

# HILLSBOROUGH RECORDER.

UNION, THE CONSTITUTION AND THE LAWS—THE GUARDIANS OF OUR LIBERTY.

Vol. XXXII.

WEDNESDAY FEBRUARY 19, 1851.

No. 1570.



RURAL ECONOMY.

May your rich soil,  
Exuberant, nature's better blessings pour  
O'er every land."

## WHY ARE ASHES MORE VALUABLE THAN LIME OR GYPSUM AS FERTILIZERS?

Our neighbors of Long Island have become famous for their trade in ashes. They send their boats the entire length of the Mohawk Valley, and they would push their enterprise as far as the Black River Valley, if the Black River Valley Canal was complete; and they could well afford to transport not merely the live ash, but the refuse ash. They have been in the habit of buying the refuse of the asheries of Albany and Troy, and paying as much for it as the soapmaker paid originally for the live ash. In looking about for a fertilizer, the Long Islanders have found by experience, that they form the best which they can employ. The question which we have propounded demands an answer; we therefore proceed to state, that ashes owe their value to their composition. Our reader will, perhaps, say that he knew this before. Very well. We say again, and more to the point, that ashes, spent and unspent, owe their principal value to the potash in the first instance, and to the phosphates and magnesia, in the second. We design to speak mainly of spent ashes, though we believe farmers had much better keep all their ashes for their corn and wheat lands, rather than sell them for one shilling per bushel. Spent ashes, then, we repeat, are valuable for the phosphates they contain, together with the lime and magnesia, which are in a state of great sub-division. Besides the foregoing elements, silica, both soluble and insoluble, is present. The amount of the former will vary in the quantity by the intensity of heat to which the vegetable may have been subjected. Thus the yellow pine, which grows on the sandy lands west of Albany, contains in its weight silica.

When the value of ashes is sought for, it may with propriety be said, that they rank next to bone dust, containing, as they do, phosphate of magnesia and iron, together with a large percentage of lime. The ash of the forest as well as fruit trees, is as various as their own products; scarcely two agreeing either in the amount of ash they yield, or in the elements which compose it.

Farmer.

## Cutting Fodder for Stock.

That cutting fodder for stock, especially the coarsest kinds, is a subject worthy of more attention among farmers, will, I believe, be admitted by all who have given it anything like a fair trial. Cut fodder of every description, is of more value for stock than uncut. I have known persons to be of opinion that a horse would thrive as well upon cut hay, as he would without its being cut and a moderate allowance of oats added.

This may be claiming too much for it, but yet there is a stronger argument in its favor.

Horses, as well as other stock, appear to relish the same fodder better for its being cut; besides the advantage of eating it in half the time, allowing more for rest. It has also a tendency to obviate the difficulty to which cattle and horses are subject, in the winter season, when they are kept upon dry fodder, such as wheat and oat straw, corn fodder, poor hay, &c., which will be much better eaten by being cut than without. I have repeatedly seen fodder offered to cattle and refused, and the same fodder passed through the cutter, returned to them apparently to their satisfaction, from the disposition they made of it. Hay that is mussy is much improved by cutting, as the dust becomes liberated by the operation. There is one other benefit to be derived, which is mixing straw, poor hay, &c., with that which is good, by which means all will be eaten. Some, however, may object, that straw and poor hay are in a manner worthless, therefore nothing is gained. But we may recollect that the time has not long since gone by, when very many doubted their being any advantage in grinding corn and cobs together for provender; but experiments have established the fact that there is economy in it; and from some experience in mixing fodder, I think the advantage fully equal to mixing cobs with corn provender.

Maine Farmer.

An exchange paper enumerates the following list of advantages attending the advertising in a newspaper—it has enlarged many a small business; has revived many a dull business; has recovered many a lost business; has preserved many a large business; has created many a new business.

From Arthur's Home Gazette.

## WHO ARE THE HAPPIEST?

"What troubles you, William?" said Mrs. Aiken, speaking in a tone of kind concern to her husband, who sat silent and moody, with his eyes fixed upon the floor, and now following the forms of his plainly-clad children as they sported, full of health and spirits, about the room.

It was evening, and Mr. Aiken, a man who earned his bread by the sweat of his brow, had, a little while before, returned from his daily labor.

No answer was made to the wife's question. A few minutes went by, and then she spoke again.

"Is anything wrong with you, William?"

"Nothing more than usual," was replied. "There's always something wrong. The fact is, I'm out of heart."

"William?"

Mrs. Aiken came and stood beside her husband, and laid her hand gently upon his shoulder.

"The evil spirit of envy and discontent was in the poor man's heart,—this his wife understood right well. She had often before seen him in this frame of mind.

"I'm as good as Freeman, am I not?"

"Yes, and a good deal better, I hope," replied Mrs. Aiken.

"And yet he is rolling in wealth, while I, though compelled to toil early and late, can scarcely keep soul and body together."

"Hush, William. Don't talk so. It does you no good. We have a comfortable home, with food and raiment,—let us therewith be contented and thankful."

"Thankful for this mean hut! Thankful for hard labor, poor fare, and coarse clothing!"

"None are so happy as those who labor; none enjoy better health than they who have only the plainest food. Do you ever go hungry to bed, William?"

"No, of course not."

"Do you or your children shiver in the cold of winter for lack of warm clothing?"

"No; but—"

"William! Do not look past your real comforts in envy of the blessings God has given to others. Depend upon it, we receive all of this world's goods the kind Father above sees it best for us to have. With more, we might not be so happy as we are."

"I'll take all that risk," said Aiken. "Give me plenty of money, and I'll find a way to largely increase the bounds of enjoyment."

"The largest amount of happiness, I believe, is ever to be found in that external condition in which God has placed us."

"Then every poor man should willingly remain poor."

"I did not say that, William. I think every man should seek earnestly to improve his worldly affairs—yet be contented with his lot at all times; for only in contentment is there happiness, and that is a blessing the poor may share equally with the rich. Indeed, I believe the poor have this blessing in large store. You, for instance, are a happier man than Mr. Freeman."

"I am not so sure of that."

"I am, then. Look at his face. Doesn't that tell the story? Would you exchange with him in every respect?"

"No, not in every respect. I would like to have his money."

"Ah, William! William!" Mrs. Aiken shook her head. "You are giving place in your heart for the entrance of bad spirits. Try to enjoy fully what you have, and you will be a far happier man than Mr. Freeman. Your sleep is sound at night."

"I know. A man who labors as hard as I do, can't help but sleep soundly."

"Then labor is a blessing, if for nothing else. I took home, to-day, a couple of aprons made for Mrs. Freeman. She looked pale and troubled, and I asked her if she was not well."

"Not very," she replied. "I've lost so much rest of late, that I'm almost worn out."

"I did not ask why this was; but after remaining silent for a few moments, she said—"

"Mr. Freeman has got himself so excited about business, that he sleeps scarcely three hours in twenty-four. He cares neither for eating nor drinking; and if I did not watch him, would scarcely appear abroad in decent apparel. Hardly a day passes that something does not go wrong. Workmen fail in their contracts, prices fall below what he expected them to be, agents prove to be unfaithful; in fact, a hundred things occur to interfere with his expectation, and to cloud his mind with disappointment. We were far happier when we were pluck Mrs. Aiken. There was a time when we enjoyed this life. Bright days!—how well are they remembered! Mr. Freeman's income was twelve dollars a week; we lived

in two rooms, and did all our own work. I had fewer wants than I have ever had since, and was far happier than I ever expect to be again on this side of the grave."

Just then a cry was heard in the street.

"Hark!" exclaimed Mr. Aiken. "Fire! Fire! Fire!" The startling sound rose clear and shrill upon the air. Aiken sprang to the window and threw it open.

"Mr. Freeman's new building, as I live!"

Aiken dropped the window, and catching up his hat, hurriedly left the house.

Mrs. Aiken shook her head. It was an hour ere he returned. Meanwhile, the fire raged furiously, and from her window, where she was safe from harm, Mrs. Aiken saw the large new factory, which the rich man had just erected, entirely consumed by the fierce devouring element. All in vain was it that the intrepid firemen wrought almost miracles of daring, in their efforts to save the building. Story after story was successively wrapped in flames, until, at length, over fifty thousand dollars worth of property lay a heap of black and smouldering ruins.

Wet to the skin, and covered in cinders, was Mr. Aiken when he returned to his humble abode, after having worked manfully, in his unselfish efforts to rescue a portion of his neighbor's property from destruction.

"Poor Freeman! I pity him from my very heart!" was his generous, sympathizing exclamation as soon as he met his wife.

"He is insured, is he not?" inquired Mrs. Aiken.

"Partly. But even a full insurance would be a poor compensation for such a loss. In less than two weeks this new factory, with all its perfect and beautiful machinery, would have been in operation. The price of goods is now high, and Mr. Freeman would have cleared a handsome sum of money on the first season's product of his mill. It is a terrible disappointment for him. I never saw a man so much disturbed."

"Poor man! His sleep will not be so sound as yours to-night, William."

"Indeed it will not."

"Nor, rich as he is, will he be as happy as you to-morrow."

"If I were as he is," said Aiken, "I would not fret myself to death for this loss. I would, rather, be thankful for the wealth still left in my possession."

"No, William, the same spirit that makes you restless and discontented now, would be with you no matter how greatly improved might be your external condition. Mr. Freeman was once as poor as you are. Do you think him happier for his riches? Does he enjoy life more? Has wealth brought a greater freedom from care? Has it made his sleep sweeter? Far, very far from it. Riches have but increased the sources of discontent."

"This is not a necessary consequence. If Mr. Freeman turn a blessing into a curse, that is a defect in his particular case."

"And few, in this fallen and evil world, are free from this same defect, William. If wealth were sought from unselfish ends, then it would make its possessor happy. But how few so seek riches. It is here, believe me, that the evil lies."

Mrs. Aiken spoke earnestly, and something of the truth that was in her mind, shed its beams upon the mind of her husband.

"You remember," said she, smiling, "the anecdote of the rich man in New York, who asked a person who gave utterance to words of envy towards himself—'Would you,' said he, 'take all the care and anxiety attendant upon the management of my large estate and extensive business operations, merely for your victuals and clothes?'"

"No, indeed, I would not," was the quick answer. "I get no more," said the rich man, gravely. And it was the truth, William. They who get rich in this world, pass up through incessant toil and anxiety; and, while they seem to enjoy all the good things of life, in reality enjoy but little. They get only their victuals and clothes. I have worked for many rich ladies; and I do not remember one who appeared to be happier than I am. And I am mistaken if your experience is not very much like my own."

A few days after this time, Aiken came home from his work one evening. As he entered the room where his wife and children sat, they looked up to him with a cheer and smile of welcome, and the latter gathered around him, filled his ears with the music of their happy voices. The father drew an arm around one and another, and as he sat in their midst, his heart swelled in his bosom, and warmed with a glow of happiness.

Soon the evening meal was served—served by the hands of his wife—the good angel of his humble home. Wil-

liam Aiken, as he looked around upon his smiling children, and his true-hearted, even-tempered, cheerful mother, felt he had many blessings for which he should be thankful.

"I saw something a little while ago, that I shall not soon forget," said he, when alone with his wife.

"What was that, William?"

"I had occasion to call at the house of Mr. Elder, on some business, as I came home this evening. Mr. Elder is rich, and I have often envied him; but I shall do so no more. I found him in his sitting room, alone, walking the floor with a troubled look on his face. He glanced at me with an impatient expression as I entered. I mentioned my business, when he said abruptly and rudely—"

"I've no time to think of that now."

"As I was turning away, a door of the room opened, and Mrs. Elder and two children entered."

"I wish you would send them children up to the nursery," he exclaimed, in a fretful, half-angry voice. "I'm in no humor to be troubled with them now."

"The look cast upon their father by those two innocent little children, as their mother pushed them from the room, I shall not soon forget. I remembered, as I left the house, that there had been a large failure in Market street, and that Mr. Elder was said to be the loser by some ten thousand dollars—less than a twentieth part of what he is worth. I am happier than he is to-night, Mary."

"And happier you may ever be, William," returned his wife, "if you but stoop to the humble flowers that spring up along your pathway, and, like the bee, take the honey they contain. God knows what, in external things, is best for us; and he will make either poverty or riches, which ever come, a blessing, if we are humble, patient and contented."

Customs of the Turks.—Mr. Brown, who resided a long time in Constantinople, and who accompanies Amin Bey, has published in the Scotia Gazette, some interesting papers upon the habits and customs of the Turks. From one of them we copy the following:

"The higher classes of the Ottomans or Turks of Constantinople, are very refined in their manners and habits. They are very gentle and mild in disposition, and differ very much from the ideas generally had of them in this and many other countries. Their education cannot be called a very good one; they have but few works on modern sciences, and none on the histories of other countries. Beyond a history of Catherine II. of Russia, and another of Bonaparte, at St. Helena, there are none in their own language, or any of the sovereigns or governments of Europe. Of America, they possess one called the 'Tradition of a New Name,' or the 'Discovery of the Western Ind.' It contains much that is fabulous, drawn from the earlier accounts of the imagined condition of the discovered 'Ind' of Columbus and his companions. It deprives Columbus of much of the merit which he has followed the route pointed out to him by an adventurous Captain whom he found at the Canary Islands. It has many reports about mermaids and other fabulous beings, and also describes several kinds of fruits, which unfortunately, are not now, at least, to be found in any known part of America. Within late years, some small geographies have been translated into Turkish from the French, for the use of the public schools now being established by the present Sultan. They possess some excellent works on mathematics—and, it may here be said, that the people of the East have always excelled in the science of figures;—and many grammars and dictionaries exist in Turkish, of Arabic and Persian. As the Turkish language alone is a very poor one, large additions have been made to it from the Arabic and the Persian, and it is these that form the Ottoman tongue. With these, it becomes very extensive, and requires several years of study to be properly acquired. The Turks and Persians use the alphabet of the Arabs, and like them, write from right to left; but whilst the Arabian numerals are still used in Arabia and Africa, as well as all over Europe, the Turks have a set of their own, distinct and peculiar. All eastern people, except the Chinese, write with a reed; the latter use a brush, and write from the top to the bottom of the paper.

Most oriental people resemble each other in their social and domestic habits. Children of the two sexes only associate together until the age of nine or ten years, when the females assume the veil prescribed by their Prophet for concealment from the males. To that age, they associate with each other at school; brothers and sisters freely associate with their cousins of either sex, but with no more distant connections. Brothers may see the faces of brothers' wives or slaves, and those of their parents; but not those of any one not nearly connected with them. A Mussulman is allowed by his religion, to have four wives, and to divorce them when he pleases. He cannot take back a wife divorced the third time; she can then become united

in marriage to another husband, &c., and in turn divorced by him. He may have as many female slaves (concubines) as his purse will allow, and he has entire power over their persons as well as labor. These, as well as other slaves, become free after seven or eight years of servitude, following in this respect, the Mosaic law. All white female slaves are free who may bear a child to their master; and all children thus born of slaves, are free and have the same right to the patrimony of their father, as those of the free married wife. Divorces are rare among the higher classes of Mussulmen; they are considered irreparable, and only now occur among the ignorant and ill bred. Few Mussulmen have more than one wife, both on account of the expense required to keep up different establishments for each wife, and of the quarrels to which feelings of jealousy give rise among them. Few also introduce female slaves into their harems (female apartments) for the same reasons; and thus, though polygamy is legal among the Turks, the inconvenience attending it, prevents its use.

DR. WILLIAMS'S LECTURE On the Coal Mines of North-Carolina.

If I had the talents to amuse and entertain a public audience, talents, to which I make no pretensions, I could not expect to afford amusement and entertainment on a subject of dry statistics; but on a subject so deeply interesting to the people of North Carolina as the development of their resources, I hope to be able to command the attention of an audience so patriotic as that which I have the honor to address, while I discourse, for a short period, on the value of the Coal Fields of Deep River, a subject to which I have given my undivided attention and laborious investigation for the last few months.

The value of coal, as a Mineral fuel, is but little known, except to those whose interests have made it a subject of study. Professor Taylor, in his invaluable work on the Statistics of Coal, very justly remarks, that it would be no difficult task to show, in figures, how vastly more profitable is the application of labor in the mining and working and transportation of coal, than that of the precious metals.

"The annual production of all the gold and silver mines of North and South America was estimated by Baron Humboldt at nine millions of pounds sterling, and at present (excepting the recent discoveries in California) is less than five millions of pounds, or twenty five millions of dollars. Now, the value of the coal produced annually, in Great Britain alone, is computed at fifty millions of dollars at the pit's mouth, and from seventy-five to one hundred millions of dollars at the places of consumption."

Great Britain is indebted to her coal for her supremacy as a manufacturing, commercial, and maritime nation. Take from her the coal mines and she would sink into a fourth rate commercial and maritime nation. Take from her the coal mines and she would sink into a fourth rate commercial and maritime power. Her manufactures would cease—her Sheffield, Birmingham and Manchester would be no more, and her people would be compelled to emigrate or starve.

The use of coal in the United States, to any considerable extent, has been very recent. The immense coal fields West of the Alleghenies were considered of little value twenty-five years ago, and the anthracites of Pennsylvania were scarcely known thirty years since. The whole amount of that kind of fuel mined in Pennsylvania in eighteen hundred and twenty was only 365 tons. The mining of that species of coal increased very slowly, as it had to make its way against public prejudice, arising from its difficulty of ignition.

In 1828, the amount of anthracite mined and sent to market was only seventy-seven thousand tons. From that period the quantity rapidly increased, and in 1849 amounted to nearly three millions and a half tons. In 1850, it is estimated the amount did not fall short of four millions. The beneficial effects resulting to the State of Pennsylvania from the development of her coal fields was felt and acknowledged throughout the length and breadth of her land. The growth of her commerce increased with the growth and development of her mineral resources. In 1820, the coastwise arrivals at the port of Philadelphia amounted to only 877; in 1847 to 18,069. Three millions of tons of anthracite coal were brought to market that year, whose value then was twelve millions of dollars, and eleven thousand four hundred and thirty nine vessels cleared from the single port of Philadelphia that season loaded with a million and a quarter tons of coal.

During the agitation of the tariff in 1846 at Washington, it was stated by Mr. Cameron, of Pennsylvania, that thirty years ago coal was entirely unknown in this country; yet in 1846 it gave employment to four millions of days work annually. It kept in movement a thousand ships of one hundred and fifty tons each, and afforded a nursery for the training of six thousand seamen, who earned three mil-

lions of dollars yearly. It gave circulation to a capital of fifty millions of dollars. It kept in activity fifteen thousand miners, and sustained a mining population of seventy thousand souls, who annually consumed upwards of two millions worth of agricultural productions, and more than three and a half millions worth of merchandise.

To Pennsylvania (says Professor Taylor) the almost exclusive possession of this species of combustible (anthracite) within reasonable distance of the sea-board, is a boon of inestimable price, which places her in a position of enviable superiority, and baffles speculation as to the point to which it may ultimately elevate her. If such then have been the magnificent results, from the development of the coal fields of Great Britain and Pennsylvania, and such the anticipations as to the future, the question occurs what is the value of the coal fields of North Carolina?

Their value depends upon their extent, upon the thickness of the beds, the quality of the coal, and facilities and cheapness of transportation to tide water and thence to a market. As to their extent, you heard last evening the statement of Professor Johnson, than whom no one stands higher in his profession. He had recently returned from a tour of several weeks examination in the valley of Deep River. He stated that his own observations satisfied him that the coal measure of Deep River extended fifteen miles, and that he had reliable authority for their extension fifteen miles farther. He did not state the width of the measures, as he had not time to examine, except in one place, where he had traced the beds on both sides of the river, and where they were from three and a half to four miles wide. From other sources of information, I have no doubt of their greater extension, both in length and width. But if we take the length to be but 20 miles, and the mean width at three and a half miles, we have an area of one hundred and five square miles.

The thickness of several of the veins, the learned Professor stated. None that he examined were less than six feet. Some were of greater thickness, and, in some localities, two or three veins were found underlying each other. Now if we estimate the area to be underlain with only one vein, and that vein to be only six feet thick, this estimate would give for the solid cubic quantity in the ground six millions of tons to the square mile. Making allowance of one fifth for waste and faults, the whole available amount would be five millions of tons to the square mile, or 522 millions of tons for the entire coal area of Deep River. The coal is of three kinds, the highly bituminous, the semi-bituminous, and the pure anthracite, and each kind has been shown by analysis to be among the best coals of its class. In quality of coals the fields of Deep River are unsurpassed; in variety unequalled by any location in the United States; in quantity, as far as regards all practical purposes, equal to any other. To mine the coal of Deep River at the rate of two millions of tons a year would occupy 262 years, and at the rate of three millions of tons a year 175 years. The remaining question is, what are the means and cost of transportation to market? The means of transportation are through the slack water improvement of the Cape Fear and Deep River. The enterprise of a few individuals, aided by the liberality and wisdom of your Legislature, has opened a pathway to the ocean, for extent and capacity combined, surpasses any canal in this or any other country, and at an expense not exceeding four hundred thousand dollars. Compare the canal, as it may without impropriety be called, with the great canals which have been constructed with a view to benefit the coal trade of Maryland and Pennsylvania. The cost of the Chesapeake and Ohio canal, was upwards of seventeen millions of dollars. It is about the extent of the Cape Fear and Deep River—is sixty feet wide, and six feet deep, with locks of 15 feet in width and 100 feet long. Your canal averages 450 feet in width. The water in the pools is usually from ten to fifteen feet in depth. The locks are 18 feet wide and 115 feet in length. It requires 14 days to go from Cumberland, at the head of the Chesapeake and Ohio canal, to Alexandria, and return, not including the time occupied in loading and unloading the barges. A steamboat with her tow of barges can go from the mines on Deep River to Wilmington, and return, in 4 days, making a difference of ten days in one trip.

The expenses of transportation are greater in other respects, as well as in the saving of time, as it regards these two improvements. On the Maryland canal, animal power is used to draw the coal barges; on the Cape Fear and Deep River improvements, steam power will be used. From the relative cost of the two improvements, and the means of transportation to be used on them, there can be scarcely a comparison, as to the relative amount of toll or the expenses of transportation. When at tide water, at Wilmington, the coal can be sent to New York, at as little expense as from Alexandria. As far, then, as regards bituminous coal, the owners of mines on Deep River need not fear any

competition.

DR. WILLIAMS'S LECTURE On the Coal Mines of North-Carolina.

If I had the talents to amuse and entertain a public audience, talents, to which I make no pretensions, I could not expect to afford amusement and entertainment on a subject of dry statistics; but on a subject so deeply interesting to the people of North Carolina as the development of their resources, I hope to be able to command the attention of an audience so patriotic as that which I have the honor to address, while I discourse, for a short period, on the value of the Coal Fields of Deep River, a subject to which I have given my undivided attention and laborious investigation for the last few months.

The value of coal, as a Mineral fuel, is but little known, except to those whose interests have made it a subject of study. Professor Taylor, in his invaluable work on the Statistics of Coal, very justly remarks, that it would be no difficult task to show, in figures, how vastly more profitable is the application of labor in the mining and working and transportation of coal, than that of the precious metals.

"The annual production of all the gold and silver mines of North and South America was estimated by Baron Humboldt at nine millions of pounds sterling, and at present (excepting the recent discoveries in California) is less than five millions of pounds, or twenty five millions of dollars. Now, the value of the coal produced annually, in Great Britain alone, is computed at fifty millions of dollars at the pit's mouth, and from seventy-five to one hundred millions of dollars at the places of consumption."

Great Britain is indebted to her coal for her supremacy as a manufacturing, commercial, and maritime nation. Take from her the coal mines and she would sink into a fourth rate commercial and maritime nation. Take from her the coal mines and she would sink into a fourth rate commercial and maritime power. Her manufactures would cease—her Sheffield, Birmingham and Manchester would be no more, and her people would be compelled to emigrate or starve.

The use of coal in the United States, to any considerable extent, has been very recent. The immense coal fields West of the Alleghenies were considered of little value twenty-five years ago, and the anthracites of Pennsylvania were scarcely known thirty years since. The whole amount of that kind of fuel mined in Pennsylvania in eighteen hundred and twenty was only 365 tons. The mining of that species of coal increased very slowly, as it had to make its way against public prejudice, arising from its difficulty of ignition.

In 1828, the amount of anthracite mined and sent to market was only seventy-seven thousand tons. From that period the quantity rapidly increased, and in 1849 amounted to nearly three millions and a half tons. In 1850, it is estimated the amount did not fall short of four millions. The beneficial effects resulting to the State of Pennsylvania from the development of her coal fields was felt and acknowledged throughout the length and breadth of her land. The growth of her commerce increased with the growth and development of her mineral resources. In 1820, the coastwise arrivals at the port of Philadelphia amounted to only 877; in 1847 to 18,069. Three millions of tons of anthracite coal were brought to market that year, whose value then was twelve millions of dollars, and eleven thousand four hundred and thirty nine vessels cleared from the single port of Philadelphia that season loaded with a million and a quarter tons of coal.

During the agitation of the tariff in 1846 at Washington, it was stated by Mr. Cameron, of Pennsylvania, that thirty years ago coal was entirely unknown in this country; yet in 1846 it gave employment to four millions of days work annually. It kept in movement a thousand ships of one hundred and fifty tons each, and afforded a nursery for the training of six thousand seamen, who earned three mil-

lions of dollars yearly. It gave circulation to a capital of fifty millions of dollars. It kept in activity fifteen thousand miners, and sustained a mining population of seventy thousand souls, who annually consumed upwards of two millions worth of agricultural productions, and more than three and a half millions worth of merchandise.

To Pennsylvania (says Professor Taylor) the almost exclusive possession of this species of combustible (anthracite) within reasonable distance of the sea-board, is a boon of inestimable price, which places her in a position of enviable superiority, and baffles speculation as to the point to which it may ultimately elevate her. If such then have been the magnificent results, from the development of the coal fields of Great Britain and Pennsylvania, and such the anticipations as to the future, the question occurs what is the value of the coal fields of North Carolina?

Their value depends upon their extent, upon the thickness of the beds, the quality of the coal, and facilities and cheapness of transportation to tide water and thence to a market. As to their extent, you heard last evening the statement of Professor Johnson, than whom no one stands higher in his profession. He had recently returned from a tour of several weeks examination in the valley of Deep River. He stated that his own observations satisfied him that the coal measure of Deep River extended fifteen miles, and that he had reliable authority for their extension fifteen miles farther. He did not state the width of the measures, as he had not time to examine, except in one place, where he had traced the beds on both sides of the river, and where they were from three and a half to four miles wide. From other sources of information, I have no doubt of their greater extension, both in length and width. But if we take the length to be but 20 miles, and the mean width at three and a half miles, we have an area of one hundred and five square miles.

The thickness of several of the veins, the learned Professor stated. None that he examined were less than six feet. Some were of greater thickness, and, in some localities, two or three veins were found underlying each other. Now if we estimate the area to be underlain with only one vein, and that vein to be only six feet thick, this estimate would give for the solid cubic quantity in the ground six millions of tons to the square mile. Making allowance of one fifth for waste and faults, the whole available amount would be five millions of tons to the square mile, or 522 millions of tons for the entire coal area of Deep River. The coal is of three kinds, the highly bituminous, the semi-bituminous, and the pure anthracite, and each kind has been shown by analysis to be among the best coals of its class. In quality of coals the fields of Deep River are unsurpassed; in variety unequalled by any location in the United States; in quantity, as far as regards all practical purposes, equal to any other. To mine the coal of Deep River at the rate of two millions of tons a year would occupy 262 years, and at the rate of three millions of tons a year 175 years. The remaining question is, what are the means and cost of transportation to market? The means of transportation are through the slack water improvement of the Cape Fear and Deep River. The enterprise of a few individuals, aided by the liberality and wisdom of your Legislature, has opened a pathway to the ocean, for extent and capacity combined, surpasses any canal in this or any other country, and at an expense not exceeding four hundred thousand dollars. Compare the canal, as it may without impropriety be called, with the great canals which have been constructed with a view to benefit the coal trade of Maryland and Pennsylvania. The cost of the Chesapeake and Ohio canal, was upwards of seventeen millions of dollars. It is about the extent of the Cape Fear and Deep River—is sixty feet wide, and six feet deep, with locks of 15 feet in width and 100 feet long. Your canal averages 450 feet in width. The water in the pools is usually from ten to fifteen feet in depth. The locks are 18 feet wide and 115 feet in length. It requires 14 days to go from Cumberland, at the head of the Chesapeake and Ohio canal, to Alexandria, and return, not including the time occupied in loading and unloading the barges. A steamboat with her tow of barges can go from the mines on Deep River to Wilmington, and return, in 4 days, making a difference of ten days in one trip.

The expenses of transportation are greater in other respects, as well as in the saving of time, as it regards these two improvements. On the Maryland canal, animal power is used to draw the coal barges; on the Cape Fear and Deep River improvements, steam power will be used. From the relative cost of the two improvements, and the means of transportation to be used on them, there can be scarcely a comparison, as to the relative amount of toll or the expenses of transportation. When at tide water, at Wilmington, the coal can be sent to New York, at as little expense as from Alexandria. As far, then, as regards bituminous coal, the owners of mines on Deep River need not fear any

competition.