

# Scientific American

NEW YORK, FEBRUARY 9, 1850.

## Advice to American Inventors.

Within a few weeks, our readers must have noticed two references made to alleged foreign inventions, as being derived in some way from America; in other words, the honor of prior discovery should belong to Americans. One of these discoveries was a new method of casting metal pipe; the other was an attachment of an alarm and a mode of lighting a lamp by a clock. From all the evidence which we have been able to gather on the subject, the American inventors have just claims to priority of invention, which is a very great honor indeed, but it also appears to us that the foreigners were self-inventors—that is, they designed and completed their inventions without any knowledge of the American inventions, and they now claim almost equal honor with the first inventors. Why? Because the American inventors did not publish some account of their inventions in a periodical devoted to science and invention. This is not the dark age; we live in times when the press is made the herald of what is new and what is useful. What can the world know of an invention, however useful, if it is shut out from its ken, and surely every person should know enough now, to know that the only true way (and the best ever discovered) to establish priority of discovery, is to place the invention within the light tower of the press. Had this been done with the inventions mentioned, the broad fact of priority of the American inventions referred to, would long before this time have been shed abroad upon almost every corner of the earth.

When a person discovers something that would in his opinion be valuable and profitable to himself, and the publication of the same be injurious to his interests, such as a chemical compound; he should at once file a caveat to secure his discovery, if not fully matured, but if matured he should at once apply for a Patent, and then publish, the nature of his discovery, and the benefits that will result from it. It is not prudent always to publish full descriptions of chemical discoveries, for secretly, they can be infringed, but it is right and wise to publish what qualities the discovery possesses.

It sometimes, yea very often, happens, that an inventor makes a discovery, but to satisfy himself respecting its merits, requires experiments which cannot be hid from prying eyes, such as castings and the construction of the machine. In the majority of cases, a Caveat is the only safety, and to make all doubly sure, a clear description of the invention should be published. This both covers the honor and the rights of the inventor. We know a gentleman who by the injudicious advice of friends to keep all secret, when it was scarcely possible to do so, lost one of the most valuable inventions in the Republic. Another person got a patent, more than a year after he commenced to make his machine in private, and he cannot now, according to law, use his own invention.

In respect to foreign patents, we believe, that many good American inventions are pirated from the original inventors and patented in England. This can be done by the English Law, which is a libel on justice. We hope to see that odious statute abolished before we leave this land of the living. If American inventors want to patent their inventions in England, let them beware of what they are about, let them be prompt and secret in their foreign movements, and let them be careful in whom they trust.

For the Scientific American.

## Geology of Florida.

The cretaceous system of rocks which appear to underlie the whole of Florida, abounds in fossils peculiar to that formation, and in the numerous streams which drain the southern portion of the peninsula, fossil bones of the mammoth are abundantly found, with here and there remains of the mastodon, turtle, shark, and other animals. So thickly are these fossils strewed along the course of the adjacent river, (Pease Creek) that, in many places its bed is literally paved with their re-

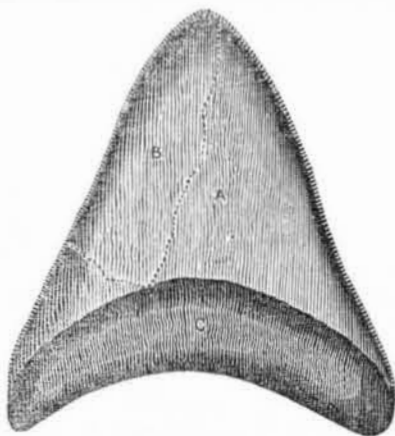
mains, and the wondering Indian points with astonishment to well preserved teeth, which he supposes to have belonged to a former race of immense giants. The animals to which these bones once belonged, must have attained in some instances a very large size. I have in my possession a portion of a tooth—the last in the lower jaw, I presume, of the fossil elephant, which measures on its grinding surface nine inches in length by four inches in breadth, and is eight inches to the bottom of the root; it weighs nine pounds. The entire tooth, if symmetrical, must have been fourteen inches long, four inches broad and nine inches deep; this tooth, with several others, was found in Pease Creek.

A tooth of the mastodon was discovered in a neighboring tributary—which we have called Fossil Creek—of the following dimensions:—six and three-fourths inches long, four inches broad and three inches deep,—its root being partially broken off. This tooth was the last in the jaw, and when entire, measured probably nine inches in length.

In addition to the above, portions of the vertebrae and other parts of the skeleton, with a large amount of broken fragments of ribs and tusks have been found; one of the pieces, being part of a rib, I presume of the mammoth, measures eight inches around its cross section. I have in my possession what appears to be the front part of a knee joint, which belonged to a bone probably eighteen inches in diameter. Also a portion of the upper shell of a fossil turtle that averages, perhaps, one inch in thickness.

These remains are, however, surpassed by the fossil teeth, abundantly found, of an extinct race of sharks, of huge dimensions; we have found them whole and broken, of all sizes, up to the dimensions of the largest, which, when entire, must have measured over three inches at its centre, above the jaw, along its enamel, by four and a half inches broad, and more than three-fourths of an inch in thickness above the gum. The entire tooth could not, probably, have been placed in a rectangle of less than five inches long, by four and a half inches broad. The dimensions of its huge owner could not have been less, I think, estimating by zoological rules, than eighty or one hundred feet long.

Shark's Tooth found in Pease Creek, East Florida:—



A, is a half size of a shark's tooth, reproduced from B, the fragment found: the enamel on this is perfect. C, root of the tooth.—The shark to which this tooth belonged was probably 90 feet long.

Many of these fossils, together with fragments of different kinds of wood are petrified, either into siliceous or calcareous stone, the organic structure being perfectly preserved. These stony remains of animals long extinct, seem to be in keeping with the singular district of country bordering on this fossiliferous region. Mile after mile, for more than a day's journey, is monotonously passed over in what is appropriately called the "deadening;" the blackened trunks of pines stand thickly over the surface, interrupted here and there by small prairies and patches of hammock, but they seem as if blasted by the fire of heaven. Occasionally a living tree is seen, contrasting strangely with the scene of desolation around it. What could have produced such an extended destruction of vegetable life is left to be conjectured; the Indians say it took place after a great hail storm many years ago, and

some consideration attaches itself to this supposed cause, from the observation of an officer, that the deadening coincides in direction with the north east storms. GEO. W. RAINS, Bvt. Captain U. S. A.

Post on Pease Creek, Florida, fifty miles from Tampa Bay, Jan. 10, 1850.

## Meeting of Gas Consumers.

The fourth public meeting of those who are opposed to the present Gas Companies, of this city, was held in the Broadway House, on the evening of last Wednesday, 30th ult., when a long petition, to be signed by the inhabitants of the city and to be presented to the Common Council, was introduced and adopted. The following is the most important part of it:—

"Your petitioners, therefore, pray that your honorable body will annul the contracts made by your predecessors with the New York Gas Light Company and the Manhattan Gas Light Company, because of the failure, by said companies respectively, to perform the conditions contained in their contracts. And that your honorable body will adopt the necessary ordinances to form a public gas department in the government of the city of New York, and to provide for supplying the public lamps and buildings and the citizens of said city with gas for lighting streets and buildings, at the lowest price which will defray the cost of its production and supply, and carry such arrangements into effect as early as may be practicable; or, that you will grant to your petitioners and their fellow-citizens such relief from the exactions, now made upon them and the city treasury, for the supply of gas light furnished by said companies, as to your honorable body shall appear most expedient and just."

The meeting was then organized into a permanent Gas Consumers' Association, the officers of the general meetings being continued as such under the new organization.

The following is one of the resolutions adopted.

"Resolved, That the prices heretofore charged by the New York Gas Light Company and the Manhattan Gas Light Company, for the light supplied by them, under the monopolies granted to said companies by the Corporation of New York, have been excessive and exorbitant; that these unjust and arbitrary exactions of the privileged few call for an immediate abrogation of the powers conferred upon them, and the establishment of such measures as will effectually secure the public treasury and private citizens from similar impositions."

The price of gas in this city is shamefully exorbitant, there certainly should be a reform, but the present companies can make the reform better than the new ones. Why? Because they have the materials all laid down, they only want right management. Gas could be made in this city for one-third the present price, and all the coals imported; but the Liverpool coal is not the best. If the Gas companies were wise and enterprising, and economical, our mechanic's houses would be lighted with it, instead of candles and expensive fluids.

Near the close of the meeting, some speeches were made; and Mr. Paine, from Worcester, was there, and spoke a few words in favor of a hydro-electric light, of his own invention, by which, he said, that the light which now costs one hundred dollars a year, can be furnished at two dollars. A machine of this description will soon be exhibited in this and other cities. He alluded to the remarks which Professor Grant made, at a previous meeting, concerning him and his light, and denied their correctness.

Professor Grant then rose and said—May I ask if you are the great "shot at?"

There was not much courtesy nor polish in this, in fact, it was decidedly ungentlemanly towards Mr. Paine, who, however, made a most suitable reply—it was this:

"If the inquiry has anything to do with light, I will answer it."

We have now a word to say here about Mr. Paine, his light, and Mr. Porter. We saw a statement, in the Louisville Journal, reflecting upon Mr. Paine, as a kind of humbug, and praising Mr. Porter as an honest man. We see that the Washington Union and the Journal have always named him as former editor of the Scientific American, and he always pub-

lishes himself as its original editor. We have no objections, but we must state that he was only editor during the first and part of the second volume, and our readers well know how much the form and character of our paper has changed since then. Mr. Paine says that many of his statements in his Washington letter were gratuitous, unauthorized. Whatever people may say about Mr. Paine, and whatever the public may think of him, one thing we know, there is not a neater handed or more ingenious mechanic in the United States. He is a great expert at making philosophical instruments, and this is well known to every person in Worcester. With regard to his *Electric Light*, we have some doubts about it, because it is opposed to present philosophical knowledge, but, personally, we would be the last in the world to throw ridicule upon any man, on this account, for he may be right and philosophy, as known, wrong, but we must cling to what we believe is correct, until we are convinced of our error. Many an inventor is honestly deceived, that is, his expectations may be too high regarding his own discovery. A disinterested person is generally the best judge. In respect to the letter of Carburated Hydrogen, in our last number, we do not blame Mr. Paine, or any inventor, for making all they can out of any useful invention. The public is seldom thankful to inventors, so they must look to themselves while they are laboring for the advancement of science at the same time.

## Works on Science and Art.

CIVIL ENGINEERING.—An Elementary Course of Civil Engineering, by D. H. Mahan, M. A. Fourth Edition: published by John Wiley, 161 Broadway, New York.

This is a work well known to the American public, by name, but this edition is mostly rewritten, and consequently much better than former ones, and to the Civil Engineer is a most valuable volume. Its first section treats of building materials, such as stone, lime and all the various kinds of mortars, cements and mastics. It then treats of wood materials—iron, paints and varnishes, as employed in building. The next is on the strength of materials, embracing a most extensive fund of information on the subject. Masonry is the next section, treating the whole subject in the most thorough manner. The next section is on Framing. It is a most valuable chapter. The next chapter embraces the methods of building Bridges, both of stone, wood, iron, and contains essential and important information about Suspension, Cast Iron, and Aqueduct Bridges.

The next chapter is on Roads, such as highways of every description, and railways. The three concluding chapters are on Canals, Rivers, and Sea Coast improvements. This book contains all the necessary information for a person who wishes to be acquainted with civil engineering. Its great merit in our eyes, is its simplicity of arrangement and clearness of diction. It is very different from a number of other works that we have seen on the same subject, inasmuch as the author discards the subject of all learned nonsense, and presents it in a simple but dignified garb. It is always an evidence to us of mastery over a subject, when it is rendered clear and intelligible, and we hold the reverse opinion in respect to obtuse treatises relating to the practical arts.—The price is \$3.

## The Prussian Rifle.

The Boston Traveller mentioned recently, on the authority of a private letter received in that city, from Berlin, that an American gentleman had succeeded in working out the whole of the secret of the new Prussian Rifle, and that he had purchased and made experiments with one, which he was about to forward to our government.—[Phila. Ledger.

[It is not often that the Ledger is found over looking our columns. The Prussian Rifle is patented in America, and was illustrated as described by us a few weeks ago. The American gentleman who is in Berlin, as mentioned by the Traveller, must be an exceedingly penetrating genius—a patriotic explorer of foreign inventions. The Prussian inventor is now residing in New York.