

Scientific American

NEW YORK, JANUARY 18, 1851.

The Future---Industry.

A prudential preparation, and a far-reaching sagacity to anticipate something of the future, are evidences of superior mental endowments, and a superior civilization. The barbarian cares only for the present—he revels in the dance or the feast of momentary enjoyment, heedless of those provisions for the future which distinguish the civilized man. The wise man derives lessons from every event he witnesses, and treasures up the experience of the past to guide him for the future; he remembers the teaching of the wisest and most experienced of mental philosophers—the son of Israel's Shepherd King, and he does not forget how the sluggard is commended to "go to the ant, consider her ways, and be wise: for she provideth her meat in summer, and gathereth her food in harvest."

Last week, while taking a brief survey of the progress of science and discovery during the past fifty years, we were particularly struck with the accumulated number of discoveries which have rewarded unremitting application and industry, and which have conferred honor on many low-born names. Many discoveries have been made, apparently by accident, but, as a general thing, we find they were made by men of observing and reflective minds, and who were prosecuting researches with some distinctive object in view. It has often happened, that men who have studied and labored unsuccessfully in the search of a certain object, have been rewarded with quite a different but more important one, than that for which they had so long struggled and studied. This was the case with Newton and the apple, and the grand discovery of the metal, potassium, by Davy.

We instance these cases, and have chosen this subject, to give a word of advice to our young men especially. Industry is sure to have its reward sooner or later, and young men who, in the common course of providence, have a good future before them, should never forget this. Let your attention and labors be rightly and well directed. James Watt had labored much and studied long before he was rewarded; but the reward came at last. Sitting in deep reflection upon his favorite subject—the steam engine—the invention of the grand improvement, viz., the separate condenser, beamed upon his mind like a flash of lightning,—hundreds of others have been rewarded in the same way. "He that trifeth with time layeth up for himself rags and sorrow." In our long winter evenings, our young men should endeavor to spend the hours at their disposal to some useful purpose. Innocent amusements are good in their place—we like to see young people enjoying themselves; but oh, how many triflers of time do we see every week, and how much time we see wasted every day, which, if well spent, would cause future consolation and enjoyment,—whereas we can expect to see no reward reaped by those who are so unwise, but that of regret, and, it may be, poverty. Almost every person has cause to regret misspent time.

Let every one who reads this determine to employ his future moments better than the past. At the opening of a new year it is a good time to commence life anew. Good purposes are good things, for no man, without a good purpose, ever pursues good objects. The advice given will apply to men in every condition of life, and in every calling and profession. Lay out a right-good path for the future, and "whatsoever thy hand findeth to do, do it with all thy might."

A New Locomotive for Cuba.

Messrs. Norris and Brother, of Philadelphia, have just finished another of their large class of locomotives for one of the railroads in Cuba. We see that the fine locomotive works of Norris, in Schenectady, N. Y., are to be let.

New Aerial Propeller.

An inventor named Tough has invented a new Aerial Propeller; it is a remarkably tough subject.

More about Agricultural Chemistry.

A society in Scotland has been testing different manures in the production of turnips, which must be of interest to a great number of our readers. There were fifteen fair experiments made, but those of the greatest importance were between manure kept under roof and manure exposed to the weather. We will refer only to these two, but stating that from seven tons of Peruvian guano, 25 tons 8 cwt. of turnips were produced on the acre. This was the largest produce of the fifteen experiments. Forty loads to the acre of uncovered kept manure, and 40 loads kept under cover, gave the following results:—that kept under cover produced 20 tons 16 cwt. per acre, that from the uncovered produced 20 tons 8 cwt.—a very small difference indeed. As two-thirds of our people are engaged in agricultural pursuits, this subject is of great importance to them, and we cannot do better than publish that part of the report of the Club mentioned (St. Quivox Farming Club):

"The chief feature of interest involved in these experiments is the comparison between the crops grown on farm manure kept under a roof, and those on dung kept in the usual manner. It is an important contribution towards a solution of the question—whether it is profitable to roof over manure heaps at farmsteadings? It is needless to expect that this point will be settled in the laboratory of the chemist. As in many other things, the farmer must in all likelihood, find out the way for himself, and the chemist will afterwards tell him why his practice is correct. At a recent agricultural meeting, Prof. Way, when asked if the advantages gained by covering a manure heap were worth the expense, replied that the question was an unfair one, as he could not be supposed to know what the expense would be; but, as a principle, he would say by all means cover it over, and if they must dilute their heap, dilute it when they wished, and not let the heavens do it for them. Even if mixed with soil, he wished to say that it would do better to cover it. It may as well be said, however, that if the heap must be diluted in order to keep it in a cool condition, it can in no way be so cheaply done as by rains; and if these should wash out a portion of the soluble fertilizing matter, a good tank can be constructed to receive it at far less expense than a large roof; and besides, we have here a fact, and one fact is said to be worth a number of theories, that the manure kept in the open air was as valuable for the growth of turnips, as that kept under a roof. The quality may be a little lessened by exposure; but what remains appears to be weight for weight of equal quality. Nor is it likely to lose much if mixed with soil containing a considerable portion of alumina. Professor Way has himself shown, by his admirable discoveries, that such soils possess the power of absorbing and retaining the fertilizing properties of manure in so effectual a manner, that no amount of rain will wash them out. With this knowledge, it is difficult to discover what great good can result from roofing over a heap of dung mixed with earth. In these times it will not do for farmers to undertake expensive works which may be of doubtful utility; and it is therefore satisfactory to find that some progress has been made in the accumulation of data, from which a correct judgement may be formed. A few more of careful, conducted experiments, to confirm or disprove those of our respected President, will be the simplest way of setting the matter at rest; for, with all deference to those who guide us to principles, it is facts from the field which will most readily influence practical men, at least so long as the knowledge of these guides is so incomplete that their deductions are frequently found not to be trustworthy."

A new theory, we see, of enriching waste lands, is brought forward by a Mr. Baldwin, of Virginia, in the "Plow, Loom, and Anvil." It is simply to cover or shade the waste lands—prevent its exposure to the sun. Heavy manuring is a more reasonable method, for sure and quick results; and, after all, we must say that the report above is inconclusive. Let five tons of manure be set aside, under roof,

for 6 months, and 5 exposed to the weather, and then test them fairly. Turnips are a good test crop.

Meeting about New York Gas.

A meeting was held at the Chinese Rooms, on Wednesday evening last week, the object of which was, to advocate a Gas Reform and approve the veto of Ex-Mayor Woodhull.—Speeches were made by C. E. Lester, Horace Greeley, a Mr. Camp, a Mr. Price, and others. Mr. Camp stated that he had a gas made out of refuse materials, which was purer, and could be made for one half less than the kind made from coal by the New York gas companies. Mr. Lester and Mr. Greeley spoke about the discoveries and improvements which had been made, were making, and are to be made, which left coal gas far behind the progress of the age. We must say that all this wants confirmation. Very little improvements have been made in the manufacture of coal gas for twenty-one years. Where cannel coal is cheap and where the coke can be sold for a reasonable profit, no gas has been able to compete with that of coal. We hope the cannel coal of Virginia will be able to be brought to New York and sold cheaply. In some English cities every working man burns gas in his house, and the cost per annum is not to him one-fourth of what oil, camphens, or candles cost us here, and certainly one-third the price of our gas. The gas companies' contract will run out in two years, and then the lighting of the city should be left to open competition. Let the Common Council now make open proposals for a contract, to go into operation when the present contract expires. That will bring out the pith of those who propose to supply us with cheap gas. Let there be fair competition in this thing; let every thing be done openly and above board. We would like to see gas produced so cheap that it would be introduced and used in all private houses. This, we believe, could be done by a strong, wise, and spirited gas company; for, if it has been done in other quarters of the world, it surely can be in New York.

Drawing in Academies and Colleges.

We have received a letter from a correspondent, stating that Mechanical Drawing is taught, Minifie's work being the class book, in Norwich University, Vt. We have also received a catalogue from our correspondent (J. B. T. Mead, Cadet, N. U.), and we are well pleased with the course of instruction. The term opened on the 3rd inst. Candidates who do not pursue the regular college course are admitted to the scientific course, and are required to sustain a satisfactory examination in English grammar, geography, and algebra through equations of the first degree. To young mechanics we say, by all means save all the money you can, and give yourselves the best education possible. Is there one man living who does not regret misspent time and money of youthful days? Without a good education, no man becomes distinguished. Oh, how many men, now ignorant, might have been educated had they only saved up a few cents every week when they were young. It is indeed true that the majority of men appear not to have the right stamina for studying a subject that requires severe reflection; but it is also true, that a taste for dry study can be cultivated, and a faculty for it can be easily destroyed. To young men we say, learn—learn when you are young, and apply your wisdom when you grow up into manhood and old age.

Sash-Bar Grooving Machine and old Gen. Benthams.

The British papers have lately been boasting of an invention made by Mr. Paxton, the architect and designer of the Great Glass Palace, for grooving sash-bars, for which he received a medal from the Society of Arts, in 1841. This has called out a correspondent of the London Mechanics' Magazine to the defence of the ingenious Sir Samuel Benthams, the original inventor of planing machines, a subject in which a great number of our readers are interested. The patent of Sir Samuel, 28th April, 1793, reads thus, "besides the general operations of planing, rebating, morticing, sawing in curved, winding, and

transverse directions," he invented an apparatus "for preparing all parts of highly finished window-sash." In 1797 Benthams proposed and introduced steam power into the Portsmouth Royal Dock Yard, and new machinery for working in wood, which he described in a letter to the Navy Board as follows:

"1st. By means of reciprocating motion."  
"Sawing in general; particularly straight work—such as sliding timber, slitting deals, cutting, quartering, and straight planks of all kinds."

In the margin of a certified copy of this letter is written, "All introduced except sliding timber."

To return to the proposal.

"2ndly. By means of rotary motion."

"Edging, tonguing, grooving, rebating and cross-cutting into lengths, deals of all sorts for joiners and house carpenters' work."

Against this article is written in the margin, perhaps as late as 1813, "Long since introduced with great success."

Then follows in the proposal,

"Tonguing and grooving piles for dam-work."

"Converting slabs and offal timber into treenails."

This was also executed, so that slab and offal theretofore sold mostly for fire-wood, was by means of his machinery made available for the fabrication of various articles of secondary importance.

To the above particulars, Sir Samuel added, "These, amongst various other instances, have occurred to me as giving occasion in his Majesty's dockyards for the substitution of the invariable accuracy of machinery, to the uncertain dexterity of more expensive manual labor."

By Sir Samuel's machinery junctures were as accurately cut as any other parts—even dovetails, mortices, and tenons.

The original of this letter, 1797, doubtless is amongst the records at the Admiralty; there is a copy of it in the books of the Inspector-General's-office, and a certified copy exists in private hands.

New York Streets---Mud.

We can boast of a great many things, such as the largest city, the greatest amount of shipping, steamboats, &c., but all these are nothing to brag of in comparison with our muddy streets. There are gulfs in the Catskill Mountains, but what are they in comparison with the gulfs in some of our intersecting streets. A horse and cart almost disappear in the puddles, and donkeys would never come out alive. It is related that a little boy, one of those hard-faced, knotty-headed little fellows so plentiful in some of our by-streets, was seen to disappear head-first on last Friday, from the curbstone in front of the Chinese Museum. His mother, a podgy little body of a peculiar stamp, was looking on at the time, and lifted up her hands in mute despair at his sudden departure into such a region. A crowd was soon collected, gazing into the place where our little hero had disappeared, some proposing to get a long pole, and others shouting for grappling irons, when lo and behold! a slight movement was seen near the mud top on the other side of the street, then a wagging of a little gritty half brown and some other mixed colored head, and then the little fellow struggled up, looking over to his mother with an eel in the one hand and a mud turtle in the other, and with such a grin—oh! to have seen it. It is reported that the Mayor and Commissioner of Streets came up about the conclusion of the feat, and have become satisfied about the productiveness of New York streets. Proposals will soon be issued for the planting of eel-grass, and the full protection of our street fishing ponds.

Henry M. Paine, at Worcester, has received by the last steamer from England, his letters patent, which secure to him and his associate the benefits derived from his grand discovery by the people of Great Britain.

A rich vein of the phosphate of lime, about 6 feet wide at the surface, containing 90 per cent. of the phosphate, has just been discovered in New Jersey.