

CHOULES, JOHN OVERTON
The oration of the fourteenth
anniversary of the American
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*How often we say
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THE
ORATION

DELIVERED ON THE
FOURTEENTH ANNIVERSARY

OF THE
AMERICAN INSTITUTE.

DELIVERED BY
JOHN OVERTON CHOULES,

OF THE
BROADWAY TABACACIE.

OCTOBER 11, 1841.

NEW-YORK:
PRINTED BY J. VAN NORDEN & CO.
No. 27 PINE-STREET
1842.



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AT THE

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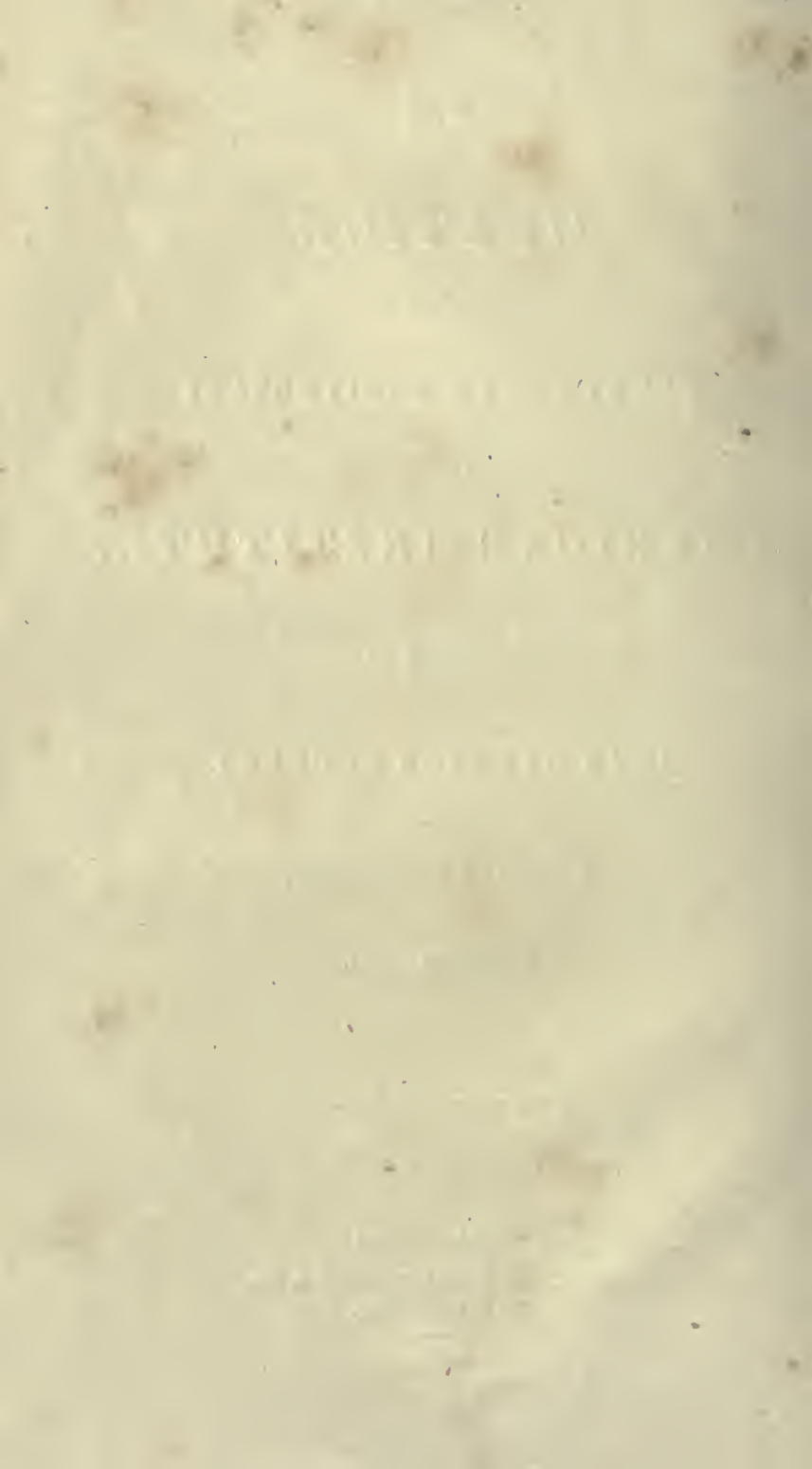
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NIBLO'S GARDEN,

New-York, Oct. 22d, 1841.

DEAR SIR,

THE Managers of the Fourteenth Annual Fair of "the American Institute of the City of New-York" gratefully acknowledge their obligations to you for the timely relief afforded by your prompt acceptance of their invitation to deliver the Anniversary Address last evening—which invitation was delayed by the intervention of unexpected circumstances, and did not come to the knowledge of the Managers until within a few hours of the time which had been announced for this part of the celebration.

The important facts contained in your Address, and their bearings on the vital interests of Agriculture and productive industry generally, and the patriotic sentiments it is calculated to inspire if extensively read, are the reasons for soliciting from you the further favour of a copy for publication.

On behalf of the Managers,

T. B. WAKEMAN,

Chairman of Pub. Committee.

The REV. J. O. CHOULES.

T. B. WAKEMAN, ESQ., *Chairman of the Publishing Committee*
of the 14th Annual Fair of the American Institute:

DEAR SIR,—I have received your kind favour, requesting a copy of the Anniversary Address for publication.

You are perfectly aware that it was not prepared for such an important occasion, or such an immense assembly as that to which I was summoned at two hours' notice, through the unavoidable absence of the learned and honourable gentleman who was to have gratified and instructed the friends of Commerce, Agriculture and Manufactures.

The subject which I selected is one, too, little appreciated by the inhabitants of cities and towns, and I think far too seldom brought before their attention; and yet it is full of interest, and admits of popular discussion. The kind reception which the address met with on its delivery, and the frequent applications I have had to repeat it in other places, induce me to comply with your request, although I am quite aware that the Oration is better calculated for the audience than the press.

With best wishes for the success of the Institute and respect for the Managers,

I am, very faithfully yours,

JNO. O. CHOULES.

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ORATION.

MR. PRESIDENT, AND GENTLEMEN OF THE AMERICAN INSTITUTE :

“OUR COUNTRY,” is a phrase of wide and endearing import. Poetry has sung its charms, patriotism has felt them, and piety has consecrated them. And what a country, fellow citizens, does God permit us to call our own ! There is our long Atlantic coast, with more than two thousand one hundred miles of seaboard, skirting states containing more than one million of square miles. There, too, is our *imperium in imperio*, the Valley of the West, lying between the Lakes and the Gulf of Mexico, the Alleganies and the Rocky Mountains, containing two millions of square miles, one hundred thousand miles of internal ship and steam-boat navigation, four thousand miles of rail-road, two thousand miles of lake, and one thousand of gulf. All this extent embraces the best variations of climate upon the globe, comprehending exactly those degrees which have been ever marked by the genius and enterprise of man.

Our land is a mart for the nations, a workshop for the earth ; every ocean is white with our canvass, and we have learned to press into our service steam as it rises, water as it flows, air as it flies. We have almost the only Constitution that deserves the name—freedom for every citizen, liberty breathing full and free through all our institutions—thus cherishing a spirit of enterprise, a security that holds out a protecting bounty to each individual, rendering every citizen assured of the full enjoyment of all lawful acquisition ; and in addition to this, the law does all that for every man’s religion which true religion asks, wishes or wants, and that is,—*lets it alone*.

With a lamentable exception of three millions, our people are free, and are characterized by strength, ingenuity and patience ; they present, in body and mind, the noblest materials for the formation of national greatness.

I believe you are all disposed, after this brief survey, to exclaim with me of the Giver of every good gift, who hath thus ordered the bounds of our habitation—"He hath not dealt so with any other people."

How little did Columbus understand of the true nature and bearing of his mission, when, with a heart big with mighty projects, he walked in silence on the shores of Andalusia, and watched the star of evening down the western sky! Little did he dream that he was about to open another Paradise to thousands driven from their homes, not by the wrath of their Maker, but the rage of their brethren ; that he was the instrument in the hands of God to throw open an asylum to which the feet of the oppressed would direct their course from all lands for protection, and to which the imploring eye of misery would be turned, from almost every scene of human wretchedness. And now, after almost four centuries have passed away, what do we see? Nation upon nation, long reposing in the lap of its rulers, is starting up to action, and animated and incited to hope by our blessedness, is making its way for this lighthouse of the world.* An attraction in the material world is ever withdrawing particles of matter from whatever is old, and combining them in newer and more beautiful forms ; so a moral influence is withdrawing subjects from the old and worn-out governments of Europe, and hurrying them across the Atlantic, to participate in the renovated youth of our western republic. It is an influence which, like that of nature, is universal, without pause or relaxation, and hordes of emigrants are continually swarming off, as ceaseless in their passage, and as crowded and as unreturning, as the travellers to eternity. Even those who are forced to remain feel a melancholy restlessness, like a bird of passage whose wing was broken at the season of emigration, and they look at America as the land of the dear de-

* Douglass.

parted, where every one has some near relative or dear friend gone before him. In all Europe a voice, like that heard before the final ruin of Jerusalem, seems to whisper to such as have ears to hear, "Arise, let us depart hence."

But why does the public teacher of Christianity appear upon such an occasion ; does he not transcend his appropriate duty when he talks of the details of earthly actions ?

I feel myself entirely in the discharge of appropriate duty when I advocate the ordination of Jehovah, and speak of the most ancient, honourable and satisfying employments that ever occupied the intelligent creation.

I cannot but regard agricultural improvement as closely connected with a prosperous state of morality and religion ; for the inculcations of Christianity, neatness, order, and consequently taste, find their natural sphere in rural pursuits. The habits of life, and the sentiments which accord with husbandry, are highly congenial to the genuine spirit of religion ; and a well conducted farm should be the home of devotion, tranquillity and peace.

I greatly fear that the moral influences flowing from the cultivation of the rural sciences are inadequately appreciated by too many. Every minister of religion should aim to call out and encourage the observation, and curiosity of the young ; he should train them up around him as querists ; he should himself remember, and let them never forget, that Newton, by observing the fall of an apple, was led on to the discovery of the sublime principles of the material world. O, how much can be done for happiness and comfort in a country parish by a well educated minister ! what transformations he may effect—what improvements he may suggest—what trains of future action he may set off, by a *hint*, a *request*, or an *example*.

Who that has passed through the town of Worcester, in Massachusetts, has not admired the taste and beauty of its well planted trees and shaded avenues ? All this, I believe, was devised and commenced by a young minister, who, without any resources but of taste and genius, applied himself and a few kindred spirits to the work of moulding the taste and habits of the community. He was one of four ministers who formed the Worcester County Agricultural Society, and in that county

many of the ministers have been successful farmers, and they have received as many premiums as any other class of men. And while I speak of Massachusetts, and refer to the clergy, I am sure you are all of you reminded of the indebtedness of every man who cultivates the American soil to that able farmer, that distinguished philanthropist and eloquent teacher, the Rev. Henry Coleman, late Agricultural Commissioner for the Commonwealth. When I read his reports and letters to the yeomanry of New-England, I wish that his voice could be heard in every farm of our State and Union.*

Mitchell, in his agricultural tour through Holland, states, that each Divinity student, before being licensed, has to attend two years lectures upon agriculture. I have no doubt that the usefulness of the clergy is much augmented by this step, and that their future influence over the manners and habits of the country is greatly increased.

When I think of the state of society in our country, I wish that many, very many, of the Lord's prophets were themselves husbandmen, or at least *fond* of rural pursuits, and distinguished by their attachment and devotion to nature; for what beautiful teachings there are in that volume which the Almighty has spread open to us; and to some thoughtless minds the lessons of the open field are far more impressive than our discourses of the music and harmonies of heaven. Go out into nature, all is visible, all is tangible. I can take a leaf, a plant, an insect, and from either I can make appeals that the sophist's art, the skeptic's hatred, can neither mystify nor evade. I can bring up from nature, evidences in favour of my faith in God, that only "*a fool*" can deny. And then nature speaks one universal language, and establishes the same facts to all classes and orders of minds. Her unity is wondrous, and no inquisitive eye roams far for a curious object. No student complains that nature's lessons are few, or her colours faint. "Her lines are gone out into all the earth, and there is no speech nor language where her voice

* Since this address was delivered, Mr. Coleman has taken charge of the New Genesee Farmer, and will, I doubt not, render that excellent paper more valuable and useful than ever.

is not heard." I long for the day when men shall be told more of the material revelation God has made, which admits no change. No Vandal hordes can ever blot out its inscriptions, or burn its library. Nature's alphabet is made up of only four letters, wood, water, rock and soil; and yet with these four letters she forms such wondrous compositions, such infinite combinations, as no language with twenty-four letters can describe. Nature never grows old, she speaks now as ever; she has no provincialisms. The lark carols the same song, in the same key, as when Adam turned his delighted ear to catch the strain; the owl still hoots in *b flat*, yet loves the note, and screams through no other octave;* the stormy petrel as much delighted to sport among the first waves the Indian Ocean ever raised, as it does now. Birds that lived on flies, laid bluish eggs, when Isaac went out into the fields to meditate at eventide, as they will two thousand years hence, if the world does not break her harness from the orb of day. The sun is as bright as when Lot entered the little city of Zoar. The diamond, and the onyx, and the topaz of Ethiopia, are still as splendid, and the vulture's eye as fierce, as when Job took up his parable. In short, nature's pendulum has never altered its strokes.

I might magnify your estimate of the value and importance of agriculture, by carrying you back to the primeval scenes of the world's history; but who does not remember, that when all things were pronounced to be very good, it was amid scenery, of which the grouping was made up of a God, a garden, and its cultivator, man. The soil whence Adam sprang was the granary whence he was to be sustained, and it afforded him at last his grave and resting place.

I might occupy your time in alluding to Patriarchal agricultural labours, when the world's forefathers worshipped God in all the simplicity of nature, tending their flocks by day, and reposing at night in calm serenity beneath the spreading sky, peace their pillow, and piety their guardian angel. I might speak to you of Israel's monarch, who planted him vineyards, and made him gardens and orchards, and planted in them trees

* Bayley on Nature.

of all kinds of fruit, and who had possessions of great and small cattle, above all that were in Jerusalem before him, and who spake of trees from the cedar that is in Lebanon, even unto the hyssop that springeth out of the wall. And Uzziah and other kings, while good and virtuous, had cattle in the plains and low country, and husbandmen and vine dressers in the mountains and in Carmel, and who loved husbandry. It is not needful, to make you see the dignity of agricultural labour, that I carry you back to Babylon, Persia or Rome, for you all know that wherever liberty, the arts and sciences have flourished, there has the patriot encouraged, the statesman protected, and the poet praised the art of husbandry. How delightful are the glimpses which we obtain of rural life in the literature of Greece and Rome! Laertes pruning his vines, Eumenes entertaining his king, and Hesiod himself leading us to the very cradle and infancy of agriculture.

“ Forget not, when you sow the grain, to mind
 “ That a boy follows with a rake behind,
 “ And strictly charge him, as you drive, with care
 “ The seed to cover and the birds to scare.”

Every schoolboy knows the agricultural glory of old Rome, and thinks of Varro, Cincinnatus, Cato, Virgil, Horace and Cicero, in connection with the cultivation of their mother earth. The history of agricultural improvement is almost the history of the world, and comes not within my province; but it is gratifying that we can trace its most rapid developements in the land which contains the tombs of our ancestors, and was the birthplace of our language, laws and religion. It was only at the close of the fifteenth century that agriculture began to be regarded and pursued as a science. Fitzherbert, a Judge of the Court of Common Pleas, wrote the earliest piece upon farming,*

* “The Book of Husbandry, very Profitable and Necessary for all Persons.” He also wrote several other pieces. The Judge applied himself as vigorously to husbandry in the country as to the study of the law in the town. We have a similar instance at the present time in the Hon. Daniel Webster, whose thorough acquaintance with practical farming is exemplified in the very ablest agricultural address I have ever read. It was delivered in Boston soon after his return from Europe. It is the fullest and most condensed article on husbandry that we have access to, and should be reprinted by the American Institute for general distribution.

about one hundred years before the establishment of Plymouth Colony or New-Amsterdam. It was published in 1534. The work imparted much interest to the pursuit of husbandry. Tusser's Five Hundred Points of Husbandry appeared thirty years after; then came Barnaby Goage's "Whole Art and Trade of Husbandry." Sir Hugh Platt turned his mind to the proper food of the soil, and wrote "The Jewel Houses." His remarks upon manures are sensible, and still in repute. Samuel Hartlip wrote an admirable treatise, for which he was rewarded by that true-hearted patriot and far discerning statesman, Oliver Cromwell, who bestowed upon him a pension. Hartlip has the merit of having been the first who recommended a public director of husbandry to be established by law. Evelyn and Tull are names dear to the well-read and scientific cultivator of the soil; and I join with one who has gone before me in this duty, in declaring that Jethro Tull is more deserving of a monument than the Duke of Marlboro'.*

The time would fail me to run over all the names that have helped to make England, if not a garden, yet a prodigy of agricultural wealth, and that little island the wonder of the world.

Anderson and Hunter, Marshall and Home, Young and Dickson, Sinclair and Davy, Loudon and Knight, Bedford and Spencer, Coke and Shaw, are the true friends of man, and their fame is yet to grow brighter and run in larger circles.

The glorious era from which all the triumphs of husbandry now date, is 1793, when, under the auspices of Sinclair and Pitt, the British Legislature incorporated the Board of Agriculture; then surveys were made of every county, the resources of the empire developed and proclaimed. It is from this period that we may regard agriculture as a science. The essays published on turning grass land into arable, and the

* How much it is to be lamented that there is no library in our country where even a tolerable collection of the old agricultural authors can be found for purposes of reference. It is matter of doubt whether a rich man could do the American Institute as much real good in any other way as by presenting it with the means of collecting in England some twenty-five or thirty old authors upon husbandry and gardening. One hundred dollars would procure all the above named authors, and several others who were cotemporary with them.

culture of the potato, exhibited the ablest talent of Great Britain, and have furnished, I believe, some of the most valuable volumes ever written. The patronage of the government gave interest to the subject, and the proudest peers of England placed their sons with practical farmers for the acquirement of the details of husbandry.

A member of the late cabinet devoted three years to all the labours of a farm. Now, too, chemistry was brought forward to the aid of agriculture, and has been one of its firmest pillars. In short, we may regard this organization of the agricultural society as the origin of the systematic rotation of crops, the improvement in breeds of cattle, use of plaster, the soiling of cattle, culture of root crops, and artificial grasses. Comparisons led to the establishment of facts, and agriculture may now be regarded as an art resting upon facts.

In almost every portion of Great Britain these societies sprang up, and the farmers had the courage and wisdom to profit by the improvements which skill and science had introduced, and the result is, that five millions of all ages produce annually from her soil seven hundred millions worth of agricultural produce. In 1760 the growth of all grain in England and Wales was one hundred and twenty millions of bushels, in Scotland thirty millions, making a total of one hundred and fifty millions. In 1840 the produce was four hundred and ten millions of bushels. Think of seven hundred millions worth of produce from that little island, and remember, that competent judges tell us this may still be doubled! Agriculture has clothed the most barren heaths with luxuriant crops, converted pools and marshes into fruitful meadows, and clothed the bleakest mountains with groves of forest trees.

Agriculture has been termed by Sully, the breast from whence the state receives support and nourishment. It is the primary source of wealth and independence; and when the soil of a country is in such a state naturally or artificially, as, under judicious management, to furnish maintenance for more persons than are required for its culture, thence proceeds the profits of the farmer, the rents of the landlord, the subsistence of the manufacturer and merchant, and the greater proportion of

the income of the state. That surplus marketable produce is justly considered to be the principal source of all political power and personal enjoyment; when that surplus does not exist there can be no flourishing towns, no naval force, none of the superior arts or finer manufactures, no learning, none of the conveniences and luxuries of foreign lands, and none of that cultivated and polished society at home, which not only elevates and dignifies the individual, but extends its beneficial influence throughout society. What exertions, then, ought to be made, and encouragement to be given, to preserve and to improve so essential a resource, this foundation of national prosperity. Agriculture does more than feed, it clothes us: without it we should have no manufactures, no commerce. These all stand together like pillars in a cluster, the largest in the centre, and that largest is Agriculture.

Let us look at our own state—the empire state. Her territorial extent is ten thousand square miles larger than England and Wales. In 1783 she had not half the population of the states of Massachusetts, Pennsylvania, Maryland and Virginia; now her inhabitants are two million five hundred thousand. Our Commonwealth exhibits physical capabilities of wealth and greatness existing to an unknown extent, and is fertile in most of the productions which minister to the necessities of man. I envy not the individual whose heart does not swell when he gazes on the bold and magnificent profusion with which the living God has scattered the proofs of his eternal Godhead, and with what a vast and awful scale of grandeur he has piled up the mountain and spread out the valley, planted the forest and poured forth the flood.

The western portion of our state was, forty years ago, a wilderness—we now point out to it as a garden. In that time seventeen millions of acres of forest land have been subdued and brought into improvement. One million five hundred thousand inhabitants are occupied in the various departments of civilized life; and they are to-day in the peaceful possession of more than six hundred millions of property.

No state in the Union presents to the farmer the means of health, independence and abundance, more amply than our

own; and we are indeed criminal, if we do not avail ourselves of all the lights of science, and the aids of other lands, in prosecuting our onward march.

Many of my hearers have heard that the revival of agriculture commenced in Flanders, about seven hundred years ago. There the soil was little better than a white barren sand, now its increase is said to be twice as great as in England. The grand maxim on which the Flemish farmer acts is, "without manure no corn, without cattle no manure, and without root crops no cattle can be raised." Their success may be resolved into the following causes: small farms, careful manure, rotation of crops, clover and roots, cutting their forage, and close, undivided personal attention. The farmer does not lumber, fish, speculate, nor hold office.

I have had much opportunity to notice the conduct of our western farmers; and I am entirely impressed with the belief that most of them would be better off if they were to be deprived of half their lands. Labour and anxiety are all they can obtain from the extensive cultivation they now attempt. But there is a perfect mania for adding acre to acre.

The true idea of a farm, is its closest possible resemblance to a well-conducted garden. The Flemish farmer never dreams of exhausting his soil in one place, then moving off to wear it out in another, and then in his old age to commence a new clearing of the forest. If I can make ten acres yield me as much as one hundred, by affording it all my means of improvement, and which was required by the one hundred, the consequence is, that I have profited in my body and mind in an astonishing degree. I have saved ten times the ploughing and harrowing, ten times the sowing and hoeing, mowing and reaping, besides ten times the rent.

I fully expect to see the second crop far more common than it is. With our powerful sun, we need only efficient manuring, limited extent of soil under cultivation, and an increase of care, to effect this. We have all encouragement to persevere, when we reflect upon what has resulted from the formation of Agricultural Associations. We can tell of crops augmented in our own state as follows:

Wheat,	from 18	bushels per acre,	to	30
Corn,	“ 40	“ “ “ “	“ “	70
Barley,	“ 25	“ “ “ “	“ “	40
Peas,	“ 25	“ “ “ “	“ “	45
Oats,	“ 40	“ “ “ “	“ “	74-79
Potatoes,	“ 200	“ “ “ “	“ “	475
Carrots,	“ 500	“ “ “ “	“ “	1000
Sugar Beet,	“ 750	“ “ “ “	“ “	1500
Mangel Wurzel,	“ 600	“ “ “ “	“ “	1200
Ruta Baga,	“ 500	“ “ “ “	“ “	1200
Hay,	“ 1½	tons	“ “ “	3 tons.

In New-York we have authenticated reports of 53 bushels of wheat, 58 barley, 50 peas, 135 corn, 750 potatoes, and 5 tons of hay to the acre.

It would ill become me to adventure instruction to men who have long been conversant with the cultivation of the soil, from their habits of labour, or the deep personal interest which they have in the land which they possess. But it is proper that I should endeavour to call up a more general attention to the pursuits of the farmer. Here, in our cities and large towns, there are errors in the public mind, strong prejudices, unconcealed contempt, and above all, the most unfortunate ignorance.

I am not in danger of contradiction when I declare, that our community has regarded money as the chief good, and its accumulation has been practically regarded as the chief end of man. All the occupation and the energy of life have gone out in this direction. To till the ground has been thought disreputable, I imagine, very principally, because its profits have been thought to be slow in their return; there have been no wonderful fortunes made in a few months—no food for that preternatural restlessness which cupidity has revelled in. What a frightful conspiracy there has been going on for years past in our cities and towns against the unchangeable law and ordinance of heaven, “in the sweat of thy brow shalt thou eat bread till thou be turned again into the ground.” Gen. iii. 19. All classes in our midst have been affected. Lawyers, doctors, merchants and ministers have turned their minds to the best way of getting rich without

labour; and such was the ingenuity of this city, that in one year we made property grow ninety-two millions!

But in accounting for this popular distaste, let me be more particular. I believe that parents have had much to do in the creation of this feeling. The men and women who enjoy the honour to have been the architects of their own fortunes, seem in many cases determined to placè their children at the very farthest distance from the line of occupation, and the principles and methods of life, which have rendered them happy, prosperous and respectable. No matter how many children they have, the sons are to do with as little labour as may be, and the daughters are to be lilies, they are neither to toil or spin. How many a parent would feel absolutely insulted if you supposed that he intended to put his boy to actual labour of any sort! When parents and children come to the conclusion that the lad *must* obtain his living by some exertion of his own, they put their minds to the rack, to discover a way by which it can be done without labour. The father, perhaps, has made every cent he possesses by toil, yet, under the influence of the day in which we live, he cannot endure the idea that his son should be seen in a labouring dress, engaged in a mechanical or agricultural employment. When will men see the folly of the opinion, that the youth who labours on a farm or works in a shop, can be *fit for nothing else!* A young man upon a farm may qualify himself not only to pursue his calling, but to take a part in *all* the public concerns of life.

It is idle to talk of the want of time or means for mental cultivation upon an American farm. Judge Buel was correct when he declared that a man might devote three hours out of twenty-four to study, without infringing upon his business, fatiguing his mind, or impairing his health, allowing eight hours for sleep, ten for labour, and three for contingencies; and I ask what ordinary occupation affords a larger portion of time to the acquisition of *general knowledge?* Let no man on a farm complain of want of opportunity. How many such suffer money to be squandered, which would purchase a capital library, and fritter away time in taverns, idle talk, and lounging on

winter evenings, and useless sleep in long nights, which, if employed in reading and study, would make them able agriculturists, and fit them for the halls of legislation and the council tables of the nation.

I believe, too, that parents err in placing such an estimate upon the talents of their sons, as leads them to select the learned professions as the only sphere in which they can have a proper scope for exhibition. The principals of our academies and the presidents of our colleges will testify, that at the opening of every term, and at the annual commencements, they receive from fond parents nothing but intellect and genius of "the first order" and "greatest promise." Alas, that all this preëminence so soon finds its level.

I have ever regarded the best carpenter in a village as a more distinguished man than an ordinary, every day, commonplace lawyer; the best blacksmith, the ingenious, contriving mechanic, as a more valuable and respectable character than the half educated, conceited, lounging professional man, who has forgotten almost all he learned in the schools, and has never made advances in general knowledge since he commenced the profession which his apathy and dulness have so served to disgrace. The president of one of our colleges remarks, "I have long thought that our graduates mistake their path to honour and usefulness in making choice of a learned profession, instead of converting agriculture into onc, as it ought to be." Agriculture not a science! Why, there is hardly a science that is not subservient to the promotion of agriculture; zoölogy, botany, geology, chemistry in a most essential degree, mechanical sciences, all are connected with it. But the great practical problem which this country has to solve, is, to give the speediest return to the cultivator, and of yielding the largest amount of produce at the smallest proportionate expense; and though the science of theory and expensive experiments may not be adapted to the mass of our agriculturists, yet, happily, we have a noble class of men of education, property and public spirit, capable of weighing the scientific speculations of the wise, and with means, and the inclination to apply those means, to a practical investigation of the result of theories.

It is one of the happiest signs of the times, that many young men of education and wealth are turning their attention to husbandry; they are making a wise choice for their own happiness and that of others. Let me quote from Lord Stanley, at Liverpool, in relation to the magnitude and vastness of agriculture, as affording room for investment. Speaking of draining, "I am aware," he says, "that the process of draining is an expensive one, which requires an outlay of capital which, if we were to take the total of even a single county in England, would strike every man as something marvellous and almost appalling; and yet I am satisfied of this, that while no landlord could expect a tenant to engage in operations so extensive without his concurrence and assistance, and without his bearing the principal burden of the original outlay, I am firmly persuaded of this, that there is no bank in the whole country, no commercial speculation, no investment, so safe, so sure, so profitable, as that in which even borrowed capital may be engaged, by investing it *under the ground of your own soil.*"

I should not be surprised if here, as in England, farming came to be a fashionable pursuit; and almost every man here may afford to be in the fashion. We may get our small farms of fifty, eighty and one hundred acres, and almost every man may enjoy his homestead; nor need we for this go out into the wilderness. We can find good land, at cheap prices, almost at our very doors. The opening of that portion of the New-York and Erie Rail-Road which is completed, places all the facilities of a farm in the reach of every man who covets them. I wish I could persuade you all to go and look at the country through which the entire route of that road is laid. You would then be satisfied that there are the same happy miracles of improvement to be accomplished in the southern tier of counties, which have blessed and civilized our state on the line of the Erie Canal. How strange that any apathy should exist among us in reference to this vast and important work, which brings all the produce of the west to our doors at all seasons—gives us access to New-Orleans in nine days—offers us a western business not only in spring and autumn, but during the whole year. I am sure that in ten years the line of that road will exhibit an appear-

ance of culture, comfort and opulence, worthy of the great highway to the commercial emporium of our country.

I wish I could see in all our farmers a disposition to magnify their calling; but I have been grieved in many a farm-house, to listen to lamentations over what they term their "hard lot." I have heard the residents upon a noble farm, all paid for, talk about drudgery, and never having their work done, and few or no opportunities for the children; and I have especially been sorry to hear the females lament over the hard fate of some promising youth of seventeen or eighteen, who was admirably filling up his duties, and training himself for extensive usefulness and influence. They have made comparison between his situation, coarsely clad and working hard, and coming in fatigued, with some cousin at college, or young man who *clerked* it in a city store, till at length the boy has become dissatisfied, and begged off from his true interests and happiness. I am conversant with no truer scenes of enjoyment than I have witnessed in American farm-houses, and even log cabins, where the father, under the influence of enlightened Christianity and sound views of life, has gone with his family, as the world have termed it, into the woods. The land is his own, and he has every inducement to improve it; he finds a healthy employment for himself and family, and is never at a loss for materials to occupy his mind. I do not think the physician has more occasion for research than the farmer; the proper food of vegetables and animals will alone constitute a wide and lasting field of investigation. The daily journal of a farmer is a source of much interest to himself and others. The record of his labours, the expression of his hopes, the nature of his fears, the opinions of his neighbours, the results of his experiments, the entire sum total of his operations, will prove a deep source of pleasure to any thinking man. If the establishment of agricultural societies, and the cattle shows of our country, should have the effect of stimulating one farmer in every town to manage his land and stock upon the best principles of husbandry, there would be a wonderful and speedy alteration in the products of the earth, because comparison would force itself upon his friends and neighbours; and his example would be certainly beneficial, for prejudice itself will give way to profit.

I know an individual who, at a great expense of money and travel, carried, hundreds of miles, a pair of fine imported Berkshires: his fellow farmers around were large raisers of pork, and their swine were, without exception, of the genuine land pike and alligator breed, all leg and snout; well, they crowded to see the new pigs, admired their shape, did not like their colour, did not think they were "so great, after all," and thought that one hundred dollars invested in two pigs was "quite ridiculous." The result, however, was, that the farmers were soon willing to help pay for the original outlay, for they quickly became dissatisfied with their own rail-like breed; and I have since seen, at the piggery of a flour mill two miles off, more than fifty half blooded Berkshires, and all through the township they are getting a better article for pork and hams.

The prejudices of the farmers to new ways, fresh breeds, and book farming, are all destined to give way. I am sure that a remark which that great man, De Witt Clinton, made in 1825, in relation to American invention, that we were "a people that had no stand still in us," is perfectly applicable to us as agriculturists. Our farmers have eyes, they can all see, and they *will learn*. I am acquainted with a vicinity where a root crop had never been raised as a principal resource for cattle. An experiment in 1838, has now twenty rivals, all at first slow to believe, but quick to follow; and all their working cattle this winter will have cause for thanksgiving. In that same town a man has converted a soil, marred by the salts of iron, into valuable ground, by the free use of lime; a course to which he was advised by a neighbour who took the *Cultivator*. And here let me say, that in 1840, on a long western journey, I one day remarked to my friend, that I thought I could give a pretty shrewd guess, from observation as we went along, as to the fact whether the occupants of the farms took any agricultural papers: in thirteen trials I made but one wrong guess. It is important that the doings of this society, good agricultural reports, books and periodicals, be circulated among the farmers; because improvements and the alterations of established customs and habits are very slowly admitted, and the farmer oftentimes, from his retired position, unless he is addicted to reading, is likely to

acquire very little knowledge of his art, but that which is traditional and peculiar to his vicinity. We should do much for our state, if we could put forth a periodical into every farm-house ; one that would keep pace with the times, and afford the earliest notice of every important invention or discovery in rural life. I never take up the *Ploughboy*, the *New-York Farmer*, and especially the *Cultivator*, without an earnest wish that such admirable pages of wisdom and experience, and plain, round-about common sense, could be scattered in every farm-house in America, and its volumes placed in every city habitation. I do not know a more amusing or instructive set of volumes than Buel's *Cultivator*. I almost envy that good great man his claims upon national gratitude.

I wish I could induce the father of every family to give this work a place in his house at Christmas, for the benefit of his children ; the practical information which they would gain from it, and their acquaintance with things of rural life, would richly repay the expenditure, and this knowledge would all come into useful play.* I know a youth, the son of a president of a city bank, a boy of eighteen, who gravely asked how long it took to bring a crop of wheat and barley to perfection, and what animals were called neat cattle ; and yet this lad was deemed *well-educated and accomplished*, in the circle in which he moved.

We all know how much is done by oral instruction ; how often men are more affected by what they hear than what they read ; and this has induced me to wish that suitable, and, of course, well-qualified men, could go through every portion of our state, and address the population of every vicinity on the great subject of the improvements in husbandry, and urge the cultivators of the soil to a generous rivalry. The man who went out upon this

* I am happy to state, that Mr. A. B. Allen has commenced another periodical devoted to agriculture. It is published in New-York, and is called "The American Farmers' Magazine," a monthly, at two dollars a year. No writer in our country brings more thorough practical skill and a larger share of science to the subject than Mr. Allen. His magazine will, I doubt not, be a *standard authority*, New-York city ought to furnish it with a large number of subscribers. Our merchants depend so much upon the production of the soil, that their very business interests demand that they should be acquainted with the farming interests of the state and country, and Mr. Allen will give such statistics as are adapted to their use.

task should not go forth as the profound scholar, or the refined gentleman, but as a plain, honest-hearted citizen, who had an important subject to talk about, and valuable information to diffuse.

I believe that such an agency would be productive of the happiest results. It would do much to overcome prejudice; the individual would drop the seed of suggestion upon much good ground; he would acquire immense practical information. There are a hundred things which a wise man could do upon such a tour that we can hardly hope to effect by our publications. Improvements in fencing, especially in building, could be pointed out and explained; the abatement and removal of absolute nuisances could be judiciously hinted at and enforced in good natured conversation, and the cultivation of fruit recommended. I know a gentleman who prides himself on having induced several farmers to get up woodpiles, where formerly daily fuel was only to be obtained by daily prayer and coaxing and scolding, on the part of all the women, to all the men in the establishment.

It is to be deplored, that in many parts of the country the farm-house makes so little pretension to external beauty, and that it is destitute of those attractions which are always at the command of the occupant.

How many abodes do we know that are almost without gardens, and quite without flowers. It is the part of wisdom to make our habitations the home of as many joys and pleasures as possible, and there ought to be a thousand sweet attractions in and around the sacred spot we call our homes.

This feeling is perfectly philosophical. The fragrance of the rose that is plucked at the door of the cottage, is sweeter in odour to the poor man, who has assiduously reared it there amid difficulties and discouragements, than if it were culled from the "parterre" of the palace; and the root which he has dug from his own little garden is more grateful to his palate than if it were the purchased product of unknown hands; and this argument, if it be true when applied to individuals, is equally valid on the broad principle of nations.

O, we greatly need something more of the sweet and beau-

tiful about our houses and cottages, that shall make childhood, youth and age all cry out, "there is no place like home." In your summer rambles away from the hot city, you go to the farm-houses of this and other states; now just think how differently your memory calls up various houses at which you have sojourned. You can think of spots like paradise, and there are others that you recollect, and *there* are only the capabilities for improvement and fine opportunities for the hand of industry and good taste. How well we recall to mind the pretty white cottage, the deep green blinds, the painted trellis, the climbing shrub, the neat garden fence, the sweetly scented flowers, the entire air of comfort, and how we long again to enjoy the bliss of quietness and repose.

I believe a garden spot exerts a salutary influence, not only in early life, but in the advanced periods of human existence. "O, how much sweeter is it to me," said Madame De Genlis, "to recall to my mind the walks and sports of my childhood, than the pomp and splendour of the palaces I have since inhabited. All these courts, once so splendid and brilliant, are now faded; the projects which were then built with so much confidence are become chimeras. The impenetrable future has cheated alike the security of princes and the ambition of courtiers. Versailles is drooping into ruins. I should look in vain for the vestiges of the feeble grandeur I once admired; but I should find the banks of the Loire as smiling as ever, the meadows of St. Aubyn as full of violets and lilies of the valley, and its trees loftier and fairer. There are no vicissitudes for the eternal beauties of nature; and while, amid blood-stained revolutions, palaces, columns, statues disappear, the simple flowers of nature, regardless of the storm, grow into beauty, and multiply for ever."

Hannah More felicitated herself through life on her attachment to the garden, and declared to an American friend, that in her eighty-third year the love of flowers was the only natural passion left to her which had lost none of its force.

I am unhappy when I see a farm without a garden, and almost so in a house without flowers. I believe all who possess sensibility are fond of plants, and I also believe that at some period or other of life the predilection will break out. I think

nature indicates the garden as man's proper place ; for the infant can hardly walk before he is found planting a flower. Every boy loves a garden—a garden of his own ; every sailor talks about his garden, and some old sailors can show us rare ones. Napoleon and Siddons, Washington and Jefferson, in their retirement from life's busy scenes, are found in the garden.

As far as I have noticed, the greatest admirers and most passionate cultivators of flowers are females and manufacturers. I was much pleased, at the exhibition in New-Haven last week, to observe that the choicest fruits and flowers came from the care of the ladies ; and the manufacturing classes in England and Scotland, especially in Staffordshire and Lancashire, and vicinity of Paisley, are enthusiastic florists, and derive much enjoyment from their gardening societies ; they regard gardening as a relaxation. It is not undeserving of a notice on this occasion, that a mechanic* who labours daily in our city, has a garden in Williamsburgh, where he can show a finer collection of flowers than is possessed by most rich men, and his dahlias are now adorning our agricultural room at the Garden.

“Flowers, of all created things, are the most innocently simple, and most superbly complex—playthings for childhood, ornaments of the grave, and companions of the cold corpse ! “Flowers, beloved by the wandering idiot, and studied by the deep thinking man of science ! Flowers, that unceasingly expand to heaven their grateful, and to man their cheerful looks—partners of human joy, soothers of human sorrow ; fit emblems of the victor's triumph, of the young bride's blushes ; welcome to the crowded halls, and graceful upon solitary graves ! Flowers are, in the volume of nature, what the expression ‘God is love’ is in revelation. What a desolate place would be a world without a flower ! It would be a face without a smile, a feast without a welcome. Are not flowers the stars of the earth ? And are not stars the flowers of heaven ? One cannot look closely at the structure of a flower without loving it. They are the emblems and manifestations of God's love to the creation ; and they are the means and the ministration of man's

* Mr. Tucker.

love to his fellow creatures, for they first awaken in his mind a sense of the beautiful and good. The very inutility of flowers is their excellence and great beauty, for they lead us to thoughts of generosity and moral beauty, detached from and superior to selfishness: so that they are pretty lessons in nature's book of instruction, teaching man that he liveth not by bread alone, but that he hath another than animal life."

I think it will appear to all who have visited our best herds and seen the state of the English cattle shows, that the time has arrived when we should breed for ourselves; and, with our climate in New-York, Ohio, Michigan and Kentucky, so favourable for our purpose, and perhaps even for exportation, I know men who think we may not have to wait one hundred years to repay favours to our friends in England. Only let us keep our high blood pure, and bring up judicious selections to the best pure blood bulls, and breed steadily toward the Durham, and I expect we shall have cattle that will reflect as much credit upon their breeders as the milk pots of Col. Jaques, or the short horns or alloys of Collings. One thing I am quite satisfied of, and that is, that we have no further need of extensive importation in short horns. I think their value cannot well be overrated for milking qualities or for beef. If any are sceptical on the latter point, I beg their particular attention to a pair of steers which Mr. Townsend will exhibit next week for competition, and which weigh 2,615 lbs. each.*

In relation to the cattle, I have hardly time to say much; nor perhaps is this the best place, though something may be expected. It is well known, that for a few years past much attention has been directed to this subject, and very heavy investments have been made in the improved breeds. The best herds of England have been inspected; and we have now in New-York, New-Jersey, Ohio, Michigan and Kentucky, some of the choicest animals that have been reared. Great praise is due to such men as Van Rensselaer, Prentiss, Corning, Rotch,

* These noble animals afterwards received the silver cup at the Fair. They are returned to New-Haven, and will probably have an addition of 500 lbs. to their individual weight when they are brought to the market.

Lossing, Bement, Pope, Giddings, Whitney, Townsend, Poole, Renwick and Clay, who, at great expense, have brought among us the best blood of England.

I trust that our farmers will avoid the grievous error of preferring a breed whose services may be obtained cheaply, rather than selecting an animal of the highest merit. This, indeed, is to be "penny wise and pound foolish."

I yesterday had the pleasure to accompany Mr. A. B. Allen, of Buffalo, who has just returned from an agricultural tour in England, on board the packet ship Hendrick Hudson, from London, for the purpose of inspecting the superior stock selected by him for himself and his friends. Several large previous importations had arrived by the packet ships Mediator and Wellington. This consists of South Down sheep, the great York and Kenilworth breeds of pigs, shepherd dogs, the large Dorking fowls, which are distinguished, like Goliath, by having an additional toe, English pheasants, &c. Of cattle, Mr. Allen has made no importation, principally on account of the disease which is at present pervading all England, and he was fearful of importing that with them, to the injury of our present stock. He however concurs with me in the opinion, that New-York, Ohio and Kentucky, with the exception of one herd, may even now challenge all England in the breed of short horns; and this is his judgment, after having attended the Royal Agricultural Society's Exhibition at Liverpool, and the still finer one of Durhams, long-wooled sheep and horses, at Hull, Yorkshire, and examining the celebrated herds of Earl Spencer, Mr. Bates, and other eminent breeders. Mr. Allen thinks very favourably of Herefords, but more so of some very large and improved South Devons. The celebrated Ayrshires he greatly admires; but for the most delicate knife, and for a source of real profit to the grazier, he thinks highly of the Scotch Highlanders, as now raised by a few choice breeders. These animals are but of medium size; they are occasionally of dun colour, more commonly black, without horns, and very hardy and thrifty. There can be no doubt that they would suit the climate of New-England.

If any of you, gentlemen, wish to investigate the history of

the improved breed of Durhams, I would advise you to consult "Cully on Live Stock," a work, I have reason to believe, quite as much to be depended upon, as the more recent treatise by the Rev. Henry Berry. It may not be amiss to say, that we can trace back the short horns for nearly two hundred years. Sir H. Smythson then used to weigh out food to his cattle, and his notes upon his herd, as to the eye, horns, hoof, hide, all indicate the identity of this breed. It is an interesting fact, and probably known to very few, that while Lord Percy was engaged in this country during the Revolution, his steward sent the celebrated herd, one by one, to the shambles. At the return of Lord Percy, he found the butcher carrying off the very last cow, which he rescued from the knife, and thus preserved the breed.

Mr. Allen thinks that in horses we are far superior to England. There is nothing there equal to our American trotters. Their cart horses carry more flesh, but have not the muscle of our heavy Pennsylvania horses; nor are they as enduring in their work, or as strong at a pull, and are much coarser in their conformation, with long hair below the knee, and heavy fetlocks, that gather mud, give them disease, and hinder quick movement. Even our racers, he thinks, would beat England as weight carriers, at three or four mile heats, but does not know, owing to their very fine training, and the soft springing turf on the course, but the English horse might be quicker a few seconds for a single heat; but, generally, that ours have the most bottom or endurance, he has not a doubt. He thinks our climate greatly superior to that of England for breeding these noble animals; and if we only pay close attention to this department of husbandry, we may become large exporters, especially of roadsters. Our horses are already much talked about and inquired after abroad; and Mr. Allen tells me he rode after some quite ordinary American horses that had been taken to England, which were highly prized, beating every thing upon the road with perfect ease.

The South Downs which I saw yesterday, I hardly know how to speak of; they must be seen to be understood. You have often heard travellers' stories about English mutton; well, let

the incredulous go and look at these importations. Three of them are brought out by Mr. Allen for the Hon. Mr. Stevenson, late Minister at St. James; three for Bishop Meade, of Virginia; five for Mr. Rotch, of Butternuts, Otsego county, N. Y. Mr. Stevenson has been abroad six years, and after visiting all the flocks of note, prefers the South Downs to all others; and Dr. Meade and Mr. Allen concur fully in this opinion. I have heard it doubted whether the South Downs are adapted to our hard northern climate; to this I would say, that they have been found to endure a Scotch winter even better than the Cheviots, at an elevation of two thousand feet above the sea.

These sheep were selected from the celebrated stock of Jonas Webb, Esq., of Babraham, Cambridge, who carried off all the prizes this year at the show of the Royal Agricultural Society. These animals are of great size for Downs, of the most finished form, of a fleece about equal, I think, to three quarters blood Merino, and as thick and close as felt. The bucks will shear from ten to eleven and a half pounds per annum, and are of great weight; those of Bishop Meade and Mr. Stevenson are of two hundred and forty-eight and two hundred and fifty-four pounds, though only eighteen months old, while that of Mr. Rotch, a lamb of six months, is one hundred and fifty-two pounds. Mr. Webb killed a wether last Christmas which weighed, dressed, with the head on, two hundred. The sire of Mr. Rotch's buck, as the best yearling in all England, took the prize of thirty sovereigns from the Royal Agricultural Society at Liverpool, and is now merely let to the Duke of Newcastle for the present season at one hundred sovereigns! The shepherd's dog I think remarkably beautiful; he is of a medium size, of shining black colour, with long and glossy hair. The breed is so good and true, that they break themselves in, to guard and drive sheep on the extensive ranges of hill and down, without any training. He is almost as active as the greyhound, and very docile and intelligent. The introduction of dogs into agricultural use would be of great service, and especially in driving flocks to city markets. The Dorking fowls are of immense size, often weighing eight pounds dressed, and all sportsmen know the beauty of the English cock pheasant. I am happy to inform you that my

friend, Mr. Allen, will soon favour the public with an article upon the history and pedigree of South Downs, with a series of engravings.

In relation to pigs, it is well known that Mr. Allen has long been one of the most extensive and successful breeders; his learned article, which appeared in Albany, has been reprinted in London, and excites much attention. To examine the breeds of England was one great object of his tour, and in the investigation of this matter he travelled many hundreds of miles.

He still pronounces the Berkshire the best, combining the finest qualities, and, he thinks, yielding a sufficient size. He saw the best Chinese, the wild boar, the German boar, and all the crosses which have been procured.

Our good friends in Kentucky, who "go the whole hog," regard the Berkshires as only *approximations* to bacon excellence, and have always been asking northern breeders to furnish them *length, length*. Well, I think Mr. Allen will satisfy them now, he has a breed which he can easily fat to weigh fourteen hundred; he saw one exhibited in England, and, strange as it may sound, under the patronage of Queen Victoria, which he measured. From the tip of nose, over his head, to the tail, nine feet nine inches; from the tip of nose, along the side, to the end of the rump, seven feet nine inches; in height four feet, girt round the breast seven feet seven inches. This is the stock from which Mr. Allen has shown me specimens.

The details of the Agricultural Society at Liverpool afford the most interesting proof of the fresh impetus which the cause of improved husbandry has received. The best men in England, in all walks of life, are becoming interested. Noblemen may be seen in their gaiters and nailed shoes, cuffs turned up, examining cattle and guiding ploughs. Young noblemen, leaving their habits of dissipation, are joining the masses of the people, doing what they can to advance the true interests of the land.

It is gratifying to know that Mr. Allen has received the kindest attention from the gentlemen who are engaged in agriculture, and has been treated with the greatest confidence; and it is to be hoped that the results of his tour may be speedily laid before the public.

I close by indulging myself and gratifying my audience by quoting a passage from a work which I strongly commend you to purchase. Read it, read it again ; it will do the young man more good than he will get from any half dozen novels that have been published this year ; it is *Howitt's Rural Life in England* ; I have placed it, by recommendation, in the hands of several friends, and they have all been delighted with the work.

“There is no class of men, if times are but tolerably good, that enjoy themselves so highly as farmers ; they are little kings. Their concerns are not huddled up into a corner, as those of the town tradesman are. In town, many a man who turns thousands per week is hemmed in close by buildings, and cuts no figure at all. A narrow shop, a contracted warehouse, without an inch of room to turn him on any hand, without a yard, a stable, or outhouse of any description, perhaps hoisted aloft, up three or four pairs of dirty stairs, is all the room that the wealthy tradesman can often bless himself with, and there day after day, month after month, year after year, he is to be found, like a bat in the hole of a wall, or a toad in the heart of a stone or of an oak tree. Spring, and summer, and autumn go round ; sunshine and flowers spread over the world ; the sweetest breezes blow, the sweetest waters murmur along the vales, but they are all lost upon him ; he is the doleful prisoner of Mammon, and so he lives and dies. The farmer would not take the wealth of the world on such terms. His concerns, however small, spread themselves out in a pleasant amplitude both to his eye and heart. His house stands in its own spacious solitude ; his offices and out-houses stand round extensively, without any stubborn and limiting contraction ; his acres stretch over hill and dale ; there his flocks and herds are feeding ; there his labourers are toiling—he is king and sole commander there. He lives among the purest air and the most delicious quiet. Often, when I see those healthy, hardy, full-grown sons of the soil going out of town, I envy them the freshness and the repose of the spots to which they are going. Ample old fashioned kitchens, with their chimney corners of the true, projecting, beamed and seated construction, still remaining ; blazing fires in winter, shining on suspended hams and flitches, guns supported on

hooks above, dogs basking on the hearth below ; cool shady parlours in summer, with open windows, and odours from garden and shrubbery blowing in ; gardens wet with purest dews, and humming at noontide with bees ; and green fields and verdurous trees, or deep woodlands lying all around, where a hundred rejoicing voices of birds or other creatures are heard, and winds blow to and fro, full of health, and life-enjoyment. How enviable do such places seem to the fretted spirits of towns, who are compelled not only to bear their burden of cares, but to enter daily into the public strife against selfish evil and ever spreading corruption. When one calls to mind the simple abundance of farm-houses, their rich cream and milk, and unadulterated butter, and bread grown upon their own lands, sweet as that which Christ broke, and blessed as he gave to his disciples ; their fruits, ripe and fresh plucked from the sunny wall, or the garden bed, or the pleasant old orchard ; when one casts an eye upon, or calls to one's memory the aspect of those houses, many of them so antiquesly picturesque, or so bright looking and comfortable, in deep retired valleys, by beautiful streams or among fragrant woodlands, one cannot help saying with King James of Scotland, when he met Johnny Armstrong,

“ What want these knaves that a king should have ? ”

The first part of the paper is devoted to a general
 discussion of the problem. It is shown that the
 problem is equivalent to the problem of finding
 the minimum of a certain functional. This
 functional is defined as follows:

$$J(u) = \int_{\Omega} |\nabla u|^2 dx + \int_{\Omega} f(x) u dx$$

where Ω is the domain of interest, ∇ is the
 gradient operator, and $f(x)$ is a given function.
 The minimum of this functional is attained
 at a function u which satisfies the boundary
 value problem

$$\Delta u = -f(x) \text{ in } \Omega, \quad u = 0 \text{ on } \partial\Omega$$

where Δ is the Laplacian operator and $\partial\Omega$
 is the boundary of Ω . The existence and
 uniqueness of the solution of this problem
 is guaranteed by the theory of elliptic
 partial differential equations.

In the second part of the paper, the
 problem is solved numerically. The domain
 Ω is discretized by a finite difference
 method. The resulting system of linear
 equations is solved by the conjugate
 gradient method. The results of the
 numerical solution are compared with the
 analytical solution. It is shown that the
 numerical solution converges to the
 analytical solution as the mesh size
 decreases.

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