

Scientific American

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Seek Useful Information.

No man who would be wise for himself, who desires to march upwards and onwards with an honorable name for sound sense and general intelligence, can either possess the qualification spoken of, or gratify his desires, if he has not a taste for reading, and selects that kind of food for his mental appetite, which, with all his knowledge, will enable him to "get understanding." History can instruct and poetry can charm, but ignorant indeed must that man be at the present day, be he rich, or the poorest of the poor, who seeks no instruction, in scientific literature, and finds no pleasure in some kind of scientific pursuit. A knowledge of the passing events of the day—the actions of nations and men, are essential to the intelligent man; but along with this kind of knowledge, it is impossible for a man to lay claim to the possession of general intelligence, unless he reads often and attentively some periodical devoted to a diffusion of that kind of knowledge, which relates to the progress of science and art. Men of scientific taste, are generally distinguished for uncommon strength of mind. They are shining lights, that dazzle and attract the attention of those who come within the sphere of their influence. That mechanic who possesses the greatest amount of useful knowledge, and is best acquainted with the inventions and improvements of the day, always exerts the greatest influence in his sphere and commands the highest wages. Every person knows this to be true, and it is equally true that such a person is ever found to be a great reader.

The man who reads not, is ever found to be one who believes that the moon is "no bigger than his grandsire's shield." It is quite possible for some of our working people to be far more learned than some of those who have a great name for extensive learning. A man may be able to pronounce *steam-engine*, in twenty different languages, but if he knows nothing about its nature, construction and operation, he is but a very ignorant man after all, in comparison with the man who possesses a full knowledge of these things. This same comparison may be well applied to every other branch of useful knowledge. A knowledge of the nature of things, is a grand object—an object which every man should continually bear in mind. But how are people to acquire this knowledge which you speak of, some will say. We will answer. It is not possible for any one man to acquire a knowledge of all the sciences, in one short life; but if every man would spend his spare moments, in reading *useful* books or papers, and would make a habit of classifying the knowledge he acquires, the growth of information and the grasp of his mind would increase with his existence; and no man who has the least experience in the world, but has felt at some time or other, the supremacy of his mind, when discoursing upon some subject with which he was well acquainted, in the company of those who were ignorant of the same: The more intelligent a man is, he feels more self respect,—he understands his own just rights better, and maintains them with a commensurate dignity.

It is the object of the Scientific American, to furnish its readers with that kind of information, which will make them better men, by strengthening their understandings, and enlarging their capacities—it deals with facts and not with fictions. In view of what we have said, we will conclude by saying, "we speak as unto wise men," *seek useful information.*

It is reported that three large steamers are nearly ready at Liverpool, to ply between Galway in Ireland and Halifax. They are expected to make the trip in six days.

If this is true, it will turn out to be a bad speculation.

A piano factory is established at Milwaukee, Wisconsin.

New Jersey Zinc Ore.—Improvement in Smelting.

In Sussex County, N. J., in the town of Monroe, there is a rich vein of the red oxide of zinc, mixed with Franklinites—which is an iron ore, combined with the oxide in small black beads. The mineral crops out at the summit of a ridge that is precipitous on either side, and about three eighths of a mile in length. The removal of a very slight covering of extraneous material lays open the ores.

The Franklinites yields iron of the finest quality, and fully equal in tenacity and fineness, to the Swedish, from which the English manufacture their best steel. It is in veins from 8 to 25 feet wide, and lies between two veins of secondary limestone, the average depth of which is reckoned by geologists about 200 feet. Taking the average of the ore, the zinc and iron are nearly equal in quantity. In some veins the zinc predominates, and in other veins the iron.

Besides these valuable productions, the white oxide of zinc is manufactured also directly from the ore, in quality superior to any ever made, and white as the whitest snow. This forms one of the best paints known, being entirely free from all poisonous qualities, and remaining for years as pure as when first put on.

In the days gone by, Lord Stirling erected a furnace there for smelting copper, but the zinc was never worked till about ten years ago, when Uncle Sam, at more expense than profit, worked the mines to obtain zinc for making the brass to be used for the national standard weights and measures. The company that now own the mines for a long time were unable to smelt the ore profitably, but they have done so at last. They constructed a great variety of furnaces before they succeeded in a form that was most advantageous. They now heat the ore to a moderate red heat, when the red oxide becomes of the consistency of paste, and the metal is passed through a sieve, and the zinc separated from the iron. The iron, even in the condition in which it is left at that stage is capable of being used, by passing through another process is rendered fit for the rolling mill.

We have seen some of the zinc; it is beautiful. It has been made into a number of articles, and it works handsomely. The iron we have not seen, but it is said to be of the very best quality. As a component part of brass alloy, zinc is a valuable metal, but above all, since the discovery of galvanism, has its true value been developed. It is an excellent covering for iron, and is used extensively in electric batteries. Its virtues are daily becoming more prominent, and its application to the arts extending in a wonderful manner, whether we look upon it in a galvanized iron house-roof, or the galvanized (zinc) wires of the electric telegraph.

Charles W. Holden.

Charles W. Holden, the well known publisher of Holden's Dollar Magazine, died on the Upper Sacramento, on the 13th of last June, of bilious dysentery. He was a very enterprising young man, a native of Barre, Mass., and we had been acquainted with him from his boyhood. He was early left an orphan, to struggle with the world on his own hand which he did with tact, talent and energy. He went to California with the highest hopes of future wealth, but alas, he has met an early grave far from his native New England mountain.

During the time of his absence, his Magazine was published here with its characteristic spirit and ability—it will still continue to be published as it has hitherto been.

Iron Cottages.

An iron cottage weighing 1500 lbs. 16 1-2 by 18 feet in two compartments—a kitchen and sitting room, with five plate glass windows, two beds, one table, one chest of drawers, two chairs, a fountain washstand, and complete apparatus for cooking can be bought in Liverpool for \$150.

If one could be built in this city, for double that amount, our mechanics would soon lower the rents, by occupying their own dwellings.

False Opinions.

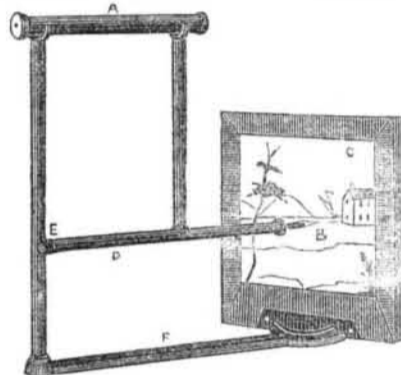
Hungary has fallen. The axiom of the Duke of Wellington, that a small army, however well disciplined, has no chance ultimately against a large one, however badly generalled, has again received a melancholy illustration.

Patriotism, bravery, prudence, and consummate military skill, have been unable to resist the ponderous pressure of the multitudinous forces of the Czar; for, against such odds, even successive victories, by multiplying necessary losses, only led to subsequent defeat.

Gorgey, like Napoleon, has yielded to the power of numbers. The tactics of Bonaparte, in resisting the onward march of the allied armies in 1814, according to Napier, exhausted all the resources of military science; but, despite the efforts of the greatest of generals, the Cossacks entered Paris.

[The above is from the Liverpool Journal. The Duke of Wellington believed in no such axiom when he fought the battle of Assaye.—The skill is not so much as the bravery, when the numbers are about equal. Napoleon learned this at Waterloo.]

Drawing made Easy.



The above fig. represents a perspective view of a delineating instrument, recently invented by Mr. Allen Judd, of Chicopee, Mass. A is a telescope through which the eye looks upon the object to be delineated; D is a tube so connected and hinged by means of centre pins that it will turn in every parallel direction with the telescope; B is a slide pencil inserted in the end of said tube. C is a drawing board standing perpendicular, on which is placed a paper to receive the delineated object; the tube, D, is so hinged at the end, E, as to permit the other end, with the pencil in it, to move every possible way on the drawing board. This instrument all combined is rather simple, and being made of polished brass tubing all except the bare piece, F, which is iron japanned green, is a very beautiful thing. This instrument stands about 15 inches high, just the right height for convenience to sit and look through when on a common table and sitting on a common chair. The only process of operating this machine is to place it before the object to be delineated either near by or in the distance, touch the instrument only with one or both hands, take hold of the slide pencil and the eye looking through the telescope will dictate the movement of the hand so that a correct outline in perfect proportion is readily obtained by a skilful hand. We can see no reason why this instrument cannot be advantageously introduced into our high schools where drawing is taught. The price of the instrument is \$6, the inventor assures us that persons of ingenuity who have a taste for drawing, will in a short time make great proficiency in the art by its use. The inventor has applied for a patent and makes them to order at Chicopee, Massachusetts.

Fair of the American Institute.

The next Annual Fair of this Institute, opens on the 2d of next month, at Castle Garden. It is expected that a great number will be in attendance, as the President is expected from Washington, and as the City is now so healthy.

To Take Quinine.

This medicine so much used in the west, for fever, ague, is very bitter and not easily taken. The most palatable way is, to take 3 grains of it in half a cup-full of cold coffee well sweetened.

BROTHER EDITORS,—In commencing our 5th volume, we return our sincere thanks, for the good will you have always shown to us, and the many very favorable notices we have received at your hands. It is a great pleasure to an editor, to know that the paper which he conducts, is generally acceptable. Without a single exception, we are on the most friendly terms with all our contemporaries, and we are indebted to many of them for special favors. To the London Patent Journal, Messrs. Barlow and Payne, the most enterprising weekly periodical of the kind abroad, we return our grateful acknowledgements. Our friends at home are too numerous to mention by name, but we know that they will accept "the will for the deed."

Our New Dress.

Our readers will perceive, that we have not brushed up our jacket and merely blackened our boots, but we have put on a new beaver, coat, vest, pants and boots, and our nether garment is of the finest texture—the real muslin cambric, the whole of which is stitched up with our new sewing-machine. We believe that our readers will not contradict us when we say, that there is not a neater paper published on this continent.

Franklin Institute Fair.

We would call the attention of our readers to the Fair of this old Institution. It opens on the 12th of next month. It will, no doubt, be an excellent one.

Fearful Railroad Collision.

On Friday, the 7th inst., a fearful Railroad collision took place near Rochester, between a freight train going east and a passenger train going west. The passenger train was about three hours behind its time. It had been detained at Shortsville by another train which had run off the track. According to the regulations, all freight trains are obliged to keep out of the way of passenger trains, and if the latter has not arrived at the regular hour for the starting of the former, the freight train must wait until the passenger train arrives. These regulations were understood by the conductor and engineer of the passenger train coming west, but by direction of the superintendent of the road, the freight train went out at its regular hour, 10 o'clock, and instructions were sent down by the express train from the passenger train, coming up, to hold on, as there was a freight train coming. These instructions were not delivered.

When about a mile east of Carterville, the passenger train was met by the freight train running at the rate of 25 miles an hour. There was a high bank a piece of wood on the inner side of the curve which prevented either from discovering the other train until they were close together. The engineer on the freight train reversed his engine and fell to the ground. The engineer on the other train, not so quickly discovering his danger, had not time to reverse his engine but jumped quickly off, and the two locomotives came together with a terrible force—almost entirely destroying them. A number of the cars were badly broken—and John Sholtus was killed.

We seldom make such a long extract, in relating an accident of this kind, but this is one that requires a word of comment. It is evident, that there was mismanagement in the case, now if our railroad lines had telegraph lines completely under their control, to be used for their own business only, such an accident as the above would not occur. A new line of wires from Albany to Buffalo, could be put up at little expense, on the standing poles, and the right to use it, for the purpose stated, viz., to communicate instantly from station, to station, could surely be purchased at little expense, from some of the Telegraph Patentees.

Families which take the Scientific American have a never failing source to which they can resort for valuable receipts, and general information of the most useful kind. Young mechanics should take it, if they would consult their own interests. The sum for one year's subscription is a mere drop in the bucket, in comparison with the benefits received in return. Now is the time to become a subscriber.