

PERSEVERANCE OF THE SAINTS.—A clergyman in Vermont was once trying to unsettle the faith of a pious old lady, who was a firm believer in the perseverance of the saints. To his arguments she replied, "God has undertaken to save my soul, and I expect him to finish the work." "Ah," said he, "but what if he should leave you to fall away and perish?" "And," said she, "what if God had let Elijah fall after he had taken him up to carry him to heaven?" "Oh," replied the minister, "it was not at all likely he would." "Well," said the old lady, "no more likely is it that God will undertake to carry me to heaven, and let me fall before he gets me half way there."

FALLING FLAT ON THE PROMISES.—A negro in Virginia, who was remarkable for his good sense, and his knowledge of the essential truths of Christianity, and especially for his freedom from all gloomy fears in regard to his eternal state, was once addressed on this wise: "You seem to be always comfortable in the hope of the Gospel. I wish you would tell me how you manage it, to keep so steadily in this blessed frame of mind." "Why Master," he replied, "I just fall flat on the promises, and I pray right up;" an answer that would do honour to the head and heart of a philosopher, and that contains in it the true secret of earthly happiness.

THE CLERGYMAN AND THE SCEPTIC.—"If we are to live after death, why don't we have some certain knowledge of it?" said a sceptic to a clergyman. "Why didn't you have some knowledge of this world before you came into it?" was the caustic reply.

Scientific.

DISCOVERIES IN EASTERN AFRICA.—At a recent meeting of the London Syro-Egyptian Soc., Dr. Beke communicated some "notes" on recent Geographical Discoveries in Eastern Africa, illustrated by a large map, on which he marked the position of the snowy mountains Kilma-Djaro and Kenia, from the latter of which Dr. Beke entertained little doubt that the waters poured into the Nile. Baron Von Muller, late Austrian Consul General in Senaar, had stated that the natives of the valley of the Bahrel Abyad, between four and five degrees North latitude, were acquainted with a very lofty white mountain, "whose peaks are completely white," situate at a considerable distance to the south of their country, and in which that river is said to have its origin. Dr. Beke noticed the volcano in an active state, of the existence of which, in the Waknafi country, north-west of Mount Kenia, Dr. Krapf received information from the natives; also the country of the Uniamesi, in which is said to be a large lake named Usambiro, apparently the lake Zambire of the Portuguese, and according to Dr. Krapf, quite distinct from Nyassi, or Niassa, as the Dr. writes it. Dr. Beke agreed with Dr. Krapf in looking on the country of the Uniamesi, or "of the moon," as the central point of division between the waters flowing to the Mediterranean, to the Atlantic, and to the Indian Ocean. This country is to be made the centre of the missionary system now being established in Eastern Africa; the ulterior object of which is said to be "to extend an equinoctial chain of missionary stations across the whole breadth of the continent from east to west." The proximate sites of the first stations determined on were shown on the map.

BRITISH PATENT LAWS.—Strong efforts are now making to obtain a reform of the British Patent Laws: it is high time they were reformed. A simplification of the mode of obtaining patents is demanded, and a reduction of the fees to about \$130. I hope these reforms will be carried through so that justice may be done by the Patent Laws of the British realm to the poor inventor, as well as the rich. An improvement of the Patent Law recommended, is, that a patent be granted for 21 years, that \$25 be paid down when granted, and \$35 every year afterwards, until the term expires, unless it is found unprofitable, when the patentee can let it expire just by not paying his yearly tax. I think this is a good plan, and is well worthy of your attention in America. It is derived from the French system, where the government prosecutes for infringement.—*Excelsior.*

Glass Pearls, though among the most beautiful, inexpensive and common ornaments for women now made, are produced by a very

singular process. In 1656, about two hundred years ago, a Venetian, named Jaquin, discovered that the scales of a species of fish possessed the property of communicating a pearly hue to water. He found by experiment, that beads, dipped in this water, assumed, when dried, the appearance of pearls. It proved, however, that the pearly coating, when placed outside, was easily rubbed off, and the next improvement was to make the beads hollow. The making of these beads is carried on even to this day in Venice. The beads are all blown separately. By means of a small tube the insides are delicately coated with the pearly liquid, and a wax coating is placed over that. It requires the scale of four thousand fishes to produce a half pint of the liquid, to which small quantities of sal ammonia and isinglass are afterwards added.

Vessels of Bulrushes.—Many a reader of Isaiah xviii. may have been perplexed to understand how ambassadors could have been sent by sea, in vessels constructed of such materials. Alexander, in his commentary on the passage, says, that the phrase is now universally explained to mean, vessels of the papyrus plant. And modern research shows that the Egyptians built their boats of the root of the papyrus; its stalk served them for masts; its bark for sails; and its stoutest fibres, twisted together, for cordage.

Coal in China.—Coal has not been known in Europe more than 300 years. In China its uses have been understood about 2,000 years, and its utility in the arts more than 1,000. The coal deposits of this country are extensive and rich, and will beyond question supply all the demands that the steam-engine may make upon them even in the vast increase of commerce and manufactures soon to take place in those parts of the world.

The Farm.

[From the N. Y. Tribune.]

WILL GOOD FARMING PAY?

We are sometimes provoked by the receipt of letters from farmers who coolly undertake to set us right with regard to what we may term High and Low Farming—they considering our notions occasionally indicated in The Tribune entirely erroneous, or at least unsuited to the present condition of Agriculture in this Country. "Land is so cheap and Labor so dear," say they, "that we can't afford to farm so high as the English and Belgians do." Now half the men who talk in this way have no clear idea of what superior farming really is, but if pressed for a definition of it, will dilate on the unproductive expense of white-washing trees, plaining boards for fences, or something of the sort, which has nothing to do with Farming at all. A farmer, good or bad, may expend so much capital in mere fancy-work as to render his farm unproductive and even an expense to him; but that does not invalidate the sound general rule that any thing can profitably be well done which can profitably be done at all. To this rule we know no exceptions. One man's land may be unsuited to Corn, or Wheat, or Barley, so that he ought not to attempt the growing of that particular grain; but if it will pay for growing any crop of it at all, it will pay for growing a good one. If it will not pay for such a crop, it will not for any; and should be turned over to something of which it will yield a generous return; and, in default of that, given up to pasturage and got into wood as soon as possible. To raise a twenty-bushel crop of Indian Corn ought to be indictable as a perversion and waste of the bounties of Providence.

The farmer who ploughs (once) five or six inches, and manures feebly, and gets in his crop late, and about half cultivates it through the Summer, and gets a meagre half-crop in the Fall, (unless cattle happen to break over his shiftless fences and eat it up meantime) not only dooms himself to fence, and watch, and pay taxes to twice or thrice the extent he ought, but he is committing a flagrant crime against nature by exhausting the Soil of its virtues.

Every acre of land under cultivation ought to be worth more after each year's tillage than it was before. It may not, indeed, be in condition to produce a larger amount of that same crop; if so, that is ample reason for changing to something else. To say that a farmer can't afford the fertilization and culture needed to obtain fifty bushels of corn from an acre but can afford to own, fence, till and pay taxes on it for twenty bushels, is an amazing absurdity.

Prof. Mapes of New-Jersey, in his 'Working Farmer' for April, thus bears testimony to the effects of science in improving the Agriculture of that State:

"Within the last three years we have visited many farms in New-Jersey, and some of the owners of these farms sent certificates of results to Trenton. One represented that under our advice he had added the missing constituents to his soil, at an expense of only \$4 12½ per acre, with proper tillage, and produced, in consequence, the following crops: Corn 128 bushels of ears per acre, where formerly, with much larger expenditures for manures, but 30 bushels of shelled corn had been produced. Potatoes 310 bushels per acre.—Mangold-wurtzel 16 tons per acre, and other crops in proportion. Another (a member of the House of Assembly) represented that on a piece of ground in Passaic County, which had been considered of very inferior quality and unworthy cultivation for corn, he had raised, by adding the missing constituents of his soil, under our advisement, 138 bushels of ears of corn per acre, and that his crop of long orange carrots averaged 600 bushels per acre, and that the expenses for fertilization were less than for the ordinary method by barn-yard manuring.

"We asserted, without the fear of contradiction, that in no case where we had been furnished with an analysis of the soil, had we failed in increasing the income of the owner more than one-third, and this, too, after having advised under such circumstances more than one hundred farmers in New-Jersey.

In another article in the same paper, Prof. Mapes gives the following glance at what is doing for Agriculture in Europe by Governments which we are accustomed to consider as far behind our own in knowledge of, and devotion to, popular well-being:

ADVANCEMENT OF AGRICULTURE.

Our readers will be surprised to learn how much is being done by European Governments for the advancement of Agriculture, while our own General and State Governments are supinely inert on this all important subject.

Every political economist knows that an increase of production adds permanently to national wealth, and hence the English Government are ever ready to lend judicious aid to their farming interest. As an example:—by long experience it has been ascertained that by thorough underdraining, an acre of land will produce one-third more nett results to the owner, and therefore the Government have enacted laws and appropriated funds to be used for this purpose. Several appropriations have been made during the last session of Parliament, one of which is £2,000,000 sterling, equal to \$10,000,000. This sum is placed at the disposal of commissioners, who loan it to applicants on the following terms:—The farm of the applicant is first valued, and then a loan is made to him on mortgage, to be applied to underdraining. This mortgage is only active on the increased value of the farm by underdraining. The borrower is required to pay 5 per cent. interest, payable annually, and 5 per cent. of the principal, and thus in 20 years both principal and interest will be paid off: and the first instance has not yet occurred where the increased products of the land have not been sufficiently great to enable the occupant to meet these payments.—Should the borrower fail to meet the requirements of the mortgage, then the farm may be sold, but before the Government can appropriate any part of the amount toward the liquidation of their mortgage, they must first pay the borrower the amount at which the farm was valued before being underdrained; and long experience has established, that underdrained farms will always sell for more than the cost of underdraining added to Commissioners valuations.

Now, look at the position of all the parties at the end of twenty years? The owner of the land having paid off the mortgage from increased products, is as much richer as the value of the improvement; while the Government have been repaid, and the wealth of the nation has been increased equal to the increased amount of products. Add to this the future ability of the soil to continue to produce this increased ratio, and the whole result is before us. In the face of the experience of a whole nation, is it not ridiculous at this time to hear American farmers railing against the practice of underdraining? In addition to this loan of \$10,000,000, the Government have appropriated \$1,000,000 for similar purposes in Ireland, and a further sum of \$4,000,000, if the Commissioners shall think advisable.

Many other acts have been passed for inclo-

tures, general public drainage, &c. &c., all requiring appropriations from the Public Treasury. In addition to these appropriations by the Government, we find half a column of advertisements in the *Mark Lane Express* of chartered companies, with capitals varying from \$500,000 to \$5,000,000, offering to make loans for under-drainage of land in terms nearly as liberal as those offered by the Government. We find, also, the reports of County Agriculturists paid by County Societies, whose business is to visit the different localities, deliver lectures, and give gratuitous advice to farmers. Schools for instruction in Scientific Agriculture are being established in almost every township, and the wisest and best men in the land are lending their aid to the general advancement of Agriculture.

Necessity may truly be said to be the mother of invention; but in our country it would seem as if old Mrs. Necessity was away from home, and her offspring had gone to sleep.—Why is it, that while our mechanics are busily employed in the application of the sciences to their vocations, that farmers alone will suffer theirs to remain without improvement? The exceptions to this rule are really rare, nor do we claim from our legislators any amendment.

We find our Government ordering new steam vessels almost monthly, for the mere purpose of testing new inventions in steam machinery, and the whole mechanical interests of the country using their interest and influence to press forward the appropriation. More than \$100,000 have been spent for improvement in the telescope, and not one cent has yet ever been appropriated for improvements in the plough. Within the last twelve months France has endowed 180 Agricultural Colleges and Academies, while the politicians of the United States have told the farmers that they were the bone and sinew of the country, and paid nine-tenths of the taxes, in consideration of which they had better attend to their business in the old way, and vote for them again at the next election.

Prussia, and indeed all the continental powers, are organizing institutions for the advancement of the agricultural interest, and while all the world beside are busy in the good work, both our General and State Governments fear to act with promptness and decision. The hackneyed excuse that we have so much spare land will no longer avail. Our whole sea-board, and indeed our middle States, do not produce half the grain crops of thirty years ago. The great majority of our bread-stuffs are brought from the West; and even the wheat-growers of the far famed Mohawk and Genesee Valleys, are driven from the field by western competitors. One competent lecturer on Agriculture, visiting the different counties in either of the northern Atlantic States, and delivering free lectures on Agriculture, would double the crops in five years. Let those who doubt it spend a single hour with us, and if we cannot produce the evidence beyond a cavil to any unprejudiced mind, we will break our pen and cease to urge our readers to increased exertion.

Cuttings in Brick Dust.

I have had great success in propagating plants lately, especially the more tender kinds of greenhouse plants. As I think my good luck depends not so much upon the treatment as the material I use, I beg you to "make a note of it" for the benefit of your readers.

This material is brick dust, the refuse of kiln after burning, or what may be made by taking soft bricks and pounding them up. Enough may be had at any brick yard for a mere trifle to last a great while, but I think the fresher it is the better. For those plants most difficult to root, such as Daphnes Heaths, Cape Jasmines, &c., I fill shallow cutting pots entirely with brick dust (except about an inch at the bottom, which is filled with coarse lumps of brick, to secure a good drainage.) For plants that root more easily I use half brick dust and half sandy loam.

It is quite surprising how much more certainly and quickly cuttings of all sorts root in brick dust than in sand or in loamy soil in the common way. "Damping off," which is so fatal to cuttings made in the ordinary way, rarely happens when brick dust is used, and from the mass of fibre quickly thrown out from the bottom of the cuttings I am convinced that there is something more than the texture of the brick dust which causes the much greater vigor and success of cuttings planted in brick dust over those planted in the ordinary way.—*Exchange.*