

## Identity of the Jews.

To the Jews, however, we make the most triumphant appeal. Their common origin and wide dispersion are notorious facts. Receivers and rejecters of the Bible concur in believing that the Israelites dwelt for centuries on the same soil, and were characterized by the physical peculiarities. National qualities bound them together as a people, while they separated them from the rest of mankind. That they were scattered, and are now dwelling in every land, associated with every phase of civilization, and exposed to an infinite variety of climatic influences, is so well authenticated, as to render proof needless. The proof of this nationality is, in fact, written on their countenances, and read by all people. While other nations blend with those among whom they settle, the posterity of Abraham retain their peculiarities. Britons, Romans, Saxons, and Normans, have merged their distinctions in their common descendants, the present inhabitants of this island; while even the French refugees of recent times have been absorbed into the population of London. We may as well expect oil to mingle with water, as the Jew to unite with the nations of the earth. Had Israel dwelt in its own land, maintained its own polity, and preserved its national peculiarities, the wonder would be lessened. The preservation of distinctive traits, in spite of dispersion, is unique. Thus, although the Jew becomes the subject of every form of government, from the autocracy of Russia, to the democracy of America, he retains his theocratic creed. Neither barbarism the most rude, nor civilization the most refined, have succeeded in altering his peculiar countenance; for in the back woods of the New World, and at the court of the British Sovereign, he is instantly known. Time that changes all things else, seems to stay his rough hand when he approaches the Jew. Compare his lineaments, sculptured in marble and cast in bronze—for the arch and medal still exist—with those of the living Jew, and be convinced of his unchangeableness. The permanence of physiognomy is evidently traceable to a supernatural cause, which prevents the usual modification of features, in order to accomplish an important object. Into this it is not our province now to enter, yet we cannot help remarking that the Jew is a witness not of one truth, but of many truths. Marvellously does he illustrate the consistency of the original unity of man with the most extensive diversity. —*British Quarterly on Ornithology.*

## FINANCIAL REFORM.

On the motion for going into Committee of supply on the Army Estimates, on Friday, March 8th,

Mr. Cobden moved a resolution that the annual expenditure of the country ought to be restored, gradually, but speedily as possible, to the amount which was found sufficient in 1835, namely, £44,422,000. This motion, the hon. Member observed, was not designed as a vote of censure, or in hostility to the Government, but as simply pledging the House to the principles of retrenchment. Much had been said about the benefits to be expected from a redistribution of burdens; but no real advantage was possible except by a reduction of expenditure. The estimates of 1835 were simply taken as a basis for his economical arguments. It was no new course which he was now adopting. From the close of the war the Whigs for many years were always founding their schemes of financial reform upon the model year of 1792. He was not now to be "pooh-poohed" for following their example. Between 1835 and 1850 the interest on the national debt had been reduced by 200,000*l.* annually, while the expenditure on the army, navy, ordnance, and civil services of all sorts, had swollen from 44,395,000*l.* to 59,843,000*l.* Last year he had calculated the increase over the estimates of 1835 at 10,000,000*l.* Since then reductions were effected, amounting to nearly three millions and a half, and another million was promised for the ensuing year. This was highly satisfactory, and afforded encouragement for them to proceed in the work of retrenchment. How this was to be effected Mr. Cobden went on to detail. Basing his calculations on the estimates of 1842, he proposed to effect gradual reductions in the army, navy, and ordnance, to the amount of 5,823,000*l.* So far from leaving the country defenceless, even after this diminution, ten millions annually would still be left to defray the charges of our military armaments. For other items of economy the hon. Member passed in review the various branches of the civil service, which he

divided into seven classes. First, the civil list, where he proposed no change, believing that it was but equitable commutation for the ceded royal properties. Secondly, annuities and pensions, with which he would not interfere, save to enact that the greater proportion should lapse after the decease of their present possessors. Thirdly, in salaries and allowances he expected large reductions, suggesting, among other changes, the abolition of a large number of nearly useless commissionerships. Fourthly, in diplomatic services, which now cost 170,000*l.*, one half might be usefully struck off. The fifth class, that of Courts of Justice, had increased to 1,105,000*l.* from 430,000*l.* in 1835, and provided an ample harvest for the pruning hook. In the sixth and seventh items, consisting of various miscellaneous charges, and amounting to more than four millions—including the cost of public works, and the consular and colonial establishment—a still wider field was afforded. The expenditure contracted by the House of Parliament itself was disgracefully wasteful; and the plans adopted in building the new palace for the Legislature were as wantonly extravagant as could by possibility be devised. The House should begin their retrenchments within their own chamber. From all these items, and from the four or five millions absorbed in the collection, he was not too sanguine in calculating upon an aggregate saving of 650,000*l.* Reverting to the main head of retrenchment, that of the military expenditure, Mr. Cobden argued, that the events of the past twelve months had strengthened all our assurances of continued peace. Still more important were the changes now in progress in our colonies. Free constitutions were promised to the principal dependencies; and, as the inhabitants made their own laws, they might be expected to provide for their own police and defence. Counting reliefs that the time wasted in travelling, a force of 20,000 men might, he estimated, be spared from the army. Railroads again, had facilitated transport and enabled every bayonet now to possess a greater efficiency than in 1835. Since that period also we had added, by means of the enrolled pensioners, dockyard battalions, county and Irish constabularies, more than 33,000 to our number of armed men. Ireland now held twice the force which it did then, and required less. Here was plenty of scope for reduction. But economy was to be sought also by a change in the organisation no less than in a decrease in the numbers of the army. We had lately reduced some thousands of common men; but left the number of officers, already disproportionately high, without diminution. Official returns showed that the percentage of officers to men in the British army was much greater than in the military establishments of France, Prussia, or Austria. In the navy large retrenchments might be effected. The military marine should be regarded as the police force of the seas. As the machine was so expensive it ought not to be employed in unworthy services. It was absurd to send ships of war against Bornean pirates. If we dismantled our ships there were plenty of resources to fall back upon in case of alarm. Our vast mercantile steam marine might be considered in the light of a reserve. Numbers of those vessels were able to carry warlike armaments, and could be fitted out with little delay if wanted. Finally, the hon. Member contended, that, by diminishing establishments, and reducing taxation, employment would increase, and national wealth expand, so as to confer more real strength than could spring from an overgrown military force. Power and safety came not by guns and soldiers, but from an easy exchequer and an abundance of what was proverbially called the "signs of war." Turning to the question, what was to be done with our surplus, Mr. Cobden ridiculed the project of attacking the principal of our national debt, 800 millions, with a petty balance of two millions. Reductions in taxation preemptorily demanded by overburdened industries, would swallow up that small amount. But, by adopting his plan, the work of reducing taxes and paying off debt might proceed together. He concluded by an appeal to the House not to treat this proposal as a party question, and moved the resolution of which he had given notice:—"That the net expenditure of the Government for the year 1855 (Parliamentary Paper, No. 260, 1847) amounted to 44,422,000*l.*; that the net expenditure for the year ended the 5th day of January, 1850 (Parliamentary Paper, No. 1, 1850) amounted to 59,853,000*l.*; the increase of upwards of 6,000,000*l.* having been caused principally by successive augmentations of our warlike establishments, and outlays for defen-

sive armaments: that no foreign danger, or necessary cost of the Civil Government, or indispensable disbursements for the services in our dependencies abroad, warrant the continuance of this increase of expenditure: that the taxes required to meet the present expenditure impede the operations of agriculture and manufactures, and diminish the funds for the employment of labor in all branches of productive industry, thereby tending to produce pauperism and crime, and adding to the local and general burdens of the people: that, to diminish these evils, it is expedient that this House take steps to reduce the annual expenditure with all practicable speed, to an amount not exceeding the sum which, within the last fifteen years, has been proved to be sufficient for the maintenance of the security, honour, and dignity of the nation."

## The Farm.

[From the Puritan Recorder.]

## PROFESSOR JOHNSTON'S FIFTH LECTURE,

## THE RELATIONS OF BOTANY TO AGRICULTURE.

Botany treats of plants, which commencing at the top, consist of leaves, branches, trunk, roots, flowers, fruit, all calling for the attention of the scholar and the cultivator. We should examine the leaf in respect to its structure and the growth of the plant. It consists of fibres or extensions of the wood and of the grain or bark stretching over these. If we examine with a microscope the under side of a leaf that flutters in the breeze, or the upper side of one that floats on the water, we shall see that it is full of dots, pores or little mouths (stomata) for breathing, of which we shall speak in the sequel, and which are very numerous, amounting on a square inch of a lilac leaf, to 120,000.

The stem consists of the pith and the barks of which there are several in structure and use, most remarkably displaying the power and skill of the Creator. The roots, too, consist of two corresponding parts, with a curious wedge at their extremity, which their growth forces through the soil. Back of this wedge near the extremity, they constitute a spongy substance, full of absorbent cells which take up nourishment for the plant. Hence great care should be taken in transplanting, not to break off these extremities and thus retard the growth.

The flowers have a leaf different in form and color from that of the plant. The color not only delights the eye but promotes the growth of the fruit, the darker colors absorbing the light and heat of the sun's rays, and the lighter colors reflecting them. Their action and influence on the growth of wheat and other grain, belong more properly to agricultural chemistry, and will be considered in connection with that subject.

The seed consists of several parts; as the germ which is seen when a bean is dropped into water and allowed to swell and burst, and which belongs to all seeds. These different ingredients were illustrated with drawings representing the various species of Indian corn. The use of these drawings was granted the lecturer by Dr. C. T. Jackson, of Boston. The chief constituents of this grain are starch, sugar, fibre, albumen, gluten and oil. But these exist in very different proportions in different varieties, and therefore adapt them to various purposes. Some of these are indicated by the color in different parts of the kernel, as the olive color indicates oil. Southern corn has a good proportion of both oil and starch; other kinds have starch but no oil; pop corn has little starch but much oil, which expands and pops by heat; sweet corn has much starch, gum and sugar, but no oil. The variety having most starch is best for the manufacture of that article; that possessing most oil, for the growth and fattening of cattle. The expansion of pop corn is remarkable, one barrel making six when popped; while one barrel of rice corn, containing more oil, will make thirty-six barrels when popped. The varieties containing no oil, will not pop. Wheat contains but two per cent. of oil, while common corn contains eight, ten or more, and a knowledge of these constituents is important in the cultivation and use of the article.

Botanical physiology is also important, which treats of the habits of plants, of the composition of their parts, of their mode of growth, of the changes which they undergo, of their proper food, etc., but this belongs more appropriately to vegetable chemistry.

To the science of botany belongs the geography of plants, which teaches us what kinds

to expect and to cultivate in a given latitude or section of country; also their geology, by which we learn what kind of vegetation will flourish best in a given soil, formed by the disintegration of certain strata of rocks. For instance, how different the vegetation of Massachusetts on the eastern shore, in the valley of the Connecticut and on the hills of Berkshire.

Geology enables us to decide first the soil and then the vegetation; or *vice versa*, from the vegetation we can determine the quality of the soil and the kinds of underlying rocks. Where a farmer finds only soft wood growing, as pine, he concludes that the soil is light; but where he finds hard wood, as oak or walnut, he infers that the soil is strong and rich; and where he finds a mixed growth, he says the soil must be fertile and capable of high cultivation. If he examines a farm, he reasons in a similar manner from the kinds of weeds, grasses and grains which it produces, to the nature of the soil and to the kind of cultivation which it needs; and if he more perfectly understood science, he would reason more conclusively and advantageously; if he found that the weeds were annuals, he would know that once cutting would exterminate them; if biennials, twice in two successive years; but if perennials, that constant cutting would be necessary. If he well understood the nature of the seed and of the plant, he would know whether to apply to them the scythe, the fire or the plough, and when and how each should be used to prove effectual.

For some of these investigations a microscope is necessary; for example, to discover the smut on wheat and Indian corn, and the ergot on rye and grass, the latter of which produces, both in man and beast, disease that is dangerous and often fatal. It infects the grass in low, wet grounds, and draining is an effectual remedy as it is commonly also for rust and mildew. The subject of the next lecture is the relations of Zoology to Agriculture.

## Agricultural Meeting at the State House, Mass.

The eleventh meeting of the season was held on Thursday evening, March 14. A portion of the time previous to organization was occupied by Mr. French, of Braintree, in exhibiting some portions of apple trees which had been attacked by the borer. By these specimens the course of the insect in his attack upon the tree could be plainly traced, from the time of his entering under the root until he worked out above. An informal conversation ensued in regard to the best manner of destroying the insect, between gentlemen whose views have heretofore been reported in our columns. Mr. French said his manner was to lay bare the root, and having found the place of entrance, by means of a small wire to draw the insect from his hiding place or destroy him in his hole. A few of the borers themselves were also presented for the inspection of those present.

Neither the President or any of the Vice Presidents having arrived at quarter before eight, the meeting was called to order, and Hon. Seth Sprague, of Duxbury, elected Chairman, *pro tem.* Subject for discussion, *The Diseases of Animals.*

The discussion was commenced by Col. Thayer, of Braintree, who spoke upon the management of colts during the time of breaking. He had been in the habit of raising colts for years, and had had much experience in the matter. He thought it too much the habit of beginning the breaking of colts by "licking." This practice is bad. His plan is as follows:—When the colt is 2 years old he first breaks him to the halter, so adjusting it that he can be led about as safely and kindly as a dog. He then uses him to a bit of common size—not the monstrous large ones which are too often used. After he becomes accustomed to the feeling of the bit, he is reined up. A saddle is then put upon his back, which he is made to wear until used to it, after which a person may mount him and ride off with readiness. During all this time he is not struck a blow, but treated with the most perfect kindness. The speaker had known of cases where the opposite course had been pursued, and the spirits of the animal broken by excessive whipping, thus rendering him almost worthless. Col. Thayer pursues the same course in breaking the colt to the carriage. First the harness in which he is to be used is placed upon him, and after he is used to it he is led beside a carriage, so that he may hear its noise and become acquainted with it. He is next attached to the carriage, and in most every case would