

Constituents of Soils," in the following words:—

"In the preceding part of the chapter we have inserted a number of analysis of various soils, as well as the conclusions deduced from them, by means of which the farmer may be enabled to ascertain the manures best adapted for each variety of soil. By inspecting the analysis of the sterile soils, it will be apparent that it is in the power of chemistry to point out the causes of their sterility. The general cause which conduces to the sterility of soils is either the absence of certain constituents indispensable to the growth of plants, or the presence of others which exert an injurious or poisonous action. The analysis are those of Doctor Sprengel,—a chemist who has unceasingly occupied himself for the last twenty years in endeavouring to point out the importance of the organic ingredients of a soil for the development of plants cultivated upon it.—He considers as essential all the inorganic bodies found in the ashes of plants. Sprengel has shown that mineral manures, such as ashes, marl, &c., afford to a soil alkalies, phosphates, and sulphates; and further that they can exert a notable influence only on those soils in which they are absent or deficient. In a former chapter I have endeavoured to point out the importance of considering these constituents as intimately connected with the vital processes of the vegetable organism, and have shown that the different families of plants, contain unequal quantities of inorganic ingredients. This subject is of much importance; for the application of manures must be regulated by the composition of the plants which are cultivated upon any particular soil. Still the composition of the soil must always be kept in view. Thus it would be perfect extravagance to manure certain soils with ashes, marl, or gypsum; whilst, on the contrary, these compounds would produce the most beneficial results on other lands.

"In a former part of the work, the principal action of gypsum upon vegetables was ascribed to the decomposition and fixation of the carbonate of ammonia contained in rain-water; but gypsum exerts a two-fold action. The power of decomposing the carbonate of ammonia, and of fixing the ammonia, is not peculiar to gypsum, but is absorbed also by other salts of lime, (chloride of calcium for example). But it acts also as a sulphate, and when useful as such cannot be replaced by any other salt of lime which does not contain sulphuric acid.

"Hence gypsum can be replaced as a manure only by a mixture of salt of lime with ammonia, and a salt of sulphuric acid. Sulphate of ammonia can therefore be substituted for gypsum, and exerts a more rapid and effectual action. In France, sulphuric acid has been poured upon the fields after the removal of the crops, and has been found to form a good manure. But this is merely a process of forming gypsum *in situ*; for the soils upon which it is applied contain much lime, which enters into combination with the sulphuric acid. It would certainly be much more advantageous to form sulphate of ammonia by adding the acid to putrified urine, and to apply this mixture to the field."

A great means of happiness is a constant employment for a desirable end, and a consciousness of advancement towards that end.—*Selected.*

AMERICAN AND ENGLISH WOMEN CONTRASTED.—Our girl, with her delicate features, and nymph-like figure, is far more lovely in her first freshness than the Eng-

lish; but the English woman, in her ripeness and full development, far surpasses ours. She is superb from twenty to twenty-five.—*Miss Sedgwick.*

It is unquestionably true that wealth produces wants, but it is still a more important truth that wants produce wealth. Each cause acts and re-acts upon the other; but the order both of precedence and of importance, is with the wants which stimulate to industry; and with regard to these, it appears that, instead of being always ready to second the physical powers of man, they require for their development "all appliances and means to boot." The greatest of all difficulties in converting uncivilized and thinly peopled countries into civilized and populous ones, is to inspire them with the wants best calculated to excite their exertions in the production of wealth. One of the greatest benefits which foreign commerce confers, and the reason why it has always appeared an almost accessory ingredient in the progress of wealth, is its tendency to inspire new wants, to form new tastes, and to furnish fresh motives for industry.—*Matthus's Political Economy.*

It is by availing themselves of all the aids of modern science, by laying hold and giving a practical direction to every new scientific discovery, that the manufacturing and mechanical arts have so rapidly advanced in Great Britain. But agriculture, slow and deliberate in her movements, looking backward rather for counsel and direction to the times and ways of her forefathers, than either to the opinions and demands of the present or to the hopes and prospects of the future. Agriculture has availed herself but little of the enlargement of modern knowledge. She has even rudely repelled the cultivators of science when they presumed to intrude upon her domain.—*Blackwoods' Magazine.*

Such is the constitution of the human mind, and so marvellously is it adapted to the changing circumstances in which the race is placed, that there is no situation in which it is not qualified to reap felicity; and all the evils to which at one period it is subjected, are compensated by sources of enjoyment which are then, in a peculiar manner, placed within its reach.—*Selected.*

MATRIMONIAL STATISTICS.—A curious compilation, not yet published, bearing the title of *Paris Moral*, contains the following matrimonial statistics of Paris, in 1837:

Wives who have deserted their husbands	1132
Husbands who have deserted their wives	2348
Couples legally separated	4175
" living in open variance....	17,345
" living in secret variance....	13,279
" mutually indifferent.....	55,140
" reputed happy.....	3175
" nearly happy.....	127
" truly happy.....	13
	96,834

EXTRAORDINARY RAIL-WAY TRAIN.—On Thursday the 14th of July, the six o'clock train, A. M., from Paddington to Taunton, carried the immense and unprecedented number of 2,115 passengers! the great attraction being the Agricultural Meeting at Bristol.—*Berkshire Chron.*

POETRY.

THERE'S A CHARM IN THE WOODS.

BY JAMES STONEHOUSE.

There's a charm in the woods at the beautiful dawn,
When the bright sun is warming the earth with his ray;
When dew-drops, like diamonds, ensparkle the lawn,
And the lark high in air seems to welcome the day.
Then sweet 'tis to rove where the rivulet streams,
Where for ever it singeth its sweet little song;
Oh! the breath of the morning most exquisite seems,
Perfumed by the flowers in floating along.

There's a charm in the woods when the daylight declines,
When the hum of the village no longer is heard,
When the glow-worm's pale lamp on mossy bank shines,
And stilled are the voices of bee and of bird:
Then wander with me: for, though morning may waken
The heart's gayest feelings of gladness and joy,
At the twilight alone earth's care are forsaken,
And we think that such moment possess no alloy.

THE TIME TO PLAY AT CARDS.

When Scott's wild witchery is o'er,
When Byron's verse can charm no more;
When Milton's heavenly muse we scold,
And Shakspeare's magic light is out;
When Ratcliffe, Smollett, Irving, Fielding,
Have lost the power of pleasure yielding;
When Music is no longer blended,
And Humour's stories all are ended;
When Sense, nor Wit, nor Mirth regards,
Then is—the time to play at Cards!

USEFUL RECEIPTS.

TO PREVENT HORSES BEING TEASED BY FLIES.—Take two or three small handfuls of walnut leaves, upon which pour two or three quarts of cold water; let it infuse one night, and pour the whole next morning into a tea-kettle, and let it boil a quarter of an hour; when cold it will be fit for use. No more is required than to moisten a sponge, and before the horse goes out of the stable, let those parts which are most irritable be smeared over with the liquor, namely, between and upon the ears, the neck, the flank, &c. Not only the lady or gentleman who rides out for pleasure will derive benefit from the walnut leaves thus prepared, but the coachman, waggoner, and all others who use horses during the hot months.

TO ERADICATE CORNS.—Take a small piece of flannel which has not been washed, wrap or sew it round the corn and toe. One thickness will be sufficient. Wet the flannel where the corn is night and morning with fine sweet oil. Renew the flannel weekly, and at the same time pare the corn, which will soon disappear.—*Leeds Intelligencer.*

COURAGE.—A traveller, relating his adventures, told the company that he and his servant had made fifty wild Arabs run; which, startling them, he observed, that there was no great matter in it, "for," says he, "we ran, and they ran after us."