, from Drawings made on the spot. Post 8vo. 12s. cloth.

**PULMAN.—THE VADE-MECUM OF FLY-FISHING FOR**

**TROUT**: being a complete Practical Treatise on that Branch of the Art of Angling; with plain and copious Instructions for the Manufacture of Artificial Flies. By **G. P. R. PULMAN**, Author of "The Book of the Axe." Third Edition, re-written and greatly enlarged; with several Woodcuts. Fcp. 8vo. 6s. cloth.

**PYCROFT.—A COURSE OF ENGLISH READING,**

Adapted to every Taste and Capacity: with Literary Anecdotes. By the Rev. **JAMES PYCROFT**, B.A. Author of "The Collegian's Guide, &c." New Edition. Fcp. 8vo. 5s. cloth.

**DR. REECE'S MEDICAL GUIDE;**

For the Use of the Clergy, Heads of Families, Schools, and Junior Medical Practitioners; comprising a complete Modern Dispensatory, and a Practical Treatise on the distinguishing Symptoms, Causes, Prevention, Cure, and Palliation of the Diseases incident to the Human Frame. With the latest Discoveries in the different departments of the Healing Art, Materia Medica, &c. Seventeenth Edition (1850), with considerable Additions; revised and corrected by the Author's Son, **DR. HENRY REECE**, M.R.C.S. &c. 8vo. 12s. cloth.

**RICH.—THE ILLUSTRATED COMPANION TO THE LATIN**

**DICTIONARY AND GREEK LEXICON**: forming a Glossary of all the Words representing Visible Objects connected with the Arts, Manufactures, and Every-day Life of the Ancients. With Representations of nearly Two Thousand Objects from the Antique. By **ANTHONY RICH**, Jun. B.A. late of Caius College, Cambridge. Post 8vo. with about 2,000 Woodcuts, 21s. cloth.

**RICHARDSON.—NARRATIVE OF AN OVERLAND JOURNEY**

in SEARCH of the DISCOVERY SHIPS under SIR JOHN FRANKLIN, in the YEARS 1847, 1848, and 1849. By **SIR JOHN RICHARDSON**, M.D., F.R.S., &c., Inspector of Hospitals. Published by Authority of the Admiralty. 2 vols. 8vo. with Maps and Plans. [In the press.]

**RIDDLE.—A COPIOUS AND CRITICAL LATIN-ENGLISH**

**LEXICON**, founded on the German-Latin Dictionaries of Dr. William Freund. By the Rev. **J. E. RIDDLE**, M.A. of St. Edmund's Hall, Oxford. Uniform with Yonge's English Greek Lexicon. New Edition. Post 4to. £2. 10s. cloth.

**RIDDLE.—A COMPLETE LATIN-ENGLISH AND ENGLISH-**

**LATIN DICTIONARY**, for the use of Colleges and Schools. By the Rev. **J. E. RIDDLE**, M.A. of St. Edmund Hall, Oxford. New Edition, revised and corrected. 8vo. 31s. 6d. cloth.

Separately { The English-Latin Dictionary, 10s. 6d. cloth.  
The Latin-English Dictionary, 21s. cloth.

**RIDDLE.—A DIAMOND LATIN-ENGLISH DICTIONARY.**

For the Waistcoat-pocket. A Guide to the Meaning, Quality, and right Accentuation of Latin Classical Words. By the Rev. **J. E. RIDDLE**, M.A. New Edition. Royal 32mo. 4s. bound.

**RIVERS.—THE ROSE AMATEUR'S GUIDE;**

Containing ample Descriptions of all the fine leading varieties of Roses, regularly classed in their respective Families; their History and mode of Culture. By **T. RIVERS**, Jun. New Edition, corrected and improved. Fcp. 8vo. 6s. cloth.

**ROBINSON'S LEXICON TO THE GREEK TESTAMENT.**

A GREEK and ENGLISH LEXICON of the NEW TESTAMENT. By **EDWARD ROBINSON**, D.D., LL.D., Professor of Biblical Literature in the Union Theological Seminary, New York; Author of "Biblical Researches in Palestine," &c. A New Edition (1850), revised, and in great part re-written. In One large Volume, 8vo. 18s. cloth.

**ROGERS.—ESSAYS SELECTED FROM CONTRIBUTIONS**

To the EDINBURGH REVIEW. By **HENRY ROGERS**. 2 vols. 8vo. 24s. cloth.

**RONALDS.—THE FLY-FISHER'S ENTOMOLOGY.**

Illustrated by coloured Representations of the Natural and Artificial Insect; and accompanied by a few Observations and Instructions relative to Trout and Grayling Fishing. By **ALFRED RONALDS**. 4th Edition, corrected; with Twenty Copperplates. 8vo. 14s. cloth.

**ROVINGS IN THE PACIFIC, FROM 1837 TO 1849;**

With a GLANCE at CALIFORNIA. By A MERCHANT LONG RESIDENT AT TAHITI. With Four Illustrations printed in colours. 2 vols. post 8vo. 21s. cloth.

**ROWTON.—THE DEBATER;**

Being a Series of complete Debates, Outlines of Debates, and Questions for Discussion; with ample References to the best Sources of Information on each particular Topic. By **FREDERIC ROWTON**, Author of "The Female Poets of Great Britain." New Edition. Fcp. 8vo. 6s. cloth.

**SCHLEIDEN.—PRINCIPLES OF SCIENTIFIC BOTANY;**

Or, Botany as an Inductive Science. By **DR. M. J. SCHLEIDEN**, Extraordinary Professor of Botany in the University of Jena. Translated by **EDWIN LANKESTER**, M.D. F.R.S. F.L.S. Lecturer on Botany at the St. George's School of Medicine, London. 8vo. with Plates and Woodcuts, 21s. cloth.

**SCOFFERN.—THE MANUFACTURE OF SUGAR,**

In the Colonies and at Home, chemically considered. By **JOHN SCOFFERN**, M.B. Lond. late Professor of Chemistry at the Aldersgate College of Medicine. 8vo. with Illustrations (one coloured) 10s. 6d. cloth.

**SEAWARD.—SIR EDWARD SEAWARD'S NARRATIVE OF HIS SHIPWRECK,** and consequent Discovery of certain Islands in the Caribbean Sea; with a detail of many extraordinary and highly interesting Events in his Life, from 1733 to 1749, as written in his own Diary. Edited by Miss JANE PORTER. Third Edition, with a New Nautical and Geographical Introduction. 2 vols. post 8vo. 21s. cloth.

**SEWELL.—AMY HERBERT.**

By a LADY. Edited by the Rev. WILLIAM SEWELL, B.D. Fellow and Tutor of Exeter College, Oxford. New Edition. 2 vols. fcp. 8vo. 9s. cloth.

**SEWELL.—THE EARL'S DAUGHTER.**

By the Authoress of "Amy Herbert," "Gertrude," "Laneton Parsonage," "Margaret Percival," and "The Child's History of Rome." Edited by the Rev. WILLIAM SEWELL, D.D. Fellow and Tutor of Exeter College, Oxford. 2 vols. fcp. 8vo. 9s. cloth.

**SEWELL.—GERTRUDE.**

A Tale. By the Authoress of "Amy Herbert." Edited by the Rev. WILLIAM SEWELL, B.D. Fellow and Tutor of Exeter College, Oxford. New Edition. 2 vols. fcp. 8vo. 9s. cloth.

**SEWELL.—LANETON PARSONAGE:**

A Tale for Children, on the Practical Use of a portion of the Church Catechism. By the Authoress of "Amy Herbert." Edited by the Rev. W. SEWELL, B.D. Fellow and Tutor of Exeter College, Oxford. New Edition. 3 vols. fcp. 8vo. 16s. cloth.

**SEWELL.—MARGARET PERCIVAL.**

By the Authoress of "Amy Herbert." Edited by the Rev. W. SEWELL, B.D. Fellow and Tutor of Exeter College, Oxford. New Edition. 2 vols. fcp. 8vo. 12s. cloth.

**SHAKSPEARE, BY BOWDLER.**

THE FAMILY SHAKSPEARE; in which nothing is added to the Original Text; but those words and expressions are omitted which cannot with propriety be read aloud. By T. BOWDLER, Esq. F.R.S. New Edition. 8vo. with 36 Engravings on Wood, from designs by Smirke, Howard, and other Artists, 21s. cloth; or, in 8 vols. 8vo. without Illustrations, £4. 14s. 6d. boards.

**SHARP'S BRITISH GAZETTEER.**

A NEW and COMPLETE BRITISH GAZETTEER, or TOPOGRAPHICAL DICTIONARY of the UNITED KINGDOM. Containing a Description of every Place, and the principal Objects of Note, founded upon the Ordnance Surveys, the best Local and other Authorities, and the most recent Official Documents connected with Population, Constituencies, Corporate and Ecclesiastical Affairs, Poor Laws, Education, Charitable Trusts, Railways, Trade, &c. By J. A. SHARP. In Two very large Volumes, 8vo. uniform with Johnston's *New General Gazetteer of the World*. [In the press.]

**SHORT WHIST:**

Its Rise, Progress, and Laws; with Observations to make anyone a Whist Player; containing also the Laws of Piquet, Cassino, Ecarté, Cribbage, Backgammon. By Major A\*\*\*\*\*. New Edition. To which are added, Precepts for Tyros. By Mrs. B\*\*\*\*. Fcp. 8vo. 3s. cloth.

**SINCLAIR.—THE BUSINESS OF LIFE.**

By CATHERINE SINCLAIR, Author of "The Journey of Life," "Modern Society," "Jane Bouverie," &c. 2 vols. fcp. 8vo. 10s. cloth.

**SINCLAIR.—THE JOURNEY OF LIFE.**

By CATHERINE SINCLAIR, Author of "The Business of Life," "Modern Society," "Jane Bouverie," &c. New Edition, corrected and enlarged. Fcp. 8vo. 5s. cloth.

**SIR ROGER DE COVERLEY.**

From *The Spectator*. With Notes and Illustrations, by W. HENRY WILLS; and Twelve fine Wood Engravings, by John Thompson, from Designs by FREDERICK TAYLER. Crown 8vo. 15s. boards; or 27s. bound in morocco by Hayday.

**THE SKETCHES:**

Three Tales. By the Authors of "Amy Herbert," "The Old Man's Home," and "Hawkstone." New Edition. Fcp. 8vo. with 6 Plates, 8s. cloth.

**SMEE.—ELEMENTS OF ELECTRO-METALLURGY.**

By ALFRED SMEE, F.R.S., Surgeon to the Bank of England. Third Edition, revised, corrected, and considerably enlarged; with Electrotypes and numerous Woodcuts. Post 8vo. 10s. 6d. cloth.

**SMITH.—THE WORKS OF THE REV. SYDNEY SMITH:**

Including his Contributions to *The Edinburgh Review*. New Edition, complete in One Volume; with Portrait by E. U. Eddis, engraved in line by W. Greatbach, and View of Combe Florey Rectory, Somerset. Square crown 8vo. 21s. cloth; 30s. calf extra, by Hayday; or in 3 vols. 8vo. with Portrait, 36s. cloth.

**SMITH.—ELEMENTARY SKETCHES OF MORAL PHILOSOPHY,** delivered at the Royal Institution in the Years 1804, 1805, and 1806. By the late

Rev. SYDNEY SMITH, M.A. With an Introductory Letter to Mrs. Sydney Smith from the late Lord Jeffrey. Second Edition. 8vo. 12s. cloth.

**SMITH.—SERMONS PREACHED AT ST. PAUL'S CATHEDRAL,** the Foundling Hospital, and several Churches in London; together with others

addressed to a Country Congregation. By the late Rev. SYDNEY SMITH, Canon Residentiary of St. Paul's Cathedral. 8vo. 12s. cloth.

**SMITH.—THE DOCTRINE OF THE CHERUBIM:**

Being an Inquiry, Critical, Exegetical, and Practical, into the Symbolical Character and Design of the Cherubic Figure of Holy Scripture. By GEORGE SMITH, F.A.S., &c. Post 8vo. 3s. cloth.

**SMITH.—SACRED ANNALS;**

Or, Researches into the History and Religion of Mankind, from the Creation of the World to the Death of Isaac: deduced from the Writings of Moses and other Inspired Authors, copiously illustrated and confirmed by the Ancient Records, Traditions, and Mythology of the Heathen World. By GEORGE SMITH, F.A.S. Crown 8vo. 10s. cloth.

**SMITH.—THE HEBREW PEOPLE;**

Or, the History and Religion of the Israelites, from the Origin of the Nation to the Time of Christ: deduced from the Writings of Moses and other Inspired Authors; and illustrated by copious References to the Ancient Records, Traditions, and Mythology of the Heathen World. By GEORGE SMITH, F.A.S. &c. Forming the Second Volume of *Sacred Annals*. Crown 8vo. in Two Parts, 12s. cloth.

**SMITH.—THE RELIGION OF ANCIENT BRITAIN HISTORICALLY CONSIDERED:** or, a Succinct Account of the several Religious Systems which have

obtained in this Island from the Earliest Times to the Norman Conquest: including an Investigation into the Early Progress of Error in the Christian Church, the Introduction of the Gospel into Britain, and the State of Religion in England till Popery had gained the ascendancy. By GEORGE SMITH, F.A.S. New Edition. 8vo. 7s. 6d. cloth.

**SMITH.—PERILOUS TIMES;**

Or, the Aggressions of Antichristian Error on Scriptural Christianity, considered in reference to the Dangers and Duties of Protestants. By GEORGE SMITH, F.A.S. Fcp. 8vo. 6s. cloth.

**SMITH.—THE VOYAGE AND SHIPWRECK OF ST. PAUL:**

with Dissertations on the Sources of the Writings of St. Luke, and the Ships and Navigation of the Ancients. By JAMES SMITH, Esq. of Jordan Hill, F.R.S. 8vo. with Views, Charts, and Woodcuts, 14s. cloth.

**SNOW.—VOYAGE OF THE PRINCE ALBERT IN SEARCH OF SIR JOHN FRANKLIN: A Narrative of Every-day Life in the Arctic Seas.** By W. PARKER SNOW. With a Chart, and 4 Illustrations printed in Colours. Post 8vo. 12s. cloth.

**THE LIFE AND CORRESPONDENCE OF THE LATE ROBERT SOUTHEY.** Edited by his Son, the Rev. CHARLES CUTBERT SOUTHEY M.A., Vicar of Ardeleigh. With numerous Portraits, and Six Landscape Illustrations from Designs by William Westall, A.R.A. 6 vols. post 8vo. 63s. cloth.

\*.\* Each of the Six Volumes may be had separately, price 10s. 6d.

**SOUTHEY'S COMMONPLACE BOOK—FOURTH SERIES.**

FOURTH and last SERIES; being ORIGINAL MEMORANDA, and comprising Collections, Ideas, and Studies for Literary Compositions in general; Collections for a History of English Literature and Poetry; Characteristic English Anecdotes, and Fragments for *Espritella*; Collections for *The Doctor &c.*; Personal Observations and Recollections, with Fragments of Journals; Miscellaneous Anecdotes and Gleanings; Extracts, Facts, and Opinions relating to Political and Social Society; Texts for Sermons; Texts for Enforcement; and L'Envoy; forming a single Volume complete in itself. Edited by Mr. Southey's Son-in-law, the Rev. J. W. WARTER, B.D. Square crown 8vo. 21s. cloth.

**SOUTHEY'S COMMONPLACE BOOK—THIRD SERIES.**

Being ANALYTICAL READINGS; and comprising *Analytical Readings*, with Illustrations and copious *Extracts*, of Works in English Civil History; English Ecclesiastical History; Anglo-Irish History; French History; French Literature; Miscellaneous Foreign Civil History; General Ecclesiastical History; Historical Memoirs; Ecclesiastical Biography; Miscellaneous Biography; Correspondence; Voyages and Travels; Topography; Natural History; Divinity; Literary History; Miscellaneous Literature; and Miscellanies. Forming a single Volume complete in itself. Edited by Mr. Southey's Son-in-law, the Rev. J. W. WARTER, B.D. Square crown 8vo. 21s. cloth.

**SOUTHEY'S COMMONPLACE BOOK—SECOND SERIES.**

Comprising SPECIAL COLLECTIONS—viz. Ecclesiastical, or Notes and Extracts on Theological Subjects (with Collections concerning Cromwell's Age); Spanish and Portuguese Literature; Middle Ages, &c.; Notes for the History of the Religious Orders; Orientalia, or Eastern and Mahomedan Collections; American Tribes; Incidental and Miscellaneous Illustrations; Physica, or Remarkable Facts in Natural History; and Curious Facts, quite Miscellaneous. Forming a single Volume complete in itself. Edited by Mr. Southey's Son-in-law, the Rev. J. W. WARTER, B.D. Square crown 8vo. 18s. cloth.

**SOUTHEY'S COMMONPLACE BOOK—FIRST SERIES.**

Comprising CHOICE PASSAGES, Moral, Religious, Political, Philosophical, Historical, Poetical, and Miscellaneous; and COLLECTIONS for the History of Manners and Literature in England. Forming a single Volume complete in itself. Edited by Mr. Southey's Son-in-law, the Rev. J. W. WARTER, B.D. New Edition; with medallion Portrait of Southey. Square crown 8vo. 18s. cloth.

**SOUTHEY'S THE DOCTOR &c. COMPLETE IN ONE VOLUME.**

The DOCTOR &c. By the late ROBERT SOUTHEY. Complete in One Volume. Edited by Mr. Southey's Son-in-law, the Rev. JOHN WOOD WARTER, B.D. With Portrait, Vignette, Bust of the Author, and coloured Plate. New Edition. Square crown 8vo. 21s. cloth.

**ROBERT SOUTHEY'S COMPLETE POETICAL WORKS;**

Containing all the Author's last Introductions and Notes. Complete in One Volume, with Portrait and View of the Poet's Residence at Keswick; uniform with Lord Byron's and Moore's Poems. Medium 8vo. 21s. cloth; 42s. bound in morocco.—Or, in 10 vols. fcp. 8vo. with Portrait and 19 Plates, £2. 10s. cloth; morocco, £4. 10s.

**SOUTHEY.—SELECT WORKS OF THE BRITISH POETS,**

From Chaucer to Lovelace, inclusive. With Biographical Sketches by the late ROBERT SOUTHEY. Medium 8vo. 2s. cloth.

**SOUTHEY.—THE LIFE OF WESLEY;**

And Rise and Progress of Methodism. By ROBERT SOUTHEY, New Edition, with Notes by the late Samuel Taylor Coleridge, Esq., and Remarks on the Life and Character of John Wesley, by the late Alexander Knox, Esq. Edited by the Author's Son, the Rev. CHARLES CUTBERT SOUTHEY, M.A. Vicar of Ardeleigh. 2 vols. 8vo. with 2 Portraits, 28s. cloth.

**STEEL'S SHIPMASTER'S ASSISTANT;**

Compiled for the use of Merchants, Owners and Masters of Ships, Officers of Customs, and all Persons connected with Shipping or Commerce; containing the Law and Local Regulations affecting the Ownership, Charge, and Management of Ships and their Cargoes; together with Notices of other Matters, and all necessary Information for Mariners. New Edition, rewritten throughout. Edited by GRAHAM WILLMORE, Esq. M.A. Barrister-at-Law; GEORGE CLEMENTS, of the Customs, London; and WILLIAM TATE, Author of "The Modern Cambist." 8vo. 28s. cloth; or, 29s. bound.

**STEPHEN.—ESSAYS IN ECCLESIASTICAL BIOGRAPHY.**

From The Edinburgh Review. By the Right Hon. Sir JAMES STEPHEN, K.C.B., Professor of Modern History in the University of Cambridge. Second Edition. 2 vols. 8vo. 24s. cloth.

**STOW.—THE TRAINING SYSTEM, THE MORAL TRAINING**

SCHOOL, and the NORMAL SEMINARY. By DAVID STOW, Esq. Honorary Secretary to the Glasgow Normal Free Seminary; Author of "Moral Training," &c. 8th Edition, corrected and enlarged; with Plates and Woodcuts. Post 8vo. 6s. cloth.

**SWAIN.—ENGLISH MELODIES.**

By CHARLES SWAIN, Author of "The Mind, and other Poems." Fcp. 8vo. 6s. cloth; bound in morocco, 12s.

**SYMONS.—THE LAW RELATING TO MERCHANT SEAMEN,**

Arranged chiefly for the use of Masters and Officers in the British Merchant Service. With an Appendix, containing the Navigation Act; the Mercantile Marine Act, 1850; the general Merchant Seamen's Act; the Seamen's Protection Act; the Notice of Examinations of Masters and Mates; and the Scale of Medicines (Dec. 13, 1850) and Medical Stores (Dec. 20, 1850) issued by the Board of Trade. By EDWARD WILLIAM SYMONS, Chief Clerk of the Thames Police Court. 4th Edition. 12mo. 5s. cloth.

**TATE.—ON THE STRENGTH OF MATERIALS;**

Containing various original and useful Formulae, specially applied to Tubular Bridges, Wrought Iron and Cast Iron Beams, &c. By THOMAS TATE, of Kneller Training College, Twickenham; late Mathematical Professor and Lecturer on Chemistry in the National Society's Training College, Battersea; Author of "Exercises on Mechanics and Natural Philosophy." 8vo. 5s. 6d. cloth.

**TAYLER.—MARGARET;**

Or, the Pearl. By the Rev. CHARLES B. TAYLER, M.A. Rector of St. Peter's, Chester, Author of "Lady Mary, or Not of the World," &c. New Edition. Fcp. 8vo. 6s. cloth.

**TAYLER.—LADY MARY;**

Or, Not of the World. By the Rev. CHARLES B. TAYLER, Rector of St. Peter's, Chester; Author of "Margaret, or the Pearl," &c. New Edition; with a Frontispiece engraved by J. ABSOLON. Fcp. 8vo. 6s. 6d. cloth.

**TAYLOR.—THE VIRGIN WIDOW:**

a Play. By HENRY TAYLOR, Author of "The Statesman," "Philip Van Artevelde," "Edwin the Fair," &c. Fcp. 8vo. 6s. cloth.

**TAYLOR.—LOYOLA: AND JESUITISM IN ITS RUDIMENTS.**

By ISAAC TAYLOR, Author of "Natural History of Enthusiasm," &c. Post 8vo. 10s. 6d. cloth.

**THIRLWALL.—THE HISTORY OF GREECE.**

By the Right Rev. the Lord Bishop of Sr. David's (the Rev. Connop Thirlwall). A New Edition, revised; with Notes. Vols. I. to V. 8vo. with Maps, 6s. cloth. To be completed in 8 volumes, price 12s. each. [Vol. VI. nearly ready.]

\*.\* Also, an Edition in 8 vols. fcp. 8vo. with Vignette Titles, £2. 8s. cloth.

**A HISTORY OF GREECE, FROM THE EARLIEST TIMES**

to the TAKING of CORINTH by the ROMANS, B.C. 146, mainly based upon Bishop Thirlwall's History of Greece. By Dr. LEONHARD S. DIMITZ, F.R.S.E., Rector of the High School of Edinburgh. Second Edition. 12mo. 7s. 6d. cloth.

**THOMAS'S INTEREST TABLES.—A NEW SET OF INTEREST**

TABLES, from One to Three per Cent. per Annum, calculated by Eighths per Cent. By WILLIAM THOMAS. 4to. [Nearly ready.]

**THOMSON'S SEASONS.**

Edited by BOLTON CORNEY, Esq. Illustrated with Seventy-seven Designs drawn on Wood, by Members of the Etching Club. Engraved by Thompson and other eminent Engravers. Square crown 8vo. uniform with *Goldsmith's Poems illustrated by the Etching Club*, 21s. cloth; or, bound in morocco, by Hayday, 36s.

**THOMSON'S SEASONS.**

Edited, with Notes, Philosophical, Classical, Historical, and Biographical, by ANTHONY TODD THOMSON, M.D. F.L.S. Fcp. 8vo. 7s. 6d. cloth.

**THOMSON.—THE DOMESTIC MANAGEMENT OF THE SICK**

ROOM, necessary, in Aid of Medical Treatment, for the Cure of Diseases. By ANTHONY TODD THOMSON, M.D. F.L.S. late Professor of Materia Medica and Therapeutics, and of Forensic Medicine, in University College, London. New Edition. Post 8vo. 10s. 6d. cloth.

**THOMSON.—TABLES OF INTEREST,**

At Three, Four, Four-and-a-Half, and Five per Cent., from One Pound to Ten Thousand, and from One to Three Hundred and sixty-five Days, in a regular progression of single Days; with Interest at all the above Rates, from One to Twelve Months, and from One to Ten Years. Also, numerous other Tables of Exchanges, Time, and Discounts. By JOHN THOMSON, Accountant. New Edition. 12mo. 8s. bound.

**THOMSON.—SCHOOL CHEMISTRY;**

Or, Practical Rudiments of the Science. By ROBERT DUNDAS THOMSON, M.D. Master in Surgery in the University of Glasgow. Fcp. 8vo. with Woodcuts, 7s. cloth.

**THE THUMB BIBLE;**

Or, Verbum Scripturæ. By J. TAYLOR. Being an Epitome of the Old and New Testaments in English Verse. A New Edition (1870), printed from the Edition of 1693, by C. Whittingham, Chiswick. 6mo. 1s. 6d. bound and clasped.

**TOMLINE.—AN INTRODUCTION TO THE STUDY OF THE**

BIBLE: containing Proofs of the Authenticity and Inspiration of the Holy Scriptures; a Summary of the History of the Jews; an Account of the Jewish Sects; and a brief Statement of the Contents of the several Books of the Old and New Testaments. By GEORGE TOMLINE, D.D. F.R.S. New Edition. Fcp. 8vo. 5s. 6d. cloth.

**TOOKE.—THE HISTORY OF PRICES:**

With reference to the Causes of their principal Variations, from the year 1792 to the year 1838, inclusive. Preceded by a Sketch of the History of the Corn Trade in the last Two Centuries. By THOMAS TOOKE, Esq. F.R.S. 3 vols. 8vo. £2. 8s. cloth.

**TOOKE.—THE HISTORY OF PRICES, AND OF THE STATE**

of the CIRCULATION from 1639 to 1847, inclusive: with a general Review of the Currency Question, and Remarks on the Operation of the Acts 7 and 8 Vict. c. 32: being a continuation of *The History of Prices, from 1792 to 1839*. By T. TOOKE, Esq. F.R.S. 8vo. 18s. cloth.

**TOWNSEND.—MODERN STATE TRIALS.**

Revised and Illustrated with Essays and Notes. By WILLIAM CHARLES TOWNSEND, Esq. M.A., Q.C., late Recorder of Macclesfield; Author of "Lives of Twelve Eminent Judges of the Last and of the Present Century," &c. 2 vols. 8vo. 30s. cloth.

**TOWNSEND.—THE LIVES OF TWELVE EMINENT JUDGES**

of the LAST and of the PRESENT CENTURY. By W. CHARLES TOWNSEND, Esq. M.A. Q.C. late Recorder of Macclesfield; Author of "Memoirs of the House of Commons." 2 vols. 8vo. 28s. cloth.

**TURNER.—THE SACRED HISTORY OF THE WORLD,**

Attempted to be Philosophically considered, in a Series of Letters to a Son. By SHARON TURNER, F.S.A. and R.A.S.L. New Edition, edited by the Rev. SYDNEY TURNER. 3 vols. post 8vo. 31s. 6d. cloth.

**DR. TURTON'S MANUAL OF THE LAND AND FRESH-**

WATER SHELLS of the BRITISH ISLANDS. A New Edition, thoroughly revised and with considerable Additions. By JOHN EDWARD GRAY, Keeper of the Zoological Collection in the British Museum. Post 8vo. with Woodcuts, and 12 Coloured Plates 15s. cloth.

**TWELVE YEARS AGO: A TALE.**

By the Authoress of "Letters to my Unknown Friends," "Some Passages from Modern History," "Discipline," and "Letters on Happiness." Fcp. 8vo. 6s. 6d. cloth.

**TWINING.—ON THE PHILOSOPHY OF PAINTING:**

A Theoretical and Practical Treatise; comprising Aesthetics in reference to Art—the Application of Rules to Painting—and General Observations on Perspective. By H. TWINING, Esq. Imperial 8vo. with numerous Plates and Wood Engravings, 21s. cloth.

**TWISS.—THE LETTERS APOSTOLIC OF POPE PIUS IX.**

Considered with reference to the Law of England and the Law of Europe. With an Appendix of Documents. By TRAVERS TWISS, D.C.L., of Doctors' Commons; Fellow of University College, Oxford; and Commissary-General of the Diocese of Canterbury. 8vo. 9s. cloth.

**URE.—DICTIONARY OF ARTS, MANUFACTURES, & MINES;**

Containing a clear Exposition of their Principles and Practice. By ANDREW URE, M.D. F.R.S. M.G.S. M.A.S. Lond.; M. Acad. N.L. Philad.; S. Ph. Soc. N. Germ. Hanov.; Mulli. &c. &c. New Edition, corrected. 8vo. with 1,241 Engravings on Wood, 50s. cloth.—Also,

SUPPLEMENT of RECENT IMPROVEMENTS. New Edition. 8vo. with Woodcuts, 14s. cloth.

**WATERTON.—ESSAYS ON NATURAL HISTORY,**

Chiefly Ornithology. By CHARLES WATERTON, Esq., Author of "Wanderings in South America." With an Autobiography of the Author, and Views of Walton Hall. New Edition. 2 vols. fcp. 8vo. 14s. 6d. cloth.

\*.\* Separately—Vol. I. (First Series), 8s.; Vol. II. (Second Series), 6s. 6d.

**ALARIC WATTS'S POETRY AND PAINTING.—LYRICS OF THE HEART,** and other Poems. By ALARIC A. WATTS. With Forty-one highly-finished Line-Engravings, executed expressly for this work by the most eminent Painters and Engravers.

In One Volume, square crown 8vo. price 31s. 6d. boards, or 45s. bound in morocco by Hayday; Proof Impressions, 63s. boards.—Plain Proofs, 41 Plates, demy 4to. (only 100 copies printed) £2. 2s. in portfolio; India Proofs before letters, colombier 4to. (only 50 copies printed), £3. 5s. in portfolio.

**WEBSTER.—AN ENCYCLOPEDIA OF DOMESTIC ECONOMY;**

Comprising such subjects as are most immediately connected with Housekeeping; as, The Construction of Domestic Edifices, with the modes of Warming, Ventilating, and Lighting them—A description of the various articles of Furniture, with the nature of their Materials—Duties of Servants, &c. &c. By THOMAS WEBSTER, F.G.S.; assisted by the late Mrs. Parkes. New Edition. 8vo. with nearly 1,000 Woodcuts, 50s. cloth.

**WESTWOOD.—AN INTRODUCTION TO THE MODERN CLASSIFICATION OF INSECTS;**

founded on the Natural Habits and compounding Organisation of the different Families. By J. O. WESTWOOD, F.L.S. &c. &c. 2 vols. 8vo. with numerous Illustrations, £2. 7s. cloth.

**WHEATLEY.—THE ROD AND LINE;**

Or, Practical Hints and Dainty Devices for the sure taking of Trout, Grayling, &c. By HEWETT WHEATLEY, Esq. Senior Angler. Fcp. 8vo. with Nine coloured Plates, 10s. 6d. cloth.

**WILBERFORCE.—A PRACTICAL VIEW OF THE PREVAILING RELIGIOUS SYSTEMS OF PROFESSED CHRISTIANS,**

in the Higher and Middle Classes in this Country, contrasted with Real Christianity. By WM. WILBERFORCE, Esq. M.P. New Editions. 8vo. 8s. boards; or fcp. 8vo. 4s. 6d. cloth.

**LADY WILLOUGHBY'S DIARY.**

So much of the Diary of Lady Willoughby as relates to her Domestic History, and to the Eventful Reign of King Charles the First, the Protectorate, and the Restoration (1635 to 1663). Printed, ornamented, and bound in the style of the period to which *The Diary* refers. New Edition; in Two Parts. Square fcp. 8vo. 8s. each, boards; or 18s. each, bound in morocco.

**YOUATT.—THE HORSE.**

By WILLIAM YOUATT. With a Treatise of Draught. A New Edition; with numerous Wood Engravings, from Designs by William Harvey. 8vo. 10s. cloth.

Messrs. Longman and Co.'s Edition should be ordered.

**YOUATT.—THE DOG.**

By WILLIAM YOUATT. A New Edition; with numerous Wood Engravings, from Designs by William Harvey. 8vo. 6s. cloth.

\*.\* The above works, which were prepared under the superintendence of the Society for the Diffusion of Knowledge, are now published by Messrs. Longman and Co., by assignment from Mr. Charles Knight. It is to be observed that the edition of Mr. Youatt's book on the Horse which Messrs. Longman and Co. have purchased from Mr. Knight, is that which was thoroughly revised by the author, and thereby rendered in many respects a new work. The engravings, also, were greatly improved. Both works are the most complete treatises in the language on the History, Structure, Diseases, and Management of the Animals of which they treat.

**ZUMPT'S GRAMMAR OF THE LATIN LANGUAGE.**

Translated and adapted for the use of English Students, with the Author's sanction and co-operation, by Dr. L. SCHMITZ, F.R.S.E., Rector of the High School of Edinburgh; with copious Corrections and Additions communicated to Dr. Schmitz, for the authorised English Translation, by Professor ZUMPT. New Edition, corrected. 8vo. 14s. cloth.

[March 31, 1851.]

# LARDNER'S CABINET CYCLOPÆDIA.

A SERIES OF ORIGINAL WORKS.

PRICE THREE SHILLINGS AND SIXPENCE EACH VOLUME

*The Series, in 132 Volumes, £19. 19s.*

- The LIVES of British DRAMATISTS. By Dr. Dunham, R. Bell, Esq. &c. 2 vols. 7s.
- The EARLY WRITERS of GREAT BRITAIN. By Dr. Dunham, R. Bell, Esq. &c. 1 vol. 3s. 6d.
- LIVES of the most Eminent FOREIGN STATESMEN. By G. P. R. James, Esq. and E. E. Crowe, Esq. 5 vols. 17s. 6d.
- LIVES of the most Eminent FRENCH WRITERS. By Mrs. Shelley, and others. 2 vols. 7s.
- LIVES of the most Eminent LITERARY MEN of ITALY, SPAIN, and PORTUGAL. By Mrs. Shelley, Sir D. Brewster, J. Montgomery, &c. 3 vols. 10s. 6d.
- A PRELIMINARY DISCOURSE on the STUDY of NATURAL PHILOSOPHY. By Sir John Herschel. 1 vol. 3s. 6d.
- The HISTORY of NATURAL PHILOSOPHY, from the earliest Periods to the present Time. By Baden Powell, A.M. Savilian Professor of Mathematics in the University of Oxford. 1 vol. 3s. 6d.
- A TREATISE on ARITHMETIC. By D. Lardner, LL.D. F.R.S. 1 vol. 3s. 6d.
- A TREATISE on ASTRONOMY. By Sir John Herschel. 1 vol. 3s. 6d.
- A TREATISE on MECHANICS. By Capt. Kater and Dr. Lardner. 1 vol. 3s. 6d.
- A TREATISE on OPTICS. By Sir D. Brewster, LL.D. F.R.S. &c. 1 vol. 3s. 6d.
- A TREATISE on HEAT. By Dr. Lardner. 1 vol. 3s. 6d.
- A TREATISE on CHEMISTRY. By Michael Donovan, M.R.I.A. 1 vol. 3s. 6d.
- A TREATISE on HYDROSTATICS and PNEUMATICS. By Dr. Lardner. 1 vol. 3s. 6d.
- An ESSAY on PROBABILITIES, and on their application to Life Contingencies and Insurance Offices. By Aug. De Morgan, of Trinity College, Cambridge. 1 vol. 3s. 6d.
- A TREATISE on GEOMETRY, and its application to the Arts. By Dr. Lardner. 1 vol. 3s. 6d.
- A MANUAL of ELECTRICITY, MAGNETISM, and METEOROLOGY. By D. Lardner, D.C.L. F.R.S. &c.; and C. V. Walker, Esq. Secretary to the Electrical Society. 2 vols. 7s.
- A TREATISE on the MANUFACTURE of SILK. By G. R. Porter, Esq. F.R.S. Author of "The Progress of the Nation," &c. 1 vol. 3s. 6d.
- A TREATISE on the MANUFACTURES of PORCELAIN and GLASS. By G. R. Porter, Esq. F.R.S. 1 vol. 3s. 6d.
- A TREATISE on the MANUFACTURES in METAL. By J. Holland, Esq. 3 vols. 10s. 6d.
- A TREATISE on DOMESTIC ECONOMY. By M. Donovan, Esq. M.R.I.A. Professor of Chemistry to the Company of Apothecaries in Ireland. 2 vols. 7s.
- A PRELIMINARY DISCOURSE on the STUDY of NATURAL HISTORY. By W. Swainson, Esq. F.R.S. L.S. 1 vol. 3s. 6d.
- On the HABITS and INSTINCTS of ANIMALS. By William Swainson, Esq. 1 vol. 3s. 6d.
- A TREATISE on the NATURAL HISTORY & CLASSIFICATION of ANIMALS. By W. Swainson, Esq. 1 vol. 3s. 6d.
- On the NATURAL HISTORY and CLASSIFICATION of QUADRUPEDS. By W. Swainson, Esq. 1 vol. 3s. 6d.
- On the NATURAL HISTORY and CLASSIFICATION of BIRDS. By W. Swainson, Esq. 2 vols. 7s.
- ANIMALS in MENAGERIES. By W. Swainson, Esq. 1 vol. 3s. 6d.
- On the NATURAL HISTORY and CLASSIFICATION of FISH, REPTILES, &c. By W. Swainson, Esq. 2 vols. 7s.
- The HISTORY and NATURAL ARRANGEMENT of INSECTS. By W. Swainson, Esq. and W. E. Shuckard, Esq. 1 vol. 3s. 6d.
- A TREATISE on MALACOLOGY; or, the Natural Classification of Shells and Shell-Fish. By William Swainson, Esq. 1 vol. 3s. 6d.
- TREATISE on TAXIDERMY. With the Biography of the Zoologists, and Notices of their Works. 1 vol. 3s. 6d.
- A TREATISE on GEOLOGY. By John Phillips, F.R.S. G.S. Professor of Geology, King's College, London. 2 vols. 7s.
- The PRINCIPLES of DESCRIPTIVE and PHYSIOLOGICAL BOTANY. By the Rev. J. S. Henslow, M.A. &c. 1 vol. 3s. 6d.

LONDON: LONGMAN, BROWN, GREEN, AND LONGMANS.

